Intermatic Product Catalog

Lighting Controls | Surge Protection | Weatherproof Covers | Pool & Spa Solutions
Timers | HVAC/R Solutions | Photocontrols

Intermatic.com

INTERMATIC®

Built to Withstand the Test of Time

For more than a century, Intermatic has built an enduring reputation for quality, innovation and service. We're proud that contractors across the globe trust us to deliver reliable, easy-to-install lighting and energy control solutions that withstand the test of time.

From basic mechanical time switches and pool and spa controls to robust commercial lighting controls, our product line has evolved to meet the many unique needs of our customers. Today, you'll find Intermatic solutions in a wide variety of residential, commercial, industrial and utility applications, as well as integrated into countless OEM solutions.

Residential: Our versatile product portfolio offers homeowners convenience, energy savings and security. We stand proud as industry leaders within the surge protection and outdoor receptacle cover categories.

Commercial: We deliver state-of-the-art solutions that align with energy and building codes while enhancing occupant comfort. Our contractor-focused products offer simple installation, low maintenance and easy scalability.

Industrial: In addition to the advanced electronic timer controls that are frequently used in industrial applications, we specialize in industrial-grade surge protection, as well as machinery and pump controls.

Utility: Our durable utility solutions connect communities across the globe. We're the industry leader in outdoor lighting controls and are influential in driving conversion to electronic photocontrols worldwide.

A Tradition of Manufacturing Excellence

From our humble beginnings in 1891 onward, we've embraced new challenges and sought ways to push the industry forward. Our longstanding tradition of manufacturing excellence is at the heart of our success.

Likewise, central to this is our 882,487 square foot manufacturing facility in Juarez, Mexico, which allows us to implement progressive manufacturing processes while ensuring the highest product quality and design standards. The ISO 9001:2015 certified space includes plastic injection tooling, plastic injection molding, metal stamping and circuit board printing machinery, as well as more than 40 on-site specialty engineers to oversee daily operations.

On-site CSA and UL-Certified labs support an iterative design philosophy that helps us get products into the hands of customers faster while maintaining rigorous design and quality standards.

Energized for the Future

As we push forward, we're eager to tackle new challenges and share innovative new technology with our customers. Here are just a few of the key areas we're focused on as we look towards the future.

Scalable Smart Technology: Now more than ever, businesses and homeowners have realized the importance of flexibility. New solutions like our ARISTA™ Advanced Lighting Control System take this to heart with modular components that work together but can also be easily modified as project needs change.

Automated Manufacturing: By upgrading our manufacturing systems and processes, we're able to build on our high standards of quality and performance while getting new solutions to customers faster.

Enhanced LED Compatibility: We've helped usher in a new standard of LED lighting control technology. Our mission is to help customers optimize energy savings and reduce maintenance needs with a suite of LED-compatible lighting controls designed specifically to match the life expectancy of LED fixtures.

Diverse OEM Partnerships: Manufacturers partner with Intermatic to help bring their visions to life, with projects ranging from temperature controls to industrial equipment. Each OEM connection is an opportunity to integrate new technologies and enhance our core solutions.

Local Values, **Global Impact**

From our North American headquarters in Libertyville, Illinois to Southeast Asia and beyond, Intermatic has a presence in 35+ countries worldwide. Local values and a global perspective help our company develop meaningful solutions that are tailored to the needs of our diverse and growing customer base.

Inside this Catalog

Our product catalog is designed to provide you with all of the necessary information you need to make a purchasing decision.

Easily find the product category with color-coded sections.

Product description, applications & features

Product photos

Ratings and model charts

Additional helpful information such as dimensional drawings and wiring diagrams

Refer to the product index in the front of the book for a complete list by Model #

Any required or additional accessories are listed in the back of each section

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Example Catalog Spread

Visit the New **Intermatic.com** Today!

From product sell sheets and wiring diagrams to technical support and how-to content, the new Intermatic.com is your go-to resource for all things Intermatic.

We've recently updated our website to showcase the many markets and applications Intermatic solutions can be used in while emphasizing the resources contractors and distributors need to make important buying decisions.

Visit Intermatic.com on your computer, tablet or smartphone for a seamless browsing experience that's full of helpful content. In addition to the website's updated look and feel, we've added time-saving features, such as online chat support and a product cross reference guide, to get customers the answers they need as quickly as possible.

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Product Index

Advanced Lighting Control Solutions

Take the hassle out of commercial lighting projects with the ARISTA™ Advanced Lighting Control System. Our contractor-focused solution makes it easy for installers of all technology backgrounds to integrate wireless, code-compliant lighting control in a wide range of indoor applications.

Flexible Control

Set lighting schedules, monitor daylight levels and reduce energy waste while still allowing for manual control in a wide range of indoor environments. Suggested applications include classrooms, retail stores, offices, restaurants, schools and more.

Customizable Components

A suite of modular components, including sensors, controllers and manual overrides, makes it easy to install and configure ARISTA to meet diverse project needs. Users can add or remove devices at any time without resetting the system and starting from scratch.

Simple Wireless Connectivity

ARISTA simplifies installations with a contractor-friendly communication protocol known as Bluetooth® 5.0 mesh wireless technology. The secure wireless technology allows contractors to complete setup without connecting to a local area network or hub.

Code Compliant Design

Out of the box, ARISTA meets or exceeds ASHRAE 90.1-2016, IECC 2018 and Title 24-2019. The system's modular components allow design engineers and design-build contractors to select the functionality needed within a project, then hand off specific installation specifications to contractors and commissioners.

Contents

Additional Solutions and Resources

Ready to get started? Scan the QR code to the right for a variety of helpful resources, including sell sheets, product instructions, installation videos and more.

Simple, Connected, Contractor-Friendly

Introducing ARISTA, a customizable smart lighting control solution for commercial and municipal buildings. The simple wireless system empowers installers of all technology backgrounds to integrate impressive, code-compliant lighting control in a wide range of applications.

ARISTA Code Compliance (Meets or Exceeds):
• ASHRAE 90.1-2016
• IECC 2018
• Title 24-2019

Simple, Adaptable Components

A suite of modular components makes it easy to install and configure ARISTA in a wide range of commercial applications. Bluetooth wireless communication and optional battery-powered sensors help speed up installations by reducing wiring needs.

Easy Smartphone Setup

Use the ARISTA app to breeze through installation and manage settings once setup is complete. Permission new users to share access and control based on occupant, facility manager or inspector needs. (Available for Apple iOS and Android devices.)

Built-in "wink" feature helps installers identify components on the fly

Commission with Ease

Quickly identify components and adjust system settings in real-time using the ARISTA app.
Contractors may also view multiple sites/projects from a single smartphone to streamline work.

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Room Controller

The "brain" of the ARISTA system, the Room Controller connects to the primary load, has wired or wireless inputs, drives schedules using a real-time clock, has adjustable light level settings, all accessible through the smart phone app via Bluetooth mesh technology.

In-Wall Dimmer with Manual Override

In-wall controls give occupants manual control of select features, including ON/OFF, raise/lower light levels (dimming), and adjustable auto-off countdown capabilities.

These units are in-field upgradeable - as new features are released, users can easily upgrade the firmware of their existing control to take advantage of the new functionality.

Presence Sensors

Convenient and energy efficient, Presence Sensors reduce Energy Costs by ensuring lights are only on during occupancy. Presence sensors allow for either Automatic or Manual ON operation, and feature an Automatic OFF operation.

In-Wall Sensors   **Wall-Mount Sensors**   **Ceiling Sensors**

Daylight Harvester

Our Daylight Harvesting Sensors help building managers make the most of natural light while promoting occupant comfort and energy efficiency.

Safe and Secure Networking

ARISTA uses a secure Bluetooth® mesh protocol that allows components to communicate without the need for a traditional local area network. Every device transmission is protected by three 128-bit encrypted security keys.

Each Bluetooth enabled component is its own wireless node for sending, receiving and sharing control commands through a wireless mesh network. Expandability is easy with each device passing information to the next thus expanding the reach and control throughout the network.

System Diagram - Bluetooth 5.0 Mesh Network

Bluetooth™

0-10 V / 1-10 V Dimmable Lighting Fixtures

Ceiling Sensors

In-Wall Sensors

Wall-Mounted Sensors

Occ/Vac Sensors

All Sensors

Daylight Harvester

Daylight Sensor

Room Controller

ARISTA

Control and Commissioning App

In-Wall Dimmer

ALC1-R

1 Channel 0-10V Lighting/Plug Load Controller
ALC1-R LIGHTING CONTROLLER

The ALC1-R lighting controller is a single-channel 0-10 V dimming controller designed to work with ARISTA Lighting Control System by Intermatic. These units can work with either 0-10 V or 1-10 V lighting fixtures, including LED's, or plug load control. Once installed, the ALC1-R unit(s) can be configured to work off of either scheduling, sensing, or a combination of both, providing maximum energy efficiency as well as occupant comfort. These units can be configured for either wireless or wired communications, and utilize Bluetooth Mesh technologies for wireless communications. Secure Bluetooth® 5.0 mesh technology allows installers to quickly connect this device and configure settings via the ARISTA app without connecting to a Wi-Fi network.

APPLICATIONS
• Dimming • Indoor Lighting Control • Timing/Scheduling ON/OFF

FEATURES
• Wired or wireless communications
• Provides 24VDC for wired devices
• Utilizes a secure bluetooth mesh for connectivity
• Built-in real time clock for keeping timing accuracy
• Allows for 1 wired analog Input
• Allows for 2 wired digital inputs
• Works with 0-10 V or 1-10 V luminaries
• 365-Day scheduling including holidays
• Programmable blink warning alert
• Programmable light levels

RATINGS

RATINGS	
Input Voltage	120-277 VAC, 50/60 Hz
Electronic Ballast (LED)	10 A
Ballast (Fluorescent)	10 A, 120-277 VAC
Resistive	120-277 VAC, 50/60Hz, 20 A
General Use	120-277 VAC, 50/60Hz, 20 A
Tungsten	277 VAC, 12.5 A
Class 1	0 - 10 VDC 50 mA
Class 2	24 VDC 145 mA
Switch Type	SPST
Neutral Connection Required	Yes
Wiring Options Low Voltage	Pigtails, Terminals
Warranty	5-Year limited
Operating Temperature	32°F - 131° F (0°C - 55°C)

Model #	Description	Mount Type
ALC1-R	1 Channel 0-10 V Lighting/ Plug Load Controller	Electrical Box

WIRING DIAGRAMS

Scan to learn more about the ALC1-R wiring information.

ADDITIONAL CONTROLLERS

Intermatic's ARISTA product line is constantly expanding. Please contact an Intermatic sales representative or visit Intermatic.com for more information and availability.

Model #	Description	Mount Type
ALC2-R*	2 Channel 0-10 V Lighting/Plug Load Controller	Surface Mount
ALC4-R*	4-Channel 0-10 V Lighting/Plug Load Controller	Surface Mount
ALC1-P*	1-Channel Phase Dimmer	Electrical Box

*Contact an Intermatic sales representative or visit Intermatic.com for more information and availability

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WALL MOUNT OCC/VAC SENSORS
ALC-WM-DT-BT & ALC-WM-BT

The wall mount Occupancy Vacancy Sensors designed for use with the ARISTA Lighting Controls System by Intermatic and will control lighting based upon occupancy/vacancy. If space is configured for occupancy and movement is detected, the sensor informs the ARISTA controller(s) in the space and the lights will illuminate. The light will turn OFF after the sensors deem the room vacant and the timeout period expires. If space is configured for vacancy, the ARISTA controller(s) in the space will only react when they are manually activated. The lights will turn off after the sensor deems the space vacant and the timeout period expires. Secure Bluetooth® 5.0 mesh technology allows installers to quickly connect this device and configure settings via the ARISTA app without connecting to a Wi-Fi network.

APPLICATIONS
• Indoor Lighting Control • Indoor Sensing Control

FEATURES
• Wired or wireless communications
• Toolless battery replacement
• Multiple mounting options
• Adjustable sensitivity settings
• Independent settings for Ultrasonic and PIR sensor technologies
• Adjustable time-out settings

ALC-WM-DT-BT

Model #	Description	Coverage Range (ft²)
ALC-WM-DT-BT	Dual Tech Wall Mount OCC/VAC Sensor	PIR 1200 ft², US 1000ft²
ALC-WM-BT	PIR Wall Mount OCC/VAC Sensor	1200 ft²

RATINGS	
Input Voltage	24 VDC
Wiring Options Low Voltage	Terminals
PIR Coverage Area (sq ft)	1200
Data Transfer Options	Bluetooth, Wired
Warranty	5-Year limited
Operating Temperature	32°F - 131°F (0°C - 55°C)

IN-WALL OCC/VAC SENSORS
ALC-DT-BT-WH & ALC-PI-BT-WH

The In-Wall Occupancy Vacancy Sensors designed for use with the ARISTA Lighting Controls System by Intermatic and will control lighting based upon occupancy/vacancy. If the space is configured for Occupancy and movement is detected, the sensor informs the ARISTA controller(s) in the space and the lights will illuminate. The lights will turn off after the ARISTA controller(s) deem the space vacant and the timeout period completes. If the space is configured for Vacancy, the ARISTA controller(s) in the space will only react when they are manually activated. The lights will turn off after the sensor deems the space vacant and the timeout period completes. The ALC-DT-BT-WH also utilizes a built-in switch that can be used as a manual override to the programmed ARISTA controller(s). Secure Bluetooth® 5.0 mesh technology allows installers to quickly connect this device and configure settings via the ARISTA app without connecting to a Wi-Fi network. Secure Bluetooth® 5.0 mesh technology allows installers to quickly connect this device and configure settings via the ARISTA app without connecting to a Wi-Fi network.

APPLICATIONS
• Indoor Lighting Control • Indoor Sensing Control

FEATURES
• 120-277 VAC
• Wireless communications
• Eliminates 3-way and multi-way wiring
• Adjustable sensitivity settings
• Independent settings for Ultrasonic and PIR sensor technologies
• Programmable ON/OFF button
• Can be used for occupancy or vacancy applications
• LED indicators for easy identification

ALC-DT-BT-WH   ALC-PI-BT-WH

Model #	Description	Coverage Range
ALC-DT-BT-WH	Dual Tech In-Wall OCC/VAC Sensor	PIR 1200 ft², US 400 ft²
ALC-PI-BT-WH	PIR In-Wall OCC/VAC Sensor	1200 ft²

RATINGS	
Input Voltage	120-277 VAC, 50/60 Hz
Wiring Options Line Voltage	Leads
PIR Coverage Area (sq ft)	1200
Data Transfer Options	Bluetooth
Warranty	5-Year limited
Operating Temperature	32°F - 131°F (0°C - 55°C)

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ALC-CMP-DT-BT

CEILING MOUNT OCC/VAC SENSORS
ALC-CMP-DT-BT & ALC-CMP-BT

The Ceiling Mount Occupancy Vacancy Sensors designed for use with the ARISTA Lighting Controls System by Intermatic and will control lighting based upon occupancy/vacancy. If space is configured for Occupancy and movement is detected, the sensor informs the ARISTA controller(s) in the space and the lights will illuminate. The lights will turn off after the ARISTA controller(s) deem the space vacant and the timeout period completes. If space is configured for Vacancy, the ARISTA controller(s) in the space will only react when they are manually activated. The lights will turn off after the sensor deems the space vacant and the timeout period completes. This sensor provides a 360° coverage pattern. Secure Bluetooth® 5.0 mesh technology allows installers to quickly connect this device and configure settings via the ARISTA app without connecting to a Wi-Fi network.

APPLICATIONS
• Indoor Lighting Control • Indoor Sensing Control

FEATURES
• Wired or wireless communications
• Toolless battery replacement
• Multiple mounting options
• Adjustable sensitivity settings
• Independent settings for Ultrasonic and PIR sensor technologies
• Adjustable time-out settings

RATINGS	
Input Voltage	24 VDC
Wiring Options Low Voltage	Terminals
PIR Coverage Area (sq ft)	1300
Data Transfer Options	Bluetooth, Wired
Warranty	5-Year limited
Operating Temperature	32°F - 131°F (0°C - 55°C)

Model #	Description	Coverage Range
ALC-CMP-DT-BT	Dual Tech Ceiling Mount OCC/VAC Sensor	PIR 1300 ft², US 1600 ft²
ALC-CMP-BT	PIR Ceiling Mount OCC/VAC Sensor	1200 ft²

SIMPLIFY INSTALLATION WITH THE ARISTA APP

Use the ARISTA app to breeze through installation and configuration of ARISTA devices. Its simple workflows make it easy for contractors to set up lighting control boundaries, create ON/OFF schedules, set dimming levels, adjust sensors, add new users and more!

• **Quick Installation** – Once ARISTA devices (e.g., sensors, controllers) are physically installed and powered on, the ARISTA app helps contractors onboard components to the wireless network and assign them to a Project.
• **Define Boundaries** – Create dynamic lighting environments by assigning ARISTA devices to a specific Area, Space and Zone within a Project. This allows users to group components based on physical location and function.
• **Real-time Configuration** – Use the app to adjust input settings (e.g., run level, fade time) and create time schedules for each ARISTA device. A helpful "blink" feature allows installers to quickly identify devices in the field and begin configuration.
• **Grant Access** – Add new Installers to a Project to assist with configuration and/or commissioning on the job site. Once initial installation is complete, pass control to stakeholders by granting Occupant access within the app. This allows occupants to make adjustments to ARISTA devices within specific parameters set during installation.

Download on the App Store — GET IT ON Google Play

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Daylight Harvester
ALC-DH-BT

The ALC-DH-BT is a light sensor designed for use with the ARISTA Lighting Controls System by Intermatic. This sensor is used for daylight harvesting applications where energy conservation is essential. This sensor can be used for both open loop and closed loop applications. Secure Bluetooth® 5.0 mesh technology allows installers to quickly connect this device and configure settings via the ARISTA app without connecting to a Wi-Fi network.

APPLICATIONS
• Daylight Sensing • Indoor Lighting Control • Indoor Sensing Control

FEATURES
• Battery or 24 VDC powered
• Wired or wireless communications
• Toolless battery replacement
• Multiple mounting options
• Open or closed loop compatibility
• Selectable footcandle level settings

Model #	Description	Light Level Ranges
ALC-DH-BT	Daylight Harvester	0.1-30 fc; 3-300 fc; 30-3000 fc*

Settings are selectable through the ARISTA app

ALC-DH-BT

RATINGS	
Input Voltage	3 V Battery, 24 VDC
Wiring Options Low Voltage	Terminals
Data Transfer Options	Bluetooth
Warranty	5-Year limited
Operating Temperature	32°F - 131°F (0°C - 55°C)

In-Wall Dimmer with Display
ALC-IWD

The ALC-IWD is an in-wall dimmer/switch designed for use with the ARISTA Lighting Controls System by Intermatic and will provide ON/OFF functionality as well as dimming capabilities. Due to the wireless design, these switches can be used as single-pole, 3-way, or multi-way applications. These units also feature a lockable user interface to prevent unauthorized changes from being made to the control. This product is designed for use with any ARISTA controllers by Intermatic.

APPLICATIONS
• Dimming • Indoor Lighting Control • Indoor Sensing Control

FEATURES
• Wireless communications
• Eliminates 3-way and multi-way wiring
• Manual On/Off and dimming operations
• Easy to follow display
• Selectable back-lit display settings
• Firmware allows users to update device, install new features
• Single-pole or Multi-pole applications
• Dim from multiple locations
• Easy wiring
• Lockable to prevent unauthorized changes

Model #	Description	Switch Type
ALC-IWD	In-Wall Dimmer with Display	SPST; 3-Way; Multi-Way

ALC-IWD

RATINGS	
Input Voltage	120-277 VAC, 60 Hz
Wiring Options Line Voltage	Pigtails
Data Transfer Options	Bluetooth
Warranty	5-Year limited
Operating Temperature	32°F - 131°F (0°C - 55°C)

ARISTA System Solutions

Improve occupant comfort and boost energy efficiency with the ARISTA Lighting Control System. The customizable smart system helps building owners create dynamic, code-compliant indoor environments that optimize natural light and support business needs. Check out a few system solution below.

Private Office or Lobby with Dimming

System Set Up:
- ALC1-R (1)
- ALC-CMP-BT (1)
- ALC-IWD (1)

Open Office with Dimming

System Set Up:
- ALC1-R (2)
- ALC-CMP-BT (6)
- ALC-IWD (2)

Private Office or Lobby with Dimming and Daylight Harvesting

System Set Up:
- ALC1-R (1)
- ALC-CMP-BT (1)
- ALC-IWD (1)
- ALC-DH-BT (1)

Break Room with Dimming

System Set Up:
- ALC1-R (1)
- ALC-IWD (1)
- ALC-WM-BT (1)

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Simple. Scalable. Wireless.

Bring comfort and safety to outdoor spaces with the **ARISTA™ Nightscape Advanced Lighting Control System**. The customizable system combines locking-type controls and smart presence sensors with Bluetooth mesh technology to create dynamic lighting environments that are occupant-friendly and code compliant. This is done all without a gateway or central control unit.

Easy Setup

Use the ARISTA Nightscape mobile app to configure sensors and controllers, adjust lighting schedules and monitor performance on the go.

Robust Control

Tailor ON/OFF, sensor presence overrides and part-night dimming schedules for different areas and occupant needs in large outdoor environments.

Applications:
- Commercial buildings
- Parking lots
- Schools
- Parks

Contact your local Intermatic representative to be the first to demo the new ARISTA Nightscape Lighting Control System. Available soon!

Intermatic.com/ARISTA

Example Application:
U-Shaped parking lot with a roundabout outdoor area at a primary school.

Electronic Controls Solutions

Take command of complex lighting and load schedules with our robust electronic controls. Flexible 24-hour, 7-day, 365-day and dusk-to-dawn scheduling options make these solutions an excellent fit for office buildings, retail stores, schools and more.

Indoor Lighting Control

Boost energy efficiency and promote occupant comfort with versatile indoor lighting controls. These solutions allow users to create dynamic ON/OFF lighting schedules as well as control lights based on daily activity (Occ/Vac).

Timing/Scheduling ON/OFF

Take the guesswork out of daily lighting schedules with simple, reliable time scheduling controls. These solutions allow users to set daily or weekly ON/OFF schedules for a range of applications, including lighting, ventilation, pump controls and more.

Outdoor Lighting Control

Promote safety and comfort by illuminating outdoor spaces with energy-saving Astronomic timer controls and dusk-to-dawn photocontrols.

Industrial Cycling Controls

Manage ON/OFF and maintenance schedules of 3-phase motor loads with our robust electronic controls. Select solutions allow users to create monthly start-up schedules to support the long-term performance of machinery and industrial equipment.

Contents

Additional Solutions and Resources

Ready to get started? Scan the QR code to the right for a variety of helpful resources, including sell sheets, product instructions, installation videos and more.

Electronic Controls

ET91615CR

ET90215CRE

ET90115C

ET90000 Series
365-DAY ASTRONOMIC TIME SWITCHES

The ET90000 Series combines powerful and intuitive scheduling with truly maintenance-free convenience. The PC App and Mobile App provide real-time remote control, and the USB connection and Ethernet capabilities enable in-field updates.

APPLICATIONS
• Indoor Lighting Control • Outdoor Lighting Control • Timing/Scheduling ON/OFF
• Machinery & Pump Controls

FEATURES
• Automatic input voltage selection from 120 to 277 VAC, 50/60 Hz
• Over 2,000 events plus holiday schedules
• Advanced scheduling including relative events, such as fourth Thursday of November or first week of year
• 30 A rated contacts
• 100-hour supercapacitor eliminates the need for batteries
• USB connection for uploading, downloading and transferring programs
• Easy-to-follow on-screen menus for programming to-the-minute accuracy
• Non-volatile memory protects programming indefinitely
• Firmware can be upgraded in-field via USB or Ethernet
• Internally expandable, in 4-circuit increments, up to 16-circuits for 4, 8, and 12-circuit models
• PC App for easy scheduling or control, either remotely or through USB flash drive
• Mobile app for real time status and overrides

Load Type	NO (Normally Open)	NC (Normally Closed)
Input Voltage	120-277 VAC, 50/60 Hz	12-240 VAC, 50/60 Hz
General Purpose	30 A, 12-240 VAC, 50/60 Hz	10 A, 12-240 VAC, 50/60 Hz
Ballast (Fluorescent)	20 A, 120-277 VAC, 50/60 Hz	3 A, 120-277 VAC, 50/60 Hz
Electronic Ballast (LED)	8 A, 120-277 VAC, 50/60 Hz	–
Restive (Heater)	20 A, 28 VDC; 30 A, 12-240 VAC, 50/60 Hz	10 A, 28 VDC; 10 A, 120-240 VAC, 50/60 Hz
Tungsten (Incandescent)	5 A, 12-120 VAC, 50/60 Hz	–
Pilot Duty	470 VA, 120-240 VAC, 50/60 Hz	275 VA, 120-240 VAC, 50/60 Hz
Motor	1 HP, 120 VAC, 50/60 Hz; 2 HP, 240 VAC, 50/60 Hz	1/4 HP, 120 VAC, 50/60 Hz; 1/2 HP, 240 VAC, 50/60 Hz

RATINGS	
Wire Size	#6 AWG
Min ON/OFF Times	1 Sec
Max ON/OFF Times	365 days
Warranty	3-Year limited
Operating Temperature	-40°F - 104°F (-40°C - 40°C)

Model #	Circuits	Enclosure	Ethernet
ET90115C	1	Indoor type 1 metal	Ethernet Optional/USB
ET90115CE	1	Indoor type 1 metal	Ethernet Included/USB
ET90115CR	1	Outdoor type 3R metal	Ethernet Optional/USB
ET90115CRE	1	Outdoor type 3R metal	Ethernet Included/USB
ET90215C	2	Indoor type 1 metal	Ethernet Optional/USB
ET90215CE	2	Indoor type 1 metal	Ethernet Included/USB
ET90215CR	2	Outdoor type 3R metal	Ethernet Optional/USB
ET90215CRE	2	Outdoor type 3R metal	Ethernet Included/USB
ET90415CR	4	Outdoor type 3R metal	Ethernet Included/USB
ET90815CR	8	Outdoor type 3R metal	Ethernet Included/USB
ET91215CR	12	Outdoor type 3R metal	Ethernet Included/USB
ET91615CR	16	Outdoor type 3R metal	Ethernet Included/USB

Note: The electronic mechanism snaps into the standard Intermatic enclosure for easy upgrading of mechanical mechanisms, if desired. For outdoor rated metal enclosures contact Intermatic.

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WIRING DIAGRAMS

Typical bell, buzzer, or ringing installation. Multiple loads may be wired concurrently, within the maximum output ratings for the circuit.

Typical installation for photocontrol in parallel with time switch contacts. Either the time switch OR the photocontrol must be ON to power the load. Ideal for improved safety. Loads will activate at the scheduled times, at night, or during low-light conditions such as a storm.

Typical lighting installation. Multiple loads may be wired concurrently, within the maximum output ratings for the circuit.

ENCLOSURE DIMENSIONS

Type 1, 1-2 Circuit

CONDUIT KNOCKOUT SIZES	
SIZES	QTY
DUAL ¾" & ½"	5

Type 3R, 1-2 Circuit

CONDUIT KNOCKOUT SIZES	
SIZES	QTY
DUAL ¾" & ½"	5

Type 3R, 4-16 Circuit

CONDUIT KNOCKOUT SIZES	
SIZES	QTY
DUAL 1" & ¾"	6
DUAL ¾" & ½"	8

ET90000 PC APP

The ET90000 PC App enables real-time remote control of each ET90000 device from the convenience of your laptop. It's a great tool for creating schedules before, during, or after installation. Plus, with the PC App you can control circuits, perform firmware updates, or download events, zones, and holidays from wherever you are working. The ET90000 PC App is available at Intermatic.com.

Electronic Controls

ET2105C

ET2705C

ET2725CP

ET2845CR

ET2000 Series
BASIC+ ELECTRONIC TIME SWITCHES

The ET2000 Series offers an easy-to-use interface, while still allowing to-the-minute scheduling capabilities for nearly any application. This series provides 50 holiday blocks with independent scheduling to ensure the loads are always in the proper ON/OFF state. This series also includes 96 ON/OFF events for even the most demanding schedules. The scheduling capabilities, configurable outputs, and a 100-hour backup without the need of batteries, make this series ideal for nearly any application.

APPLICATIONS
• Outdoor Lighting Control • Timing/Scheduling ON/OFF • Machinery & Pump Controls

FEATURES
• 100-hour supercapacitor eliminates the need for batteries
• Up to 96 set points or events
• Up to 50 holiday blocks with schedule capabilities
• Automatic input voltage selection from 120 to 277 VAC, 60 Hz
• Additional mode of operation turns the ON/OFF buttons into 2-hour overrides
• Configurable outputs allow the control of various voltages and applications
• Relays incorporate zero-crossing technology to extend the life of the control
• Non-volatile EEPROM memory protects programming indefinitely
• LED compatible
• USB port makes transferring and saving of schedules easy
• 2-year limited warranty

24-HOUR SCHEDULE

Model #	Enclosure
1-Circuit SPST Switch	
ET2105C	Indoor type 1 metal
ET2105CP	Indoor/outdoor type 3R plastic with see-through door
ET2105CR	Outdoor type 3R metal
1-Circuit SPDT Switch	
ET2115C	Indoor type 1 metal
ET2115CP	Indoor/outdoor type 3R plastic with see-through door
ET2115CR	Outdoor type 3R metal
2-Circuit 2xSPST, 1xDPST or Pulse Switch	
ET2125C	Indoor type 1 metal
ET2125CP	Indoor/outdoor type 3R plastic with see-through door
ET2125CR	Outdoor type 3R metal
4-Circuit 4xSPST, 2xDPST or Pulse Switch	
ET2145C	Indoor type 1 metal
ET2145CP	Indoor/outdoor type 3R plastic with see-through door
ET2145CR	Outdoor type 3R metal

The electronic mechanism snaps into the standard Intermatic enclosure for easy upgrading of mechanical mechanisms, if desired. Contact Intermatic for additional outdoor rated enclosures or see accessories on page 34.

7-DAY SCHEDULE

Model #	Enclosure
1-Circuit SPST Switch	
ET2705C	Indoor type 1 metal
ET2705CP	Indoor/outdoor type 3R plastic with see-through door
ET2705CR	Outdoor type 3R metal
1-Circuit SPDT Switch	
ET2715C	Indoor type 1 metal
ET2715CP	Indoor/outdoor type 3R plastic with see-through door
ET2715CR	Outdoor type 3R metal
2-Circuits 2xSPST, 1xDPST or Pulse Switch	
ET2725C	Indoor type 1 metal
ET2725CP	Indoor/outdoor type 3R plastic with see-through door
ET2725CR	Outdoor type 3R metal
4-Circuits 4xSPST, 2xDPST or Pulse Switch	
ET2745C	Indoor type 1 metal
ET2745CP	Indoor/outdoor type 3R plastic with see-through door
ET2745CR	Outdoor type 3R metal

7-DAY ASTRONOMIC SCHEDULE

Model #	Enclosure
1-Circuits SPST Switch	
ET2805C	Indoor type 1 metal
ET2805CP	Indoor/outdoor type 3R plastic with see-through door
ET2805CR	Outdoor type 3R metal
1-Circuit SPDT Switch	
ET2815C	Indoor type 1 metal
ET2815CP	Indoor/outdoor type 3R plastic with see-through door
ET2815CR	Outdoor type 3R metal
2-Circuits 2xSPST, 1xDPST or Pulse Switch	
ET2825C	Indoor type 1 metal
ET2825CP	Indoor/outdoor type 3R plastic with see-through door
ET2825CR	Outdoor type 3R metal
4-Circuits 4xSPST, 2xDPST or Pulse Switch	
ET2845C	Indoor type 1 metal
ET2845CP	Indoor/outdoor type 3R plastic with see-through door
ET2845CR	Outdoor type 3R metal

INTERMATIC®

Timer Power

TIMER POWER

AC IN

L1
L2/N

POWER TO TIMER
120/208/240/277 VAC
(AUTO VOLTAGE, NO JUMPERS REQUIRED)

1-Circuit

TIMER POWER — CIRCUIT 1
AC IN — NO-1 — COM1
L1
L2/N
OUTPUT 1
INPUT 1
INDIVIDUAL 120/277 VAC LOADS
OUTPUT CONFIGURATION: IND

TIMER POWER
AC IN
L1
L2/N
POWER TO TIMER
120/277 VAC
(AUTO VOLTAGE, NO JUMPERS REQUIRED)

TIMER POWER
AC IN
L1
L2/N
POWER TO TIMER
120/208/240/277 VAC
(AUTO VOLTAGE, NO JUMPERS REQUIRED)

For SPDT Models

TIMER POWER — CIRCUIT 1
AC IN — NO-1 — COM1 — NC-1
L1
L2/N
OUTPUT 1
INPUT 1
OUTPUT 2
2 - INDIVIDUAL 120/277 VAC LOADS
OUTPUT CONFIGURATION: IND - CIRCUIT 1 AND 2

2-Circuit

TIMER POWER
AC IN
L1
L2/N
POWER TO TIMER
120/208/240/277 VAC
(AUTO VOLTAGE, NO JUMPERS REQUIRED)

TIMER POWER — CIRCUIT 1 — CIRCUIT 2
AC IN — NO-1 — COM1 — NO-2 — COM2
L1
L2/N
OUTPUT 1 — INPUT 1 — OUTPUT 2 — INPUT 2
2 - INDIVIDUAL 120/277 VAC LOADS
OUTPUT CONFIGURATION: IND - CIRCUIT 1 AND 2

TIMER POWER — CIRCUIT 1 — CIRCUIT 2
AC IN — NO-1 — COM1 — NO-2 — COM2
L1
L2
OUTPUT 1 & 2
TIMER CONFIGURATION 208/240 VAC DSPT
OUTPUT CONFIGURATION: SIM

TIMER POWER — CIRCUIT 1 — CIRCUIT 2
AC IN — NO-1 — COM1 — NO-2 — COM2
L1
L2/N
OUTPUT 1 & 2
OUTPUT CONFIGURATION: PUL - (BELL RINGING)

TIMER POWER — CIRCUIT 1 — CIRCUIT 2
AC IN — NO-1 — COM1 — NO-2 — COM2
L1
L2/N
CLOSE — COM — OPEN
TIMER CONFIGURATION FOR CONTACTOR CONTROL
OUTPUT CONFIGURATION: PUL

4-Circuit

TIMER POWER
AC IN
L1
L2/N
POWER TO TIMER
120/208/240/277 VAC
(AUTO VOLTAGE, NO JUMPERS REQUIRED)

TIMER POWER — CIRCUIT 1 — CIRCUIT 2 — CIRCUIT 3 — CIRCUIT 4
AC IN — NO-1 — COM1 — NO-2 — COM2 — NO-3 — COM3 — NO-4 — COM4
L1
L2/N
OUTPUT 1 — INPUT 1 — OUTPUT 2 — INPUT 2 — OUTPUT 3 — INPUT 3 — OUTPUT 4 — INPUT 4
4 - INDIVIDUAL 120/277 VAC LOADS
OUTPUT CONFIGURATION: IND - CIRCUIT 1 AND 2
OUTPUT CONFIGURATION: IND - CIRCUIT 3 AND 4

TIMER POWER — CIRCUIT 1 — CIRCUIT 2 — CIRCUIT 3 — CIRCUIT 4
AC IN — NO-1 — COM1 — NO-2 — COM2 — NO-3 — COM3 — NO-4 — COM4
L1
L2
OUTPUT 1&2 — OUTPUT 3&4
TIMER CONFIGURATION FOR TWO 208/240 VAC DSPT
OUTPUT CONFIGURATION: SIM - CIRCUIT 1 AND 2
OUTPUT CONFIGURATION: SIM - CIRCUIT 3 AND 4

TIMER POWER — CIRCUIT 1 — CIRCUIT 2 — CIRCUIT 3 — CIRCUIT 4
AC IN — NO-1 — COM1 — NO-2 — COM2 — NO-3 — COM3 — NO-4 — COM4
L1
L2/N
CLOSE — COM — OPEN — CLOSE — COM — OPEN
TIMER CONFIGURATION FOR TWO CONTACTOR CONTROLS
OUTPUT CONFIGURATION: PUL - CIRCUIT 1 AND 2
OUTPUT CONFIGURATION: PUL - CIRCUIT 3 AND 4

TIMER POWER — CIRCUIT 1 — CIRCUIT 2 — CIRCUIT 3 — CIRCUIT 4
AC IN — NO-1 — COM1 — NO-2 — COM2 — NO-3 — COM3 — NO-4 — COM4
L1
L2/N
OUTPUT 1 — INPUT 1 — OUTPUT 2 — INPUT 2 — OUTPUT 3&4 — INPUT 3 — INPUT 4
TIMER CONFIGURATION FOR COMBINATION MODE
OUTPUT CONFIGURATION: IND - CIRCUIT 1 AND 2 (120/277 VAC LOAD)
OUTPUT CONFIGURATION: SIM - CIRCUIT 3 AND 4 (208/240 VAC LOAD)

TIMER POWER — CIRCUIT 1 — CIRCUIT 2 — CIRCUIT 3 — CIRCUIT 4
AC IN — NO-1 — COM1 — NO-2 — COM2 — NO-3 — COM3 — NO-4 — COM4
L1
L2/N
OUTPUT 1&2 — INPUT 1 — INPUT 2 — OUTPUT 3 — INPUT 3 — OUTPUT 4 — INPUT 4
TIMER CONFIGURATION FOR COMBINATION MODE
OUTPUT CONFIGURATION: SIM - CIRCUIT 1 AND 2 (208/240 VAC LOAD)
OUTPUT CONFIGURATION: IND - CIRCUIT 3 AND 4 (120/277 VAC LOAD)

TIMER POWER — CIRCUIT 1 — CIRCUIT 2 — CIRCUIT 3 — CIRCUIT 4
AC IN — NO-1 — COM1 — NO-2 — COM2 — NO-3 — COM3 — NO-4 — COM4
L1
L2/N
OUTPUT 1&2 — OUTPUT 3 — INPUT 3 — OUTPUT 4 — INPUT 4
TIMER CONFIGURATION FOR COMBINATION MODE
OUTPUT CONFIGURATION: PUL - CIRCUIT 1 AND 2 (BELL RINGING)
OUTPUT CONFIGURATION: IND - CIRCUIT 3 AND 4

TIMER POWER — CIRCUIT 1 — CIRCUIT 2 — CIRCUIT 3 — CIRCUIT 4
AC IN — NO-1 — COM1 — NO-2 — COM2 — NO-3 — COM3 — NO-4 — COM4
L1
L2/N
OUTPUT 1&2 — OUTPUT 3&4
240 VAC

c(UL)us LED TITLE 20 LISTED

RATINGS: SPST	
Input Voltage	120-277 VAC, 60 Hz
NO Contacts	
Electronic Ballast (LED)	10 A, 120/277 VAC, 60 Hz
Ballast (Fluorescent)	20 A, 120-277 VAC, 60 Hz
Inductive	30 A, 120-240 VAC, 60 Hz
Resistive (Heater)	20 A, 28 VDC; 30 A, 120-240 VAC, 60 Hz
Tungsten (Incandescent)	5 A, 120-277 VAC, 60 Hz
Motor	1 HP, 120 VAC, 60 Hz; 2 HP, 240 VAC, 60 Hz
Warranty	2-Year limited
Operating Temperature	-40°F - 104°F (-40°C - 40°C)

RATINGS: SPDT	
Input Voltage	120-277 VAC, 60 Hz
NO Contacts	
Electronic Ballast (LED)	10A, 120/277 VAC, 60 Hz
Ballast (Fluorescent)	20 A, 120-277 VAC, 60 Hz
Inductive	20 A, 120-240 VAC, 60 Hz
Resistive (Heater)	20 A, 28 VDC; 20 A, 120-240 VAC, 60 Hz
Motor	1 HP, 120 VAC, 60 Hz; 2 HP, 240 VAC, 60 Hz
NC Contacts	
Ballast (Fluorescent)	3 A, 120-277 VAC, 60 Hz
Inductive	10 A, 120-240 VAC, 60 Hz
Resistive (Heater)	10 A, 28 VDC; 10 A, 120-240 VAC, 60 Hz
Motor	1/4 HP, 120 VAC, 60 Hz; 1/2 HP, 240 VAC, 60 Hz
Warranty	2-Year limited
Operating Temperature	-40°F - 104°F (-40°C - 40°C)

RATINGS: 2XSPST, 1XDPST OR PULSE	
Input Voltage	120-277 VAC, 60 Hz
NO Contacts	
Electronic Ballast (LED)	10A, 120/277 VAC, 60 Hz
Ballast (Fluorescent)	20 A, 120-277 VAC, 60 Hz
Inductive	30 A, 120-240 VAC, 60 Hz
Resistive (Heater)	20 A, 28 VDC; 30 A, 120-240 VAC, 60 Hz
Tungsten (Incandescent)	5 A, 120-277 VAC, 60 Hz
Motor	1 HP, 120 VAC, 60 Hz; 2 HP, 240 VAC, 60 Hz
Warranty	2-Year limited
Operating Temperature	-40°F - 104°F (-40°C - 40°C)

INTERMATIC®

Electronic Controls

ET1125C

ET1705C

ET8215C

ET1100 Series, ET1700 Series, ET8000 Series
BASIC ELECTRONIC TIME SWITCHES

This series offers an easy way to upgrade from a basic mechanical time switch to an electronic time switch. These timers will allow for up-to-the-minute programming, battery backup for power loss, up to 28 events total, and automatic daylight saving time corrections without the need of user interaction. They come in standard 24-hour, 7-day and 7-day astronomic versions.

APPLICATIONS
• Outdoor Lighting Control • Timing/Scheduling ON/OFF • Machinery & Pump Controls

FEATURES
• Selector switch to determine input voltage between 120-277 VAC, 50/60 Hz
• Up to 28 events total
• To-the-minute accuracy
• Temporary override or permanent manual override
• Automatic Daylight Saving Time adjustment
• Astronomic models enable dusk-to-dawn scheduling

24-HOUR SCHEDULE

Model #	Enclosure
1-Circuit SPST Switch	
ET1105C	Indoor type 1 metal
2-Circuits 2xSPST, 1xDPST or Pulse Switch	
ET1125C	Indoor type 1 metal

7-DAY SCHEDULE

Model #	Enclosure
1-Circuit SPST Switch	
ET1705C	Indoor type 1 metal
2-Circuits 2xSPST, 1xDPST or Pulse Switch	
ET1725C	Indoor type 1 metal

7-DAY ASTRONOMIC SCHEDULE

Model #	Enclosure
1-Circuit SPST Switch	
ET8015C	Indoor type 1 metal
2-Circuits 2xSPST, 1xDPST or Pulse Switch	
ET8215C	Indoor type 1 metal
4-Circuits 4xSPST, 2xDPST or 2xPulse Switch	
ET8415CR*	Outdoor type 3R metal

Rated for 4.5 A Electronic Ballast (LED)

RATINGS: SPST	
Input Voltage	120-277 VAC, 50/60 Hz
NO Contacts	
Electronic Ballast (LED)	1 A, 120-277 VAC
Ballast (Fluorescent)	20 A, 120-277 VAC
Inductive	30 A, 120/240 VAC
Resistive (Heater)	20 A, 28 VDC; 30 A, 120/240 VAC
Tungsten (Incandescent)	5 A, 120/240 VAC
Motor	1 HP, 120 VAC; 2 HP, 240 VAC
Warranty	1-Year limited
Operating Temperature	-40°F - 104°F (-40°C - 40°C)

RATINGS: 2XSPST, 1XDPST OR PULSE	
Input Voltage	120-277 VAC, 50/60 Hz
NO Contacts	
Electronic Ballast (LED)	1 A, 120-277 VAC
Ballast (Fluorescent)	20 A, 120-277 VAC
Inductive	30 A, 120/240 VAC
Resistive (Heater)	20 A, 28 VDC; 30 A, 120/240 VAC
Motor	1 HP, 120 VAC; 2 HP, 240 VAC
Warranty	1-Year limited
Operating Temperature	-40°F - 104°F (-40° - 40°C)

Enclosure	
Type	Indoor type 1 metal
Dimensions	7.875" x 5.125" x 3.4375" (200 mm x 130.2 mm x 87.3 mm)
Knockout Dimensions	
Side/Back	(1) combination ½" - ¾"
Bottom	(2) combination ½" - ¾"

The electronic mechanism snaps into the standard Intermatic enclosure for easy upgrading of mechanical mechanisms, if desired.
For outdoor rated metal enclosures contact Intermatic.
For accessories see page 34
For enclosure line drawings and knockout locations, see pages 35 & 186.

INTERMATIC®

ET1100, ET1700, ET8000 SERIES

Timer Power

Neutral
Line
120 VAC Input
Load
1 2 3 4

Install jumper if the loads are on the same circuit as the input for the control

Single Circuit 120 VAC-SPST

Timer Power

ON Pulse OFF Pulse
L2/Neutral
L1
1 2 3 4 5 6

COM CLOSE OPEN
Mechanically Held Contactor

2-Circuit Pulse 2x SPST

Configure jumper set to PUL.

Timer Power

L2
L1
1 2 3 4 5
Load 1
Load 2

Install jumper if the loads are on the same circuit as the input for the control

SPDT (ETXX15 models) (load switching)

Timer Power

L2
L1
240 VAC Input
1 2 3 4 5 6
Load

2-Circuit (SIM)

Timer Power

L2/ Neutral
L1
1 2 3 4 5 6
Load

2-Circuit (Per Bell Ringing)

Timer Power

L2/Neutral
L1
120/208/240/277 VAC Input
1 2 3 4 5 6
L3 L4/Neutral L5 L6/Neutral
Load 1 Load 2

2-Circuit (IND)

ET8415CR WIRING DIAGRAMS

There are many different ways to set the relays on the ET8415CR Time Switch. The four relays can be used individually or in pairs of two. Refer to the table below for a complete list of ways to set the relays and illustrations for some of the common wiring installations.

Possible switching configurations		
IND/IND	SIM/IND	PUL/IND
IND/SIM	SIM/SIM	PUL/SIM
IND/PUL	SIM/PUL	PUL/PUL

Note:
IND= Independent SIM= Simultaneous PUL= Pulse

2x DPST
Operation Mode set to SIM for both sets of contacts, input and output voltage are the same.

NOTE: Each relay is a dry contact. Other voltages can be used if dedicated supply voltage is used for COM terminals.

AC IN NO-1 COM1 NO-2 COM2 NO-3 COM3 NO-4 COM4
240 VAC L2 L1
Load 1
240 VAC Load
Load 2
240 VAC Load
240 VAC L3 L4

4x SPST
Operation Mode set to IND, input and output voltage are the same.

NOTE: Each relay is a dry contact. Other voltages can be used if dedicated supply voltage is used for COM terminal replacing L1.

AC IN NO-1 COM1 NO-2 COM2 NO-3 COM3 NO-4 COM4
Neutral/L2
L1
120/208/240/277 VAC Input
Load 1 Load 2 Load 3 Load 4

2x Pulse
Operation mode set to PUL for both sets of contacts, each ON and OFF event for circuit 1 will ring the bell. Each ON event for Circuit 3 will close contactor and each OFF event will open contactor.

NOTE: Each relay is a dry contact Other voltages can be used if dedicated supply voltage is used for COM terminals.

AC IN NO-1 COM1 NO-2 COM2 NO-3 COM3 NO-4 COM4
Neutral/L2
L1
120/208/240/277 VAC Input
Bell
L3
120/208/240/277 VAC
28 VDC Input
Load 3
Closed Open
Maintained Contactor
COM
Neutral/L4

Electronic Controls

ETCB28253PCR

Contractor Box
ELECTRONIC ALL-PURPOSE CONTRACTOR BOX

The ETCB28253PCR is a field-ready solution that provides a durable Type 3-R Enclosure, a built-in 7/365 Day Astronomic Timer, 60 Amp 3-Pole contactor, inputs for timed photocontrol override, switched override capabilities, as well as inputs for surge protective devices. The timer allows for 96 ON/OFF events, 50 holiday blocks with independent scheduling, Astronomic scheduling, and 100-hour backup without the need of replacing batteries. The clock input voltage is 120 VAC, 60 Hz. The contactor has a 120 VAC coil to turn it on or off, which is completely independent of the voltage ratings that can be used with the contactor itself. The contactor can be used for 120-480 VAC, 60 Hz

APPLICATIONS
• Indoor Lighting Control • Outdoor Lighting Control • 3-Phase Motor Control
• Timing/Scheduling ON/OFF • Machinery & Pump Controls

FEATURES
• 3-Pole 60 A Contactor
• Timed photo control inputs
• Surge Protection Inputs
• 100-hour supercapacitor eliminates the need for batteries
• Up to 96 set points or events
• Up to 50 Holiday blocks with schedule capabilities
• Astronomic settings to automatically adjust for sunrise and sunset times based
  on location
• Additional mode of operation turns the ON/OFF buttons into 2-hour overrides
• Non-volatile EEPROM memory protects programming indefinitely
• USB port makes transferring and saving of schedules easy
• 2-year limited warranty

RATINGS	
Input Voltage	120 VAC, 60 Hz
Restive (Heater)	60 A
Motor	5 HP, 120 VAC;10 HP, 240 VAC, (Single-Phase); 25 HP (360 LRA), 240 VAC; 30 HP (300 LRA), 480 VAC
Warranty	2-Year limited
Operating Temperature	-40°F - 104° F (-40°C - 40°C)

Model #	Switch Type	Enclosure
ETCB28253PCR	3xSPST	Indoor/outdoor type 3 metal

WANT MORE?

For additional products check out our Surge Protection Solutions starting on page 118 and our Photocontrol Solutions starting on page 88.
Stay updated on new Contractor Box solutions by visiting Intermatic.com.

INTERMATIC®

WIRING DIAGRAMS

OPTIONAL PHOTO CONTROL

MAIN LOAD

LOAD **INPUTS**

L1
L2
L3

ROUTE L1, L2 & L3 WIRES BETWEEN THE CONTACTOR AND SIDE OF ENCLOSURE

CONTROL **INPUT**

NEUTRAL

120V

NEUTRAL   LINE   OVERIDE

PHOTO CONTROL (OPTIONAL)

WHT
BLK
RED

OVERIDE SWITCH (OPTIONAL)

CONNECTION TERMINALS FOR SURGE DEVICES

LOAD **OUTPUTS**

T3
T2
T1

ENCLOSURE DIMENSIONS

10"

4 3/4"

11 3/4"

12 3/8"

2 1/2"

5"

KNOCKOUT 1/2" AND 3/4" (19 PLACES)

KNOCKOUT 3/4" AND 1" (3 PLACES)

Electronic Controls

FM1D14-24U

FM1D14 Series
15A, 1 CIRCUIT, 14 PROGRAM ELECTRONIC TIMER

The FM1D14 Series is a great value electronic time-based control solution for ventilating, heating, cooling, lighting or other electrical loads in commercial and industrial applications. These one-channel time switches are programmable for 24-hour or 7-day schedules. The FM1D14 Series is intended for either panel, surface or DIN rail mounting. Surface/DIN rail are completely enclosed in a plastic housing and include a terminal cover, dust cover and subbase for installation and hard wiring.

APPLICATIONS
• Refrigeration Merchandiser • Air Movement & Ventilation• Aeration
• Septic Treatment• Generator Exercising

FEATURES
• 24-Hour or 7-day applications
• 14 Set point programs
• Easy to program
• Manual override with status indication
• Self-recharging battery with backup protection up to 2500-hours
• LCD display
• 5 Preset adjustable block programs
• A models come with clear dust cover

RATINGS	
Input Voltage	See Model Chart
Power Consumption VA	4
Switch Type	SPDT
NO Contacts	
Ballast (Fluorescent)	8 A, 277 VAC
Tungsten (Incandescent)	1000 W, 120 VAC
Pilot Duty	B300
Motor	1/2 HP @ 120 VAC, 1 HP @ 250 VAC, 10 FLA, 60 LRA @ 250 VAC
NC Contacts	
Resistive (Heater)	12 A, 24 VDC
Motor	1/2 HP @ 120/240 VAC, 10 FLA, 60 LRA @ 250 VAC
Wiring Terminals	Screw terminals for #24 to #10 AWG wire (A models)
Operating Temperature	-40°F - 131°F (-40°C - 55°C)
Warranty	1-Year limited

Model #	Mounting	Input Voltage	Programs
FM1D14-24U	Panel	24 VAC/VDC, 50/60 Hz	14
FM1D14-AV-U	Panel	120-277 VAC, 50/60 Hz	14
FM1D14A-24	DIN Rail, Surface	24 VAC/VDC, 50/60 Hz	14
FM1D14A-AV	DIN Rail, Surface	120-277 VAC, 50/60 Hz	14

WIRING DIAGRAMS
Typical Wiring:
24-277 VAC Application

Typical Wiring:
24 VDC Application

NO & NC Switching Configuration

DIMENSIONS

FM1D14A Surface/DIN Rail
with Clear Dust Cover

FM1D14 Surface/DIN Rail

INTERMATIC®

FM1D20 Series
16 A, 1-CIRCUIT TIMER MODULES

The FM1D20 Series Electronic Time Controls are for ventilating, heating, cooling, lighting or other electrical loads in commercial and industrial applications. These one-channel time switches are programmable for 24-hour or 7-day schedules. They are intended for either panel, surface, flush, or DIN rail mounting. Flush and surface/DIN rail (A & E models) are completely enclosed in a plastic housing and include a terminal cover, dust cover and subbase for installation and hard wiring.

APPLICATIONS
• Refrigeration Merchandiser • Air Movement & Ventilation • Aeration
• Septic Treatment • Generator Exercising

FEATURES
• 24-Hour or 7-day applications
• 20 Set point programs
• Three preset adjustable block programs
• Easy-to-follow menu driven programming
• Manual override with status indication
• Battery backup
• Large LCD
• Daylight Saving Time adjustment
• A & E models come with clear dust cover

FM1D20-24U

Model #	Mounting	Input Voltage	Programs
FM1D20-24U	Panel	24 VAC/VDC, 50/60 Hz	20
FM1D20-120U	Panel	120 VAC, 50/60 Hz	20
FM1D20A-24	DIN Rail, Surface	24 VAC/VDC, 50/60 Hz	20
FM1D20A-120	DIN Rail, Surface	120 VAC, 50/60 Hz	20
FM1D20A-240	DIN Rail, Surface	240 VAC, 50/60 Hz	20
FM1D20E-24	Flush	24 VAC/VDC, 50/60 Hz	20
FM1D20E-120	Flush	120 VAC, 50/60 Hz	20

DIMENSIONS
FM1D20A Surface/DIN Rail with Clear Dust Cover

FM1D20E Flush Mount with Clear Dust Cover

FM1D20 Flush Mount with Clear Dust Cover

RATINGS

Input Voltage	See Model Chart
Power Consumption VA	4
Switch Type	SPDT
NO Contacts	
Ballast (Fluorescent)	8 A, 240 VAC, 12 A, 120 VAC
Tungsten (Incandescent)	600 W, 120 VAC, 1000 W, 240 VAC
Pilot Duty	360 VA, 120 VAC, 720 VA, 240 VAC
Motor	1/2 HP, 120 VAC, 1 HP, 240 VAC
NC Contacts	
Resistive (Heater)	16 A, 277 VAC, 8 A, 24 VDC
Wiring Terminals	¼" Quick connect terminals
Operating Temperature	-13°F - 131°F (-25°C - 55°C)
Warranty	1-Year limited

WIRING DIAGRAMS

NO/NC Switch Configuration

Typical Wiring: 24-120 VAC Application

Typical Wiring: 24 VDC Application

FM1D50A-24

FM1D50 Series
16 A, 1-CIRCUIT TIMER MODULES

The FM1D50 Series Electronic Time-Based Controls enable switching of ventilation, heating, cooling, lighting or other electrical loads in commercial and industrial applications. These one-channel time switches are programmable for 24-hour or 7-day schedules. They are intended for DIN rail mounting. Surface/DIN rail models are completely enclosed in a plastic housing and include a terminal cover, dust cover and subbase for installation and hard wiring.

APPLICATIONS
• Refrigeration Merchandiser • Air Movement & Ventilation • Aeration • Septic Treatment
• Generator Exercising

FEATURES
• 24-Hour or 7-day applications
• 50 Set point programs
• Two preset adjustable block programs
• Easy-to-follow menu driven programming
• Manual override with status indication
• Battery backup
• Large LCD
• Seven available languages: English, German, French,Italian, Spanish, Portuguese and Dutch
• Auto Daylight Saving Time feature
• A & E Models come with clear dust cover

RATINGS	
Input Voltage	See Model Chart
Power Consumption VA	4
Switch Type	SPDT
NO Contacts	
Ballast (Fluorescent)	8 A, 240 VAC, 12 A, 120 VAC
Resistive (Heater)	16 A, 277 VAC
Tungsten (Incandescent)	600 W, 120 VAC, 1000 W, 240 VAC
Pilot Duty	360 VA, 120 VAC, 720 VA, 240 VAC
Motor	1/2 HP, 120 VAC, 1 HP, 240 VAC
NC Contacts	
Resistive (Heater)	16 A, 277 VAC
Wiring Terminals	Screw terminals for #24 to #10 AWG wire
Operating Temperature	-13°F - 131°F (-25°C - 55°C)
Warranty	1-Year limited

Model #	Mounting	Input Voltage	Programs
FM1D50A-24	DIN Rail, Surface	24 VAC/VDC, 50/60 Hz	50
FM1D50A-120	DIN Rail, Surface	120 VAC, 50/60 Hz	50

WIRING DIAGRAMS
NO/NC Switching Configuration

Typical Wiring:
24 VDC Application

Typical Wiring:
24-120 VAC Application

DIMENSIONS
FM1D50A Surface/DIN Rail with Clear Dust Cover

INTERMATIC®

FM2D50 Series
16 A, 2-CIRCUIT TIMER MODULES

The FM2D50 Series provides 2-circuit, time-based control of ventilation, heating, cooling, lighting or other electrical loads in commercial and industrial applications. These one-channel time switches are programmable for 24-hour or 7-day schedules. They are intended for surface, flush or DIN rail mounting. The control is completely enclosed in a plastic housing and includes a terminal cover, dust cover and subbase for installation and hard wiring.

APPLICATIONS
• Refrigeration Merchandiser • Air Movement & Ventilation • Aeration • Septic Treatment
• Generator Exercising

FEATURES
• 24-Hour or 7-day applications
• Auto Daylight Saving Time (DST) feature
• 2-Circuit independent programming
• 50 Set point programs
• Two preset adjustable block programs
• Easy-to-follow, menu-driven programming
• Seven available languages: English, German, French, Italian, Spanish, Portuguese and Dutch
• Surface, Flush or DIN rail mounting (for DIN rail mounting, order MB-DIN base, sold separately)
• Manual override with status indication
• Battery backup
• Large LCD
• Clear dust cover

FM2D50-24

Model #	Mounting	Input Voltage	Programs
FM2D50-24	DIN Rail, Flush, Surface	24 VAC/VDC, 50/60 Hz	50
FM2D50-120	DIN Rail, Flush, Surface	120 VAC, 50/60 Hz	50
FM2D50-240	DIN Rail, Flush, Surface	240 VAC, 50/60 Hz	50

RATINGS	
Input Voltage	See Model Chart
Power Consumption VA	4
Switch Type	2xSPDT
NO Contacts	
Ballast (Fluorescent)	8 A, 240 VAC, 12 A, 120 VAC
Resistive (Heater)	16 A, 277 VAC
Tungsten (Incandescent)	600 W, 120 VAC, 1000 W, 240 VAC
Pilot Duty	360 VA, 120 VAC, 720 VA, 240 VAC
Motor	1/2 HP, 120 VAC, 1 HP, 240 VAC
NC Contacts	
Ballast (Fluorescent)	8 A, 240 VAC, 12 A, 120 VAC
Resistive (Heater)	16 A, 277 VAC
Wiring Terminals	Screw terminals for #24 to #10 AWG wire
Operating Temperature	-13°F - 131°F (-25°C - 55°C)
Warranty	1-Year limited

DIMENSIONS

WIRING DIAGRAMS

NO/NC Switching Configuration

Typical Wiring: 24 VAC/VDC Application

Typical Wiring: 120 VAC

Typical Wiring: 240 VAC

Electronic Controls

GM40AVE-RD89

GM40AVE
40 A AUTO-VOLTAGE GENERAL PURPOSE ELECTRONIC TIME SWITCH

The GM40AVE is a universal, electronic time switch designed for general purpose residential and commercial applications. The robust 40 A time control automatically detects the input voltage without the use of a DIP switch or selector pins. The time switch automatically selects any voltage between 120 VAC and 277 VAC. The mechanism is mounted in a compact UL Type 3R outdoor enclosure and can also be easily retrofitted into other Intermatic enclosure types. The time control features a DPDT switching configuration standard (i.e. two normally open and two normally closed contacts).

APPLICATIONS
• Aeration, Air Movement & Ventilation • Generator Exercising
• Refrigeration Merchandiser • Septic Treatment

FEATURES
• Heavy-duty 40 A contact rating
• Automatically adjusts voltages between 120-277 VAC
• 24-Hour/7-day flexible scheduling
• Power and status LED indicators
• DPDT switching configuration (2 NO and 2 NC Contacts)
• 14 Set point programs
• Manual override with load status indication
• Self-recharging battery with back up protection up to 2500 hours
• Type 3R outdoor enclosure with lockable hasp
• To-the-minute accuracy

RATINGS	
Input Voltage	See Model Chart
Switch Type	DPDT
NO Contacts	
Electronic Ballast (LED)	30 A, 120 VAC, 50/60 Hz; 20 A, 277 VAC, 50/60 Hz
Resistive (Heater)	40 A, 120-277 VAC, 50/60 Hz
Tungsten (Incandescent)	15 A, 120 VAC, 50/60 Hz
Motor	1 HP, 16 FLA, 96 LRA @ 120 VAC, 50/60 Hz; 2 HP, 12 FLA, 52 LRA @ 208-277 VAC, 50/60 Hz
NC Contacts	
Electronic Ballast (LED)	10 A, 277 VAC, 50/60 Hz
Resistive (Heater)	30 A, 120-277 VAC, 50/60 Hz
Tungsten (Incandescent)	2 A, 120 VAC, 50/60 Hz
Motor	1 HP, 12 FLA, 30 LRA @ 120 VAC, 50/60 Hz; 2 HP, 10 FLA, 30 LRA @ 240 VAC, 50/60 Hz
Wiring Terminals	Screw box lug
Operating Temperature	-40°F - 131°F (-40°C - 55°C)
Warranty	1-Year limited

Model #	Input Voltage	Battery Backup
GM40AVE-RD89	120-277 VAC, 50/60 Hz	2500 Hours

WIRING DIAGRAMS
Typical Wiring: 208/240 VAC

208/240 VAC

Typical Wiring: 120/277 VAC

120/277 VAC

DIMENSIONS

6.61"
[16.79 cm]
5.73"
[14.55 cm]
8.88"
[22.56 cm]
3"
[7.62 cm]

INTERMATIC®

GMXFM Series
16 A GENERAL PURPOSE 1- CIRCUIT ELECTRONIC TIME CONTROLS

Universal GMXFM Electronic Series Time Controls are a low-cost alternative for applications that do not require more than 16 A. The timer is mounted in a UL Type 1 indoor enclosure.

APPLICATIONS
• Refrigeration Merchandiser • Air Movement & Ventilation • Aeration • Septic Treatment
• Generator Exercising

FEATURES
• 24-Hour or 7-day applications
• Finger-safe terminals
• Manual Daylight Saving Time adjustment (D20 Models)
• Manual override with load status indication
• Heavy-duty relay contacts for switching low or line voltage loads
• Non-metallic enclosure provides space for field added contactor or other accessories

GMXFM1D20-I-24

Model #	Input Voltage	# of Circuits	Number of Set Points	Battery Backup	Enclosure
GMXFM1D20-I-24	24 VAC/VDC, 50/60 Hz	1	20	7 Years	Indoor type 1 plastic
GMXFM1D20-I-120	120 VAC, 50/60 Hz	1	20	7 Years	Indoor type 1 plastic

RATINGS	
Input Voltage	See Model Chart
Power Consumption VA	4
Switch Type	SPDT
NO Contacts	
Ballast (Fluorescent)	12 A, 120 VAC, 8 A, 240 VAC
Resistive (Heater)	16 A, 277 VAC
Tungsten (Incandescent)	600 W, 120 VAC, 1000 W, 240 VAC
Pilot Duty	360 VA, 120 VAC, 720 VA, 240 VAC
Motor	1/2 HP, 120 VAC, 1 HP, 240 VAC
NC Contacts	
Resistive (Heater)	16 A, 277 VAC, 8 A, 24 VDC
Pilot Duty	360 VA, 120 VAC
Wiring Terminals	Screw box lug
Operating Temperature	-13°F - 131°F (-25°C - 55°C)
Warranty	1-Year limited

WIRING DIAGRAMS

120 VAC Timer,
120 VAC Load

120 VAC Timer, 24 VAC,
120 VAC, or 240 VAC Load

120 VAC, Two Speed Fan

DIMENSIONS

6.5" [16.5 cm]
5.54" [14.1cm]
10" [25.4 cm]
8.64" [21.9 cm]
3.74" [9.5 cm]

Electronic Controls

ACCESSORIES

ET9250

ET-NF

ET9232

ET9100

Model #	Description
101--00040	Battery Holder for ET100
124ET2574	(SPDT) Insulator for ET Series controls (ET1115C, ET1115CR, ET1715C, ET1715CR, ET8115C and ET8115CR)
124ET2581	(SPST) Insulator for ET Series controls (ET1105C, ET1105CR, ET1705C, ET1705CR, ET8015C and ET8015CR)
124ET2582	(DPST) Insulator for ET Series controls (ET1125C, ET1125CR, ET1725C, ET1725CR, ET8215C and ET8215CR)
178GR10K-1	Additional Separate Sensor Accessory (for Multiple Evaporator Applications)
ET9100	Replacement Door Assembly for ET90415-ET91615
ET9232	Ethernet Module for ET90000 Upgrade or Replacement
ET9250	4-Circuit Relay Board for Upgrade or Replacement of ET90415CR-ET91615CR Panels
ET-NF	RC Snubber Noise Filter 24-277VAC/DC for Electronic Controls
MS-101W	Commercial Grade Momentary Contact Decorator Switch, 120/277V, 15A, SPST, White

ENCLOSURES

2T511GA

ET-2T2926A

2T308A

2T2500GA

Model #	Description
2T2040GA	Case-Indoor, Type 1 Metal, Gray
2T2331GA	Case-Outdoor, Type 3R Metal, Gray
2T2365GA	Case-Indoor, Type 1 Metal, Gray
2T2500GA	Case-Outdoor, Type 3R Plastic, Gray
2T2926A	Case-Outdoor, Type 3R Plastic, Gray with See-Through Window
2T308A	Case-Indoor, Type 1 Metal, Gray
2T511GA	Case-Outdoor, Type 3R Metal, Gray

INTERMATIC®

Electronic Controls

ENCLOSURE DIMENSIONS

2T2040GA

7 7/8"

5 1/8"

3/16"

2T2365GA / 2T308A

8"

11"

2T511GA / 2T2485GA

5/16"

∅3/16"

∅3/8"

3X 8 1/16"

2X 8 5/8"

2X ∅1/4"
MOUNTING HOLES

KNOCKOUT
1/2" & 3/4"

1 5/8"

3 1/4"

10 1/8"

6 1/2"

2T2500GA/ 2T2502GA/ 2T2926A

6 1/2"

4"

R1/8"

2 3/4"

10"

8 1/16"

8"

2X 8 1/2"

2X ∅1/4"
MOUNTING HOLES

1 1/2"

1 5/8"

KNOCKOUT
1/2", 3/4"

3 1/4"

— WANT TO KNOW MORE? —

Please see pages186-190 for additional wiring diagram and information on enclosures.

Mechanical Time Switch Solutions

Manage the runtime of fans, lights, motors, heaters, and other energy-consuming loads with our industry-leading mechanical time switch solutions. The trusted "yellow dial" is available in a range of heavy-duty options and can be integrated in a variety of commercial and industrial applications.

Indoor and Outdoor Lighting Control

Create dynamic, energy-efficient lighting environments by installing simple mechanical time switches. Our versatile solutions allow for 24-hour and 7-day control, as well as skip periods and manual override control.

Ventilation Systems

Keep fans and ventilation systems running on schedule with durable mechanical time switches. These rugged controls make it easy to create basic ON/OFF schedules in a range of commercial and industrial applications.

Landscape Water Control

Simplify watering schedules and promote water conservation by installing a versatile mechanical time switch. These reliable solutions make it easy to set sprinkler run times over a 24-hour or 7-day period.

Pump, Machinery and Motor Controls

Manage pump and light motor control schedules, including pool and spa pumps, with our range of mechanical time switch solutions. Designed for simple installation and operation, these controls provide lasting value in a wide variety of applications.

Contents

A Closer Look at the Control That Put Intermatic on the Map

There are few products on the market that contractors can realistically expect to perform for decades without issue. Versatile and ever-dependable, T100 Series Mechanical Time Switches by Intermatic fit into this category.

Mechanical Time Switches
24-Hour

T101R   T101M

T100 Series
24-HOUR

The T100 Series Mechanical Time Switch has proven it can stand the test of time. These dependable time switches can handle electrical loads up to 40 A per pole and allow for up to 12 ON/OFF operations per day. A manual override switch provides added convenience.

APPLICATIONS
• Timing/Scheduling ON/OFF • Indoor Lighting Control

FEATURES
• Direct 24-hour control of most loads
• Up to 12 ON/OFF operations each day with minimum ON/OFF times of one hour
• Manual override
• One ON and one OFF tripper included
• Can be installed in most Intermatic enclosures

Model #	Switch Type	Input Voltage	Electronic Ballast	Inductive	Restive (Heater)	Tungsten (Incandescent)	Pilot Duty
Indoor type 1 metal							
T101	SPST	120 VAC, 60 Hz	16 A, 120 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz
T102	SPST	208-277 VAC, 60 Hz	16 A, 208-277 VAC	40 A, 120-277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
T103	DPST	120 VAC, 60 Hz	16 A, 120-277 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz
T104	DPST	208-277 VAC, 60 Hz	16 A, 120-277 VAC	40 A, 120-277 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
T104-50	DPST	208-277 VAC, 50 Hz	16 A, 120-277 VAC	40 A, 120-277 VAC, 50 Hz	40 A, 120-480 VAC, 50Hz	40 A, 120-277 VAC, 50 Hz	1000 VA, 120-277 VAC, 50 Hz
T105	1 NO/1 NC, SPDT	120 VAC, 60 Hz	16 A, 120 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz
T101B	SPST	120 VAC, 60 Hz	16 A, 120 VAC	40 A, 120-277 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
Indoor/outdoor type 3R plastic							
T101P	SPST	120 VAC, 60 Hz	16 A, 120 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz
T102P	SPST	208-277 VAC, 60 Hz	16 A, 208-277 VAC	40 A, 120-277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
T103P	DPST	120 VAC, 60 Hz	16 A, 120-277 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz
T104P	DPST	208-277 VAC, 60 Hz	16 A, 120-277 VAC	40 A, 120-277 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
Indoor/outdoor type 3R plastic with see-through door							
T101PCD82	SPST	120 VAC, 60 Hz	16 A, 120 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz
T103PCD82	DPST	120 VAC, 60 Hz	16 A, 120-277 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz
T104PCD82	DPST	208-277 VAC, 60 Hz	16 A, 120-277 VAC	40 A, 120-277 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
Indoor/outdoor type 3R metal							
T101R	SPST	120 VAC, 60 Hz	16 A, 120 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz
T102R	SPST	208-277 VAC, 60 Hz	16 A, 208-277 VAC	40 A, 120-277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
T103R	DPST	120 VAC, 60 Hz	16 A, 120-277 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz
T104R	DPST	208-277 VAC, 60 Hz	16 A, 120-277 VAC	40 A, 120-277 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
T106R	1 NO/1 NC, SPDT	208-277 VAC, 60 Hz	16 A, 208-277 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz
T1205R	DPST	480 VAC, 60 Hz	16 A, 277 VAC	40 A, 120-277 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
N/A - Mechanism only							
T101M	SPST	120 VAC, 60 Hz	16 A, 120 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz
T103M	DPST	120 VAC, 60 Hz	16 A, 120-277 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz
T106M	1 NO/1 NC, SPDT	208-277 VAC, 60 Hz	16 A, 208-277 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz

Ratings	
Max Power Consumption	3 W
Motor	2 HP, 24 FLA @ 120 VAC, 60 Hz, 5 HP, 28 FLA @ 240 VAC, 60 Hz
Operating Temperature	-40°F - 130°F (-40°C - 54°C)

Wire Size	#8 AWG
Warranty	1-Year limited

For enclosure options and dimensions, see pages 186-190
For accessories and replacement parts, see pages 52-53

INTERMATIC®

T170, T1400, and T1800 Series
24-HOUR WITH SKIP-A-DAY

Similar to the T100 Series, these time switches can also handle electrical loads up to 40 A per pole. The T170 Series Time Switches allow for up to 10 ON/OFF settings per day, but give you the additional capability of skipping days in which the loads may not be needed. Each time switch will come with one set of ON/OFF trippers as well as three skipper screws to omit the schedule for at least three days.

APPLICATIONS
• Indoor Lighting Control • Outdoor Lighting Control • Timing/Scheduling ON/OFF

FEATURES
• Controls loads up to 40 A per pole
• Direct 24-hour control of most loads
• Up to 10 ON/OFF operations each day
• Minimum ON/OFF times of one hour
• Manual override
• One ON and one OFF tripper and three day-skipper screws included

T171CR

Model #	Switch Type	Input Voltage	Electronic Ballast	Inductive	Restive (Heater)	Tungsten (Incandescent)	Pilot Duty
Indoor type 1 metal							
T171	SPST	120 VAC, 60 Hz	16 A, 277 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz
T172	SPST	208-277 VAC, 60 Hz	16 A, 277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
T173	DPST	120 VAC, 60 Hz	16 A, 277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
T174	DPST	208-277 VAC, 60 Hz	16 A, 277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
T175**	1 NO/1 NC	120 VAC, 60 Hz	16 A, 277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
T176**	1 NO/1 NC	208-277 VAC, 60 Hz	16 A, 277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
Outdoor type 3R metal							
T171CR	SPST	120 VAC, 60 Hz	16 A, 277 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz
T173R	DPST	120 VAC, 60 Hz	16 A, 277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
T173CR	DPST	120 VAC, 60 Hz	16 A, 277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
T174R	DPST	208-277 VAC, 60 Hz	16 A, 277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
T1471BR*	4-PST	120 VAC, 60 Hz	16 A, 277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
T1471BCR*	4-PST	120 VAC, 60 Hz	16 A, 277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
T1472BR*	4-PST	208-277 VAC, 60 Hz	16 A, 277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
T1475BR*	4-PST	480 VAC, 60 Hz	16 A, 277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
T1871BR*†	2 NO/2 NC	120 VAC, 60 Hz	16 A, 277 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz

T171CR, T173CR, T174CR, T1471BCR are models with Carry-Over
*Separate clock motor terminals for switching circuits not on line voltage.
**Can be wired as SPDT.
† Can be wired as DPDT.

Ratings	
Max Power Consumption	3 W
Motor T170 Series	2 HP, 24 FLA @ 120 VAC, 60 Hz, 5 HP, 28 FLA @ 240 VAC, 60 Hz
Motor T1400 & T1800 Series	
Single Phase	2 HP, 24 FLA @ 120 VAC, 60 Hz; 5 HP, 28 FLA @ 240 VAC, 60 Hz
Three Phase	7 1/2 HP, 28 FLA @ 208 VAC, 60 Hz; 10 HP, 28 FLA @ 240 VAC, 60 Hz
Wire Size	#8 AWG
Enclosure Dimensions H x W x D	
Metal Indoor	7.875" x 5.125" x 3.4375" (200 mm x 130.2 mm x 87.3 mm)
Metal Outdoor	10.125" x 6.5" x 3.625" (257.2 mm x 165.1 mm x 92.1 mm)
Operating Temperature	-40°F - 130°F (-40°C - 54°C)

Mechanical Time Switches
24-Hour with 15-Minute Interval

T1905P

T1900 Series & T1970 Series
24-HOUR WITH 15-MINUTE INTERVAL

This series of mechanical time switches offers more flexible scheduling capabilities by offering 15-minute intervals. These units also come with trippers that slide in or out easily for fast and accurate settings. All units can control up to 20 A of electrical load and have a single pole, double throw switch.

APPLICATIONS
• Timing/Scheduling ON/OFF • Indoor Lighting Control

FEATURES
• Provides up to 96 operations (48 ON/48 OFF) every 24 hours
• Models with skipper wheel allow for operations to be omitted on selected days of the week
• 15-minute intervals
• Captive trippers slide in and out of dial for fast, accurate setting

Ratings	
Resistive (Heater):	20 A, 125-480 VAC, 60 Hz
Motor	1/2 HP, 125 VAC, 60 Hz, 1 HP, 250 VAC, 60 Hz
Max Power Consumption	3 W
Wire Size	#12 AWG
Enclosure Dimensions H x W x D	
Metal Indoor	7.875" x 5.125" x 3.4375" (200 mm x 130.2 mm x 87.3 mm)
Metal Outdoor	10.125" x 6.5" x 3.625" (257.2 mm x 165.1 mm x 92.1 mm)
Plastic Indoor/Outdoor	10" x 6.5" x 4" (254 mm x 165.1 mm x 101.6 mm)
Warranty	1-Year limited
Operating Temperature	-40°F - 130°F (-40°C - 54°C)

For enclosure options and dimensions, see pages 186-190
For accessories and replacement parts, see pages 52-53

Model #	Switch Type	Input Voltage	Skipper Wheel
Indoor type 1 metal			
T1905	SPDT	125 VAC, 60 Hz	Not Included
T1905E	SPDT	480 VAC, 60 Hz	Not Included
T1906	SPDT	208-277 VAC, 60 Hz	Not Included
T1975	SPDT	125 VAC, 60 Hz	24 Hour
T1975E	SPDT	480 VAC, 60 Hz	24 Hour
T1976	SPDT	208-277 VAC, 60 Hz	24 Hour
Outdoor type 3R metal			
T1975ER	SPDT	480 VAC, 60 Hz	24 Hour
T1975R	SPDT	125 VAC, 60 Hz	24 Hour
T1976R	SPDT	208-277 VAC, 60 Hz	24 Hour
Indoor/outdoor type 3R plastic			
T1905P	SPDT	125 VAC, 60 Hz	Not Included

INTERMATIC®

T1905HD & T1975HD
24-HOUR HEAVY-DUTY

These heavy-duty time switches are designed to handle the toughest environments and have fully encapsulated motors to prevent dust or debris from entering the motor. The ON/OFF trippers are permanently attached to the metal dial to avoid the accidental loss of a tripper. These time switches offer 15-minute intervals, providing up to 96 operations each day.

APPLICATIONS
• Timing/Scheduling ON/OFF • Indoor Lighting Control

FEATURES
• Heavy-duty metal dial and metal enclosure withstands the most punishing environmental conditions
• Models with skipper wheel allow for operations to be omitted on selected days of the week
• Easy-to-set trippers rotate in/out for fast, accurate setting
• Up to 96 operations (48 ON/48 OFF) every 24 hours
• 15-minute intervals between events
• Fully encapsulated motor with protected gears

Model #	Switch Type	Input Voltage	Skipper Wheel
Indoor type 1 metal			
T1905HD	SPDT	125 VAC, 60 Hz	Not Included
T1975EHD	SPDT	480 VAC, 60 Hz	24 Hour
Outdoor type 3R metal			
T1905HDR	SPDT	125 VAC, 60 Hz	Not Included
T1975HDR	SPDT	125 VAC, 60 Hz	24 Hour
T1975EHDR	SPDT	480 VAC, 60 Hz	24 Hour
N/A - Mechanism only			
T1905HDM	SPDT	125 VAC, 60 Hz	Not Included

T1905HD

Ratings	
Resistive (Heater):	20 A, 125-480 VAC, 60 Hz
Motor	1/2 HP, 125 VAC, 60 Hz, 1 HP, 250 VAC, 60 Hz
Max Power Consumption	3 W
Wire Size	#12 AWG
Enclosure Dimensions H x W x D	
Metal Indoor	7.875" x 5.125" x 3.4375" (200 mm x 130.2 mm x 87.3 mm)
Metal Outdoor	10.125" x 6.5" x 3.625" (257.2 mm x 165.1 mm x 92.1 mm)
Warranty	1-Year limited
Operating Temperature	-40°F - 130°F (-40°C - 54°C)

For enclosure options and dimensions, see pages 186-190
For accessories and replacement parts, see pages 52-53

KEEP THE PIPELINE ON-TIME

Choose the T1905HD or T1975HD Heavy-Duty Timer for seamless ON/OFF control in oil field time switch applications. The rugged and versatile controls offer unique features, including higher input voltage ratings and an encapsulated motor, which help them perform in harsh outdoor conditions.

T7401B

T7000B Series
7-DAY

These 7-Day Mechanical Time Switches offer the capability of having a different schedule for each day of the week. They can handle up to 40 A of electrical loads per circuit and have separate terminals for powering the clock motor. These time switches can handle up to four loads per clock, providing a single control for easier installation. Each time switch comes with 7 ON and 7 OFF trippers, allowing for at least one ON/OFF operation each day.

APPLICATIONS
• Indoor Lighting Control • Timing/Scheduling ON/OFF

FEATURES
• Different ON/OFF programs each day of the week
• True 7-day load control with minimum ON/OFF time of 3 1⁄2 hours
• Separate clock motor terminals for switching loads not on line voltage
• Carry-over automatically rewinds when power resumes
• Minimum of 16-hour carry-over for maintaining preset schedules during power failures
• Available with Type 3R rated outdoor metal enclosure or Type 1 rated indoor metal in gray finish with separate grounding terminal

Ratings	
Electronic Ballast (LED)	16 A, 277 VAC, 60 Hz
Tungsten (Incandescent)	40 A, 120-277 VAC, 60 Hz
Resistive (Heater)	40 A, 120-480 VAC, 60 Hz
Inductive	40 A, 120-277 VAC, 60 Hz
Pilot Duty	1000 VA, 120-277 VAC, Per Pole, 60 Hz
Motor	
Single-Phase	2 HP, 24 FLA @ 120 VAC, 60 Hz; 5 HP, 28 FLA @ 240 VAC, 60 Hz
Three-Phase	7 1/2 HP, 28 FLA @ 208 VAC, 60 Hz; 10 HP, 28 FLA @ 240 VAC, 60 Hz
Wire Size	#8 AWG
Enclosure Dimensions H x W x D	
Indoor Metal	13.125" x 9" x 3.75" (333.3 mm x 228.9 mm x 95.25 mm)
Warranty	1-Year limited
Operating Temperature	-40°F - 130°F (-40°C - 54°C)

For enclosure options and dimensions, see pages 186-190
For accessories and replacement parts, see pages 52-53

Model #	Switch Type	Input Voltage
Indoor type 1 metal		
T7401B	4-PST/NO	120 VAC, 60 Hz
T7402B	4-PST/NO	208-277 VAC, 60 Hz
T7801B*	2 NO/2 NC	120 VAC, 60 Hz
T7802B*	2 NO/2 NC	208-277 VAC, 60 Hz
Indoor type 1 metal		
T7401BC	4-PST/NO	120 VAC, 60 Hz
T7402BC	4-PST/NO	208-277 VAC, 60 Hz
T7801BC*	2 NO/2 NC	120 VAC, 60 Hz

*Can be wired as (2) DPDT.
Note: All models have separate clock motor terminals for switching circuits not on line voltage.
They may be used with 24 V systems if wired in accordance with NEC regulations.

INTERMATIC®

T2000 Series
7-DAY

These compact 7-Day Mechanical Time Switches offer the capability of having a different schedule for each day of the week. They can handle up to 20 A of resistive loads and up to six ON/OFF settings per day.

APPLICATIONS
• Timing/Scheduling ON/OFF • Indoor Lighting Control

FEATURES
• Minimum 2-hour timing intervals
• Up to 42 ON/OFF operations per week
• Type 1 rated metal indoor enclosure

T2005

Model	Switch Type	Input Voltage
Indoor type 1 metal		
T2005	SPDT	120 VAC, 60 Hz
T2006	SPDT	208-277 VAC, 60 Hz

Ratings	
Resistive (Heater)	20 A, 125, 208-277 VAC, 60 Hz
Motor	1/2 HP, 125 VAC, 60 Hz, 1 HP, 250 VAC, 60 Hz
Wire Size	#12 AWG
Enclosure Dimensions H x W x D	7.875" x 5.125" x 3.4375" (200 mm x 130.2 mm x 87.3 mm)
Warranty	1-Year limited
Operating Temperature	-40°F - 130°F (-40°C - 54°C)

Mechanical Time Switches
Panel Mount, 24-Hour or 7-Day

THE 121 161

THE 121 161
1H,120V,MECH SRFC/DIN MNT

THE 121 161 is a DIN rail time switch from Intermatic that allows hourly switching cycle commands. Setting time is easy by grasping and rotating the clock dial. Time and switching times can be checked at a glance, resulting in versatile application possibilities, such as motor cycling, generator exercising, or any other applications requiring hourly cycling activities.

APPLICATIONS
• Greenhouse Misting • Aeration • Air Movement & Ventilation • Water Circulation
• Pool Pump

FEATURES
• 1.25 minute resolution
• Up to 24 ON/OFF times per hour
• Captive tripper levers
• SPDT 16 A switch
• DIN rail or enclosure mounting
• On-AUTO-OFF Override switch
• Synchronous drive

Ratings	
Switch Type	SPDT, Isolated Contacts
Resistive	16 A, 250 VAC
Tungsten	750 W, 250 VAC
Wiring Connections	Screw terminal accepts up to #12 AWG wire
Operating Humidity	0-95% RH, Non-condensing
Warranty	1-Year limited

Model #	Input Voltage	Mounting	Total Cycle Time	Timing Interval per Tripper
THE 121 161	120 VAC, 60 Hz	DIN Rail	1 hr	1.25 min

DIMENSIONS

FM1 SERIES

FM1 Series Electromechanical Timer Modules are designed with up to 21 Amp switching capability for control of a wide variety of end use applications including heating, ventilation, air conditioning, refrigeration, pool and spa, lighting and security. These versatile timers come in 12 or 24 VAC/DC or 120 and 208/240 VAC 50/60 Hz. They are available with 24-hour or 7-day scheduling.

INTERMATIC®

FM1 Series
21 A, 1-CIRCUIT, PANEL MOUNT TIMER MODULES

The FM1 series timer modules are designed to be integrated inside of a machine control panel, circuit board, or other equipment. They are a simple and low cost alternative for applications that do not require more than 21 A or 2 HP, 240 VAC. The FM1 is designed for 24-hour or 7-day control or overriding a functional typical state of a heating, ventilation, refrigeration, lighting, security, or pump system. The FM1 series is ideal for 12, 24 VAC/VDC,120 or 208/240VAC single-phase general applications.

APPLICATIONS
• Refrigeration Merchandiser • Air Movement & Ventilation • Aeration • Septic Treatment
• Generator Exercising

FEATURES
• 21 A SPDT Switch
• Captive trippers with 15-minute intervals on 24-hour models and 2-hour intervals on 7-day models
• 72-hour carry-over battery backup on Q models
• Noise immune – ideal for robust applications
• Synchronous drive or quartz drive Q models with self-recharging battery backup
• True clock face, easy-to-set
• Available with or without override
• Compact size
• Clear plastic cover (DC-FME-A), sold separately
• Standalone or with indoor/outdoor enclosure, sold separately

FM1QTUZ-24U

Model # Synchronous	Model # Quartz	Input Voltage	Override	Min On/Off Time
24 hrs				
FM1STUZ-24U	FM1QTUZ-24U*	24 VAC, 60 Hz	No	15 min
FM1STUZ-120U	FM1QTUZ-120U*	120 VAC, 60 Hz	No	
FM1STUZ-240U	–	208/240 VAC, 60 Hz	No	
FM1STUZH-24U	FM1QTUZH-24U*	24 VAC, 60 Hz	Yes	15 min
FM1STUZH-120U	FM1QTUZH-120U*	120 VAC, 60 Hz	Yes	
FM1STUZH-240U	–	208/240 VAC, 60 Hz	Yes	
7 days				
–	FM1QWUZ-240U*	208/240 VAC, 50/60 Hz	No	2 hrs
FM1SWUZ-120U	FM1QWUZH-120U*	120 VAC, 60 Hz	Yes	2 hrs

Quartz models operate at 12-24 VAC/VDC, 120, or 208/240 VAC and are Title 20 listed.

Ratings
Ratings	
Tungsten (Incandescent)	1350 W, 120 VAC
Resistive (Heater)	21 A, 250 VAC
Power Consumption	1 Va
Switch Type	SPDT
Motor	1 HP, 120 VAC; 2 HP, 250 VAC
Battery Backup Option	72-hour Carry-over, Battery, Self-recharging "Q" Models Only
Wiring Connections	1/4" Quick connect terminals
Warranty	1-Year limited
Operating Temperature	-40°F - 185°F (-40°C - 85°C)

WIRING DIAGRAMS

DIMENSIONS
FM1 Panel Mount Series

Mechanical Time Switches
Flush or Surface/DIN Rail Mount, 24-Hour

MIL72ESTUZ-120

MIL72ASTUZ-120

CSA LR3730 UL #E10694 CE RoHS Compliant 2002/95/EC TITLE 20 LISTED

MIL72 Series, 24-Hour
21 A, 1-CIRCUIT, 24-HOUR TIMER MODULES

The MIL72 series time switches are designed to be mounted inside a control panel and can accommodate surface/DIN rail or flush panel mounting. The MIL72 series is a light duty commercial time switch for 12-24 VAC/VDC, 120 or 208/240 VAC single-phase applications.

APPLICATIONS
• Refrigeration Merchandiser • Air Movement & Ventilation • Aeration
• Septic Treatment -• Generator Exercising

FEATURES
• 21 A SPDT switch
• Synchronous drive or quartz drive (Q Models) with self-recharging battery backup
• 72-hour carry-over battery backup on Q models
• Captive trippers with 15-minute intervals
• Available with or without override
• True clock face, easy-to-set
• Surface/DIN rail or flush mount
• Clear plastic dust cover
• Compact size

Ratings	
Tungsten (Incandescent)	1350 W, 120 VAC
Resistive (Heater)	21 A, 250 VAC
Power Consumption	
24 VAC	0.1 Va
120 VAC	0.5 Va
208/240	1 Va
Switch Type	SPDT
Motor	1 HP, 120 VAC; 2 HP, 250 VAC
Battery Backup Option	72-hour Carry-over, Battery, Self-recharging "Q" Models Only
Wiring Connections	¼" Quick connect terminals
Warranty	1-Year
Operating Temperature	-40°F - 185°F (-40°C - 85°C)

Model # Flush Mount (MIL72E)	Model # Surface Mount/DIN Rail (MIL72A)	Input Voltage	MIN ON/OFF Time	Override
Synchronous				
MIL72ESTUZ-120	MIL72ASTUZ-120	120 VAC, 60 Hz	15 min	No
MIL72ESTUZ-240	MIL72ASTUZ-240	208/240 VAC, 60 Hz	15 min	No
–	MIL72ASTUZH-24	24 VAC, 60 Hz	15 min	Yes
MIL72ESTUZH-120	MIL72ASTUZH-120	120 VAC, 60 Hz	15 min	Yes
–	MIL72ASTUZH-240	208/240 VAC, 60 Hz	15 min	Yes
Quartz				
MIL72EQTUZ-24*	–	12/24 VDC, 12/24 VAC, 50/60 Hz	15 min	Yes
MIL72EQTUZH-120*	MIL72AQTUZH-120*	120 VAC, 50/60 Hz	15 min	Yes
–	MIL72AQTUZ-240*	208/240 VAC, 50/60 Hz	15 min	No

Quartz Models operate on 12-24 VAC/VDC, 120 or 208/240 VAC, and 50/60 Hz and are Title 20 listed.

DIMENSIONS

MIL72E Flush Mount with Clear Dust Cover

2.83" [72 mm]
2.60" [66 mm]
.80" [20.5 mm]
1.36" [34.5 mm]

MIL72A Surface Mount/DIN Rail Mount with Clear Dust Cover

2.83" [72 mm]
2.06" [52 mm]
1.56" [39.5 mm]
4.00" [102.5 mm]
2.60" [66mm]
1.50" [38 mm]

WIRING DIAGRAMS
12-24 VAC/VDC & 120 VAC application

Timer
T
1 2 3 COM 4 N.O. 5 N.C.
LOAD
H or +(DC) 120 VAC N or -(DC)
12-24 VDC (Quartz Only)

Terminal Connections

M
① ② ③ ④ ⑤
INPUT C NO NC

ON
ON
OFF
OFF

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MIL72 Series, 7-Day
21 A, 1-CIRCUIT, 7-DAY TIMER MODULES

The MIL72 series time switches are designed to be mounted inside a control panel and can accommodate surface/DIN rail or flush panel mounting. The MIL72 series is a light duty commercial time switch for 12-24 VAC/VDC, 120 or 208/240 VAC single-phase applications.

APPLICATIONS
• Refrigeration Merchandiser • Air Movement & Ventilation • Aeration • Septic Treatment
• Generator Exercising

FEATURES
• 21 A SPDT switch
• Synchronous drive or quartz drive (Q Models) with self-recharging battery backup
• 72-hour carry-over battery backup on Q models
• Captive trippers with 2-hour intervals
• Available with or without override
• True clock face, easy-to-set
• Surface/DIN rail or flush mount
• Clear plastic dust cover
• Compact size

MIL72ESWUZH-120

MIL72AQWUZH-120

Model # Flush Mount (MIL72E)	Model # Surface Mount/DIN Rail (MIL72A)	Input Voltage	MIN ON/OFF Time	Override
Synchronous				
MIL72ESWUZH-120	**MIL72ASWUZH-120**	120 VAC, 60 Hz	2 hrs	Yes
MIL72ESWUZH-240	–	208/240 VAC, 60 Hz	2 hrs	Yes
Quartz				
MIL72EQWUZH-120	**MIL72AQWUZH-120**	120 VAC, 50/60 Hz	2 hrs	Yes

Quartz Models operate on 12-24 VAC/VDC, 120 or 208/240 VAC, and 50/60 Hz and are Title 20 listed.

CSA
LR3730   c **RU** us
#E10694   CE   RoHS
Compliant
2002/95/EC   TITLE 20
CA LISTED

Ratings	
Tungsten (Incandescent)	1350 W, 120 VAC
Resistive (Heater)	21 A, 250 VAC
Power Consumption	
120 VAC	0.5 Va
208/240	1 Va
Switch Type	SPDT
Motor	1 HP, 120 VAC; 2 HP, 250 VAC
Battery Backup Option	72-hour Carry-over, Battery, Self-recharging "Q" Models Only
Wiring Connections	Screw terminal accepts up to #12 AWG wire
Warranty	1-Year limited
Operating Temperature	-4°F - 131°F (-20°C - 55°C)

WIRING DIAGRAMS

12-24 VDC & 120 VAC application

Terminal Connections

DIMENSIONS

MIL72E Flush Mount with Clear Dust Cover

MIL72A Surface Mount with Clear Dust Cover

INTERMATIC®

GM40AV

Captive Trippers
can't be lost

GM40AV Series
40 A AUTO-VOLTAGE GENERAL PURPOSE TIME SWITCH

The GM40AV Time Switch is a universal, electromechanical time switch designed for general purpose residential and commercial applications. The robust 40 A time switch automatically detects the input voltage without the use of a DIP switch or selector pins. The time switch automatically selects any voltage between 120-277 VAC. The mechanism is mounted in a compact UL Type 3R outdoor enclosure and can also be easily retrofitted into other Intermatic enclosure types. The time switch features a DPDT switching configuration standard (i.e. two normally open and two normally closed contacts).

APPLICATIONS
- Refrigeration Merchandiser • Air Movement & Ventilation • Aeration
- Septic Treatment • Generator Exercising

FEATURES
- Auto-voltage selection 120 VAC-277 VAC
- Captive trippers - trippers cannot be lost
- 40 A rating
- Self-recharging battery backup, "Q" models feature 72-hour carry-over
- Power and status LED indicators
- 24-Hour or 7-day models available
- Up to 48 ON/OFF operations per 24-hour period or 42 ON/OFF operations per week on "W" models
- DPDT switching configuration standard (2 NO and 2 NC Contacts)
- Manual three-way ON/OFF/AUTO override switch
- Easy-to-read clock face
- Type 3R outdoor enclosure

Model #	Input Voltage	Switch Type	Enclosure	Battery Backup	Timing
GM40AV	Auto Voltage 120-277 VAC, 60 Hz	DPDT	Indoor/outdoor type 3R plastic	No	24 hour, 15 min Intervals
GM40AV-Q*	120-277 VAC, 50/60 Hz	DPDT	Indoor/outdoor type 3R plastic	72-hour Carry-over, Battery, Self-recharging	24 hour, 15 min Intervals
GM40AV-W	120-277 VAC, 60 Hz	DPDT	Indoor/outdoor type 3R plastic	No	7 day, 2 hours Intervals
GM40AV-QW*	120-277 VAC, 50/60 Hz	DPDT	Indoor/outdoor type 3R plastic	72-hour Carry-over, Battery, Self-recharging	7 day, 2 hours Intervals

*Q models are Title 20 listed.

c**UL**us #E10694   c(UL)us #E10694   **RoHS** Compliant 2002/95/EC   TITLE 20 CA LISTED   patent #6,563,237

Ratings	
NO Contacts	
Tungsten (Incandescent)	15 A, 120 VAC
Resistive (Heater)	40 A, 120-277 VAC
Ballast (Fluorescent)	30 A, 120 VAC; 20 A, 277 VAC
Pilot Duty	300 VA, 120-240 VAC
Motor	1 HP, 16 FLA, 90 LRA @120 VAC; 2 HP, 12 FLA, 52 LRA @ 208-277 VAC
NC Contacts	
Tungsten (Incandescent)	2 A, 120 VAC
Resistive (Heater)	30 A, 120-277 VAC
Ballast (Fluorescent)	10 A, 277 VAC
Motor	1 HP, 12 FLA, 30 LRA @ 120 VAC; 2 HP, 10 FLA, 30 LRA @ 240 VAC
Power Consumption	7 Va
Wiring Terminals	Screw box lug
Electrical Life	50,000 operations at full load
Operating Humidity	0-95% RH, Non-condensing
Warranty	1-Year limited
Operating Temperature	-40°F - 131°F (-40°C - 55°C)

ENCLOSURE DIMENSIONS

6.61" [16.79 cm]
5.73" [14.55 cm]
8.88" [22.56 cm]
3" [7.62 cm]

GM40AV Product Dimensions

WIRING DIAGRAM

TIMER

L 1 L 2/N NC NO COM NC 2 NO 2 COM2

LOAD #1   LOAD #2

120/277 VAC

TIMER

L 1 L 2/N NC NO COM NC 2 NO 2 COM2

LOAD #1

208/240 VAC

INTERMATIC®

GMX Series
21 A, GENERAL PURPOSE, 1-CIRCUIT ELECTRONIC TIME SWITCHES

The GMX series time switches are universal mechanical time switches. They are a low cost alternative for applications that do not require more than 21 A or 2 HP @ 240 VAC. The timer is mounted in a UL Type 1 indoor or Type 3R outdoor plastic enclosure. The GMX is a light-duty commercial time switch ideal for 24, 120 or 208/240 VAC single-phase general applications.

APPLICATIONS
- Refrigeration Merchandiser • Air Movement & Ventilation • Aeration • Septic Treatment
- Generator Exercising

FEATURES
- 21 A SPDT Switch
- UL Type 1 indoor or Type 3R outdoor plastic enclosure
- Manual 3-way override
- Captive trippers with 15-minute intervals on 24-hour models and 2-hour intervals on 7-day models
- True clock face, easy to set
- Finger-safe terminals
- Enclosure provides space for field-added contactor or other accessories
- Synchronous drive or quartz drive ("Q" models) with self-charging battery backup

GMXST-O-120

Model # Synchronous	Model # Quartz 72-hour Carry-over, Battery, Self-recharging	Voltage	Min On/Off Times	Enclosure
24 hrs				
GMXST-I-120	**	120 VAC, 60 Hz	15 min	Indoor type 1 plastic
GMXST-I-240	**	208/240 VAC, 60 Hz	15 min	Indoor type 1 plastic
GMXST-O-120	GMXQT-O-120*	120 VAC, 50/60 Hz	15 min	Outdoor type 3R plastic
7 days				
GMXSW-I-120	**	120 VAC, 60 Hz	2 hrs	Indoor type 1 plastic

*Quartz models operate on 12-24 VAC/VDC, 120 or 208/240VAC, and 50/60 Hz and are Title 20 listed.
**Considered upon request

c UL us #E10694   RoHS Compliant 2002/95/EC   TITLE 20 LISTED

Ratings	
Tungsten (Incandescent)	1350 W, 120 VAC, 60 Hz
Resistive (Heater)	21 A, 250 VAC, 60 Hz
Motor	1 HP, 120 VAC; 2 HP, 250 VAC
Switch Type	SPDT
Operating Humidity	0 to 95%, Non-condensing
Battery Backup Option	72-hour Carry-over, Battery, Self-recharging "Q" Quartz Models
Wiring Connection	Screw terminal accepts up to #12 AWG wire
Warranty	1-Year limited
Operating Temperature	-40°F - 185°F (-40°C - 85°C)

WIRING DIAGRAMS
Typical Wiring for GMX Series

208/240 V Timer and Load

120 V Timer 24-240 V Load

120 V Timer and Load

120 V Two Speed Fan

Terminal Connections

ENCLOSURE DIMENSIONS

6.5" [16.5 cm]
5.54" [14.1 cm]
10" [25.4 cm]
8.64" [21.9 cm]
3.74" [9.5 cm]

INTERMATIC

―――― ACCESSORIES ――――

Model #	Description
107TN221	Red (OFF) tripper for TN, PB, TB Series, P1101, P1131, P1161, P1261P, AL300TPWS, AL600TPWS and AL900TPWS
107TN222	Turquoise (ON) tripper for TN, PB, TB Series, P1101, P1131, P1161, P1261P, AL300TPWS, AL600TPWS and AL900TPWS
107T73	Replacement Day Wheel Pins for T8800 and R8800 Series
124T1952	Insulator for Double-Pole Time Switch (T103, T104, T105, T173, T174, T175, T176, T185, WH40)
119T86A	24 VAC 20 VA Transformer, with #10 Ring Terminals
124T2097	Insulator for R8806P101C, T8805P101C, T8845PV
124T2411A	Insulator for Mechanical Time Switches - 10 Pack
124T905	Insulator for T1905HDM, T1975EHDM, T1975HD, T1976, T1975, T1975ER, T1905
130T1042	Grounding Terminal Bar
131T68GA	125 VAC, 60 Hz Motor and Carry-over for T7400BC and T800BC Series
133T700A	Micro Switch for T8800 and R8800 Series
133T773A	Replacement Snap Switch for C8800 Series
143T138	Relay Kit, DPST, 3 HP, 240 VAC (S)
156T1948A	Trippers for T170, T1400, T1800 Series Includes 1 ON, 1 OFF, and 1 ON with Skipper Extension
156T1954A	14 Skipper Pins for R8800, and T8800 Series
156T1950AD12	12 Bags of 156T1950A Trippers for T1900, T2000, C8800, R8800, and T8800 Series
124T1954	Insulator for T101B with Independent Motor Wiring
156T1978AD12	12 Pack of 156T1978A Trippers for T100, T7000, and WH40
156T2548A	7 Sets of ON/OFF Trippers for T7400 and T7800 Series
156T3085A	Skipper Screws for T170 Series, T1400 Series, and T1800 Series
156T3230A	Trippers (1) Set (ON/OFF/ON Cutout) for WH Series
22T338GR	Mounting Bracket for Intermatic Standardized Timer Mechanisms
WG1570-10	WG1570-10
WG1573-10D	208-277 VAC, 60 Hz Motor for T102, T104, T106, T172, T174, WH40
WG1574-10	WG1574-10
WG1603-11D	WG1603-11D

Model #	Description
WG190-15D	MOTOR-BOXED,125V 60HZ
WG433-20D	MOTOR-BOXED,125V 60HZ
WG436-20	WG436-20
WG630D	WG630D
WG720-10D	MOTOR-BOXED,125V 60HZ
133T1115A	Toggle Switch for T8800 and R8800 Series
133T701A	Replacement Snap Switch for T1900 and T2000 Series
156T2978A	Package Accessory Trippers
124T2058	Insulator for T1905, T1906, T2006, T2005, C8815, C8825, C8835, C8845, C8855, C8865, C8866
124T907A	Insulator Assembly (S001)
107T119	Tripper (Silver) for T8800 and R8800 Series (Day Skipper)
156T1950A	Set of 12 Trippers for T1900, T2000, C8800, R8800 and T8800 Series
WG1571-10D	MOTOR-BOXED,125V 50HZ
WG1576-10D	WG1576-10D
WG1574-10D	MOTOR-BOXED,250V 50HZ
124T1948	Insulator for Single-Pole Time Switch (T101, T102, T171, T172)
156T3225A	Trippers (2) Sets (ON/OFF) for T7000, WH Series (With ON/OFF Markings)
133T698A	Replacement Snap Switch for T1970 Series
156T1957A	Skipper Screws (3 per package)
143T302A	Relay Kit, DPST, 3 HP, 120 VAC Assembly (S001)
WG1570-10D	125 VAC, 60 Hz Motor for T101, T103, T105
WG733-14D	208-277 VAC, 60 Hz Motor for R8800, T1900, T1970, and T8800 Series
WG1600-11	WG1600-11
WG730-14D	125 VAC, 60 Hz Motor for R8800, T1900, T1970, and T8800 Series
156T1978A	Extra/replacement trippers 1 ON and 1 OFF
124T1953	Insulator for 4PST Time Switch
WG736-14	WG736-14
WG430-20D	MOTOR-BOXED,125V 60HZ
WG1571-10	WG1571-10

INTERMATIC®

ENCLOSURES

2T511GA

2T2926A

Model #	Description
2T2040GA	Case-Indoor, Type 1 Metal, Gray
2T2331GA	Case-Outdoor, Type 3R Metal, Gray
2T2365GA	Case-Indoor, Type 1 Metal, Gray
2T2500GA	Case-Outdoor, Type 3R Plastic, Gray
2T2926A	Case-Outdoor, Type 3R Plastic, Gray with See-Through Window
2T308A	Case-Indoor, Type 1 Metal, Gray
2T511GA	Case-Outdoor, Type 3R Metal, Gray

2T308A

2T2500GA

ENCLOSURE DIMENSIONS

2T2040GA

7 7/8"

5 1/8"

3/16"

2T511GA / 2T2485GA

10 1/8"

6 1/2"

5/16"

∅3/16"

∅3/8"

3X 8 1/16"

2X 8 5/8"

2X ∅1/4" MOUNTING HOLES

KNOCKOUT 1/2" & 3/4"

1 5/8"

3 1/4"

2T2500GA/ 2T2502GA/ 2T2926A

6 1/2"

4"

R1/8"

2 3/4"

10"

8 1/16"

8"

2X 8 1/2"

2X ∅1/4" MOUNTING HOLES

KNOCKOUT 1/2", 3/4"

1 1/2"

1 5/8"

3 1/4"

2T2365GA / 2T308A

8"

11"

WANT TO KNOW MORE

Please see pages 186-190 for additional wiring diagrams and information on enclosures.

Specialty Time Switch Solutions

Give unique projects a boost with our wide selection of specialty time switches. Common applications include irrigation and misting systems, water heaters, feeding equipment, processing equipment and other agricultural needs.

Irrigation and Misting System

Automate daily or weekly watering schedules with a mechanical or electronic specialty time switch. Our versatile solutions are quick to install and adjust throughout the season as watering needs change.

Water Heater Controls

Reduce utility costs with a simple yet effective water heater timer. Electronic solutions like the EH40 allow users to create daily ON/OFF schedules to maximize efficiency while always keeping hot water at the ready.

Ventilation Systems

Keep fans and ventilation systems operating on schedule with dynamic solutions, such as our percentage cycle time switches. These handy controls improve energy efficiency and promote long-term performance.

Percentage Cycle Controls

Manage repetitive cycling schedules with a percentage cycle timer. These solutions offer flexible scheduling options and are an ideal choice for agriculture feeder and greenhouse misting applications.

Contents

Energy-Efficient Water Use in Action!

Take advantage of "off-peak" hours and improve energy efficiency with WH40 Water Heater Timer from Intermatic. The WH40 provides direct 24-hour control and offers a variety of homeowner-friendly features, including a lockable hasp and a manual ON/OFF lever to control the water heater timer without opening the enclosure.

CT2000

CT2000
PERCENTAGE CYCLE TIME SWITCH

The CT2000 Percentage Cycle Time Switch is a field adjustable timer, offering true flexibility for repetitive cycle times via an upfront control button. The timer provides repetitive cycling for short-cycle applications. The timer enclosure includes two slotted mounting holes on 5" centers and a ½" knockout for conduit connection.

APPLICATIONS
• Agriculture Feeders • Greenhouse Misting Control

FEATURES
• Provides 8 field-selectable cycle durations of 30 seconds, 1, 3, 5, 10, 30 minutes and 1 or 4 hours
• Front cover button enables true flexibility for repetitive cycle times
• Temporary and permanent manual overrides
• 30 separate positions enable precise percentage ON time selection
• User settings stored in non-volatile memory
• No DIP switches to program cycle time
• Type 3R indoor/outdoor aluminum enclosure

Ratings	
Switch Type	SPST
General Purpose	20 A, 240 VAC, 60 Hz
Tungsten (Incandescent)	5 A, 240 VAC, 60 Hz
Resistive (Heater)	20 A, 28 VDC, 240 VAC, 60 Hz
Ballast (Fluorescent)	10 A, 277 VAC, 60 Hz
Pilot Duty	470 VA, 240 VAC, 60 Hz
Motor	1 HP, 120 VAC, 60 Hz, 2 HP, 240 VAC, 60 Hz
Wire Leads 8"	
Red	#12 AWG
Black	#18 AWG
White	#18 AWG
Warranty	1-Year limited
Operating Temperature	-14°F - 140°F (-10°C - 60°C)

Model #	Input Voltage
CT2000	120/240 VAC 60 Hz

ENCLOSURE DIMENSIONS

3 5/16"

6 5/8"

1 3/4"

3 1/2"

INTERMATIC

R8800 Series & T8800 Series
SPRINKLER/IRRIGATION TIME SWITCHES WITH 14-DAY SKIPPER

These irrigation timers are designed to permit one to 44 "ON" operations every 24 hours and provide watering increments down to 12 minutes or up to 20 hours and 45 minutes to ensure proper watering increments. These models also allow for biweekly scheduling with the convenient 14-day skipper for maximum water conservation and odd/even day compliance.

APPLICATIONS
• Agriculture Feeders • Greenhouse Misting Control

FEATURES
• Up to 44 ON/OFF settings per day
• Water metering increments from 12 minutes to 20 hours and 45 minutes
• 14-Day skipper enables irrigation to be omitted on selected day(s)
• Allows for alternate-day scheduling
• ON/OFF/AUTO switch enables shutdown during rainy days and extended watering during dry periods without disturbing the cycle set on dial
• Type 3R plastic indoor/outdoor enclosure

R8806M101C

Model #	Switch Type	Clock Motor Voltage	Load Voltage	Amps (per pole)	HP
Mechanism Only					
R8806M101C	DPST	240 VAC, 60 Hz	240 VAC, 60 Hz	30 A	3
T8805M101C	DPST	125 VAC, 60 Hz	125 VAC, 60 Hz	15 A	1/2
Indoor/outdoor type 3R plastic					
R8806P101C	DPST	208/277 VAC, 60 Hz	240 VAC, 60 Hz	30 A	3
R8815P101C*	DPST	125 VAC, 60 Hz	120 VAC, 60 Hz	30 A	1 1/2
R8816P101C*	DPST	208/277 VAC, 60 Hz	240 VAC, 60 Hz	30 A	3
T8805P101C	SPST	125 VAC, 60 Hz	125 VAC, 60 Hz	15 A	1/2
T8845PV**	SPST	110/125 VAC, 60 Hz	24 VAC, 60 Hz	20 VA	

*Provided with a slide switch to enable/disable a Rain Sensor (not included).
**Includes 24 Volt, 20 VA transformer.

Ratings:	
Enclosure H x W x D **Plastic Indoor/Outdoor**	10" x 6.5" x 4" (254 mm x 165.1 mm x 101.6 mm)
Knockout Dimensions	
Side/Back	(1) combination ½" - ¾"
Bottom	(2) combination ½" - ¾"
Warranty	1-Year limited
Operating Temperature	-40°F - 130°F (-40°C - 54°C)

For enclosure line drawings and knockout locations, see pages 186-190.

SPRINKLER/IRRIGATION TIME SWITCHES

Coordinate watering schedules and manage heating system overrides with our selection of landscape water controls. Designed for commercial and residential applications, these controls help maintain lush outdoor landscapes and optimize water use.

WHAVQ4

c(UL)us **RoHS** Compliant   Patent# 6,563,237

Ratings	
Switch Configuration	40 A, DPDT
Switch Rating for NO Resistive	40 A, 250 VAC, 10,000 W
Switch Rating for NC Resistive	30 A, 250 VAC, 7500 W
Operating Humidity	0-95% RH, Non-condensing
Electrical Life	50,000 operations at full load
Operating Temperature	-4°F - 104°F (-20°C - 40°C)
Warranty	1-Year limited

WHAVQ Series
24-HOUR/7-DAY WITH BATTERY BACKUP
AUTO-VOLTAGE ELECTRIC WATER HEATER TIMERS

WHAVQ Series Water Heater Timers are designed for control of residential or commercial electric water heaters up to 10,000 Watts capacity running at 240 VAC. The unit is mounted in a UL Type 3R Outdoor enclosure and can be placed in basements or mechanical rooms.

APPLICATIONS
• Water Heater Control

FEATURES
• 40 A rating
• Self-recharging battery backup with 7-day carry-over
• Captive trippers - cannot be lost
• 24-hour or 7-day models available
• Three-way ON/OFF/AUTO manual override
• Power and status LED indicators
• Rainproof UL Type 3R enclosure
• Saves energy by shutting water heaters OFF during "off peak periods"
• Auto-voltage selection 120-240 VAC
• Easy-to-read clock face

Model #	Input Voltage	Timing
WHAVQ4	120-240 VAC, 50/60 Hz	24 hour 72-hour Carry-over, Battery, Self-recharging

WIRING DIAGRAMS

ENCLOSURE DIMENSIONS

WATER HEATER TIMERS

Utilities in many areas of the country offer two electric rates for residential or commercial customers. One rate has the regular daytime electrical rate, the other is the "off-peak" rate. The "off-peak" rate provides customers with lower priced electricity during the nighttime and weekend periods.

INTERMATIC®

EH10 & EH40
ELECTRONIC WATER HEATER TIME SWITCHES

The EH Series Electronic Time Switches provide control for electric water heaters with to-the-minute accuracy in programming and time-keeping. The use of a water heater timer allows the customer to shift electricity use to "off-peak" time periods to reduce utility costs. These time switches can be programmed for repeat daily scheduling, 5-day work week scheduling, weekend scheduling or individual day scheduling. Models are available for both 120 and 240 VAC applications.

APPLICATIONS
• Agriculture Feeders • Greenhouse Misting Control • Water Heater Control

FEATURES
• 42 ON/OFF events per week
• 7-day scheduling
• To-the-minute programming and time-keeping accuracy
• External override switch
• LED load indicator
• Replaceable battery backup

Model #	Input Voltage	Switch Type	Watts	Enclosure
EH10	120 VAC, 60 Hz	SPST	3600	Indoor type 1 metal
EH40	240 VAC, 60 Hz	DPST	7200	Indoor type 1 metal

EH10

Ratings	
Switch Rating for EH10	30 A Inductive, 30 A Resistive, 5 A Tungsten, 1 HP, 120 VAC, 60 Hz
Switch Rating for EH40	30 A Inductive, 30 A Resistive, 5 A Tungsten, 1 1/2 HP, 240 VAC, 60 Hz
Knockout Dimensions	
Side/Back	(1) combination ½" - ¾"
Bottom	(2) combination ½" - ¾"
Operating Temperature	-40°F - 104°F (-40°C - 40°C)
Warranty	1-Year limited

WH40 & T104-20
MECHANICAL WATER HEATER TIME SWITCHES

With the easy-to-set "Yellow Dial," these time switches allow for basic control of electric water heaters. These time switches offer a minimum ON/OFF time of one hour, and are available for 208-250 VAC applications. With the proven reliability of our mechanical line, these time switches provide dependable electric water heater control.

APPLICATIONS
• Agriculture Feeders • Greenhouse Misting Control • Water Heater Control

FEATURES
• Two sets of ON/OFF trippers
• Enables shifting electricity use into off-peak hours to reduce energy costs
• Convenient external override switch
• Up to 12 ON/12 OFF events per day

Model #	Switch Type	Clock Motor	Amps (per pole)	Watts Resistive	External Override
T104-20	DPST	208/277 VAC, 60 Hz	40 A	10000	No
WH40	DPST	208/277 VAC, 60 Hz	40 A	10000	Yes

WH40

Ratings	
Power Consumption	3 W
Enclosure Dimensions	
Metal Indoor (H x W x D)	7 ⅞"x 5 ⅛"x 3 ⁷⁄₁₆" (mm x mm x mm)
Knockout Dimensions	
Side/Back	(1) combination ½" - ¾"
Bottom	(2) combination ½" - ¾"
Operating Temperature	-40°F - 130°F (-40°C - 54°C)
Warranty	1-Year limited

In-Wall Timer Solutions

Convenient scheduling is always within reach with our wide selection of In-Wall Timers. These easy-to-install solutions are designed to simplify everyday lighting and load control needs.

Indoor Lighting Control

Upgrade indoor spaces with in-wall timers that manage daily lighting schedules and put occupants in control. Applications range from commercial buildings and retail stores to single-family homes and small offices.

Timing/Scheduling ON/OFF

Keep lights, ventilation systems and other loads on schedule with a 7-day or 24-hour in-wall timer. These versatile solutions make it easy to set ON/OFF schedules and promote energy efficiency.

Outdoor Lighting Control

Ideal for entryways, storefronts, front porches and more, a well-placed in-wall timer can promote security and reduce energy waste.

Occupant Comfort

Elevate residential and commercial living spaces with energy-saving in-wall timers. Advanced solutions like our ASCEND® Smart 7-Day Timer allow for easy smartphone control and provide convenient daily scheduling options.

Contents

Additional Solutions and Resources

Ready to get started? Scan the QR code to the right for a variety of helpful resources, including sell sheets, product instructions, installation videos and more.

ASCEND® SMART IN-WALL TIMER (STW700W, STW700LA)

Simplify home lighting automation projects with the Ascend Smart In-Wall Timer. An upgrade from Ascend Standard, our Wi-Fi enabled control offers many of the same benefits of a complex home automation system without the hassle.

Quick Installation - Shave minutes off each time switch installation with streamlined smartphone programming options and an intuitive interface.

No Hub Needed - Create a standalone home automation system without the need for a dedicated hub or smart home controller.

Voice Activation - Pair the Ascend Smart In-Wall Timer with Amazon Alexa or the Google Assistant to deliver voice-activated programming commands, including ON/OFF and status check.

Anywhere Access - Download the complimentary Ascend mobile app to any Apple® or Android® smartphone to update programming schedules on the fly.

Versatile Design - Fit the Ascend into any home project with both single-pole or 3-way switch compatibility.

Light Almond

ASCEND® Series
ASCEND SMART 7-DAY PROGRAMMABLE WI-FI TIMER, 120 VAC, 15A

Next generation timers with sleek, modern design and intuitive programming. Works with Amazon Alexa and Google Assistant; no hub required. Neutral required. Easily schedule lights and connected loads to turn on/off at specific times or based on sunrise/sunset.

NOTE: Not for use with sunlamps, saunas, or loads that could cause personal injury if timed incorrectly.

APPLICATIONS
• Indoor Lighting Control • Air Movement & Ventilation • Outdoor Lighting Control

FEATURES
• Single-pole or 3-way switches
• Ability to text/email saved schedules
• 7-Day Timer with Automatic Daylight Saving and Astronomic ON/OFF at Dusk or Dawn
• Sleek, Modern Design
• Remote Access from anywhere, no hub required
• Wi-Fi not needed for initial setup and scheduling
• Fully set and schedule at the timer or via the Ascend app
• Supporting mobile app available in the Apple App Store and on Google Play
• Automatic Astronomic ON/OFF dusk and dawn times to provide the most accurate lighting schedule possible
• Automatic Daylight Saving Time (DST) Adjustment
• Three pre-programmed schedule templates for convenience
• Fully customizable scheduling for flexibility
• Non-replaceable battery backup keeps time and date information in the event of a power loss
• Schedules and other settings are kept indefinitely in non-volatile memory
• No Hub Required
• 2-Hour override function
• Decorator switch plate not included

Ratings	
Input Voltage	120 VAC, 50/60 Hz
General Purpose	15 A
Electronic Ballast (LED)	5 A, 600 W
Tungsten (Incandescent)	8 A
Inductive (Heater)	15 A, 120 VAC, 50/60 Hz
Motor	1 HP, 120 VAC, 50 Hz, 1 HP, 120 VAC, 60 Hz
Dimensions H x W x D	2 ¾" x 1 ¾" x 1 ⅓" (69.9 mm x 44.4 mm x 33.9 mm x
Operating Temperature	-4°F - 122°F (-20°C - 50°C)
Warranty	3-Year limited

Note: Not for use with sunlamps, saunas, or loads that could cause personal injury if timed incorrectly.

Model #	Description	Has WiFi	Color	Neutral Required
STW700W	Ascend Smart 7-Day Programmable Wi-Fi Timer, 120 VAC, 15A, White	Yes	White	Yes
STW700LA	Ascend Smart 7-Day Programmable Wi-Fi Timer, 120 VAC, 15A, Light Almond	Yes	Light Almond	Yes

Note: For use with standard decorator plate, not included.

INTERMATIC®

ASCEND® Standard Series
ASCEND STANDARD 7-DAY PROGRAMMABLE TIMER, 120 VAC, 15A, WHITE

The ASCEND® Standard In-Wall Timer is a 7-Day Programmable Timer featuring a sleek, modern design. The timer can be configured in minutes using a large backlit LCD display and includes pre-programmed templates for easy use. The Ascend Standard features Astronomic dusk-to-dawn settings and automatic Daylight Saving Time adjustments. Neutral required. *NOTE: Not for use with sunlamps, saunas, or loads that could cause personal injury if timed incorrectly.

APPLICATIONS
• Air Movement & Ventilation • Indoor Lighting Control • Outdoor Lighting Control

FEATURES
• Quick, intuitive installation
• Single-pole or 3-way switches
• Sleek, Modern Design
• 7-Day Timer with Automatic Daylight Saving and Astronomic ON/OFF at Dusk or Dawn
• Intuitive Setup
• Three pre-programmed schedule templates for convenience
• Fully customized scheduling for flexibility
• Program up to 42 unique events
• Large, easy-to-read backlit LCD screen
• Non-replaceable battery backup keeps time and date information in the event of a power loss
• Schedules and other settings are kept indefinitely in non-volatile memory
• 2-Hour override function
• Decorator switch plate not included

Model #	Description	Has WiFi	Color	Neutral Required
ST700W	Ascend Standard 7-Day Programmable Timer, 120 VAC, 15A, White	No	White	Yes

Note: For use with standard decorator plate, not included.

Ratings	
Input Voltage	120 VAC, 50/60 Hz
General Purpose	15 A
Electronic Ballast (LED)	5 A, 600 W
Inductive (Heater)	15 A, 120 VAC, 50/60 Hz
Motor	1 HP, 120 VAC, 50/60 Hz
Dimensions H x W x D	2 ¾" x 1 ¾" x 1 ⅓" (69.9 mm x 44.4 mm x 33.9 mm)
Operating Temperature	-4°F - 122°F (-20°C - 50°C)
Warranty	3-Year limited

Note: Not for use with sunlamps, saunas, or loads that could cause personal injury if timed incorrectly.

ASCEND®

Touch- Navigate the core functions of Ascend Smart and Ascend Standard through an intuitive LCD interface. The visual display simplifies initial setup while helping homeowners view upcoming events and make updates with ease.

Mobile- Monitor Ascend Smart from anywhere with the complimentary Ascend Smart Timer mobile app. Whether it's from the couch or across the continent Ascend Smart keep users in control. Program schedules, manually adjust ON/OFF settings and view the status of programs from any smartphone or tablet.

Voice- Just say the word. Pair the Ascend Smart In-Wall Timer with voice assistant platforms, such as Amazon Alexa and the Google Assistant, to take your home to exciting new heights. The tech-forward feature allows homeowners to control Ascend through voice-activated commands without skipping a beat.

ST01

EI600 Series & ST01 Series
HEAVY-DUTY 7-DAY PROGRAMMABLE TIMERS

Highly versatile Heavy-Duty Timers are ideal for any application that requires a simple or complex ON/OFF schedule, regardless of load. No neutral connection is required.
APPLICATIONS
• Indoor Lighting Control • Air Movement & Ventilation • Outdoor Lighting Control
FEATURES
• Versatile 7-day programmable schedules with up to 40 ON/OFF events
• Astronomic clock feature determines dawn and dusk times
• Automatic Daylight Saving Time (DST) adjustment
• Random mode varies ON/OFF schedule to provide a "lived-in" appearance
• Single or 3-way switch compatible installation
• Incandescent/fluorescent/CFL/LED compatible
• Isolated switch allows timer to be used with any load type, including AC and DC loads
• Replaceable CR2 lithium battery provides up to three years of operation
• No neutral wire connection enables easy retrofitting and quicker installation

White

Ivory

Light Almond

Ratings	
Input Voltage	120-277 VAC, 50/60 Hz
Resistive (Heater)	
ST01	15 A, 1800-4155 W, 120-277 VAC
EI600	20 A, 2400-5540 W, 120-277 VAC
Tungsten (Incandescent)	1800 W, 120 VAC; 1248-1662 W, 208-277 VAC
Ballast (Fluorescent) (EI600)	16 A, 1920-4432 VA, 120-277 VAC
DC Loads	4 A, 12 VDC; 2 A, 28 VDC
Motor	1 HP, 120 VAC, 50/60 Hz; 2 HP, 240 VAC, 50/60 Hz
Dimensions H x W x D	4.125" x 1.75" x 1.8125" (104.8 mm x 44.5 mm x 46 mm)
Neutral Required	No
Operating Temperature	32°F - 104°F (0°C - 40°C)
Warranty	
ST01	1-Year limited
EI600	5-Year limited

Note: Not for use with sunlamps, saunas, or loads that could cause personal injury if timed incorrectly.

White	Ivory	Light Almond	Max Load Handling Capability
EI600WC	**EI600C**	**EI600LAC**	20 A
ST01	-	**ST01A**	15 A

Note: For use with standard decorator plate, not included.

7-DAY/24-HOUR TIMER APPLICATIONS

• Entryway lighting • Deck and landscape light controls • Attic fans • Pumps
• Small commercial – signage and store lighting • Hallway lighting

INTERMATIC®

EI500 Series
STANDARD 7-DAY PROGRAMMABLE TIMERS - 15 A

For installation on 15 A circuits, this timer provides 24-hour or 7-day programming of lights, fans, pumps and other medium-duty loads.

APPLICATIONS

• Indoor Lighting Control • Air Movement & Ventilation • Outdoor Lighting Control

FEATURES

• 7-day programmable schedules with 14 ON/OFF events
• Random mode varies ON/OFF schedule to provide a "lived-in" appearance
• Single-pole circuit
• Incandescent/fluorescent/CFL/LED compatible
• Built-in rechargeable, non-serviceable battery backup
• Requires neutral connection
• Backlit LCD display

White

Ivory

Light Almond

EI500WC

White	Ivory	Light Almond
EI500WC	EI500C	EI500LAC

Note: For use with standard decorator plate, not included.

Ratings	
Input Voltage	125 VAC, 60 Hz
Resistive (Heater)	15 A, 1875 W
Tungsten (Incandescent)	1000 W
Ballast (Fluorescent)	8 A, 1000 VA
Electronic Ballast (LED)	4 A, 500 VA
Motor	1/4 HP, 125 VAC, 60 Hz
Dimensions H x W x D	4.125" x 1.75" x 1.4375" (104.8 mm x 44.5 mm x 36.5 mm)
Neutral Required	Yes
Operating Temperature	32°F - 104°F (0°C - 40°C)
Warranty	1-Year limited

Note: Not for use with sunlamps, saunas, or loads that could cause personal injury if timed incorrectly.

EJ600 Series
STANDARD 7-DAY PROGRAMMABLE TIMERS - 12 A

A 12 A rated timer that provides full 7-day programming capabilities with dusk-to-dawn functionality, ideal for use with medium to low power loads.

APPLICATIONS

• Indoor Lighting Control • Air Movement & Ventilation • Outdoor Lighting Control

FEATURES

• 7-day programmable schedules with 14 ON/OFF events
• Astronomic clock feature determines dawn and dusk times
• Automatic Daylight Saving Time (DST) adjustment
• Random mode varies ON/OFF schedule to provide a "lived-in" appearance
• Single or 3-way switch compatible installation
• Incandescent/fluorescent compatible
• Built-in rechargeable, non-serviceable battery backup
• Requires neutral connection

White

Light Almond

EJ600

White	Light Almond
EJ600	EJ600A

Note: For use with standard decorator plate, not included.

Ratings	
Input Voltage	120 VAC, 60 Hz
Resistive (Heater)	12 A, 1440 W
Tungsten (Incandescent)	1440 W, multi-gang, 1800 W, single-gang
Ballast (Fluorescent)	4 A, 500 VA
Motor	1/2 HP
Dimensions H x W x D	4.125" x 1.75" x 1.4375" (104.8 mm x 44.5 mm x 36.5 mm)
Neutral Required	Yes
Operating Temperature	32°F - 104°F (0°C - 40°C)
Warranty	1-Year limited

Note: Not for use with sunlamps, saunas, or loads that could cause personal injury if timed incorrectly.

INTERMATIC®

E1010

E1020

E1000 Series
HEAVY DUTY MECHANICAL IN-WALL TIMERS - 15 A

These Heavy-Duty In-Wall Timers are ideal for turning on lights, fans, pumps and other heavy duty loads for energy savings, security and convenience. The timer provides up to 12 ON and 12 OFF operations per day.

APPLICATIONS
• Air Movement & Ventilation • Indoor Lighting Control • Outdoor Lighting Control

FEATURES
• E1010 includes one ON/OFF permanently attached tripper for single ON/OFF control per 24-hour period
• E1020 includes two ON/OFF trippers and can accommodate up to 12 ON/OFF trippers
• Programmable in 30-minute intervals
• Turns ON/OFF heavy-duty loads for energy savings, security and convenience
• Mounts to any standard junction box
• Requires neutral connection

Ratings	
Input Voltage	125 VAC, 60 Hz
Resistive (Heater)	15 A, 125 VAC, 60 Hz
Motor	12 FLA, 125 VAC, 60 Hz
Dimensions H x W x D	4.25" x 3.25" x 1.375" (108 mm x 82.6 mm x 34.9 mm)
Neutral Required	Yes
Operating Temperature	-4°F - 77°F (-20°C - 25°C)
Warranty	1-Year limited

Note: Not for use with sunlamps, saunas, or loads that could cause personal injury if timed incorrectly.

Model #	Description
E1010	24-Hour Heavy-Duty Mechanical In-Wall Timer, 125VAC, 15 A, Permanent Trippers, White
E1020	24-Hour Heavy-Duty Mechanical In-Wall Timer, 125VAC, 15 A, Removable Trippers, White

HEAVY DUTY MECHANICAL TIMER APPLICATIONS

• Attic Fans • Deck Light Controls • Entryway Lighting • Hallway Lighting • Landscape Light Controls
• Pumps • Small Commercial Signage • Store Lighting

INTERMATIC®

KM2 Series
HEAVY-DUTY MECHANICAL IN-WALL TIMERS - 20 A

For installing on circuits up to 20 A, this timer provides automatic 24-hour ON/OFF control of outdoor/indoor lighting, fans, pumps, office equipment and other types of loads.

APPLICATIONS
• Indoor Lighting Control • Air Movement & Ventilation • Outdoor Lighting Control

FEATURES
• 72 trippers provide 36 ON/OFF events per 24-hour period
• Captive trippers with 20-minute switching intervals
• 3-way (SPDT) switch available
• 3-position ON/OFF/AUTO override provides continuous ON or OFF operation
• Reliable synchronous timer motor
• Multiple wall plates available
• Easy wiring and installation
• Heavy-Duty 20 A rating
• Requires neutral connection

Model #	Wall Plate Configuration	
SPST		
KM2ST-1G	Timer Only	
KM2ST-2G	Timer + Toggle Switch	2-Gang
KM2ST-3G	Timer + Toggle Switch	3-Gang
KM2ST-2D	Timer + Decorator Switch	2-Gang
SPDT		
KM2STU-1G	Timer Only	

c(UL)us   c(CSA)us

Ratings	
Input Voltage	120 VAC, 60 Hz
Resistive (Heater)	20 A, 120 VAC, 60 Hz
Motor	1 HP, 120 VAC, 60 Hz
Neutral Required	Yes
Wiring Terminals	
SPST	SPST (3) #14 AWG color coded
SPDT	SPDT (4) #14 AWG color coded
Operating Humidity	0 to 95%, Non-condensing
Operating Temperature	-40°F - 180°F (-40°C - 82°C)
Warranty	1-Year limited

Note: Not for use with sunlamps, saunas, or loads that could cause personal injury if timed incorrectly.

WIRING DIAGRAMS

Standard Installation

HOT (BLACK)   LOAD (RED)   LOAD
NEUTRAL (WHITE)

3-Way Installation

HOT (BLACK)   (RED)   3-Way Switch
NEUTRAL (WHITE)   (BLUE)   LOAD

KMS2T-IG

Timer Toggle Switch Plate

2-Gang   3-Gang

4-Gang

Timer and Decorator Switch Plate

2-Gang   3-Gang

Timer and Receptacle Plate

2-Gang

INTERMATIC®

EI400WC

White

Ivory

Light Almond

EI400 Series
PROGRAMMABLE ELECTRONIC COUNTDOWN TIMER

Offering a programmable countdown time between one second and 24 hours, this versatile timer can handle any application, regardless of load type. No neutral connection is required.

APPLICATIONS
• Indoor Lighting Control • Air Movement & Ventilation

FEATURES
• Programmable countdown time interval from one second to 24 hours
• Settings stored in non-volatile memory
• Optional audible and/or visual warning of impending load switch OFF
• Lockable settings help avoid unintended changes
• Single-pole or 3-way switch compatible installation
• Incandescent/fluorescent/CFL/LED compatible
• Isolated switch allows timer to be used with any load type including AC and DC loads
• Replaceable CR2 lithium battery provides up to three years of operation
• No neutral wire connection enables easy retrofitting and quicker installation
• 24-hour programming allows for continuous operation
• Decorator switch plate not included

Ratings	
Input Voltage	120-277 VAC, 50/60 Hz
Resistive (Heater)	20 A, 2400-5540 W, 120-277 VAC
Tungsten (Incandescent)	1800 W, 120 VAC; 1248-1662 W, 208-277 VAC
DC Loads	4 A, 12 VDC; 2 A, 28 VDC
Motor	1 HP, 120 VAC, 50 Hz, 1 HP, 120 VAC, 60 Hz, 2 HP, 240 VAC, 50 Hz, 2 HP, 240 VAC, 60 Hz
Dimensions H x W x D	4.125" x 1.75" x 1.1875" (104.8 mm x 44.5 x 30.2 mm)
Neutral Required	No
Operating Temperature	32°F - 122°F (0°C - 50°C)
Warranty	5-Year limited

Note: Not for use with sunlamps, saunas, or loads that could cause personal injury if timed incorrectly.

White	Ivory	Light Almond
EI400WC	EI400C	EI400LAC

Note: For use with standard decorator plate, not included.

COUNTDOWN TIMER APPLICATIONS

• Bathroom fans • Spas • Hot tubs • Storage closets • Garage lights

INTERMATIC®

EI200 Series
ELECTRONIC COUNTDOWN TIMERS WITH PRESET TIMES

This timer requires no programming; preset countdown times are activated by pressing a single button. Silent operation makes this timer ideal for applications where the noise of mechanical countdown timers is of concern.

APPLICATIONS
• Indoor Lighting Control • Air Movement & Ventilation

FEATURES
• Provides silent operation in time ranges from five minutes to 12 hours
• Single-button time selection, with some models having a HOLD mode, for continuous ON operation
• Replaces single-pole switches in a variety of applications
• Incandescent/fluorescent/CFL/LED compatible
• For use with decorator-style wall plate (not included
• Requires neutral connection

White

Ivory

Light Almond

Without HOLD
EI215W

With HOLD
EI200W

White	Ivory	Light Almond	Preset Times
Without HOLD			
EI205W	–	EI205LA	5 min, 15 min, 30 min, 45 min, 1 hr
EI215W	–	–	15 min, 30 min, 1 hr, 2 hrs, 4 hrs
EI235W	–	–	15 min, 30 min, 45 min, 1 hr, 2 hrs
With HOLD			
EI200W	EI200	EI200LA	5 min, 10 min, 15 min, 30 min
EI210W	EI210	EI210LA	10 min, 20 min, 30 min, 60 min
EI220W	–	–	1 hr, 2 hrs, 4 hrs, 8 hrs
EI230W	–	–	2 hrs, 4 hrs, 8 hrs, 12 hrs

Ratings	
Input Voltage	120 VAC, 60 Hz
Resistive (Heater)	15 A, 1800 W
Tungsten (Incandescent)	1000 W
Ballast (Fluorescent)	8 A, 1000 VA
Electronic Ballast (LED)	4 A, 500 VA
Motor	1/4 HP
Dimensions H x W x D	4.125" x 1.688" x 1.438" (104.8 mm x 42.93 mm x 36.5 mm)
Neutral Required	Yes
Operating Temperature	32°F- 104°F (0°C - 40°C)
Warranty	1-Year limited

Note: Not for use with sunlamps, saunas, or loads that could cause personal injury if timed incorrectly.

Without HOLD
FD60MWC

With HOLD
FD6HHW

White

Ivory

Light Almond

FD Series
SPRING WOUND COUNTDOWN TIMERS - DECORATOR STYLE

The FD Series Decorator Countdown Timers are designed to replace any standard or decorator style wall switch, single- or multi-gang. These mechanical timers do not require electricity to operate. They automatically limit the ON times for fans, lighting, motors, heaters and other energy consuming loads.

APPLICATIONS
• Indoor Lighting Control • Outdoor Lighting Control • Motor Control
• Air Movement & Ventilation

FEATURES
• No electricity required to operate
• Replaces any standard or decorator single- or multi-gang wall switch
• Automatically limits ON time for energy consuming loads
• Quick and easy installation
• Time-saving up front terminal connection with teeter-type terminals
• Models available from 5 minute to 12 hour countdown time intervals
• Incandescent/fluorescent/CFL/LED compatible
• No neutral connection is required

Ratings

Ratings	
Input Voltage	125-277 VAC, 50/60 Hz
Resistive (Heater)	20 A, 2500 W, 125 VAC; 10 A, 2500 W, 250 VAC; 10 A, 2770 W, 277 VAC
Tungsten (Incandescent)	7 A, 125 VAC, 50 Hz, 7 A, 125 VAC, 60 Hz, 875 W
Motor	1 HP, 125 VAC; 2 HP, 250 VAC
Dimensions H x W x D	4.125" x 1.75" x 1.25" (104.8 mm x 44.5 mm x 31.8 mm)
Neutral Required	No
Operating Temperature	32°F - 104°F (0°C - 40°C)
Warranty	1-Year limited

Note: Not for use with sunlamps, saunas, or loads that could cause personal injury if timed incorrectly.

Without HOLD			With HOLD		Maximum Time	Switch Type
White	Ivory	Light Almond	White	Ivory		
SPST						
FD5MW	FD5M	–	–	–	5 min	SPST Configuration
FD15MWC	FD15MC	FD15MAC	FD15MHW	–	15 min	
FD30MWC	FD30MC	FD30MAC	FD30MHW	FD30MH	30 min	
FD60MWC	FD60MC	FD60MAC	FD60MHW	FD60MH	60 min	
FD2HW	FD2H	–	–	–	2 hrs	
FD4HW	FD4H	–	–	–	4 hrs	
FD6HW	FD6H	–	FD6HHW	FD6HH	6 hrs	
FD12HWC	FD12HC	–	FD12HHW	FD12HH	12 hrs	
2-Circuit (1) NO + (1) NC						
FD32HW	FD32H	–	–	–	2 hrs	*For SPDT Configuration Jumper L1 & L2 Together
–	FD34H	–	–	–	4 hrs	
DPST						
–	FD415M	–	–	–	15 min	DPST Configuration
FD430MW	FD430M	–	–	–	30 min	
FD460MW	–	–	–	–	60 min	
FD46HW	–	–	–	–	6 hrs	

Note: For use with decorator or toggle-style switch plates (not included).
For accessories please see page 73.

INTERMATIC®

FF Series
SPRING WOUND COUNTDOWN TIMERS - COMMERCIAL STYLE

The FF Series Commercial Countdown Timers are designed to replace any standard wall switch and do not require electricity to operate. These energy-efficient switches automatically limit the ON times for fans, lighting, motors, heaters, and other energy consuming loads. A commercial "brushed metal" look plate (plastic construction) meets NEC requirements.

APPLICATIONS
- Indoor Lighting Control • Outdoor Lighting Control • Motor Control
- Air Movement & Ventilation

FEATURES
- No electricity required to operate
- Replaces any standard or decorator single-gang wall switch
- Automatically limits ON time for energy consuming loads
- Quick and easy installation
- Time-saving up front terminal connection with teeter-type terminals
- Brushed metal look switch plate meets NEC requirements (plate is included)
- Incandescent/fluorescent/CFL/LED compatible
- No neutral connection is required

Without HOLD
FF5M

With HOLD
FF6HH

Without HOLD	With HOLD	Maximum Time	Switch Type
SPST			
FF5M	FF5MH	5 min	
FF15MC	FF15MH	15 min	
FF30MC	FF30MH	30 min	
FF60MC	FF60MHC	60 min	SPST Configuration
FF2H	–	2 hrs	
FF4H	–	4 hrs	
FF6H	FF6HH	6 hrs	
FF12HC	FF12HHC	12 hrs	
SPDT			
FF315M	–	15 min	
FF330M	–	30 min	
FF360M	–	60 min	
FF32H	FF32HH	2 hrs	*For SPDT Configuration Jumper L1 & L2 Together
FF34H	FF34HH	4 hrs	
FF36H		6 hrs	
FF312H	FF312HH	12 hrs	
DPST			
FF415M	–	15 min	
FF430M	–	30 min	
FF460M	–	60 min	DPST Configuration
FF46H	–	6 hrs	
FF412H	–	12 hrs	

For accessories please see page 73.

Ratings	
Input Voltage	125-277 VAC, 50/60 Hz
Resistive (Heater)	20 A, 2500 W, 125 VAC; 10 A, 2500 W, 250 VAC; 10 A, 2770 W, 277 VAC
Tungsten (Incandescent)	7 A, 125 VAC, 50 Hz, 7 A, 125 VAC, 60 Hz, 875 W
Motor	1 HP, 125 VAC; 2 HP, 250 VAC
Dimensions H x W x D	4.125" x 1.75" x 1.25" (104.8 mm x 44.5 mm x 31.8 mm)
Neutral Required	No
Operating Temperature	40°F - 120°F (4°C - 49°C)
Warranty	1-Year limited

Note: Not for use with sunlamps, saunas, or loads that could cause personal injury if timed incorrectly.

In-Wall Timers

CHOOSE THE RIGHT IN-WALL TIMER FOR YOUR NEXT PROJECT

From input voltage to motor load, this chart highlights the key features and ratings of our in-wall solutions.

	ST700	EI600	ST01	EJ600	EI500	KM2	FD	FF
FEATURES								
NEUTRAL REQUIRED	●			●	●	●		
WI-FI WITH APP	STW700W							
CONTROLS CFL	●	●	●	●	●	●	●	●
CONTROLS LED	●	●	●	●	●			
3-WAY SWITCHING	●	●	●	●		KM2STU-1G		
RATINGS								
INPUT VOLTAGE	120 VAC, 50/60 Hz	120-277 VAC, 50/60 Hz; 12/28 VDC	120-277 VAC, 50/60 Hz; 12/28 VDC	120 VAC, 60 Hz	125 VAC, 60 Hz	120 VAC, 60 Hz	125-277 VAC, 50/60 Hz	125-277 VAC, 50/60 Hz
RESISTIVE (HEATER), AC	15 A	20 A	15 A	12 A	15 A	20 A	20 A, 2500 W, 125 VAC; 10 A, 2500 W, 250 VAC; 10 A, 2770 W, 277 VAC	20 A, 2500 W, 125 VAC; 10 A, 2500 W, 250 VAC; 10 A, 2770 W, 277 VAC
TUNGSTEN (INCANDESCENT)	960 W	1800 W, 120 VAC; 1248-1662 W, 208-277 VAC	1800 W, 120 VAC; 1248-1662 W, 208-277 VAC	1800 W, Single-Gang; 1440 W, Multi-Gang	1000 W	1350 W	7 A, 125 VAC, 50 Hz; 7 A, 125 VAC, 60 Hz, 875 W	7 A, 125 VAC, 50 Hz; 7 A, 125 VAC, 60 Hz, 875 W
BALLAST (FLUORESCENT)		16 A, 1920-4432 VA	8 A, 960 VA, 120 VAC; 4 A, 832-1108 VA, 208-277 VAC	4 A, 500 VA	8 A, 1000 VA			
ELECTRONIC BALLAST (LED)	5 A, 600 W				4 A, 500 W			
DC LOADS		4 A, 12 VDC; 2 A, 28 VDC	4 A, 12 VDC; 2 A, 28 VDC					
MOTOR LOAD	1 HP	1 HP, 120 VAC; 2 HP, 240 VAC	1 HP, 120 VAC; 2 HP, 204 VAC	1/2 HP	1/4 HP	1 HP	1 HP, 125 VAC; 2 HP, 250 VAC	1 HP, 125 VAC; 2 HP, 250 VAC
WARRANTY	3-Year limited	5-Year limited	1-Year limited	1-Year limited	1-Year limited	1-Year limited	1-Year limited	1-Year limited
AGENCY	c UL us	CSA c us	CSA c us	CSA c us	c UL us	c UL us	CSA c us	CSA c us
BATTERY								
RECHARGEABLE				●	●			
REPLACEABLE		●	●					
SCHEDULES STORED IN NON-VOLATILE MEMORY	●	●	●					
PROGRAMMING								
ASTRONOMIC	●	●	●	●				
DAYLIGHT SAVING TIME	●	●	●	●				
RANDOM	●	●	●	●	●			
PROGRAM RANGE	7-Day	7-Day	7-Day	7-Day	7-Day	24-Hour	5-Minutes to 6-Hours	5-Minutes to 6-Hours
MAXIMUM NUMBER OF EVENTS	42	40	40	14	14	36	1	1

INTERMATIC®

IN-WALL TIMER ACCESSORIES

Model #	Description
107SB189	Red (ON) tripper for SB Series, HB112C, HB113C,HB114C (Indoor), AL300RTW, AL600TW, AL900TW, AL60TW and ML Series Transformer Timers
107SB192	Black (OFF) tripper for SB Series, HB112C, HB113C, HB114C (Indoor), AL300RTW, AL600TW, AL900TW, AL60TW and ML Series Transformer Timers
146--00045	Knob-Wall Switch FD Series - Ivory
146--00046	Knob-Wall Switch FD Series - White
146--00047	Knob-Wall Switch FD Series - Almond
146MT577	Knob-Wall Switch FF Series - White
146MT579	Knob-Wall Switch FF Series - Black
148FD5024	Plate for 5-Min with HOLD (FF5MH)
148FD5025	Plate for 5-Min without HOLD (FF5M)
148FD5029	Plate for 60-Min with HOLD (FF60MHC)
148FD5030	Plate for 6-Hr without HOLD (FF36H, FF46H, FF6H)
148FD5031	Plate for 6-Hr with HOLD (FF6HH)
148FD5032	Plate for 12-Hr without HOLD (FF12HC, FF312H, FF412H)
148FD5033	Plate for 12-Hr with HOLD (FF12HHC, FF312HH)
148FD5034	Plate for 2-Hr without HOLD (FF2H, FF32H)
148FD5035	Plate for 2-Hr with HOLD (FF32HH)
148FD5036	Plate for 4-Hr without HOLD (FF34H, FF4H)
148FD5037	Plate for 4-Hr with HOLD (FF34HH)
148FD5038	Plate for 30-Min with HOLD (FF30MH)
148FD5039	Plate for 15-Min with HOLD (FF15MH)
148FD5052	Plate for 5-Min without HOLD, White (FD5MW)
148FD5054	Plate for 15-Min with HOLD, White (FD15MHW)
148FD5056	Plate for 30-Min with HOLD, White (FD30MHW)
148FD5058	Plate for 60-Min with HOLD, White (FD60MHW)
148FD5059	Plate for 6-Hr without HOLD, White (FD46HW, FD6HW)
148FD5060	Plate for 6-Hr with HOLD, White (FD6HHW)
148FD5061	Plate for 12-Hr without HOLD, White (FD12HWC)
148FD5062	Plate for 12-Hr with HOLD, White (FD12HHW)
148FD5063	Plate for 2-Hr without HOLD, White (FD2HW, FD32HW)
148FD5064	Plate for 5-Min without HOLD, Ivory (FD5M)

Model #	Description
148FD5068	Plate for 30-Min with HOLD, Ivory (FD30MH)
148FD5070	Plate for 60-Min with HOLD, Ivory (FD60MH)
148FD5071	Plate for 6-Hr without HOLD, Ivory (FD36H, FD46H, FD6H)
148FD5072	Plate for 6-Hr with HOLD, Ivory (FD6HH)
148FD5073	Plate for 12-Hr without HOLD, Ivory (FD12HC)
148FD5074	Plate for 12-Hr with HOLD, Ivory (FD12HH)
148FD5075	Plate for 2-Hr without HOLD, Ivory (FD2H, FD32H)
148FD5076	Plate for 4-Hr without HOLD, Ivory (FD34H, FD4H)
148FD5077	Plate for 15-Min without HOLD, Light Almond (FD15MAC)
148FD5078	Plate for 30-Min without HOLD, Light Almond (FD30MAC)
148FD5079	Plate for 60-Min without HOLD, Light Almond (FD60MAC)
148FD5080	Plate for 4-Hr without HOLD, White (FD34HW, FD4HW)
156EB1945A	Trippers for E1020 (Pack of 2)
24--00041	Wall Plate for KM2ST-2G, 2 Gang (Timer and Toggle Switch), White
24--00042	Wall Plate for KM2ST-3G, 3 Gang (Timer and 2 Toggle Switches), White
24--00046	Wall Plate for KM2ST-2D, 2 Gang (Timer and Decorator Switch), White
24--00109	Wall Plate for KM2ST-1G or KM2STU-1G, Single Gang, White
FD15MP	Plate for 15-Min without HOLD, Ivory (FD15MC, FD415M)
FD15MPW	Plate for 15-Min without HOLD, White (FD15MWC)
FD30MP	Plate for 30-Min without HOLD, Ivory (FD30MC, FD430M)
FD30MPW	Plate for 30-Min without HOLD, White (FD30MWC, FD430MW)
FD60MP	Plate for 60-Min without HOLD, Ivory (FD460M, FD60MC)
FD60MPW	Plate for 60-Min without HOLD, White (FD460MW, FD60MWC)
FF15MP	Plate for 15-Min without HOLD, Silver (FF15MC, FF315M, FF415M)
FF30MP	Plate for 30-Min without HOLD, Silver (FF30MC, FF330M, FF430M)
FF60MP	Plate for 60-Min without HOLD, Silver (FF360M, FF460M, FF60MC)

146--00045

148FD5038

146MT577

FF60MP

107SB189

107SB192

146--00046

146--00047

Plug-In Timer Solutions

Install energy savings in an instant with our convenient plug-in timer solutions. These user-friendly mechanical and electronic controls make it easy to create ON/OFF schedules for lights, pumps, fans and more.

Indoor Convenience

Connect our plug-in timers to lamps, fans, air conditioners and more to add an extra level of comfort to everyday. They can be installed in minutes and make it easy to create daily or weekly ON/OFF schedules.

Holiday Lighting

Take holiday decorating to the next level with our versatile plug-in timers. Once installed, users can enjoy lighting displays on fixed ON/OFF schedule without the hassle of plugging decorations into the wall or flipping the switch on a power strip.

Heavy-Duty Appliances

Handle input voltages of up to 240 VAC with our selection of heavy-duty plug-in timers. These durable controls are perfect to pair with air conditioners and ventilation equipment.

Rugged Outdoor Control

Take command of ON/OFF schedules in outdoor settings with a variety of outdoor plug-in timers. Select models offer a built-in enclosure, which protects the control from the elements and supports year-round use

Contents

Additional Solutions and Resources

Ready to get started? Scan the QR code to the right for a variety of helpful resources, including sell sheets, product instructions, installation videos and more.

HB110 Series

HB112

HB113

HB114

HB110 Series
INDOOR HEAVY-DUTY APPLIANCE PLUG-IN TIMERS

Plug-in timers provide 24-hour ON/OFF scheduling for high power appliances, such as window mounted air conditioners, by accepting their specialized NEMA plugs.

APPLICATIONS
• Air Movement & Ventilation • Indoor Lighting Control

FEATURES
• 2 ON/2 OFF settings per day with removable trippers, more ON/OFF events with addition of extra trippers
• Minimum 30-min ON/OFF time
• Manual ON/OFF Override
• Grounded 125 and 240 V NEMA receptacle and plug
• Plugs directly into wall outlet

Ratings	
Input Voltage	
HB113	120 VAC, 60 Hz
HB112, HB114	240 VAC, 60 Hz
Resistive (Heater)	
HB112	15 A, 240 VAC, 60 Hz
HB113	20 A, 125 VAC, 60 Hz
HB114	20 A, 240 VAC, 60 Hz
Tungsten (Incandescent)	1250 W, 125 VAC, 60 Hz
Inductive Ballast (Heater)	
HB113	8 A, 125 VAC, 60 Hz
HB112, HB114	8 A, 240 VAC, 60 Hz
Pilot Duty	
HB113	576 VA, 125 VAC, 60 Hz
HB112, HB114	768 VA, 240 VAC, 60 Hz
Motor	
HB113	2 HP, 240 VAC, 60 Hz
HB112, HB114	2 HP, 240 VAC, 60 Hz
Warranty	1-Year limited

Model #	Input Voltage	Rect/Plug	
HB112	240 VAC, 60 Hz	6-15	
HB113	120 VAC, 60 Hz	5-20	
HB114	240 VAC, 60 Hz	6-20	

Indoor Applications

• Lamps • Appliances • Electronics • Heaters • Window Air Conditioning • Chargers

INTERMATIC®

TN311 Series
HEAVY-DUTY 24-HOUR INDOOR MECHANICAL PLUG-IN TIMER

The TN311 Series provides a quick and easy way to automate ON/OFF schedules and plugs directly into standard wall outlets.

APPLICATIONS
• Air Movement & Ventilation • Indoor Lighting Control

FEATURES
• 3 ON/3 OFF settings per day with removable trippers, more ON/OFF events with addition of extra trippers
• Minimum 30-min ON/OFF time
• Grounded receptacle and 3-prong plug
• Plugs directly into wall outlet

TN311   1x

Model #	Input Voltage	Rect/Plug	
TN311	125 VAC, 60 Hz	5-15	

Ratings	
Input Voltage	125 VAC, 60 Hz
Resistive (Heater)	15 A, 125 VAC, 60 Hz
Tungsten (Incandescent)	1875 W, 125 VAC, 60 Hz
Inductive Ballast (Fluorescent)	15 A, 125 VAC
Dimensions H x W x D	3 ⅛" x 3" x 2" (79 mm x 76 mm x 51 mm)
Warranty	1-Year limited

DT620 Series
7-DAY INDOOR DIGITAL PLUG-IN TIMER

Full feature plug-in timer provides full 7-day programming with astronomical clock and Daylight Saving Time (DST) adjustment in a convenient plug-in for quick and easy automation.

APPLICATIONS
• Air Movement & Ventilation • Indoor Lighting Control

FEATURES
• 28 ON/OFF programmable events
• Full 7-day programming options, including astronomical clock,automatic DST adjustment and random mode
• Two grounded receptacles and a grounded plug
• LR44 battery backup (included)
• Plugs directly into wall outlet

DT620   2x

Model #	Input Voltage	Rect/Plug	
DT620	120 VAC, 60 Hz	5-15	

Ratings	
Input Voltage	120 VAC, 60 Hz
Resistive (Heater)	15 A, 120 VAC
Tungsten (Incandescent)	1000 W, 120 VAC
Inductive Ballast (Fluorescent)	12 A, 120 VAC
Motor	1/2 HP, 120 VAC
Dimensions H x W x D	3 ⅕" x 3 ⅓" x 2 ¼" (81 mm x 84 mm x 57 mm)
Warranty	1-Year limited

Plug-In Timer
Outdoor

P1101   P1121   P1131

Ratings	
Input Voltage	120 VAC, 60 Hz
Resistive (Heater)	20 A, 120 VAC, 60 Hz
Tungsten (Incandescent)	1800 W, 120 VAC, 60 Hz
Motor	1 HP, 16 FLA, 96 LRA @ 120 VAC
Dimensions H x W x D	
P1101, P1131	5 ⅜" x 5 ⅛" x 2 ½" (137 mm x 130 mm x 64 mm)
P1121	5 ⅝" x 3 ⅝" x 3 ¼" (143 mm x 92 mm x 83 mm)
Warranty	1-Year limited

P1100 Series
OUTDOOR MECHANICAL PLUG-IN TIMERS WITH BUILT-IN ENCLOSURE

These plug-in timers are grounded and utilize a flip-open enclosure rated for outdoor use. These heavy-duty timers are great for providing timer function to pumps, landscaping or holiday lighting. 24-hour timers come with 2 On and 2 Off settings.

APPLICATIONS
• Outdoor Lighting Control • Landscape Water Control • Pool Pump
• Outdoor Water Fountains

FEATURES
• 2 ON/2 OFF settings per day with removable trippers, more ON/OFF events with addition of extra trippers
• Minimum 30-min ON/OFF time
• Built into outdoor rated enclosure with clear or black flip cover
• Grounded standard or locking type style NEMA plug and receptacle
• Plugs directly into wall outlet

Model #	Input Voltage	Rcpt/Plug		Cord Length	Cover
P1101	120 VAC, 60 Hz	5-15		22"	Black
P1121	120 VAC, 60 Hz	5-15		13"	Black
P1131	120 VAC, 60 Hz	L5-20		22"	Black

TN111RM40

1x

Ratings	
Input Voltage	125 VAC, 60 Hz
Resistive (Heater)	9 A (1125 W), 125 VAC, 60 Hz
Inductive Ballast (Fluorescent)	9 A, 125 VAC, 60 Hz
Motor	1/3 HP
Dimensions H x W x D	3 ⅛" x 3" x 2" (79 mm x 76 mm 51 mm)
Warranty	1-Year limited

TN111RM40
24-HOUR OUTDOOR MECHANICAL PLUG-IN TIMER

Plug-in timer rated for installation into a Type 3R outdoor low voltage transformer enclosure. Simple implementation of ON/OFF schedule.

APPLICATIONS
• Air Movement & Ventilation • Indoor Lighting Control • Outdoor Lighting Control
• Landscape Water Control

FEATURES
• 2 ON/2 OFF settings per day with removable trippers, more ON/OFF events with addition of extra trippers
• Minimum 30-min ON/OFF time
• Rated for outdoor use in a Type 3R outdoor enclosure
• Manual override dial

Model #	Input Voltage	Rcpt/Plug	
TN111RM40	125 VAC, 60 Hz	1-15	

Outdoor Applications

• Pumps • Water Fountains • Aerators • Landscape/Holiday Lighting • Engine Block Heaters

INTERMATIC®

HB880R
7-DAY OUTDOOR DIGITAL PLUG-IN TIMER

Full feature plug-in timer provides 7-day programming in a weatherproof enclosure with astronomical clock and Daylight Saving Time (DST) adjustment in a convenient plug-in for quick and easy automation.

APPLICATIONS
• Outdoor Lighting Control • Landscape Water Control

FEATURES
• 14 ON/OFF programmable events
• Full 7-day programming options, including astronomical clock, automatic DST adjustment and random mode
• 2 grounded receptacles with 24" cord and grounded plug
• Incandescent/fluorescent/CFL/LED compatible
• AA battery backup (included)
• Plugs directly into wall outlet

Model #	Input Voltage	Rect/Plug
HB880R	120 VAC, 60 Hz	5-15

HB880R   2x

Ratings	
Input Voltage	120 VAC, 60 Hz
Electronic Ballast (LED)	500 VA, 120 VAC, 60 Hz
Resistive (Heater)	15 A, 120 VAC, 60 Hz
Tungsten (Incandescent)	1000 W, 120 VAC, 60 Hz
Inductive Ballast (Fluorescent)	8.3 A, 120 VAC, 60 Hz
Motor	1/2 HP, 120 VAC, 60 Hz
Dimensions H x W x D	5 3/8" x 5" x 1 7/8" (137 mm x 129 mm x 48 mm)
Warranty	1-Year limited

DT200LT Series
DIGITAL LANDSCAPE TIMER

Digital 24-hour landscape timer with DST, rated for use in low voltage transformers up to 1200W featuring ON programming at Dusk or predetermined time and OFF at Dawn or predetermined time.

APPLICATIONS
• Indoor Lighting Control • Outdoor Lighting Control • Landscape Water Control

FEATURES
• Factory set AUTO DST option takes the hassle out of Daylight Saving Time adjustments
• One push, programming override for homeowner convenience
• Rated for use in low voltage transformers up to 1200 W
• Two included LR44 batteries retain the correct time and settings for up to three months without power
• Use with UL Certified Type 3R enclosure (sold separately)
• Intermatic Linesync technology provides accurate timing for years

Model #	Input Voltage	Rect/Plug
DT200LT	120 VAC, 60 Hz	5-15

DT200LT   2x

Ratings	
Input Voltage	120 VAC, 60 Hz
Resistive (Heater)	15 A, 120 VAC, 60 Hz
Tungsten (Incandescent)	1000 W, 120 VAC, 60 Hz
Inductive Ballast (Fluorescent)	12 A, 120 VAC, 60 Hz
Motor	1/2 HP @ 120 VAC, 60 Hz
Dimensions H x W x D	3 3/16" x 3 5/16" x 2 1/4" (81 mm x 84 mm x 57 mm)
Warranty	1-Year limited

Occupancy Sensor Solutions

Increase energy-efficiency in limited-use spaces with easy-to-install Intermatic occupancy and vacancy sensors. Our range of in-wall and ceiling mount controls ensure lights stay on only when needed and help reduce energy costs.

Storage Areas and Closets

Bring hands-free lighting control to storage areas, supply closets, garages and more with a PIR or dual-tech occupancy/vacancy sensor. Once installed, lights activate only when an occupant's presence is detected (when set in occupancy mode), allowing them to access the space without searching for an in-wall switch in the dark.

Restrooms

Install occupancy sensors in restrooms, locker rooms and other limited-use locations to provide occupants with an added level of comfort and convenience. Adjustable hold intervals make it easy to tailor sensors to application needs, while a manual override function keeps end-users in control.

Meeting Rooms and Corridors

Simplify lighting control in meeting rooms and hallways with occupancy/vacancy sensors. A range of commercial-grade solutions allow installers to integrate energy-saving control while catering to business needs.

Waiting Rooms and Common Areas

Save on energy costs by installing dual-tech occupancy sensors in common areas and waiting rooms. Our ceiling mount solutions provide enhanced coverage and allow the controls to monitor movement in crowded environments with minor obstructions and limited sight lines.

Contents

Additional Solutions and Resources

Ready to get started? Scan the QR code to the right for a variety of helpful resources, including sell sheets, product instructions, installation videos and more.

Occupancy Sensors

The right technology for the space.

Our range of sensors detects the presence and movement of people in a room, space, or immediate vicinity. Smart technology discerns even the slightest motor movements, so lights stay on when needed and turn off when vacated to conserve energy.

Ceiling Mount Sensors　　　　　　　　　　**In-Wall Sensors**

The differences between Passive Infrared (PIR) and Dual (PIR/Ultrasonic) technology.

Passive infrared (PIR) technology detects the difference in heat energy a person in motion generates in contrast to the elements surrounding them in a confined space. To detect presence PIR needs line of sight to a person.

Dual (PIR/Ultrasonic) technology combines PIR with Ultrasonic technology. Ultrasonic utilizes wave analysis and Doppler sound waves to detect differences in energy from different phenomenon. The combination of the two technologies enhances responsiveness for maximum system reliability.

INTERMATIC®

IOS-CMP-DT-LV

IOS-CMP-LV

IOS-CMP-DT-LV
LOW-VOLTAGE CEILING MOUNT DUAL TECH SENSOR

This ceiling mount sensor detects presence using a combination of Passive Infrared (PIR) and ultrasonic technologies, and in conjunction with a remote power pack unit, turns the load ON and OFF when presence is detected.

APPLICATIONS
• Indoor Sensing Control

FEATURES
• Ultrasonic and PIR sensing for presence detection, even in areas with partitions and/or with small movements
• Low-voltage, ceiling mounted sensor
• Coverage: 360°, 1600 ft2 PIR, 1000 ft2 Ultrasonic mounted on 8 to 11 ft ceiling
• Adjustable time delay
• Adjustable ambient light sensor override
• Powered by IOS-PP24 power pack, sold separately

Model #	Description	Technology
IOS-CMP-DT-LV	Commercial Grade Low-Voltage Ceiling Mount Dual Tech Occupancy/Vacancy Sensor, White	Dual Technology (PIR/Ultrasonic)

Ratings	
Input Voltage	24 VDC
Current Consumption	20 mA
Power Supply	IOS-PP24
Coverage Pattern	1000 ft^2 PIR, 1600 ft^2 Ultrasonic
Adjustable Light Level	10 fc - Daylight
Adjustable Time Delay	5 sec - 30 min
Operating Temperature	32°F - 122°F (0°C - 50°C)
Dimensions H x Dia	1 ⅜ x 4 9⁄16 (35 mm x 116 mm)
Warranty	2-Year limited

IOS-CMP-LV
LOW-VOLTAGE CEILING MOUNT PIR SENSOR

This ceiling mount sensor detects presence using Passive Infrared (PIR) technology and, in conjunction with a remote power pack unit, turns the load ON and OFF when presence is detected.

APPLICATIONS
• Indoor Sensing Control

FEATURES
• PIR sensing for presence detection
• Low-voltage, remote-mounted sensor
• Coverage: 1200 ft2 when mounted on 8 to 11 ft ceiling
• Adjustable time delay
• Adjustable ambient light sensor override
• Powered by IOS-PP24 power pack, sold separately

Model #	Description	Technology
IOS-CMP-LV	Commercial Grade Low-Voltage Ceiling Mount PIR Occupancy/Vacancy Sensor, White	PIR (Passive Infrared)

Ratings	
Input Voltage	24 VDC
Current Consumption	9mA
Power Supply	IOS-PP24
Coverage Pattern	1200 ft^2
Adjustable Light Level	10 fc - 150 fc
Adjustable Time Delay	15 sec - 30 min
Operating Temperature	32°F - 122°F (0°C - 50°C)
Dimensions H x Dia	1 ⅜" x 4 9⁄16" (35 mm x 116 mm)
Warranty	2-Year limited

--- ACCESSORY ---

IOS-PP24

IOS-PP24
LOW-VOLTAGE POWER PACK

An IOS-PP24 power pack is required to provide power to the IOS-CMP-LV sensor and enable a manual ON for the vacancy sensor.

FEATURES
• Controls up to six low-voltage sensors
• Zero-crossing technology for long life and performance
• Incandescent/Fluorescent/CFL compatible

Ratings	
Input Voltage	120/230/240/277 VAC, 50/60 Hz
Tungsten (Incandescent)	15A, 120VAC, 50/60 Hz 5A, 250VAC, 50/60 Hz
Ballast (Fluorescent)	20 A
Motor	1 HP, 120 VAC, 1 HP, 240 VAC
Operating Temperature	32°F - 131°F (0°C - 55°C)
Dimensions H x W x D	2 ¾" x 1 15⁄16" x 1 ⅝" (70 mm x 49 mm x 41 mm)
Warranty	2-Year limited

INTERMATIC

Occupancy Sensors

IOS-CMP-DT-U

IOS-CMP-U

Lens 2

IOS-HB-U

IOS-CMP-DT-U
LINE VOLTAGE CEILING MOUNT
DUAL TECH SENSOR

This ceiling mount unit turns lights ON and OFF when presence is detected using a combination of Ultrasonic and Passive Infrared (PIR) sensing technologies.

APPLICATIONS
• Indoor Sensing Control

FEATURES
• Ultrasonic and PIR sensing improves presence detection while avoiding false triggers, even in areas with partitions and/or small movements
• Zero-crossing technology for long life and performance
• Coverage: 360°, 1600 ft^2 PIR, 1000 ft^2 Ultrasonic mounted on 8 to 11 ft ceiling
• Adjustable ambient light sensor override
• Requires neutral connection
• Incandescent/Fluorescent/CFL/LED compatible

Model #	Description	Technology
IOS-CMP-DT-U	Commercial Grade Line Voltage Ceiling Mount Dual Tech Occupancy Sensor, White	Dual Technology (PIR/Ultrasonic), Zero-crossing

Ratings	
Input Voltage	120/277 VAC, 50/60 Hz
Electronic Ballast (LED)	800 VA, 120 VAC; 1600 VA, 277 VAC
Tungsten (Incandescent)	800 W, 120 VAC
Resistive (Heater)	800 W
Ballast (Fluorescent)	800 VA, 120 VAC, 1600 VA, 277 VAC
Motor	1/4 HP, 120 VAC
Coverage Pattern	360°, 1600 ft^2 PIR, 1000 ft^2 Ultrasonic
Adjustable Light Level	10 fc - Daylight
Adjustable Time Delay	5 sec - 30 min
Operating Temperature	32°F - 131°F (0°C - 55°C)
Dimensions H x Dia	1 3/8"x 4 9/16" (35 mm x 116 mm)
Warranty	2-Year limited

IOS-CMP-U
LINE VOLTAGE CEILING MOUNT
PIR SENSOR

Using Passive Infrared (PIR) sensing technology, this ceiling mount unit turns lights ON and OFF when presence is detected in a room without partitions or obstructions.

APPLICATIONS
• Indoor Sensing Control

FEATURES
• PIR technology sensing for presence detection
• Coverage: 1200 ft^2 when mounted on 8 to 11 ft ceiling
• Zero-crossing technology for long life and performance
• Adjustable ambient light sensor override
• Requires neutral connection
• Incandescent/Fluorescent/CFL/LED compatible

Model #	Description	Technology
IOS-CMP-U	Commercial Grade Line Voltage Ceiling Mount PIR Occupancy Sensor, White	PIR (Passive Infrared), Zero-crossing

Ratings	
Input Voltage	120/277 VAC, 60 Hz
Electronic Ballast (LED)	800 VA, 120 VAC; 1600 VA, 277 VAC
Tungsten (Incandescent)	800 W, 120 VAC
Resistive (Heater)	800 W
Ballast (Fluorescent)	800 VA, 120 VAC; 1600 VA, 277 VAC
Motor	1/4 HP, 120 VAC
Coverage Pattern	360°, 1200 ft^2
Adjustable Light Level	10 fc - 150 fc
Adjustable Time Delay	15 sec - 30 min
Operating Temperature	32°F - 131°F (0°C - 55°C)
Dimensions H x Dia	1 3/8" x 4 9/16" (35 mm x 116 mm)
Warranty	2-Year limited

IOS-HB-U
HIGH BAY/FIXTURE MOUNT
PIR SENSOR

For installation on High Bay Light Fixtures. Provides ON/OFF control of lights by presence in warehouses and other industrial spaces.

APPLICATIONS
• Indoor Sensing Control

FEATURES
• Passive Infrared (PIR) sensing for presence detection
• Two lenses included
• Coverage: 1200 ft^2 (Lens 1) or 2800 ft^2 (Lens 2) when mounted at 15 to 50 ft
• Zero-crossing technology for long life and performance
• Adjustable ambient light sensor override
• Incandescent/Fluorescent/CFL/LED compatible

Model #	Description	Technology
IOS-HB-U	Commercial Grade High Bay Ceiling Mount PIR Occupancy Sensor, White	PIR (Passive Infrared), Zero-crossing

Ratings	
Input Voltage	120/277 VAC, 60 Hz
Electronic Ballast (LED)	800 VA, 120 VAC; 1200 VA, 277 VAC
Tungsten (Incandescent)	800 W, 120 VAC
Resistive (Heater)	800 W
Ballast (Fluorescent)	800 VA, 120 VAC; 1200 VA, 277 VAC
Motor	1/4 HP, 120 VAC
Mounting	15-50 ft
Coverage Pattern	180°, 1200 ft^2 (Lens 1), 2800 ft^2 (Lens 2)
Adjustable Light Level	10 fc - 150 fc
Adjustable Time Delay	15 sec - 30 min
Operating Temperature	32°F - 131°F (0°C - 55°C)
Dimensions H x Dia	2 3/4" x 4" (70 mm x 102 mm)
Warranty	2-Year limited

INTERMATIC

IOS-DOV-DT-WH

IOS-DSR-WH

Ivory

IOS-DOV-DT-WH
LINE VOLTAGE IN-WALL
DUAL TECH SWITCH

This Occupancy/Vacancy in-wall switch unit can be used as a replacement to a standard wall switch to turn lights ON and OFF when presence is detected by a combination of Ultrasonic and PIR sensing technologies.

APPLICATIONS
- Indoor Sensing Control

FEATURES
- Ultrasonic and Passive Infrared (PIR) sensing for presence detection, even in areas with partitions and/or with small movements
- Coverage: 180°, 1200 ft^2 PIR, 400 ft^2 Ultrasonic
- Zero-crossing technology for long life and performance
- Adjustable time delay
- Optional walk-through detection mode
- Adjustable ambient light sensor override
- Incandescent/Fluorescent/CFL/LED compatible
- Requires neutral connection
- Fits standard decorator wall plate (included)

Model #	Description	Technology
IOS-DOV-DT-WH	Commercial Grade In-Wall Dual Tech Occupancy/Vacancy Sensor, White	Dual Technology (PIR/Ultrasonic), Zero-crossing

Ratings	
Input Voltage	120/277 VAC, 50/60 Hz
Electronic Ballast (LED)	600 VA, 120 VAC; 1385 VA, 277 VAC
Tungsten (Incandescent)	800 W, 120 VAC
Resistive (Heater)	800 W, 120 VAC
Ballast (Fluorescent)	800 VA, 120 VAC
Motor	1/4 HP, 120 VAC
Coverage Pattern	180°, 1200 ft^2 PIR, 400 ft^2 Ultrasonic
Adjustable Light Level	10 fc - Daylight
Adjustable Time Delay	15 sec - 30 min
Operating Temperature	32°F - 131°F (0°C - 55°C)
Dimensions H x W x D	2.625" x 1 5/16" x 1.75" (67 mm x 33 mm x 44 mm)
Warranty	2-Year limited

IOS-DSR Series
SELF-ADAPTIVE IN-WALL
PIR SENSOR SWITCH

These in-wall switches detect presence using PIR sensing technology. They have a self-adjusting feature that optimizes delay-off time based on actual occupancy.

APPLICATIONS
- Indoor Sensing Control

FEATURES
- Passive Infrared (PIR) sensing for presence detection
- Coverage: 180º, 1200 ft^2 with non-obstructed views
- User-selectable Vacancy or Occupancy switch mode
- Zero-crossing technology for long life and performance
- Automatic self-adaptive time delay based on occupancy patterns
- IOS-DSR/DDR models feature optional walk-through detection mode
- Adjustable ambient light sensor override
- Incandescent/Fluorescent/CFL/LED compatible
- Fits standard decorator wall plate (included)

Model #		Circuits	Switch Type	Requires Neutral	Nightlight
White	Ivory				
IOS-DSR-WH	IOS-DSR-IV	1	Occupancy, Vacancy	No	No

Ratings	
Input Voltage	120/277 VAC, 50/60 Hz
Electronic Ballast (LED)	800 VA, 120 VAC; 1600 VA, 277 VAC
Tungsten (Incandescent)	800 W, 120 VAC
Resistive (Heater)	800 W, 120 VAC
Ballast (Fluorescent)	800 VA, 120 VAC; 1600 VA, 277 VAC
Motor	1/4 HP, 120 VAC
Coverage Pattern	180°, 1200 ft^2
Adjustable Light Level	30 lux - Daylight
Adjustable Time Delay	15 sec - 30 min
Operating Temperature	32°F - 131°F (0°C - 55°C)
Dimensions H x W x D	2.625" x 1 5/16" x 1.75" (67 mm x 33 mm x 44 mm)
Warranty	2-Year limited

Occupancy Sensors
Self-Adaptive In-Wall

Ivory

IOS-DOV-WH

IOS-DDR-WH

IOS-DOV Series
SELF-ADAPTIVE IN-WALL
PIR SENSOR SWITCH

These in-wall switches detect presence using PIR (Passive Infrared Technology) and can be set for Automatic ON or Manual ON activation. These units also offer adjustable time delay, adjustable ambient light level detection, as well as adjustable sensitivity settings providing optimal energy savings.

APPLICATIONS
● Indoor Sensing Control

FEATURES
● Passive Infrared (PIR) sensing for presence detection
● Coverage: 180º, 1200 ft^2 with non-obstructed views
● User-selectable Vacancy or Occupancy switch mode
● Zero-crossing technology for long life and performance
● Adjustable ambient light sensor override
● Incandescent/Fluorescent/CFL/LED compatible
● IOS-DOV models require a neutral connection
● Fits standard decorator wall plate (included)

Model #		Circuits	Switch Type	Requires Neutral	Nightlight
White	Ivory				
IOS-DOV-WH	IOS-DOV-IV	1	Occupancy, Vacancy	Yes	No
IOS-DOV-NL-WH*	IOS-DOV-NL-IV	1	Occupancy, Vacancy	Yes	Yes

Ratings	
Input Voltage	120 VAC, 60 Hz
Electronic Ballast (LED)	800 VA
Tungsten (Incandescent)	800 W
Resistive (Heater) IOS-DOV IOS-DOV-NL	12 A 10 A
Ballast (Fluorescent)	800 VA
Motor	1/4 HP
Coverage Pattern	180°, 1200 ft^2
Adjustable Light Level	30 lux - Daylight
Adjustable Time Delay	15 sec - 30 min
Operating Temperature	32°F - 131°F (0°C - 55°C)
Dimensions H x W x D	2.625" x 1 ^{5}/₁₆" x 1.75" (67 mm x 33 mm x 44 mm)
Warranty	5-Year limited

IOS-DDR Series
SELF-ADAPTIVE IN-WALL
PIR SENSOR SWITCH

These in-wall switches detect presence using PIR sensing technology. They have a self-adjusting feature that optimizes delay-off time based on actual occupancy.

APPLICATIONS
● Indoor Sensing Control

FEATURES
● Passive Infrared (PIR) sensing for presence detection
● Coverage: 180º, 1200 ft^2 with non-obstructed views
● Independent load control for each circuit
● Zero-crossing technology for long life and performance
● Automatic self-adaptive time delay based on occupancy patterns
● Features optional walk-through detection mode
● Incandescent/Fluorescent/CFL/LED compatible
● Require a neutral connection
● Fits standard decorator wall plate (included)

Model #	Circuits	Switch Type	Requires Neutral	Nightlight
IOS-DDR-WH	2	Occupancy, Vacancy	Yes	No

Ratings	
Input Voltage	120/277 VAC, 50/60 Hz
Electronic Ballast (LED)	800 VA, 120 VAC; 1600 VA, 277 VAC
Tungsten (Incandescent)	800 W, 120 VAC
Resistive (Heater)	800 W, 120 VAC
Ballast (Fluorescent)	800 VA, 120 VAC; 1600 VA, 277 VAC
Motor	1/4 HP, 120 VAC
Coverage Pattern	180°, 1200 ft^2
Adjustable Light Level	30 lux - Daylight
Adjustable Time Delay	15 sec - 30 min
Operating Temperature	32°F - 131°F (0°C - 55°C)
Dimensions H x W x D	2.625" x 1 ^{5}/₁₆" x 1.75" (67 mm x 33 mm x 44 mm)
Warranty	5-Year limited

INTERMATIC®

IOS-DPBIF-WH

IOS-DSIF-WH

Ivory

IOS-DPB Series
RESIDENTIAL GRADE IN-WALL
PIR VACANCY AND OCCUPANCY SENSOR SWITCHES

These in-wall switches detect presence using PIR sensing technology. They provide manual ON and automatic OFF (vacancy switches) or ON/OFF (occupancy switches) for small to medium size rooms.

APPLICATIONS
- Indoor Sensing Control

FEATURES
- Passive Infrared (PIR) sensing for presence detection
- Adjustable PIR sensitivity
- Adjustable time delay 15 sec to 30 min
- Adjustable ambient light sensor override for occupancy switch models
- Coverage: 150º, 980 ft^2 with non-obstructed views
- IOS-DPBV models are Incandescent/Fluorescent/CFL/LED compatible and require a neutral connection
- 'No neutral' models offered for retrofit applications
- Fits standard decorator wall plate (included)

Model #	Switch Type	Requires Neutral	Electronic	Tungsten	Ballast	Resistive
IOS-DPBIF-WH	Occupancy	Yes	–	800 W	800 VA	12 A
IOS-DPBIMF-WH*	Occupancy	No	–	800 W	800 VA	800 W
IOS-DPBV-WH	Vacancy	Yes	500 VA	500 W	500 VA	10 A

Not compatible with LED load, only incandescent and inductive loads. Min 25 W load required.

Ratings	
Input Voltage	120 VAC, 60 Hz
Electronic Ballast (LED)	See Model Chart - Electronic
Tungsten (Incandescent)	See Model Chart - Tungsten
Ballast (Fluorescent)	See Model Chart - Ballast
Resistive (Heater)	See Model Chart - Resistive
Motor	1/4 HP
Coverage Pattern	150°, 980 ft^2
Adjustable Light Level	30 lux - Daylight
Adjustable Time Delay	15 sec - 30 min
Operating Temperature	32°F - 131°F (0°C - 55°C)
Dimensions H x W x D	2.75" x 1 $^7/_{16}$" x 1.625" (70 mm x 37 mm x 41 mm)
Warranty	2-Year limited

IOS-DSI Series
RESIDENTIAL GRADE OCCUPANCY SWITCH
WITH MANUAL OVERRIDE

These in-wall switches detect presence using PIR sensing technology to automatically turn lights ON/OFF for small to medium size rooms. These models provide users with a manual ON/OFF/AUTO override switch.

APPLICATIONS
- Indoor Sensing Control

FEATURES
- Passive Infrared (PIR) sensing for presence detection
- Adjustable PIR sensitivity
- Adjustable time delay 15 sec to 30 min
- Adjustable ambient light sensor override
- Coverage: 150º, 980 ft^2 with non-obstructed views
- IOS-DSIF models are Incandescent/Fluorescent/CFL/LED compatible and require a neutral connection
- 'No neutral' models offered for retrofit applications
- Fits standard decorator wall plate (included)

Model #		Requires Neutral	Electronic	Tungsten	Ballast	Resistive
White	Ivory					
IOS-DSIF-WH	IOS-DSIF-IV	Yes	500 VA	500 W	500 VA	–
IOS-DSIMF-WH*	IOS-DSIMF-IV*	No	–	800 W	800 VA	800 W

Not compatible with LED load, only incandescent and inductive loads. Min 25 W load required.

Ratings	
Input Voltage IOS-DSIMF	120 VAC, 60 Hz 120 VAC, 50/60 Hz
Electronic Ballast (LED)	See Model Chart - Electronic
Tungsten (Incandescent)	See Model Chart - Tungsten
Ballast (Fluorescent)	See Model Chart - Ballast
Resistive (Heater)	See Model Chart - Resistive
Motor IOS-DSIF-WH IOS-DSIMF-WH	1/8 HP 1/4 HP
Switch Type	Occupancy
Coverage Pattern	150°, 980 ft^2
Adjustable Light Level	30 lux - Daylight
Adjustable Time Delay	15 sec - 30 min
Operating Temperature	32°F - 131°F (0°C - 55°C)
Dimensions H x W x D	2.75" x 1 $^7/_{16}$" x 1.625" (70 mm x 37 mm x 41 mm)
Warranty	2-Year limited

INTERMATIC®

Photocontrol Solutions

Boost energy efficiency and promote safety in outdoor spaces with Intermatic photocontrols. Our versatile lineup can fit nearly any application and budget. Take advantage of high-performance, LED compatible electronic photocontrols to reduce long-term maintenance needs and deliver lasting value to end-users.

Streets and Roadways

Install photocontrols in street and roadway lighting applications for dependable dusk-to-dawn control. Our electronic photocontrol solutions are designed to match the 10- to 20-year lifespan of LED fixtures and reduce long-term maintenance needs.

Parking Lots and Pathways

Deliver simple dusk-to-dawn lighting control in parking lots and other common space applications with our fixed mount electronic photocontrols. These LED compatible solutions are simple to install and promote security.

Entranceways and Building Exteriors

Take the guesswork out of outdoor building lighting needs with our thermal and electronic photocontrols. These solutions provide reliable ON/OFF scheduling and fit both residential and commercial applications.

Parks and Sports Fields

Reduce energy waste and promote security in public spaces with our versatile photocontrol lineup. Available in a variety of mounting styles, including stem-and-swivel, button, in-wall and stem mount, these solutions are an ideal choice for parks, sports fields, gardens and more.

Contents

Additional Solutions and Resources

Ready to get started? Scan the QR code to the right for a variety of helpful resources, including sell sheets, product instructions, installation videos and more.

WHAT'S THE DIFFERENCE BETWEEN **THERMAL** AND **ELECTRONIC** PHOTOCONTROLS?

ELECTRONIC PHOTOCONTROLS

Modern lighting installations require lighting controls that are compatible with LED fixtures. Our NightFox™ Electronic Photocontrols are specifically designed to match the 10- to 20-year lifespan of LED fixtures, which equates to fewer maintenance service calls and lower equipment costs.

NightFox Photocontrols offer a solid-state light sensor and relays that feature zero-crossing technology for more precise control and extended service life.

- Higher initial cost but longer lasting
- 10- to 20-Year design life
- 6- to 12-Year product warranty
- Universally compatible, especially with LED fixtures

THERMAL PHOTOCONTROLS

Thermal Photocontrols are electromechanical switches that are based on a Cadmium Sulphide (CdS) photosensor and a bimetallic, thermally sensitive switch mechanism.

These simple switches provide cost-effective dusk-to-dawn control of traditional HID and incandescent lighting loads. Because of their shorter 3- to 5-year design life, they are not recommended due to the high in rush current from LED fixtures which depreciates their lifespan.

- Lower initial cost
- 3- to 5-Year design life
- 1- to 2-Year product warranty
- Best for HID and Incandescent Fixtures

APPLICATIONS

• Street lighting • Perimeter lighting • Landscape lighting
• Parking Lot lighting • Pathway lighting • Park and Recreational lighting

INTERMATIC®

NIGHTFOX™ ELECTRONIC PHOTOCONTROLS
KEY BENEFITS

UNIVERSAL COMPATIBILITY

NightFox Photocontrols are designed, tested and warrantied to match the long 10- to 20-year lifespan of LED fixtures. They're also backwards compatible with all traditional light sources (e.g., HID, Incandescent) and compatible with all service voltages (120-277 V, 347V, and 480 V).

LOWER MAINTENANCE COSTS

A long-life design allows installers to sync photocontrol and fixture maintenance schedules, resulting in fewer nuisance service calls and lower equipment costs.

SUPERIOR TECHNOLOGY

Built-in zero-crossing technology with high-precision calibration, as well as industry-leading manufacturing processes, helps ensure each photocontrol has a lifespan of 10- to 20-years.

FASTER INSTALLATION

Verify functionality of newly-installed controls in seconds by covering the sensor (unlike thermal controls which have a delayed ON/OFF trigger).

LONG-LIFE WARRANTY

All electronic photocontrols are backed by an 8- to 12-year warranty.

THE HIDDEN COST OF
PHOTOCONTROL MAINTENANCE

Pairing an LED fixture with a thermal photocontrol requires installers to make extra trips to the light fixture just to replace the photocontrol. Under ideal conditions, a thermal photocontrol will last just 3-5 years, requiring at least one extra replacement during the life of a typical LED. Often, replacement is required more frequently due to premature failure caused by the high inrush currents of LED drivers.

Thermal vs. NightFox Photocontrol Replacement with 15-Year LED Fixture

Photocontrol Replacement
Cost: Two- or three-man crew, lift equipment, service call (approximately one hour)

12 YEAR
Limited Warranty

**NIGHTFOX™
SPECIFIER GRADE**
LED4536SC
LED4537SC

Photocontrol specifically designed for 20-year service to match the life expectancy of long-life LED and new induction fixtures.

FEATURES
• Non-drift silicon light sensor with IR filter
• DC relay with zero-crossing circuitry for extended life
• All components meet 20-year life expectancy
• Conformal coated PCB
• Exceeds 15,000 ON/OFF switching cycles
• Ideal for single or multi-fixture HID and LED installations (up to 2,220 W @ 277 VAC)
• 510 J MOV surge protection

8 YEAR
Limited Warranty

**NIGHTFOX™
SELECT GRADE**
EK4536
EK4537

Designed to meet a 15-year service life, this photocontrol is LED-compatible and backed by an 8-year warranty.

FEATURES
• Non-drift silicon light sensor with IR filter
• DC relay with zero-crossing circuitry for extended life
• All components meet 15-year life expectancy
• Conformal coated PCB
• Exceeds 10,000 ON/OFF switching cycles
• Ideal for single or multi-fixture HID and LED installations (up to 1,650 W @ 277 VAC)
• 510 J MOV surge protection

6 YEAR
Limited Warranty

**NIGHTFOX™
STANDARD GRADE**
ELC4536

LED-compatible photocontrol features a 10-year life expectancy. Ideal for single fixture control of smaller LED fixtures that require a cost-effective solution.

FEATURES
• Non-drift silicon light sensor with IR filter
• All components meet 10-year life expectancy
• Exceeds 5,000 ON/OFF switching cycles
• Ideal for single HID and LED fixtures (up to 550 W @ 277 VAC)
• 510 J MOV surge protection

FOR ALL MODELS ABOVE

Model #	Warranty	Input Voltage	Electronic Ballast (LED)	Tungsten (Incandescent)	Ballast (Fluorescent)
LED4536SC	12-Year limited	120-277 VAC, 50/60 Hz	8 A, 120-277 VAC, 50/60 Hz	1000 W	1800 VA
LED4537SC	12-Year limited	347/480 VAC, 50/60 Hz	2A, 347 VAC, 50/60 Hz	1000 W	1800 VA
EK4536	8-Year limited	120-277 VAC, 50/60 Hz	6 A, 120-277 VAC, 50/60 Hz	1000 W	1800 VA
EK4537	8-Year limited	347/480 VAC, 50/60 Hz	2 A, 347 VAC 2 A, 347 VAC	1000 W	1800 VA
ELC4536	6-Year limited	120-277 VAC, 50/60 Hz	2 A, 120-277 VAC, 50/60 Hz	1000 W	1800 VA

Ratings	
Input Voltage	See Model Table
Electronic Ballast (LED)	See Model Table
Tungsten (Incandescent)	1000 W
Ballast (Fluorescent)	1800 VA
Activation On	1.5 fc
Activation Off	2.25 fc
Time Delay	Instant ON; 2 sec to 5 sec OFF
Dimensions H x Dia	2.75" x 3.375" (69.9 mm x 85.8 mm)
Operating Temperature	-40°F - 158°F (-40°C - 70°C)
Warranty	See Model Table

INTERMATIC®

EK4036S

EK4336S

EK4136S

EK4436SM

EK4236S

EK4736S

Fixed Mount Electronic Photocontrols
NIGHTFOX™ EK4000 SERIES

NightFox™ electronic photocontrols permanently install on outdoor electrical boxes, in-wall boxes or outdoor lighting fixtures. Ideal for LED and induction fixtures with long-life expectations. ½"-14 NPSM threaded stem fits standard outlet boxes and wall packs with 9" wire leads.

FEATURES
- Non-drift silicon light sensor with IR filter
- DC relay with zero-crossing circuitry for extended life
- Conformal coated PCB
- 15-year design life
- Exceeds 10,000 ON/OFF switching cycles
- Fail ON mode
- Ideal for single or multi fixture HID and LED installations (up to 1,650 W @ 277 VAC)
- 255 J MOV surge protection element
- Mounts internally to enclosure
- Features ⅜" - 18 NPSM thread for a minimum installation hole size of 5/8 inch diameter

Model #	Style	Lens Location	Input Voltage	Electronic Ballast (LED)	Wire Lead (in)
EK4027S	Button	Front	347 VAC, 50/60 Hz	2 A	9"
EK4035S	Button	Front	480 VAC, 50/60 Hz	0.35 A (Tested with 150 W 480 V LED driver with 120 Apk /100µs In-rush current)	9"
EK4036S	Button	Front	120-277 VAC, 50/60 Hz	6 A, 120-277 VAC, 50/60 Hz	9"
EK4127S	Stem Mount	Side	347 VAC, 50/60 Hz	2 A	9"
EK4135S	Stem Mount	Side	480 VAC, 50/60 Hz	0.35 A (Tested with 150 W 480 V LED driver with 120 Apk /100µs In-rush current)	9"
EK4136S	Stem Mount	Side	120-277 VAC, 50/60 Hz	6 A, 120-277 VAC, 50/60 Hz	9"
EK4227S	Stem and Swivel Mount	Side	347 VAC, 50/60 Hz	2 A	6"
EK4235S	Stem and Swivel Mount	Side	480 VAC, 50/60 Hz	0.35 A (Tested with 150 W 480 V LED driver with 120 Apk /100µs In-rush current)	6"
EK4236S	Stem and Swivel Mount	Side	120-277 VAC, 50/60 Hz	6 A, 120-277 VAC, 50/60 Hz	6"
EK4336S	In-Wall	Front	120-277 VAC, 50/60 Hz	6 A, 120-277 VAC, 50/60 Hz	9"
EK4436SM	Stem Mount	Side	120-277 VAC, 50/60 Hz	6 A, 120-277 VAC, 50/60 Hz	9"
EK4736S	Stem and Swivel Mount	Top	120-277 VAC, 50/60 Hz	6 A, 120-277 VAC, 50/60 Hz	6"

Induction   HID

8 YEAR Limited Warranty

Ratings	
Input Voltage	See Model Table
Electronic Ballast (LED)	See Model Table
Tungsten (Incandescent)	1000 W
Activation On	1.5 fc
Activation Off	4.5 fc
Time Delay	Instant ON; 2 sec to 5 sec OFF
MOV*	220 J MOV, 5,000 A Surge
Fail Mode	ON
Wire Leads	#18 AWG
Dimensions H x W x D	
Button	2 ¼" x 1 ⁵⁄₁₆" x 1 ¼" (57.2 mm x 33.3 mm x 31.8 mm)
Stem Plastic	2 ¼" x 1 ⁵⁄₁₆" x 1 ¼" (57.2 mm x 33.3 mm x 31.8 mm)
Stem Metal	2 ¹¹⁄₁₆" x 1 ¾" x 2 ³⁄₁₆" (68.3 mm x 44.5 mm x 55.6 mm)
Stem & Swivel	5 ⅝" x 1 ⁵⁄₁₆" x 1 ¼" (142.9 mm x 33.3 mm x 31.8 mm)
Operating Temperature	-40°F - 158°F (-40°C - 70°C)
Warranty	8-Year limited

Metal Oxide Varistor

INTERMATIC®

Photocontrols
Locking Type Thermal

LC4521LA

Locking Type
Thermal Photocontrols
LC4500 SERIES

These photocontrols install on light fixtures with ANSI C136.10 NEMA receptacles commonly found on street light fixtures. Locking type design facilitates fast installation and replacement of photocontrol.

FEATURES
- Mechanical bimetal switch with Cadmium Sulfide photocell
- Integral high impact thermoplastic housing
- Locking type plug for quick installation and changeover
- Delay feature prevents unwanted OFF switching
- Complies with ANSI C136.10 standard
- Tested to 3,650 ON/OFF cycles

Model #	Input Voltage	Ballast (Fluorescent)	Tungsten (Incandescent)	Protection
LC4521C	120 VAC, 50/60 Hz	8.3 A, 1000 VA	15 A, 1800 W	None
LC4523	208-277 VAC, 50/60 Hz	8.3 A, 1700-2300 VA	15 A, 3100-4150 W	
LC4527*	347 VAC, 50/60 Hz	8.3 A, 2880 VA	15 A, 5205 W	
LC4535	480 VAC, 50/60 Hz	8.3 A, 4000 VA	15 A, 7200 W	
LC4536C	120-277 VAC, 50/60 Hz	8.3 A, 1000-2300 VA	15 A, 1800-4155 W	
LC4521LA	120 VAC, 50/60 Hz	8.3 A, 1000 VA	15 A, 1800 W	Spark Gap Surge Arrestor
LC4523LA	208-277 VAC, 50/60 Hz	8.3 A, 1700-2300 VA	15 A, 3100-4150 W	
LC4535LA	480 VAC, 50/60 Hz	8.3 A, 4000 VA	15 A, 7200 W	
LC4536LAC	120-277 VAC, 50/60 Hz	8.3 A, 1000-2300 VA	15 A, 1800-4155 W	

* LC4527 is only CSA

Ratings	
Input Voltage	See Model Table
Ballast (Fluorescent)	See Model Table
Tungsten (Incandescent)	See Model Table
Activation On	5 fc
Activation Off	15 fc
Operating Temperature	-40°F - 158°F (-40°C - 70°C)
Dimensions H x Dia	2 ¾" x 3" (69.9 mm x 76.2 mm)
Warranty	2-Year limited

Low-Cost Multivoltage Locking Type
Thermal Photocontrols
LC2000 SERIES

LC2100

This model combines a silicon diode photosensing element with thermal switch to provide a multivoltage, cost-effective photocontrol.

FEATURES
- Mechanical bimetal switch with Silicon Diode photocell
- Thermoplastic housing with window
- Multivoltage covers 120 to 277 VAC applications
- Complies with ANSI C136.10

Model #	Input Voltage	Ballast (Fluorescent)	Tungsten (Incandescent)
LC2100	120-277 VAC, 50/60 Hz	1800 VA	1000 W

Ratings	
Input Voltage	120-277 VAC, 50/60 Hz
Ballast (Fluorescent)	1800 VA
Tungsten (Incandescent)	1000 W
Activation On	1.5 fc
Activation Off	6 fc
Operating Temperature	-40°F - 158°F (-40°C - 70°C)
Dimensions H x Dia	2 ⁷⁄₃₂" x 3" (56.4 mm x 76.2 mm)
Warranty	2-Year limited

INTERMATIC®

K4121C   K4423M   K4221C   K4251

Stem Mount
Thermal Photocontrols
K4100 AND K4400 SERIES

These photocontrols install on standard outdoor light fixtures and electrical boxes with ½"-14 NPSM thread or ⅞" knock-out holes for dusk-to-dawn ON/OFF control of outdoor lighting.

FEATURES
- Mechanical bimetal switch with Cadmium Sulfide photocell
- Delay feature prevents unwanted OFF switching
- Plastic and die-cast metal housing options
- ½"-14 NPSM threaded stem
- Washer gasket and locking nut included
- #18 AWG, 9" wire leads

Model #	Input Voltage	Ballast (Fluorescent)	Tungsten (Incandescent)	Housing
K4121C	120 VAC, 50/60 Hz	8.3 A, 1000 VA	15 A, 1800 W	
K4141C*	120 VAC, 50/60 Hz	25 A, 3000 VA	25 A, 3000 W	Polycarbonate
K4123C	208-277 VAC, 50/60 Hz	8.3 A, 1700-2300 VA	15 A, 3100-4150 W	
K4421M	120 VAC, 50/60 Hz	8.3 A, 1000 VA	15 A, 1800 W	Die-Cast Zinc
K4423M	208-277 VAC, 50/60 Hz	8.3 A, 1700-2300 VA	15 A, 3100-4150 W	

K4141C is not UL/CSA certified.

Stem and Swivel Mount
Thermal Photocontrols
K4200 SERIES

These photocontrols are provided with a swivel arm for easy and flexible installation to standard outdoor light fixtures or electrical boxes.

FEATURES
- Mechanical bimetal switch with Cadmium Sulfide photocell
- Delay feature prevents unwanted OFF switching
- High strength, UV resistant plastic housing
- Swivel with ½"-14 NPSM threaded stem
- Washer gasket and locking nut included
- #18 AWG, 6" wire leads

Model #	Input Voltage	Ballast (Fluorescent)	Tungsten (Incandescent)	Sensor Location
K4221C	120 VAC, 50/60 Hz	8.3 A, 1000 VA	15 A, 1800 W	
K4223C	208-277 VAC, 50/60 Hz	8.3 A, 1700-2300 VA	15 A, 3100-4150 W	Side
K4236C	120-277 VAC, 50/60 Hz	8.3 A, 1000-2300 VA	15 A, 1800-4150 W	
K4251*	120 VAC, 50/60 Hz	8.3 A, 1000 VA	15 A, 1800 W	Top
K4253*	208-277 VAC, 50/60 Hz	8.3 A, 1700-2300 VA	15 A, 3100-4150 W	

* K4253, K4251 is only CSA.

FOR ALL MODELS ABOVE

Ratings	
Input Voltage	See Model Table
Ballast (Fluorescent)	See Model Table
Tungsten (Incandescent)	See Model Table
Activation On	1 to 5 fc
Activation Off	3 to 15 fc
Operating Temperature	-40°F - 158°F (-40°C - 70°C)
Wire Leads	#18 AWG, 9" L
Dimensions H x W x D	3" x 1 ⁹⁄₁₆" x 1 ⁹⁄₁₆" (76.2 mm x 39.7 mm x 39.7 mm)
Warranty	2-Year limited, 1-Year limited for K4251, K4253 & K4141C

K4021C

K4321C

KPT1170-010

Button and Wall Mount Thermal Photocontrols
K4000 SERIES

NightFox™ electronic photocontrols permanently install on outdoor electrical boxes, in-wall boxes or outdoor lighting fixtures. Ideal for LED and induction fixtures with long-life expectations. ½"-14 NPSM threaded stem fits standard outlet boxes and wall packs with 9" wire leads.

FEATURES
- Mechanical bimetal switch with Cadmium Sulfide photocell
- Compact size fits into standard outlet box, post lamp, wall pack and other lighting fixtures
- Delay feature prevents unwanted OFF switching
- ⅜" - 18 NPSM, 3/4" long stem with locking nut and washer gasket

Model #	Style	Input Voltage	Ballast (Fluorescent)	Tungsten (Incandescent)
K4021C	Button	120 VAC, 50/60 Hz	8.3 A, 1000 VA	15 A, 1800 W
K4023C	Button	208-277 VAC, 50/60 Hz	8.3 A, 1700-2300 VA	15 A, 3100-4150 W
K4321C	In-Wall	120 VAC, 50/60 Hz	8.3 A, 1000 VA	15 A, 1800 W

Ratings	
Input Voltage	See Model Table
Ballast (Fluorescent)	See Model Table
Tungsten (Incandescent)	See Model Table
Activation On	1 to 5 fc
Activation Off	3 to 15 fc
Operating Temperature	-40°F - 158°F (-40°C - 70°C)
Wire Leads	#18 AWG, 9" L
Dimensions H x W x D	1 ¹³/₁₆" x ¹⁵/₁₆" x ¹³/₁₆" (46 mm x 23.8 mm x 20.6 mm)
Warranty	2-Year limited

PowerTap Receptacle
KPT0170-010
KPT0170-015
KPT1170-010

APPLICATIONS
- Power Extension
- Traffic Control

FEATURES
- 7-pin ANSI C 136.41 connector interface
- 3-prong power sockets + 4 signal contacts
- Taps into electric supply line of photocontrol with a #16 AWG cable out
- Branch circuit protected by an auto-resetting 10 A, OCPD
- Does not disturb the operation of lighting control units

Model #	Description
KPT0170-010	PowerTap Receptacle, 7-Pin, C136.41 Compliant, Always-On, 10' cable
KPT0170-015	PowerTap Receptacle, 7-Pin, C136.41 Compliant, Always-On, 15' cable
KPT1170-010	PowerTap Receptacle, 7-Pin, C136.41 Compliant, Dusk-to-Dawn, 10' cable

Ratings	
Branch Circuit Protection	120 V, 10 A, Auto-resetting Thermal Circuit Breaker
Branch Circuit Rating	120 VAC, 5 A max
Signal Contacts Rating	30 VDC, 0.25 A max
Power Contacts Rating	120 V, 15 A max total (luminaire plus branch circuit power)
Power Derating	5 A from -40° C to 50° C, derate at 0.1 A/° C above 50° C up to 70° C max
Line Out Cable	STOOW Cord, .314" (8mm) OD, 10 ft. long
Wire Leads	(2) #16 AWG, Flush Cut
Operating Temperature	-40°F - 158°F (-40°C - 70°C)
Warranty	2-Year limited

INTERMATIC®

SK4500K

OK4500R

Shorting and Open Plug
for Locking Type Receptacles
SK4500K
OK4500R

FEATURES
- Fits standard locking-type receptacles
- Polycarbonate housing
- Works for all voltages
- Keeps lights permanently ON or OFF

ACCESSORIES

6LV1352

K43-WP-KIT

22LG0120

LGLBL

K121/K121-30

K122

K42-SW-A

K171H

K121-GSKT

Model #	Description
SK4500K	The SK4500K Shorting Cap is a low-profile, locking-type photocontrol cap that closes the receptacle connectors of individual fixtures. This cost-effective solution allows a series of lights to perform as a collective unit (ON/OFF) while protecting the receptacle from outdoor elements.
SK4500KJ	Shorting Plug for Locking Type Receptacles, bulk pack
OK4500R	Open Cap for Locking Type Receptacles
OK4500RJ	Open Cap for Locking Type Receptacles, bulk pack

Model Number	Description
6LV1352	Light Shield Accessory for EK4036S, EK4436SM, K4000 Series Button Photocontrols
22LG0120	Light Guard Accessory for EK4000 Series Electronic Fix Mount Photocontrols
22LG116	Light Guard Accessory for K4100 Series, K4200 Series Thermal Photocontrols
K121	Locking Type Receptacle, 3-Pin, C136.10 Compliant, 9" lead
K121-30	Locking Type Receptacle, 3-Pin, C136.10 Compliant, 30" lead
K121-GSKT	Locking Type Receptacle Gasket
K171H	Locking Type Receptacle, 7-Pin, C136.41 Compliant, 12" lead
K122	Locking Type Receptacle, 3-Pin, C136.10 Compliant, with Pole Mounting Bracket
K42-SW-A	Swivel Arm Accessory for EK4136S, K4100 Series Stem Mount Photocontrols
K43-WP-KIT	Wall Plate Kit for EK4036S, K4000 Series Button Photocontrols
LGLBL	Lens Sticker Accessory for EK4000 & K4000 Series Photocontrols

Ratings	
Operating Temperature	-40°F - 158°F (-40°C - 70°C)
Dimensions H x Dia	1.5" x 3.25" (38.1 mm x 82.55 mm)
Warranty	2-Year limited

Slim New Look, Rugged Performance
Introducing New Low-Profile Shorting and Open Cap Solutions

Upgrade outdoor photocontrols with the new SK4500K Shorting Cap and OK4500R Open Cap from Intermatic. The locking-type plug connectors are a simple, cost-effective solution to protect outdoor fixtures, or control photocontrol ON/OFF patterns in multi-fixture installations.

Both solutions are ANSI C136.10 compliant, delivering long-term value without sacrificing aesthetics. Available in 50-unit bulk quantities.

Quality Customizable Solutions, Long-Lasting Performance

As a leading manufacturer of photocontrols, contactor boxes and accessories, Intermatic understands the technology needed to meet modern lighting specifications.

Our NightFox Pro Series was designed from the ground up to match the life expectancy of LED lighting fixtures. We did this by pioneering a comprehensive testing methodology that uses the best information from NEMA 410 and UL standards to ensure LED compatibility and verify life target expectations.

Moreover, our state-of-the-art ISO 9001:2015 certified, vertically integrated manufacturing facility helps us maintain rigorous manufacturing standards while keeping all aspects of production under one roof. Our team oversees everything from the metal stamping of terminals and injection molding of plastic parts to circuit board assembly, testing and calibration.

We're committed to quality, and this allows us to confidently stand behind our work, with warranties of up to 12 years on select lighting controls.

Seamless Integration with Customizable Contactor Controls

Simplify your next project with a Pro Series Contactor Box that's designed to fit your unique requirements. Our tailored solutions are ideal for a variety of indoor and outdoor lighting applications, including switching of LED or ballast lamp loads. We are in a position to provide a solution to your Lighting Control requirements.

- Avoid costly maintenance issues in roadway lighting applications by installing LED-rated NightFox™ photocontrols. Our flagship photocontrol solution can be tailored to a variety of specifications and provides reliable dusk-to-dawn lighting control.

- Simplify lighting schedules in parks, shopping districts and other outdoor spaces by upgrading to NightFox™ photocontrols. The easy-to-install dusk-to-dawn controls are designed to match the long 10- to 20-year lifespan of LED fixtures.

- Leverage existing light pole infrastructure and provide power to auxiliary devices with cost-effective Intermatic solutions. Our receptacle connectors make it easy to integrate holiday lighting, communication equipment, sensors and more in municipal applications.

INTERMATIC®

NightFox™ Pro Series
CUSTOMIZABLE ELECTRONIC PHOTOCONTROLS

Say Goodnight to LED Photocontrol Maintenance

NightFox Pro Photocontrols can be customized to meet the exact needs and specifications developed by Municipalities, Utilities, and Co-Ops.

Many Municipalities, Utilities and Co-Ops have developed specifications based on their own best practices, experience and particular needs. With the NightFox Pro Series Portfolio, there's no need to compromise. We'll build our photocontrols according to your specifications.

FEATURES
• 10- to 20-year design life
• Tested to full ON/OFF lifecycles under LED and induction loads per NEMA 410
• Tested up to 15,000 life cycles
• Up to 12-year warranties
• 120-277 or 347-480 voltage ranges
• Zero-crossing electronic circuitry minimizes the impact of inrush current
• Conformal coated PCB assemblies
• Non-drift silicon light sensor with IR filter
• Enhanced customizable surge protection with up to 1020 J MOV components
• Meet or exceed ANSI C136.10 and UL/CSA requirements
• Fail ON or Fail OFF options
• North-facing or omni-directional light sensor location options
• Nine ANSI C136.10 color-coded covers available
• NEMA 3
• ON/OFF from 1.0 to 8.0 foot-candle activation levels for overall energy saving potential

CONFIGURABLE OPTIONS

1. MODEL SERIES — Choose the base model that best meets your application.
• Standard Grade (ELC series)
  6-year warranty, 10-year design life, 2 A LED driver rating, +5,000 ON/OFF switching cycles
• Select Grade (EK series)
  10-year warranty, 15-year design life, 6 A LED driver rating, zero-crossing technology, +10,000 ON/OFF switching cycles
• Specifier Grade (LED series)
  12-year warranty, 20-year design life, 8 A LED driver rating, zero-crossing technology, +15,000 ON/OFF switching cycles
2. CONFIGURATION — Select the enclosure type and sensor mount location.
• NEMA 3
• North-Facing or Omni-Directional Light Sensor Location
3. VOLTAGE RATINGS — 120-277 V or 347-480 V
4. FAIL MODE — Fail ON or Fail OFF modes
5. LOAD RATINGS — See Model Series
6. CUSTOM ON AND OFF LIGHT ACTIVATION LEVELS
• Adjustable to any ON or OFF light activation level from 1.0 to 8.0 foot-candles
7. SURGE PROTECTION — select between two levels:
• 510 J MOV / ANSI C136.2 'Enhanced' surge protection level
• 1020 J MOV / ANSI C136.2 'Extreme' surge protection level
8. COVER COLORS — 9 cover color options.

Utility Control Boxes
CUSTOMIZABLE UTILITY CONTROL BOXES

Example Indoor and Outdoor Lighting Application Options

Professionally designed and built lighting contactor boxes provide a pre-configured, high quality control box for a quick field installation and deployment of your lighting project.

Our Lighting Contactor Controls are a simple, integrated solution to fit your specific indoor and outdoor lighting applications, including switching of LED or Ballast lamp loads. Made in the USA.

CONFIGURABLE OPTIONS
• 30 A-400 A
• 1-4 Poles
• NEMA 4X Enclosure (metal, non-metal)
• Line voltage 120 V-600 V or Multiple-in-One (120/240 V & 277/480 V)
• Photocontrol and receptacle
• Circuit protection
• Surge protection
• Zero-cross solid state relay (30 A & 60 A)
• Separate control voltage
• talento smart™ control

APPLICATIONS
• New LED Projects • Industrial plants • Street lighting • Commercial Shopping Centers
• Billboards • Hospitals • Stadiums • Schools, Universities and Community Colleges
• Roadways • Parking Lots • Residential • Automobile Dealerships • Airports • Substations

INTERESTED IN A CUSTOMIZED SOLUTION?

For more information contact your Intermatic utility representative today to discuss selecting options, pricing and lead time or send an email to utility sales@intermatic.com and a representative will respond.

DON'T FORGET THE POWERTAP

Please see page 96 for information on Intermatic's PowerTap Receptacle, the perfect addition to your utility solutions!

Hour Meter Solutions

Ensure accurate run time and load usage measurements with our wide selection of hour meters. Available in a variety of mounting styles, including DIN rail, panel, surface and flush mount.

Equipment Monitoring

Stay on top of equipment maintenance schedules by installing a versatile Intermatic hour meter. Designed to accurately monitor run times and load usage measurements for tens of thousands of hours, these solutions help avoid premature equipment failures and simplify routine maintenance.

Rugged Durability

The wide -40° F to 160° F operating temperature range found in UWZ and FWZ series hour meters allows the controls to withstand intense weather conditions without issue. This makes them an ideal solution for rigorous outdoor applications, particularly in high-stress climates.

High Visibility Displays

Improve meter reading accuracy and speed using the vibrant, rolling digits found on Intermatic hour meters. UWZ series solutions include a high-visibility orange tenths digit, while FWZ and GZ Series solutions offer yellow hundredths and tenths numerals.

Flexible Mounting Options

Panel-mount hour meters can be placed in the opening of a control panel with the face remaining visible from the outside, whereas surface-mount hour meters are commonly screwed to flat surfaces. Our simple-to-install DIN rail-mounted solutions (UWZ series) are designed to be secured to a rail.

Contents

The FWZ Series AC Hour Meters are flush panel mountable designed to fit into tight locations. They are non-resettable with watertight/dust-tight sealed bezels designed to withstand IP54 environmental rating (with use of a gasket). All models are black plastic (except FWZ72B which is blue-silver on colorless frosted polycarbonate) with white numerals on a black background. Tenths and hundredths numerals are yellow.

FWZ55 Series
FLUSH, PANEL

Ratings	
Voltage Available	120 or 240 VAC
Frequency	60 Hz
Power Consumption	1 VA
Bezel H x W	1.18" x 2.17" (30 mm x 60 mm)
Capacity	99999.99 hours
Numerals	0.16" high numerals
Operating Temperature	-40°F - 160°F (-40°C - 72°C)
Electrical Connection	Combination 1/4" spade and screw clamp, Rear access screw terminals available (Model "K")
Panel Opening H x W	1.08" x 2.06" (27.5 mm x 52 mm)
Mounting	Flush panel retainer mounted with slip-on retaining bracket
Material	Black Plastic
Ordering Information	FWZ55 + K* + Desired Voltage + Frequency + U
Warranty	1-Year limited

* Rear access screw terminals

FWZ72 Series
FLUSH PANEL MOUNT

Ratings	
Voltage Available	24, 120 or 240 VAC
Frequency	60 Hz
Power Consumption	1 VA
Bezel	2.83" round (72 mm), 3-Hole
Capacity	99999.99 hours
Digits	0.16" (4.1 mm) high numerals
Operating Temperature	-40°F - 160°F (-40°C - 72°C)
Electrical Connection	Combination 1/4" spade and screw clamp, Rear access screw terminals available (Model "K")
Panel Opening **Round** **Rectangular**	1.75" (44.4 mm) 1" x 1.5" (24 mm x 38 mm)
Mounting	Flush panel retainer mounted (3) 0.185" holes for #8 screws
Material **FWZ72** **FWZ72K** **FWZ72B** **FWZ72C**	24 or 120 VAC Black Plastic 240 VAC Black Plastic 120 or 240 VAC Blue and Silver on Frosted Clear Polycarbonate 120 VAC Clear Frosted Plastic
Gasket Model #	G-72U (sold separately)
Ordering Information	FWZ72 + Suffix K*, B, or C + Desired Voltage + Frequency + U
Warranty	1-Year limited

* Rear access screw terminals

ORDERING EXAMPLE

To build a model #, choose the Hour Meter Series at the frequency you want. Add a "K" suffix for rear access screw terminals (on applicable models). Then specify voltage. Only 50 Hz models need to be denoted in the model #. Non "U" models indicate bulk pack. Voltages not currently available will be considered on a case by case basis.

Series	+	K	+	VAC	+	Hz	+	U	=	Model #
FWZ55	+	K	+	240	+	60	+	U	=	FWZ55K-240

ORDERING EXAMPLE

To build a model #, choose the Hour Meter Series at the frequency you want. Add a "K" suffix for rear access screw terminals (on applicable models). All models are 60 Hz. Add a "B"... Add a "C"... Then specify voltage. Non "U" models indicate bulk pack. Voltages not currently available will be considered on a case by case basis.

Series	+	K, B or C	+	VAC	+	U	=	Model #
FWZ72	+	B	+	240	+	U	=	FWZ72B-240U

INTERMATIC®

GZ40AU Series
FLUSH MOUNT

The GZ Series DC Hour Meters are the answer to applications requiring low power load usage metering. Compact, tamper-proof GZ40 meters are sealed against the environment (IP rated up to IP66) to provide years of service. Accumulated load usage hours are stored in the mechanical indicating counter; therefore, no battery is required to maintain elapsed time. An input diode provides polarity protection. A quartz crystal time base ensures accurate, long-term timekeeping.

Ratings	
Voltage Available	10-80 VDC
Power Consumption	0.03W, 12 VDC, 0.7W, 48VDC
Bezel	2.31"(59 mm), SAE
Capacity	99999.9 hours
Digits/Display	0.125" (3.2 mm) high numerals
Hours Color	White on Black
Tenths Color	Red on White
Vibration Resistance	1-8 g, 10-75 Hz
Operating Temperature	-22°F - 150°F (-30°C - 65°C)
Electrical Connection	¼" Spade termination
Mounting	Flush with Bracket
Protected From	Reverse Polarity, Inductive Switching
Environmental Rating	IP66
Warranty	1-Year limited

UWZ48 Series
PLUG-IN SURFACE MOUNT

The UWZ48 Surface Mount Hour Meter uses a plug-in base where terminal protection is not necessary. The socket base is easy to install and connect. Simply plug the meter into the base and secure with a screw.

Ratings	
Voltage Available	24, 120 or 240 VAC
Frequency	60 Hz
Power Consumption	1 VA
Bezel H x W	1.89" x 1.89" (48 mm x 48 mm)
Capacity	99999.99 hours
Digits	0.16" high numerals
Operating Temperature	-40°F - 160°F (-40°C - 72°C)
Electrical Connection	Screw lugs
Mounting	Surface
Material	Light Gray Plastic
Ordering Information	UWZ48 + Desired Voltage + U
Warranty	1-Year limited

ORDERING EXAMPLE

To build a model #, choose the Hour Meter Series at the voltage you need and add a U suffix. Non "U" models indicate bulk pack. All models are 60 Hz.

Series	+	VAC	+	U	=	Model #
UWZ48	+	240	+	U	=	UWZ48-240U

Counting Down to Your Next Project
Each of the three hour meter categories offers a unique set of features and benefits.

Panel-mount hour meters are placed in the opening of a control panel with the face remaining visible from the outside, whereas **surface-mount** hour meters are commonly screwed to flat surfaces. **DIN rail-mounted** solutions (UWZ series) are designed to be secured to a rail or placed within a DIN rail control box. Scan the qr code for a list of all available products.

FWZ SERIES

- Accommodates flush- or panel-mount applications
- 24, 120, 220 or 240 VAC (depending upon model)
- Accurate at 99,999.99 (tenths and hundredths place value)
- P54 protection rating
- Non-resettable Scan the qr code for a list of available products.

UWZ SERIES

- Accommodates surface-mount, enclosed surface-mount and DIN rail-mount applications
- 24, 120 or 240 VAC (depending upon model)
- Accurate at 99,999.99 (tenths and hundredths place value)
- Ideal for electrical panel applications
- IP20 rating for Indoor applications
- Non-resettable

GZ SERIES

- Round flush-mount design
- Available from 8 VDC to 80 VDC (depending on model)
- Monitors activity up to 100,000 hours
- Accurate at 99,999.99 (tenths place value)
- Quartz crystal for enhanced timing accuracy
- Protection rating up to IP66
- Non-resettable

Hour Meters

UWZ48V Series
DIN RAIL MOUNT

A special snap-on socket base allows for fast positioning onto a DIN rail.

Ratings	
Voltage Available	24 or 120 VAC
Frequency	60 Hz
Power Consumption	1 VA
Bezel H x W	1.89" x 1.89" (48 mm x 48 mm)
Capacity	99999.99 hours
Digits	0.16" high numerals
Operating Temperature	-40°F - 160°F (-40°C - 72°C)
Electrical Connection	Combination ¼" spade and screw clamp
Mounting	DIN Rail
Material	Light Gray Plastic
Ordering Information	UWZ48V + Desired Voltage + U
Warranty	1-Year limited

ORDERING EXAMPLE

To build a model #, choose the Hour Meter Series at the frequency you want. Then specify voltage and add a U suffix. Non "U" Models indicate bulk pack. All models are 60 Hz.

Series	+	VAC	+	U	=	Model #
UWZ48V	+	240	+	U	=	UWZ48V-24U

UWZ48E Series
FLUSH MOUNT

Flush mounted with bracket, the UWZ48E unit fits into a 1.79" x 1.79" (45.5 x 45.5 mm) cutout. The thickness of the panel for flush mounting can be up to .35" (9 mm). The unit is secured in position by a plastic slip-on retaining bracket. The unit also fits square or round openings for 72 mm with optional 72 mm bezel.

Ratings	
Voltage Available	24, 120 or 240 VAC
Frequency	60 Hz
Power Consumption	1 VA
Bezel H x W	1.89" x 1.89" (48 mm x 48 mm)
Capacity	99999.99 hours
Digits	0.16" high numerals
Operating Temperature	-40°F - 160°F (-40°C - 72°C)
Electrical Connection	1/4" Spade w/ screw clamp
Mounting	Flush
Material	Light Gray Plastic
Ordering Information	UWZ48E + Desired Voltage + Frequency + U
Warranty	1-Year limited

ORDERING EXAMPLE

To build a model #, choose the Hour Meter Series at the frequency you want. Then specify voltage and add a U suffix. Non "U" Models indicate bulk pack. Only 50 Hz models need to be denoted in the model #.

Select:	Series	+	VAC	+	Hz	=	Model #
60 Hz Models:	UWZ48E	+	24	+	(60)	=	UWZ48E-24U

UWZ ACCESSORIES

DIN Rail Mounting Base
for UWZ48E

MB-48V

55 mm Bezel
for UWZ48E

BEZ-55BLACKU   BEZ-55GRAYU

72 mm Bezel with 3 Pins
for round 3-bolt hole opening for UWZ48E

BEZ-72PU Gray

INTERMATIC

DIMENSIONS
FWZ55 Series

DIMENSIONS
FWZ72 Series

DIMENSIONS
GZ40AU Series

DIMENSIONS
UWZ48 Series

DIMENSIONS
UWZ48V Series

DIMENSIONS
UWZ48E Series

Refrigeration Temperature Control Solutions

From commercial kitchens to neighborhood convenience stores, properly managing the refrigeration needs of coolers, chillers and cooking equipment is essential to success. Our versatile refrigeration temperature controls offer a proven solution for refrigeration applications.

Ice Refrigeration Machine

Keep ice machines working at peak efficiency with our range of digital temperature controllers. These solutions can be placed conveniently in both new and retrofit refrigeration applications.

Reach-In Refrigeration Cooler

Boost energy efficiency in applications ranging from frozen novelty chests to convenience store wall coolers.

Refrigeration Merchandiser

Ensure refrigeration displays and merchandisers keep their cool with our easy-to-integrate time switches and temperature controls.

Walk-In Refrigeration Cooler/Freezer

Our robust defrost timers are the perfect fit for commercial walk-in cooler/freezer applications.

Contents

Additional Solutions and Resources

Ready to get started? Scan the QR code to the right for a variety of helpful resources, including sell sheets, product instructions, installation videos and more.

DTAV40

DTAV40 Inside

DTAV40 Series
24-HOUR ELECTROMECHANICAL DEFROST TIMER

For electric heat, hot gas or compressor shutdown defrost. The Intermatic DTAV40 Series Auto Voltage Defrost Timer is applicable to air defrost (compressor shutdown) and electric or hot gas defrost systems where the defrost cycle is terminated by the timer. If the coil is frost-free, the timer can also be terminated by temperature or pressure switches before the programmed defrost termination time has been reached. The time termination functions as a fail-safe and terminates the defrost cycle if the temperature or pressure switch fails to do so.

Applications
• Walk-in Refrigeration Cooler/Freezer

Features
• Adaptive Defrost upgradeable (DTAV40, DTAV40M only) (See ICUBE™)
• DTAV40 Series replaces over 40 competitive models
• 40 A, 2 HP Rating
• Auto-voltage automatically adjusts between 120 and 240 VAC
• Q model features self-recharging battery backup with 72-hour carry-over
• Can mount in an existing enclosure – no tools required for installation
• Moisture resistant conformal-coated board
• LED indicators for defrost and refrigeration cycles
• Defrost cycles are programmed independently
• "Real-time" clock face for quick, easy and accurate setting
• Defrost times programmable in 15-minute intervals
• Captive trippers won't get lost
• Finger-safe box lug terminals

c UL us
#E10694

RoHS
Compliant
2002/95/EC

Ratings	
Input Voltage **Quartz**	120/240 VAC, 60 Hz 120/240 VAC, 50/60 Hz
Switch Type	1 SPDT, 1 NC SPST
Resistive	40 A, 120-240 VAC
Motor	1 HP, 16 FLA, 96 LRA @ 120 VAC, 2 HP, 12 FLA, 72 LRA @ 240 VAC
Operating Temperature	-40°F - 104°F (-40°C - 40°C)
Operating Humidity	0-95% RH, Non-condensing
Wiring Connections	Screw box lug terminals up to one #8 AWG wire
Enclosure/Mounting	Outdoor type 3R plastic, Bracket
Min ON/OFF Times	15-min
Max ON/OFF Times	23 hours, 45 min
Electrical Life	50,000 operations at full load
Warranty	1-Year limited

Model #	Enclosure	Backup Protection Time
DTAV40	Outdoor type 3R plastic	None
DTAV40Q	Outdoor type 3R plastic	72 Hours
DTAV40M	Mechanism Only	None

ACCESSORIES

Model Number	Description
DT-B	Defrost Timer Bracket

Note: Bracket dimensions on page 117

Give HVAC Maintenance Issues the Cold Shoulder
An Ice Cold Original: DTAV40 Defrost Timer

Simplify HVAC installations and reduce maintenance needs with the DTAV40 Defrost Timer, a 24-hour electromechanical control from Intermatic. The versatile defrost control mounts onto existing enclosures (no tools required) and serves as an easy replacement solution for more than 40 competing timers. It can be installed as a standalone solution or retrofit with the ICUBE™ Adaptive Defrost Module to improve energy efficiency, all without replacing the existing enclosure.

INTERMATIC®

ICUBE™
ADAPTIVE DEFROST CONTROL MODULE

Whether you're installing a total time clock replacement or looking for a fast retrofit, the Intermatic ICUBE™ technology is an easy-to-integrate adaptive defrost solution for commercial and industrial refrigeration systems. When ICUBE technology is used with the Intermatic DTAV40 Defrost Timer it will reduce the overall defrost frequency within the cooler or freezer by up to 40% or more. The smart-sensing technology continuously monitors evaporator coil temperatures in walk-in coolers and freezers and only allows defrosting when necessary at the next programmed timer interval.

Applications
• Walk-in Refrigeration Cooler/Freezer

Features
• Stand-alone module assembles directly into existing Intermatic DTAV40 Defrost Timers (DTAV40 Only)
• Energy-saving adaptive defrost only defrosts evaporator coils when necessary
• LED indicator conveys status and fault conditions, including efficiency mode and probe fault
• Maintains the timer's scheduling to reduce frequent defrost initiations during high usage times
• Reaches remote condensing units up to 400 ft. with typical field-used 18 gauge shielded or unshielded wire
• Four sensor inputs accommodate up to four evaporators or multiple sensor locations for larger coils
• The stand-alone module (model# DDFM) simply installs underneath the existing DTAV40 FM-Timer Module
• Sensing wire can be routed through existing conduit

DDT40

DDFM

#E10694 RoHS Compliant 2002/95/EC

Model #	Description
DDFM	ICUBE™ Adaptive Defrost Refrigeration Module with Sensor
DDT40	Complete Adaptive Defrost Refrigeration Time Control with ICUBE™ Module, Sensor, and Type 3R Enclosure
178GR10K-1	Additional Separate Sensor Accessory (for Multiple Evaporator Applications)

Ratings- DDFM	
Thermistor*	10 K Ω @ 25° C (77° F)
Wire Size	#24 AWG
Working Range	-40°F - 152°F (-40°C - 67°C)
Thermistor Probe Type	NTC
Probe Wire Length	10 ft (3.05 m)
Connector Wire Length	6 ft (1.83 m)
Warranty	1-Year limited

Thermistor probe connections are not an isolated Class 2 circuit.
*Only use a thermistor probe specified for use with DDFM model.

Ratings- DDT40	
Input Voltage	Auto Voltage 120-240 VAC, 60 Hz
Switch Type	1 SPDT, 1 NC SPST
Resistive	40 A, 120-240 VAC, 60 Hz
Motor	1 HP, 16 FLA, 96 LRA @ 120 VAC, 2 HP, 12 FLA, 72 LRA @ 240 VAC
Operating Temperature	-40°F - 131°F (-40°C - 55°C)
Operating Humidity	0-95% RH, Non-condensing
Wiring Connections	Finger safe terminals
Enclosure/Mounting	Outdoor type 3R plastic
Min ON/OFF Times	15-min
Max ON/OFF Times	23 hours, 45 min
Warranty	1-Year limited

SETTING DEFROST TIMES

Configure defrost times easily! Just scan the QR code with your smartphone or tablet for details on how to choose a defrost starting time.

Refrigeration Temperature Controls
24-Hour and/or 7-Day Electronic Defrost

DTAV40E2

DTAV40E2 Inside

DTAV40E2 Series
TIME INITIATED AND TEMPERATURE, PRESSURE OR TIME TERMINATED 40 A AUTO-VOLTAGE ELECTRONIC DEFROST TIMER

The Intermatic DTAV40E2 Electronic Auto-voltage Defrost Timer has flexible 7-day scheduling and to-the-minute defrost duration control to increase system efficiency (decrease defrost scheduling during low demand periods). It is applicable to air defrost (compressor shutdown) and electric or hot gas defrost systems where the defrost cycle is terminated by the timer. If the coil is frost-free, the timer can also be terminated by temperature or pressure switches before the programmed defrost termination time has been reached. The time termination functions as a fail-safe and cancels the defrost cycle if the temperature or pressure switch fails to do so.

APPLICATIONS
• Walk-in Refrigeration Cooler/Freezer

FEATURES
• 24-Hour/7-Day flexible scheduling increases system efficiency
• 40 A, 2 HP rating
• DTAV40E2 replaces over 40 competitive models
• Auto-voltage automatically adjusts between 120 and 240 VAC, 50/60 Hz
• Self-recharging battery backup with 2500-hour carry-over
• Can mount in an existing enclosure – no tools required for installation
• LED indicators for defrost and refrigeration cycles
• Finger-safe box lug terminals
• Simple to program electronic timer

c UL us
#E10694

Ratings	
Input Voltage	120/240 VAC, 50/60 Hz
Switch Type	1 SPDT, 1 NC SPST
Resistive	40 A, 120-240 VAC
Motor	1 HP, 16 FLA, 96 LRA @ 120 VAC, 2 HP, 12 FLA, 72 LRA @ 240 VAC
Operating Temperature	-13°F - 104°F (-25°C - 40°C)
Operating Humidity	0-95% RH, Non-condensing
Wiring Connections	Screw box lug terminals up to one #8 AWG wire
Enclosure/Mounting	Outdoor type 3R plastic with bracket
Min ON/OFF Times	1 min
Max ON/OFF Times	23 hours, 59 min
Electrical Life	50,000 operations at full load
Warranty	1-Year limited

Model #	Enclosure	Battery Backup
DTAV40E2	Outdoor type 3R plastic	2500 Hours

For mounting & enclosure dimensions see next page.
For wiring examples see next page.

SET UP SYSTEM SCHEDULING

The electronic face and programming buttons make scheduling straightforward and easy. Just scan the QR code with your smartphone or tablet for details.

INTERMATIC

DTAV40 WIRE DIAGRAMS

Wiring diagrams in powered refrigeration mode.

8145 Replacement (Retrofit)
DTAV40 Default Out of Box

8041 Replacement (Retrofit)

8045 Replacement (Retrofit)

8141 Replacement (Retrofit)

Equivalent in function, terminal identification, and wiring allows for quick and easy installation.

TYPE 3R ENCLOSURE DIMENSIONS

6.61" [16.79 cm]
5.73" [14.55 cm]
8.88" [22.56 cm]
3" [7.62 cm]

DT-B BRACKET DIMENSIONS

Note: All dimension in inches. Drawing not to scale.

Universal Replacement (See wiring diagrams for examples)				
Intermatic	Paragon		Precision	
	8141-00	8143-20	6141-00	6143-20
	8143-00	8145-20	6143-00	6145-20
	8145-00	8041-20	6145-00	6041-20
DTAV40 =	8041-00	8045-20	6041-00	6045-20
	8043-00	8047-20	6043-00	6047-20
	8045-00	8245-20	6045-00	6245-20
	8047-00	8247-20	6047-00	6247-20
	8141-20		6141-20	

Equivalent in function, terminal identification, and wiring allows for quick and easy installation.

CD5-01WHRW-I

CD5
UNIVERSAL PANEL MOUNT REFRIGERATION CONTROLLERS FOR LT & HT APPLICATIONS

The CD5 Universal Panel Mount controller from LAE by Intermatic is a flexible solution for reach-in, self-contained refrigeration & freezer cases. The controller can be configured to be used on a wide variety of self-contained systems. The controller has been designed to function efficiently with today's advanced self-contained systems including those using R290, EC motors and LED lighting.

APPLICATIONS
• Ice Refrigeration Machine • Reach-In Refrigeration Cooler

FEATURES
• 3 Relays
• 1 Solid State Relay (EC motor control)
• 2-3 Sensors
• NTC10K & PTC1000 selectable
• 1-2 Digital inputs
• Universal Voltage, 115 VAC - 240 VAC
• R290 Compatible
• IP55 Front Protection
• -50° F to 248° F (-50° C to 120° C) Control range
• RS485 Communications Standard

UL60730-1   RoHS Compliant 2011/65/EU

Ratings	
Input Voltage	100-240 VAC, 50/60 Hz
Resistive Load Ratings	
Compressor	10 (2) A @ 240 VAC
Defrost	15 (5) A @ 240 VAC
Fan	10 (2) A @ 240 VAC
AUX1	1 A (30 A/1 mS)
Relay Type	SPST
Minimum Cycle Time	1 min
Storage Temperature	14°F - 122°F (-10°C - 50°C)
Real-time Clock Face	No
Wire Size	#10 AWG
Panel Cut-Out H x W	1.14" x 2.80" (29 mm x 71 mm)
Dimensions H x W x D	1.34" x 2.76" x 2.76" (34 mm x 70 mm x 70 mm)
Operating Humidity	0-80% RH, Non-condensing
Operating Temperature	14°F - 122°F (-10°C - 50°C)
Electrical Life	100,000 operations at full load
Warranty	5-Year limited

Model #	Circuits	Input Voltage	Enclosure Type	Mounting
CD5-01WHRW-I	4	100-240 VAC, 50/60 Hz	IP55 Front	Panel

CD5 WIRING DIAGRAM

Reliable Solutions for Everyday Needs
Digital Temperature Controllers and Custom Solutions

From commercial kitchens to neighborhood convenience stores, properly managing refrigeration needs of coolers, chillers and cooking equipment is essential to success.

LAE by Intermatic Digital Temperature Controllers offer a proven solution for essential refrigeration and cooking needs. Our versatile lineup of controllers integrates seamlessly in panel-mount and split-mount applications. Likewise, extensive customization options combined with our team's rich industry knowledge allow us to be a resource to manufacturers that are looking to bring their ideas to life.

lae by INTERMATIC

AT1-5BS6E-ALI

AT2-5BS4E-ALI

AT1-5
PANEL MOUNT REFRIGERATION CONTROLLERS FOR HT APPLICATIONS

The AT1-5 Panel-Mount Controller family are compact and capable, providing excellent control options in a small package. The AT1-5 family of controllers feature 1-2 relays, one temperature sensor and a digital input. Ideal for medium temperature self-contained refrigeration systems.

APPLICATIONS
• Ice Refrigeration Machine • Reach-In Refrigeration Cooler

FEATURES
• 1-2 Relays
• 1 Sensor
• NTC10K & PTC1000 selectable
• 1 Digital input
• IP55 Front Protection
• -50° F to 248° F (-50° C to 120° C) Control range
• 14° F to 122° F (-10° C to 50° C) Ambient conditions
• RS485 Communications Options

Model #	Circuits	Input Voltage	Enclosure Type	Mounting
AT1-5BS6E-ALI	2	230 VAC ±10%, 50/60 Hz	IP55 Front	Panel
AT1-5BS6E-BGI	2	230 VAC ±10%, 50/60 Hz		
AT1-5AS5E-GI	1	230 VAC ±10%, 50/60 Hz		
AT1-5AS5U-BGI	1	115 VAC ±10%, 50/60 Hz		
AT1-5BS2E-BGI	2	230 VAC ±10%, 50/60 Hz		
AT1-5BS6U-BGI	2	115 VAC ±10%, 50/60 Hz		

For wire diagrams see page 116.

UL60730-1   RoHS Compliant 2011/65/EU

Ratings	
Input Voltage	See Model Table
Resistive Load Ratings **Compressor** **Fan**	16 (8) A @ 240 VAC 7 (2) A @ 240 VAC
Relay Type	SPST
Minimum Cycle Time	1 min
Storage Temperature	14°F - 122°F (-10°C - 50°C)
Real-time Clock Face	No
Wire Size	#10 AWG
Panel Cut-Out H x W	1.14" x 2.80" (29 mm x 71 mm)
Dimensions H x W x D	1.34" x 70" x 2.76" (34 mm x 70 mm x 70 mm)
Operating Humidity	0-80% RH, Non-condensing
Operating Temperature	14°F - 122°F (-10°C - 50°C)
Electrical Life	100,000 operations at full load
Warranty	5-Year limited

AT2-5
PANEL MOUNT REFRIGERATION CONTROLLERS FOR LT & HT APPLICATIONS

The AT2-5 Panel-Mount Controller family are compact and capable, providing excellent control options in a small package. The AT2-5 family of controllers feature 3 relays, two temperature sensors and a digital input. Ideal for low or medium temperature self-contained refrigeration systems.

APPLICATIONS
• Ice Refrigeration Machine • Reach-In Refrigeration Cooler

FEATURES
• 3 Relays
• 1-2 Sensors
• NTC10K & PTC1000 selectable
• 1 Digital input
• IP55 Front Protection
• -50° F to 248° F (-50° C to 120° C) Control range
• 14° F to 122° F (-10° C to 50° C) Ambient conditions
• RS485 Communications Options

Model #	Circuits	Input Voltage	Enclosure Type	Mounting
AT2-5BS4E-ALI	3	230 VAC ±10%, 50/60 Hz	IP55 Front	Panel
AT2-5BS4E-GI	3	230 VAC ±10%, 50/60 Hz		
AT2-5BS4U-BGI	3	115 VAC ±10%, 50/60 Hz		

For wire diagrams see page 116.

UL60730-1   RoHS Compliant 2011/65/EU

Ratings	
Input Voltage	See Model Table
Resistive Load Ratings **Compressor** **Fan** **AUX1**	16 (8) A @ 240 VAC 7 (2) A @ 240 VAC 7 (2) A @ 240 VAC
Relay Type	SPST
Minimum Cycle Time	1 min
Storage Temperature	14°F - 122°F (-10°C - 50°C)
Real-time Clock Face	No
Wire Size	#10 AWG
Panel Cut-Out H x W	1.14" x 2.80" (29 mm x 71 mm)
Dimensions H x W x D	1.34" x 2.76" x 2.76" (34 mm x 70 mm x 70 mm)
Operating Humidity	0-80% RH, Non-condensing
Operating Temperature	14°F - 122°F (-10°C - 50°C)
Electrical Life	100,000 operations at full load
Warranty	5-Year limited

INTERMATIC

BIT25-B1S3U-BI

BIT25
SPLIT MOUNT REFRIGERATION CONTROLLERS FOR LT & HT APPLICATIONS

The BIT25 Split Controllers are designed to excel in more demanding applications and provide additional control options for more sophisticated equipment. The BIT25 controllers can be mounted to a wiring chase or with the refrigeration equipment, eliminating the need for long runs of control wiring. The BIT25 features 3 highly rated relays and universal power.

APPLICATIONS
• Ice Refrigeration Machine • Reach-In Refrigeration Cooler

FEATURES
• 3 Relays
• 1-2 Sensors
• NTC10K & PTC1000 selectable
• 1 Digital input
• IP55 Front Protection
• 100-240 VAC, 50/60 Hz., or Universal Power Supply
• -50° F to 248° F (-50° C to 120° C) Control range
• 14° F to 122° F (-10° C to 50° C) Ambient conditions
• RS485 Communications Options

RoHS Compliant
UL60730-1   2011/65/EU

Ratings	
Input Voltage	See Model Table
Resistive Load Ratings Compressor AUX1 AUX2	12 (12) A @ 240 VAC 16 A @ 240 VAC 4 A @ 240 VAC
Relay Type	SPST
Minimum Cycle Time	1 min
Storage Temperature	14°F - 122°F (-10°C - 50°C)
Real-time Clock Face	No
Wire Size	#10 AWG
Panel Cut-Out H x W	1.14" x 2.80" (29 mm x 71 mm)
Dimensions H x W x D	1.57" x 3.27" x 2.76" (40 mm x 83 mm x 70 mm)
Operating Humidity	0-80% RH, Non-condensing
Operating Temperature	14°F - 122°F (-10°C - 50°C)
Electrical Life	100,000 operations at full load
Warranty	5-Year limited

Model #	Circuits	Input Voltage	Enclosure	Mounting
BIT25-B1S3U-BI	3	115 VAC ±10%, 50/60 Hz	IP55 Front	DIN
BIT25-B1S3W-BI	3	110-240 VAC ±10%, 50/60 Hz		
BIT25-B1S3E-BI	3	230 VAC ±10%, 50/60 Hz		

BIT25 DIMENSIONS

BIT25 WIRING DIAGRAM

INTERMATIC

BR1-28C1Q5WH-B

BD1-28C1S5W-BI

BR1-28
SPLIT MOUNT REFRIGERATION CONTROLLERS WITH RTC FOR LT & HT APPLICATIONS

The BR1-28 Split Controllers are designed to excel in more demanding applications and provide additional control options for more sophisticated equipment. The BR1-28 controllers can be mounted to a wiring chase or with the refrigeration equipment, eliminating the need for long runs of control wiring. The BR1-28 feature 3-5 highly rated relays and 2-3 sensors along with 2 digital inputs and RTC for exact timing of programmed events.

APPLICATIONS
• Ice Refrigeration Machine • Reach-In Refrigeration Cooler

FEATURES
• 3-5 Relays
• 3 Sensors
• NTC10K & PTC1000 selectable
• 1 Digital input
• IP55 Front Protection
• 100-240 VAC, 50/60 Hz., or Universal Power Supply
• R290 Rated Optional
• -50° F to 248° F (-50° C to 120° C) Control range
• 14° F to 122° F (-10° C to 50° C) Ambient conditions
• RS485 Communications Options

Model #	Circuits	Input Voltage	Enclosure	Mounting
BR1-28C1Q5WH-B	5	100-240 VAC ±10%, 50/60 Hz		
BR1-28C1S4WH-BI	4	100-240 VAC ±10%, 50/60 Hz	IP55 Front	DIN
BR1-28B0Q3W-AI	3	100-240 VAC ±10%, 50/60 Hz		
BR1-28C1Q5WH-BI	5	100-240 VAC ±10%, 50/60 Hz		

For wire diagrams see page 116.

c(UL)us UL60730-1   RoHS Compliant 2011/65/EU

Ratings	
Input Voltage	See Model Table
Resistive Load Ratings	
Compressor	16 (12) A @ 240 VAC
Defrost	16 (4) A @ 240 VAC
Fan	16 (4) A @ 240 VAC
AUX1	7 (2) A @ 240 VAC
Relay Type	SPST
Minimum Cycle Time	1 min
Storage Temperature	14°F - 122° F (-10°C - 50°C)
Real-time Clock Face	Yes
Wire Size	#10 AWG
Panel Cut-Out H x W	1.14" x 2.80" (29 mm x 71 mm)
Dimensions H x W x D	1.81" x 4.13" x 2.76" (46 mm x 105 mm x 70 mm)
Operating Humidity	0-80% RH, Non-condensing
Operating Temperature	14°F - 122°F (-10°C - 50°C)
Electrical Life	100,000 operations at full load
Warranty	5-Year limited

BD1-28
SPLIT MOUNT REFRIGERATION CONTROLLERS FOR LT & HT APPLICATIONS

The BD1-28 Split Controllers are designed to excel in more demanding applications and provide additional control options for more sophisticated equipment. The BD1-28 controllers can be mounted to a wiring chase or with the refrigeration equipment, eliminating the need for long runs of control wiring. The BD1-28 feature 3-5 highly rated relays and 2-3 sensors along with 2 digital inputs.

APPLICATIONS
• Ice Refrigeration Machine • Reach-In Refrigeration Cooler

FEATURES
• 5 Relays
• 3 Sensors
• NTC10K & PTC1000 selectable
• 2 Digital inputs
• IP55 Front Protection
• 100-240 VAC, 50/60 Hz., or Universal Power Supply
• -50° F to 248° F (-50° C to 120° C) Control range
• 14° F to 122° F (-10° C to 50° C) Ambient conditions
• RS485 Communications Options

Model #	Circuits	Input Voltage	Enclosure	Mounting
BD1-28C1S5W-BI	5	100-240 VAC ±10%, 50/60 Hz	IP55 Front	DIN

For wire diagrams see page 116.

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Ratings	
Input Voltage	See Model Table
Resistive Load Ratings	
Compressor	16 (8) A @ 240 VAC
Defrost	16 (4) A @ 240 VAC
Fan	16 (4) A @ 240 VAC
AUX1	7 (2) A @ 240 VAC
Relay Type	SPST
Minimum Cycle Time	1 min
Storage Temperature	14°F - 122°F (-10°C - 50°C)
Real-time Clock Face	No
Wire Size	#10 AWG
Panel Cut-Out H x W	1.14" x 2.80" (29 mm x 71 mm)
Dimensions H x W x D	1.81" x 4.13" x 2.76" (46 mm x 105 mm x 70 mm)
Operating Humidity	0-80% RH, Non-condensing
Operating Temperature	14°F - 122°F (-10°C - 50°C)
Electrical Life	100,000 operations at full load
Warranty	5-Year limited

AT1-5 WIRING DIAGRAMS

AT1-5BS4E-AG

AT1-5AS5U-BG

AT1-5BS6E-BG

AT1-5BS6E-BG

AT2-5 WIRING DIAGRAM

AT2-5BS4E-AG

BR1-28 WIRING DIAGRAM

BD1-28 WIRING DIAGRAM

INTERMATIC®

ACCESSORIES

Model Number	Description
SN4B50P1	Temperature Probe, NTC 10k probe, 5.0 m, Gray
SN4B30P1	Temperature Probe, NTC 10k probe, 3.0 m, Gray
SN4B20P1	Temperature Probe, NTC 10k probe, 2.0 m, Gray
SN4B20P2-B	Temperature Probe, NTC 10k probe, 2.0 m, Blue
SN4B20P3-Y	Temperature Probe, NTC 10k probe, 2.0 m, Yellow
SN4B30P2-B	Temperature Probe, NTC 10k probe, 3.0 m, Blue
SN4B30P3-Y	Temperature Probe, NTC 10k probe, 3.0 m, Yellow
SN4B50P2-B	Temperature Probe, NTC 10k probe, 5.0 m, Blue
SN4B50P3-Y	Temperature Probe, NTC 10k probe, 5.0 m, Yellow
LCD-5S-1I	Display, BIT25
DU5S-1I	Display, BD1-28, BR1-28

SN4B50P1   SN4B20P2-B   SN4B20P3-Y

Display, BIT25   DU5S-1I

DID YOU KNOW?

DTAV40 Series Commercial Refrigeration Defrost Timers are applicable to air defrost (compressor shutdown) and electric or hot gas defrost systems where the defrost cycle is terminated by a timer or a temperature or pressure switch. The time termination functions as a failsafe and terminates the defrost cycle if the temperature or pressure switch fails to do so.

Self-service kiosks present their own unique challenges from refrigerated reach-in coolers to chest freezer merchandisers to heated food warming displays. **LAE by Intermatic Digital Controllers** offer a proven solution for temperature control and can be used to modulate temperatures in a wide range of applications.

Surge Protection Solutions

Safeguard home appliances and commercial and Industrial equipment from damaging power surge events with our rugged surge protection solutions. These versatile SPDs provide a variety of protection options and offer lasting peace of mind.

Distribution Panelboards and Subpanels

Connect our surge protection solutions to residential or commercial distribution panelboards or subpanels for a layer of coverage against power surge events. This method of installation can be completed in minutes and offers a lasting defense against power quality issues.

Service Entrance

Keep power surge events at bay by placing one of our Type I SPDs at the service entrance. This provides widespread protection against harmful power quality issues.

Point-of-Use Protection

Our basic point-of-use surge protection solutions install in minutes and help safeguard electronics and appliances from unexpected power surge issues in simple, ad-hoc applications.

Whole Home Protection

Get wall-to-wall protection from harmful surge events by installing a whole home surge protective device in residential applications.

Contents

Additional Solutions and Resources

Ready to get started? Scan the QR code to the right for a variety of helpful resources, including sell sheets, product instructions, installation videos and more.

Causes of Power Disturbances

Electrical disturbances and downtime cost North American companies and residents more than $26 billion every year. Fluctuations in utility power (caused by grid switching, for example) are often suspected to be the main culprits. However, the overwhelming cause of power disturbances is actually from transient voltage surges from equipment inside a facility. In fact, it is estimated that 65% of all transient voltage surges are generated from inside sources, while only 35% come from outside.* Triggers of transient surges can range from the stopping and starting of motors, appliances and electronics, to even the simple action of switching lights ON and OFF.

* NEMA Surge Protection Institute

What Requires Surge Protection?

Every process and appliance within a building is controlled by electrical equipment and electronic components. Virtually all devices that are powered by electricity are vulnerable. The following types of systems will benefit from surge protection:

- Home Theater Systems
- Computers/Peripherals/Servers
- HVAC/R Systems and Controls
- Electronically Commutated Motors
- Pool and Spa Systems and Controls
- Smartphones/Tablets/Gaming Systems
- Charging Equipment for Hybrid and Electric Cars

- Variable Frequency Drives
- Security and Fire Alarm Systems
- Programmable Logic Controllers
- Network Servers/Routers/Modems
- Lighting Ballasts
- Uninterruptible Power Supplies
- Home Automation Controls

- Pumps, Motors and Related Equipment with Electronic Controls or Starters
- Telecom Equipment
- Generator Automatic Transfer Switches (ATS)

INTERMATIC®

ANSI/UL 1449, 3rd Edition, Surge Protection Compliance

UL 1449, 2nd Edition, underwent a major revision requiring additional safety testing at medium-fault current levels for Transient Voltage Surge Suppressors (TVSS). UL 1449, 3rd Edition, was published in September 2006 with compliance required by September 2009. The major differences are:

• UL 1449, 3rd Edition, is now an American National Standard (ANSI)
• Change in terminology from Transient Voltage Surge Suppressors to Surge Protective Devices (SPD)
• Voltage Protection Rating (VPR) is now tested at 6 kV/3 kA.
• Nominal Discharge Current (In) is a new addition.

Terminology Change

The full title of UL 1449, 2nd Edition, is, "Standard for Safety for Transient Voltage Surge Suppressors, UL 1449".

The new title of UL 1449, 3rd Edition, is, "Standard for Safety for Surge Protective Devices, UL 1449." "Surge Protective Devices" is a more general description and covers devices beyond what we formerly called TVSS. The term SPD also covers what are referred to as Secondary Surge Arrestors.

UL 1449, 3rd Edition, gives five designations to surge protective devices depending on where in the electrical system the device is connected. Below defines Types 1-3.

Type 1 — Permanently connected device installed before or after the service disconnect overcurrent device and intended to be installed with no external overcurrent protective device. This type of SPD most closely relates to devices that were called secondary surge arrestors prior to 3rd Edition.

Type 2 — Permanently connected device installed after the service disconnect overcurrent device. This type of SPD most closely relates to devices that were called transient voltage surge suppressors prior to 3rd Edition.

Type 3 — Point of use SPDs that are installed with a minimum of 30 feet of conductor length from the service panel. These 30 feet of conductor length does not include conductors used to attach the SPD. Some examples of Type 3 SPDs are cord connected, direct plug-in and receptacle type SPDs.

Industrial

Residential

Voltage Protection Rating (VPR)

The measured limiting voltage test in UL 1449, 3rd Edition, uses a 6 kV/3 kA combination wave surge to determine the Voltage Protection Rating (VPR) of the SPD. This test is similar to the Suppressed Voltage Rating (SVR) as performed in UL 1449, 2nd Edition. The key difference between the tests in 2nd Edition and 3rd Edition is that the magnitude of the current used for the test is six times greater in 3rd Edition versus 2nd Edition. This much higher current level will mean that the Voltage Protection Rating (VPR) will likely be significantly higher.

Nominal Discharge Current (In)

The addition of the nominal discharge current test is new to UL 1449 3rd Edition. The nominal discharge current value is selected by the manufacturer and can be either 10 kA or 20 kA for a Type 1 SPD or 3 kA, 5 kA, 10 kA or 20 kA for Type 2 SPDs. The SPD is tested by being subjected to a total of 15 impulses of the manufacturer-selected nominal discharge current.

Joule Ratings

Many end users look at Joule ratings to determine which surge protector to purchase. Unfortunately, Joule ratings can be misleading according to IEEE research. When a surge protector is submitted for third party agency testing, Joule rating is not a tested parameter. Joule ratings are an unreliable measurement for determining a product's surge protection capacity because there is no clear standard for energy ratings of SPDs on Joules.

Typical Surge Protective Device (SPD) Residential Applications

Entertainment
Home Theaters, TV, Stereos

Home Office, Computers, Tablets, Printers

Home Automation, Thermostats, Security, Lighting

HVAC, Generators, Solar

Pool & Spa Equipment, Water Heater, Landscape Lighting

Mini-split, Furnace/ Air Handler, Boilers

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Common Voltage Configurations

The wiring diagrams below illustrate the common voltage configurations for Intermatic surge products.

**120 VAC
Single Phase**

**120, 240 VAC
Single Phase**
(Split Phase)

**120, 208 VAC
Three Phase Wye**

**120, 240 VAC
Three Phase HLD**
(High Leg Delta)

**277, 480 VAC
Three Phase Wye**

**347, 600 VAC
Three Phase Wye**

**277, 480 VAC
Single Phase**

Note: All SPDs protect against surges that travel along the electrical pathway and are not applicable to direct lightning strikes that travel down non-electrical paths. Be sure to have at least a 20 A dual pole breaker(s) to help prevent the circuits from shorting. Type 1 SPDs are normally mounted before panels, which would not include a breaker.

Surge Glossary

Maximum Continuous Operating Voltage (MCOV): The maximum RMS voltage that may be applied to each mode of a surge protection device. (Listed on the product)

Modes Of Protection: Electrical paths within a system which an SPD offers defense against surge events. Examples of protection include, Line to Neutral (L-N), Line to Ground (L-G), Line to Line (L-L) and Neutral to Ground (N-G). (Listed on the product)

Nominal Discharge Current (In): Peak value of the current through the SPD having a current wave shape of 8/20 where the SPD remains functional after 15 surges. (Listed on the product)

Nominal System Voltage: The voltage level at which a system normally operates. Nominal system voltages include, but are not limited to, 120, 208, 240, 277, 347, 480, 600 VAC. (Listed on the product)

Short Circuit Current Rating (SCCR): The measurement of how much current the electrical system can supply during a fault condition. This value determines where an SPD may be installed.
(Listed on the product)

Surge: A sudden and sharp increase of current or voltage within electric circuits.

Surge Protective Device (SPD): A device used to limit a surge on equipment by diverting or limiting it. SPDs were previously known as Transient Voltage Surge Suppressors or secondary surge arresters.

Voltage Protection Rating (VPR): The value assigned by UL which specifies the measured limited voltage value of the SPD. VPR rating is formally known as the "suppressed voltage rating". (Listed on the product)

PANELGUARD® L5 Series
TYPE 1 OR 2 SPD

Intermatic PANELGUARD® Surge Protective Devices are designed to react quickly and eliminate surges providing optimal protection to downstream equipment. PANELGUARD® Industrial/Commercial-grade series are Parallel Connected Surge Protective Devices designed to protect all types of loads fed from individual disconnects, sub-panels, distribution panels and service entrance locations.

Applications
• Distribution Panel • Service Entrance • Subpanels • Utility Meters

Features
• Type 1 and Type 2 surge protection options
• Optional audible alarm and dry contact relay
• 4 Modes of protection
• UL 96A Lightning system protection compliant
• NEMA 4X enclosure for indoor or outdoor installation
• Individually integrated disconnect TPMOV® surge protection technology
• Optional advanced electrical noise filter (UL 1283) (Type 2 only)
• Blue LED protection status indicator, and red LED service indicator

L5 Series

Model #	SPD Type	Voltage	Audible Alarm, Dry Relay Contact	Filter	Maximum Continuous Operating Voltage				Voltage Protection Rating				Modes of Protection
					(L-N)	(L-L)	(L-G)	(N-G)	(L-N)	(L-L)	(L-G)	(N-G)	
L5F21S1DG1	2	120/240 VAC Single-Phase	–	EMI/RFI Filter	150	300	150	150	700	1200	1200	600	
L5F21S1DG2	2		Yes	EMI/RFI Filter	150	300	150	150	700	1200	1200	600	
L5F13D1DG1	1	120/240 VAC 3-Phase High Leg Delta	–	No Filter	150/300*	300/300*	150/300*	150	700/1200*	1200/2500*	1200/1800*	600	
L5F13D1DG2	1		Yes	No Filter	150/300*	300/300*	150/300*	150	700/1200*	1200/2500*	1200/1800*	600	
L5F13Y1DG1	1	120/208 VAC 3-Phase Wye	–	No Filter	150	300	150	150	600	1200	1200	600	
L5F13Y1DG2	1		Yes	No Filter	150	300	150	150	600	1200	1200	600	4
L5F23Y1DG1	2		–	EMI/RFI Filter	150	300	150	150	700	1200	1200	600	
L5F23Y1DG2	2		Yes	EMI/RFI Filter	150	300	150	150	700	1200	1200	600	
L5F13Y2DG1	1	277/480 VAC 3-Phase Wye	–	No Filter	320	640	320	320	1200	2500	2500	1200	
L5F13Y2DG2	1		Yes	No Filter	320	640	320	320	1200	2500	2500	1200	
L5F23Y2DG1	2		–	EMI/RFI Filter	320	640	320	320	1200	2500	2500	1200	
L5F23Y2DG2	2		Yes	EMI/RFI Filter	320	640	320	320	1200	2500	2500	1200	
L5F13Y3DG1	1	347/600 VAC 3-Phase Wye	–	No Filter	420	800	420	420	1500	3000	3000	1500	
L5F13Y3DG2	1		Yes	No Filter	420	800	420	420	1500	3000	3000	1500	

Rating reflects Phase High Leg

L5 SERIES DIMENSIONS

1.05", 6.36", 3.54", 4.72", 0.20" THRU, 5.36", 3.15", 4.81"

Ratings	
Voltage	See Model Table
MCOV*	See Model Table
Voltage Protection Rating	See Model Table
Max Surge Current Rating	50 kA Per Phase
Nominal Discharge Current	20 kA
Short Circuit Current Rating	200 kA
Diagnostics Indicator	Blue LED Protection Status Indicator, Red LED Service Indicator
Wire Size	#10 AWG
Enclosure Type	NEMA Type 4X
Dimensions H x W x D	6.46" x 4.81" x 3.54" (164.084 mm x 122.17 mm x 89.92 mm)
Operating Temperature	-40°F - 176°F (-40°C - 80°C)
Warranty	5-Year limited

* Maximum Continuous Operating Voltage

PANELGUARD® L10 Series
TYPE 1 OR 2 SPD

Intermatic PANELGUARD® Surge Protective Devices are designed to react quickly and eliminate surges providing optimal protection to downstream equipment. PANELGUARD® Industrial/Commercial-grade series are Parallel Connected Surge Protective Devices designed to protect all types of loads fed from individual disconnects, sub-panels, distribution panels and service entrance locations.

Applications
• Distribution Panel • Service Entrance • Subpanels • Utility Meters

Features
• Type 1 and Type 2 surge protection options
• Optional audible alarm and dry contact relay
• 4 Modes of protection
• UL 96A Lightning system protection compliant
• NEMA 4X enclosure for indoor or outdoor installation
• Individually integrated disconnect TPMOV® surge protection technology
• Optional advanced electrical noise filter (UL 1283) (Type 2 only)
• Blue LED protection status indicator, and red LED service indicator

L10 Series

Model #	SPD Type	Voltage	Audible Alarm, Dry Relay Contact	Filter	Max Continuous Operating Voltage				Voltage Protection Rating				Modes of Protection
					(L–N)	(L–L)	(L–G)	(N–G)	(L–N)	(L–L)	(L–G)	(N–G)	
L10F11S1DG1	1	120/240 VAC Single-Phase	–	No Filter	150	300	150	150	700	1000	1000	700	
L10F11S1DG2	1		Yes	No Filter	150	300	150	150	700	1000	1000	700	
L10F23D1DG1	2	120/240 VAC 3-Phase High Leg Delta	–	EMI/RFI Filter	150/300*	300/300*	150/300*	150	600/1200*	200/2000*	1200/2000*	700	
L10F23D1DG2	2		Yes	EMI/RFI Filter	150/300*	300/300*	150/300*	150	600/1200*	200/2000*	1200/2000*	700	
L10F13N4DG1	1	440/480 VAC 3-Phase High Leg Delta	–	No Filter	–	552	552	–	–	4000	1800	–	
L10F13N4DG2	1		Yes	No Filter	–	552	552	–	–	4000	1800	–	
L10F23N4DG1	2		–	EMI/RFI Filter	–	552	1800	–	–	4000	1800	–	
L10F23N4DG2	2		Yes	EMI/RFI Filter	–	552	1800	–	–	4000	1800	–	
L10F13Y1DG1	1	120/208 VAC 3-Phase Wye	–	No Filter	150	300	150	150	700	1000	1000	700	4
L10F13Y1DG2	1		Yes	No Filter	150	300	150	150	700	1000	1000	700	
L10F23Y1DG1	2		–	EMI/RFI Filter	150	300	150	150	700	1200	1200	700	
L10F23Y1DG2	2		Yes	EMI/RFI Filter	150	300	150	150	700	1200	1200	700	
L10F13Y2DG1	1	277/480 VAC 3-Phase Wye	–	No Filter	320	640	320	320	1200	2000	2000	1200	
L10F13Y2DG2	1		Yes	No Filter	320	640	320	320	1200	2000	2000	1200	
L10F23Y2DG1	2		–	EMI/RFI Filter	320	640	320	320	1200	2500	2500	1200	
L10F23Y2DG2	2		Yes	EMI/RFI Filter	320	640	320	320	1200	2500	2500	1200	
L10F13Y3DG1	1	347/600 VAC 3-Phase Wye	–	No Filter	420	800	420	420	1500	3000	3000	1500	
L10F13Y3DG2	1		Yes	No Filter	420	800	420	420	1500	3000	3000	1500	

Rating reflects Phase High Leg

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Ratings	
Voltage	See Model Table
MCOV*	See Model Table
Voltage Protection Rating	See Model Table
Max Surge Current Rating	100 kA Per Phase
Nominal Discharge Current	20 kA
Short Circuit Current Rating	200 kA
Diagnostics Indicator	Blue LED Protection Status Indicator, Red LED Service Indicator
Wire Size	#10 AWG
Enclosure Type	NEMA Type 4X
Dimensions H x W x D	10.59" x 5.25" x 3.29" (268.99 mm x 133.35 mm x 83.57 mm)
Operating Temperature	-40°F - 176° F (-40° C - 80°C)
Warranty	5-Year limited

***** *Maximum Continuous Operating Voltage*

L10 SERIES DIMENSIONS

1.02"
0.20" THRU
10.47"
8.74"
9.24"
3.30"
3.87"
5.23"

Surge Protection
Type 1 or 2 SPD for Industrial/Commercial

H10 Series

PANELGUARD® H10 Series
TYPE 1 OR 2 SPD

Intermatic PANELGUARD® Surge Protective Devices are designed to react quickly and eliminate surges providing optimal protection to downstream equipment. PANELGUARD® Industrial/Commercial-grade series are Parallel Connected Surge Protective Devices designed to protect all types of loads fed from individual disconnects, sub-panels, distribution panels and service entrance locations.

Applications
• Distribution Panel • Service Entrance • Subpanels • Utility Meters
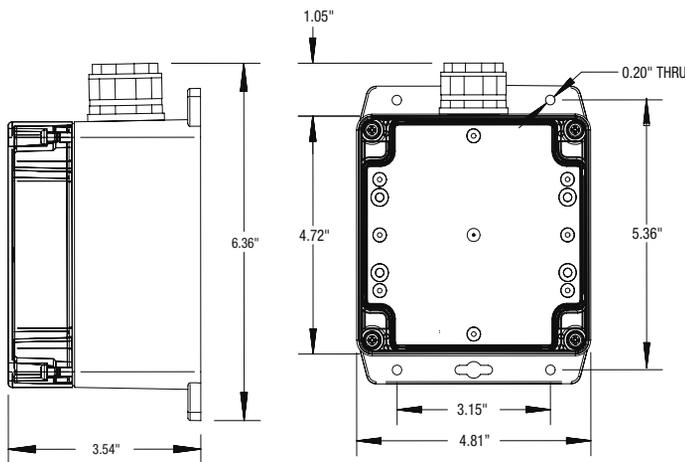
Features
• Type 1 and Type 2 surge protection options
• Optional audible alarm and dry contact relay
• 7 Modes of protection
• NFPA 780, UL 96A Lightning system protection compliant
• NEMA 4X enclosure for indoor or outdoor installation
• Individually integrated disconnect TPMOV® surge protection technology
• Optional advanced electrical noise filter (UL 1283) (Type 2 only)
• Blue LED status indicator per phase, red LED service indicator

Model #	SPD Type	Voltage	Audible Alarm, Dry Relay Contact	Filter	Maximum Continuous Operating Voltage				Voltage Protection Rating				Modes of Protection
					(L-N)	(L-L)	(L-G)	(N-G)	(L-N)	(L-L)	(L-G)	(N-G)	
H10S21S1DG1	2	120/240 VAC Single-Phase	–	EMI/RFI Filter	150	300	150	150	700	1200	700	700	
H10S21S1DG2	2		Yes	EMI/RFI Filter	150	300	150	150	700	1200	700	700	
H10S13D1DG1	1	120/240 VAC 3-Phase High Leg Delta	–	No Filter	150/300*	300/300*	150/300*	150	700/1200*	1000/1800*	700/1200*	700	
H10S13D1DG2	1		Yes	No Filter	150/300*	300/300*	150/300*	150	700/1200*	1000/1800*	700/1200*	700	
H10S23D1DG1	2		–	EMI/RFI Filter	150/300*	300/300*	150/300*	150	700/1200*	1200/1800*	700/1200*	700	
H10S23D1DG2	2		Yes	EMI/RFI Filter	150/300*	300/300*	150/300*	150	700/1200*	1200/1800*	700/1200*	700	
H10S13Y1DG1	1	120/208 VAC 3-Phase Wye	–	No Filter	150	300	150	150	600	1000	600	700	7
H10S13Y1DG2	1		Yes	No Filter	150	300	150	150	600	1000	600	700	
H10S23Y1DG1	2		–	EMI/RFI Filter	150	300	150	150	700	1000	600	700	
H10S23Y1DG2	2		Yes	EMI/RFI Filter	150	300	150	150	700	1000	600	700	
H10S13Y2DG1†	1	277/480 VAC 3-Phase Wye	–	No Filter	320	640	320	320	1200	2000	1200	1200	
H10S13Y2DG2†	1		Yes	No Filter	320	640	320	320	1200	2000	1200	1200	
H10S23Y2DG1	2		–	EMI/RFI Filter	320	640	320	320	1200	2500	1200	1200	
H10S23Y2DG2	2		Yes	EMI/RFI Filter	320	640	320	320	1200	2500	1200	1200	
H10S13Y3DG1	1	347/600 VAC 3-Phase Wye	–	No Filter	400	800	400	400	1500	2500	1500	1500	
H10S13Y3DG2	1		Yes	No Filter	400	800	400	400	1500	2500	1500	1500	

Correction: last two rows show model prefix H10S13Y3DG — voltage 347/600 VAC 3-Phase Wye

Rating reflects Phase High Leg   † H10S13Y2DG1 & H10S13Y2DG2 not NFPA compliant

H10 SERIES DIMENSIONS

1.02"
0.20" THRU
10.47"
8.74"
9.24"
3.30"
3.87"
5.23"

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Ratings	
Voltage	See Model Table
MCOV*	See Model Table
Voltage Protection Rating	See Model Table
Max Surge Current Rating	100 kA Per Phase
Nominal Discharge Current	20 kA
Short Circuit Current Rating	200 kA
Diagnostics Indicator	Blue LED Status Indicator Per Phase, Red LED Service Indicator
Wire Size	#10 AWG
Enclosure Type	NEMA Type 4X
Dimensions H x W x D	10.59" x 5.25" x 3.29" (268.99 mm x 133.35 mm x 83.57 mm)
Operating Temperature	-40°F - 176°F (-40°C - 80°C)
Warranty	10-Year limited

Maximum Continuous Operating Voltage

INTERMATIC®

PANELGUARD® H20 Series
TYPE 1 OR 2 SPD

Intermatic PANELGUARD® Surge Protective Devices are designed to react quickly and eliminate surges providing optimal protection to downstream equipment. PANELGUARD® Industrial/Commercial-grade series are Parallel Connected Surge Protective Devices designed to protect all types of loads fed from individual disconnects, sub-panels, distribution panels and service entrance locations.

Applications
• Distribution Panel • Service Entrance • Subpanels • Utility Meters

Features
• Type 1 and Type 2 surge protection options
• Optional audible alarm and dry contact relay
• 7 Modes of protection
• NFPA 780, UL 96A Lightning system protection compliant
• NEMA 4X enclosure for indoor or outdoor installation
• Individually integrated disconnect TPMOV® surge protection technology
• Optional advanced electrical noise filter (UL 1283) (Type 2 only)
• Blue LED status indicator per phase, red LED service indicator

H20 Series

Model #	SPD Type	Voltage	Audible Alarm, Dry Relay Contact	Filter	Maximum Continuous Operating Voltage				Voltage Protection Rating				Modes of Protection
					(L-N)	(L-L)	(L-G)	(N-G)	(L-N)	(L-L)	(L-G)	(N-G)	
H20S21S1DG1	2	120/240 VAC Single-Phase	–	EMI/RFI Filter	150	300	150	150	700	1200	700	700	
H20S21S1DG2	2		Yes	EMI/RFI Filter	150	300	150	150	700	1200	700	700	
H20S13D1DG1	1	120/240 VAC 3-Phase High Leg Delta	–	No Filter	150/300*	300/300*	150/300*	150	700/1200*	1200/2000*	700/1200*	700	
H20S13D1DG2	1		Yes	No Filter	150/300*	300/300*	150/300*	150	700/1200*	1200/2000*	700/1200*	700	
H20S23D1DG1	2		–	EMI/RFI Filter	150/300*	300/300*	150/300*	150	800/1200*	1200/2000*	700/1200*	700	
H20S23D1DG2	2		Yes	EMI/RFI Filter	150/300*	300/300*	150/300*	150	800/1200*	1200/2000*	700/1200*	700	
H20S13Y1DG1	1	120/208 VAC 3-Phase Wye	–	No Filter	150	300	150	150	700	1000	700	700	7
H20S13Y1DG2	1		Yes	No Filter	150	300	150	150	700	1000	700	700	
H20S23Y1DG1	2		–	EMI/RFI Filter	150	300	150	150	700	1200	700	700	
H20S23Y1DG2	2		Yes	EMI/RFI Filter	150	300	150	150	700	1200	700	700	
H20S13Y2DG1†	1	277/480 VAC 3-Phase Wye	–	No Filter	320	640	320	320	1200	2000	1200	1200	
H20S13Y2DG2†	1		Yes	No Filter	320	640	320	320	1200	2000	1200	1200	
H20S23Y2DG1	2		–	EMI/RFI Filter	320	640	320	320	1200	2500	1200	1200	
H20S23Y2DG2	2		Yes	EMI/RFI Filter	320	640	320	320	1200	2500	1200	1200	
H20S13Y3DG1	1	347/600 VAC 3-Phase Wye	–	No Filter	400	800	400	400	1500	3000	1500	1500	
H20S13Y3DG2	1		Yes	No Filter	400	800	400	400	1500	3000	1500	1500	

Rating reflects Phase High Leg   †H20S13Y2DG1 & H20S13Y2DG2 not NFPA compliant

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Ratings	
Voltage	See Model Table
MCOV*	See Model Table
Voltage Protection Rating	See Model Table
Max Surge Current Rating	200 kA Per Phase
Nominal Discharge Current	20 kA
Short Circuit Current Rating	200 kA
Diagnostics Indicator	Blue LED Status Indicator Per Phase, Red LED Service Indicator
Wire Size	#10 AWG
Enclosure Type	NEMA Type 4X
Dimensions H x W x D	10.59" x 5.25" x 3.29" (268.99 mm x 133.35 mm x 83.57 mm)
Operating Temperature	-40°F - 176°F (-40 °C - 80°C)
Warranty	10-Year limited

* Maximum Continuous Operating Voltage

H20 SERIES DIMENSIONS

1.02"
0.20" THRU
10.47"
8.74"
9.24"
3.30"
3.87"
5.23"

AG Series
TYPE 1 OR 2 SPD

The AG Series Surge Protective Devices (SPD) are designed for a variety of applications. Trusted, state-of-the-art TPMOV® (Thermally Protected Metal Oxide Varistor) surge protection technology eliminates the potentially hazardous failure modes that are commonly associated with standard MOV technology. A green LED indicator provides status of protection. Type 1 applications include outdoor installations before service entrances and utility meter cabinets. Type 2 applications include installations after service entrances.

Applications
• Distribution Panel • Service Entrance • Subpanels and Load Centers

Features
• Three or six modes of protection
• TPMOV® surge protection technology
• Green LED protection indicator
• Type 4X watertight, plastic enclosure for outdoor installations
• UV-resistant polycarbonate housing
• 1/2" threaded nipple for 7/8" normal conduit knockout
• 1-year product warranty

AG48013

Model #	Input Voltage	Modes of Protection	Maximum Continuous Operating Voltage						Voltage Protection Rating						Lead Length	Lead Gauge
			(L1-L2)	(L-N)	(L-L)	(L-G)	–	–	(L-N)	(L-L)	(L-G)	–	–	–		
Single Phase Models																
AG2401C3†	120/240 VAC Single-Phase	3 (L1-N, L2-N, L1-L2)	300	150	300	150	–	–	700	1200	700	–	–	–	18"	#12 AWG
AG48013†	277/480 VAC Single-Phase		640	320	640	320	–	–	1200	2000	1200	–	–	–	18"	#6 AWG (Green) #10 AWG (Black, White)
Three Phase Models																
AG2083C3	120/208 VAC 3-Phase Wye	6 (L1-N, L2-N, L3-N, L1-L2, L1-L3, L2-L3)	300	150	300	150	–	–	700	1200	700	–	–	–	18"	#12 AWG
AG4803C3	277/480 VAC 3-Phase Wye		640	320	640	320	–	–	1200	2000	1200	–	–	–	18"	#12 AWG
AG6503C3†	347/600 VAC 3-Phase Wye		840	420	840	420	–	–	1500	2500	1500	–	–	–	18"	#10 AWG
AG6503L3†	347/600 VAC 3-Phase Wye		840	420	840	420	–	–	1500	2500	1500	–	–	–	36"	#10 AWG
AG2403C3	120/240 VAC 3-Phase High Leg Delta		420	(L1-L3)	(L1-N/G)	(L2-L3)	(L2-N/G)	(L3-N/G)	(L1-L2)	(L1-L3)	(L1-N/G)	(L2-L3)	(L2-N/G)	(L3-N/G)	18"	#12 AWG
				300	150	420	270	150	1500	1200	700	1500	1000	700		

† *CSA and UL Recognized*

US TYPE 1   C US TYPE 2   UL

ACCESSORIES

Model Number	Description
AG1BRKT	Mounting Bracket for AG2401C3, AG48013, AG2083C3, AG4803C3, AG6503C3, AG6503L3, AG2403C3

AG1BRKT

Ratings	
SPD Type	1 or 2
In (kA)*	20 kA
SCCR (kA)**	50 kA
Surge Protection Technology	TPMOV®
Max Surge Current Per Phase	50 kA
Operating Temperature	-31°F - 185°F (-35°C - 85°C)
Dimensions H x Dia	4 3/16" x 3" (106.4 mm x 76.2 mm)
Warranty	1-Year limited

* Nominal Discharge Current   ** Short Circuit Current Rating

WIRING DIAGRAMS FOR AG2401C3

Line
Neutral
Ground
120 v
120 v
0 v
BLACK
BLACK
WHITE

120 VAC Two wire single phase with separate ground.
Found at connections for individual pieces of equipment such as pumps and single phase motors. NOTE: Both Black wires connect to Line.

Line
Grounded/Neutral
Line
120 v
240 v
120 v
BLACK
WHITE
BLACK

120/240 VAC Three wire with grounded neutral.
Found at Service entrances and Meter Cans.

Line
Neutral
Line
Ground
120 v
240 v
120 v
120 v
BLACK
WHITE
BLACK

120/240 VAC Three wire with separate ground.
Found in Main Disconnect Switches, Main Distribution panels, Load Centers Sub panels and equipment locations.

INTERMATIC®

IG Series, SPD
TYPE 1 OR TYPE 2 SPD

The IG Series Surge Protective Devices (SPD) are designed for a variety of applications. A green LED indicator provides status of protection. Trusted, state-of-the-art TPMOV® (Thermally Protected Metal Oxide Varistor) surge protection technology eliminates the potentially hazardous failure modes that are commonly associated with standard MOV technology. Type 1 applications include outdoor installations before service entrances and utility meter cabinets. Type 2 applications include installations after service entrances. CSA certified to ANSI/UL 1449, 3rd Edition.

APPLICATIONS
• Whole Home Protection

FEATURES
• Three or six modes of surge protection depending on model
• TPMOV® surge protection technology
• Green LED indicator provides status of protection
• Type 3R rainproof enclosure for indoor/outdoor applications in plastic or metal
• 3, 5 or 10-year product warranties
• $7,500, $10,000 or $25,000 connected equipment warranties on appliances and electronics
• CSA certified to ANSI/UL 1449, 3rd Edition

IG3240RC3

Model #	Modes of Protection	Maximum Continuous Operating Voltage				Voltage Protection Rating				No. of Leads/ Length	Product Warranty	Connected Equipment Warranty
		(L-N)	(L-L)	(L-G)	(N-G)	(L-N)	(L-L)	(L-G)	(N-G)			
Outdoor Type 3R Plastic												
IG1200RC3	3 (L1-N, L2-N, L1-L2)	150	300	–	–	700	1200	–	–	3, 30"	3-Year limited	3-Year / $7,500
IG1240RC3	6 (L1-N, L2-N, L1-G, L2-G, N-G, L1-L2)	150	300	300	150	700	1200	1200	700	4, 30"	5-Year limited	5-Year / $10,000
Outdoor Type 3R Metal												
IG3240RC3	6 (L1-N, L2-N, L1-G, L2-G, N-G, L1-L2)	150	300	300	150	700	1200	1200	700	4, 30"	10-Year limited	10-Year / $25,000

ACCESSORIES

Model Number	Description
IG1240FMP33	Flush Mount Kit for IG1200RC3 and IG1240RC3
IG3240FMP33	Flush Mount Kit for IG3240RC3

IG1240FMP33   IG3240FMP33

Ratings	
Service Voltage	120/240 VAC Single-Phase
Phase	Single
SPD Type	1, 2
In*	20 kA
SCCR**	100 kA
Max Surge Current Rating	50 kA
Surge Protection Technology	TPMOV®
Operating Temperature	-31°F - 185°F (-35°C - 85°C)
Dimensions H x W x D	4 3/16" x 4 3/16" x 3 7/16" (106.4 mm x 106.4 mm x 87.3 mm)

*Nominal Discharge Current   ** Short Circuit Current Rating*

IG 1200 SERIES DIMENSIONS

TYPE 2 INSTALLATION

TYPE 1 INSTALLATION

CSA US LR38068 TYPE 1   C CSA US LR38068 TYPE 2

IG2240-IMSK

IG2280-OM

IG2240-PK

IG2200 Series
TYPE 1 OR 2 SPD

Protect expensive home appliances, electronics, HVAC equipment and more with SMARTGUARD® from Intermatic. The innovative SPD offers quick change modules that allow homeowners to easily monitor and maintain their home's surge protection system. These IMODULE® components include LED lights that indicate when protection has been compromised. A blue light indicates the SPD unit is ON and a green light indicates surge protection is active. Trusted, state-of-the-art TPMOV® (Thermally Protected Metal Oxide Varistor) surge protection technology eliminates the potentially hazardous failure modes that are commonly associated with standard MOV technology. Type 1 applications include outdoor installations before service entrances and utility meter cabinets. Type 2 applications include installations after service entrances. UL Listed to ANSI/UL 1449, 4 th Edition.
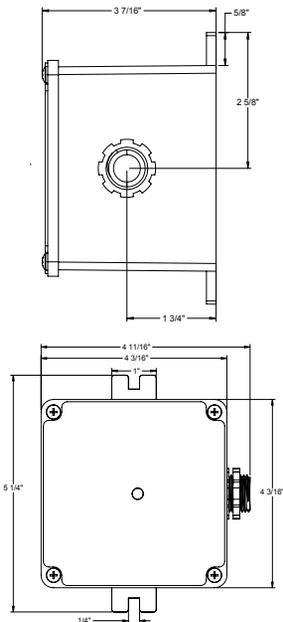
Applications
• Whole Home Protection

Features
• Six Modes of protection
• TPMOV® surge protection technology
• Module Power Switch, included on IG2240-IMSK, enables convenient disconnection of power at the SPD when replacing with an IMODULE®
• Includes three IMODULE® cartridges with LED power and protection status lights
• IMODULE® is quick and easy to replace, eliminating the need to install a new SPD unit
• Tamper-proof IMODULE® doors, will only open when the IMODULE® is being inserted
• Type 3R Rainproof Enclosure for indoor/outdoor applications in metal or plastic
• 10-year product warranty
• $25,000 or $50,000 connected equipment warranty for 10 years on appliances and electronics
• UL certified to ANSI/UL 1449, 4th Edition

Ratings	
Input Voltage	120/240 VAC, 50/60 Hz
Phase	Single
Modes of Protection	6 (L1-N, L2-N, L1-G, L2-G, N-G, L1-L2)
Surge Protection Technology	TPMOV®
Max Surge Current Rating	50 kA
# of Leads	4
Lead Gauge	#10 AWG, Tinned Copper
Operating Temperature	-31°F - 185°F (-35°C - 85°C)
Dimensions H x Dia	See page 131 for dimensions
Warranty	10-Year limited (Base), 3-Year limited (IMODULES®)
Connected Equipment Warranty	10-Year / $25,000

ACCESSORIES

Model Number	Description
IG120RSM10K	IMODULE® Replacement Module for SMARTGUARD®
IG120RSM20	Replacement IMODULE® for IG2280 Series
IG2200-FMK	Flush Mount Kit for IG2240-IMSK and IG2280-IM

IG120RSM10K   IG2200-FMK

Note: IG2240-IMSK includes flush mount kit

Model #	SPD Type	In* (kA)	SCCR** (kA)	Maximum Continuous Operating Voltage				Voltage Protection Rating				Lead Length	Module Power Switch
				(L-N)	(L-L)	(L-G)	(N-G)	(L-N)	(L-L)	(L-G)	(N-G)		
Indoor/Outdoor Type 3 Plastic													
IG2240-PK	2	10 kA	10 kA	150	300	300	150	800	1200	1500	700	18"	No
IG2280-P	2	20 kA	100 kA	150	300	300	150	800	1200	1500	700	18"	No
Outdoor Type 3R Metal													
IG2280-OM	2	20 kA	100 kA	150	300	300	150	800	1200	1500	700	18"	No
Indoor Type 1 Metal													
IG2240-IMSK	1, 2	10 kA	10 kA	150	300	300	150	800	1500	1500	700	32"	Yes
IG2280-IM	2	20 kA	100 kA	150	300	300	150	800	1200	1500	700	18"	No

*Nominal Discharge Current
**Short Circuit Current Rating

INTERMATIC®

DIMENSIONS FOR IG 2200 SERIES

IG2240-IMSK and IG2280-IM

5"
2 1/2"
10 3/8"
3/4" 3/4"
1 5/8" 1 5/8"

IG2280-OM

5 3/4"
2 1/2"
5"

IG2240-PK

8 1/2"
1 5/8"
3 1/4"

TYPE 1 INSTALLATION

120/240 VAC Single-Phase

Service Transformer Secondary

L1 (black)
Neutral (white)
L2 (black)
GND (green)

Service Equipment Overcurrent device

SPD

TYPE 2 INSTALLATION

120/240 VAC Single-Phase

*2 Pole 30 A circuit breaker in Service Panel.

*C/B
Line (black)
Neutral (white)
Line (black)
GND (green)

SPD

SPD TYPE 2 WIRING DIAGRAM
120/240 VAC SINGLE-PHASE

Main Breaker
2-Pole, 30A circuit breaker
Black (Line)
Black (Line)
SPD UNIT
Neutral (White)
Green (Ground)
Type 2 Installation

REPLACEABLE IMODULE®

Blue LED: Power indicator

Green LED: Status indicator
ON: Protection is being provided.
OFF: IMODULE® is no longer providing protection. Replace IMODULE® as soon as possible.
Alignment key of module

Step 1
Turn off power and remove affected module

Step 2
Insert new module

Step 3
Turn on power; green light indicates surge protection has been restored

IG Series, Surge Strips
POINT-OF-USE SURGE STRIPS

Type 3 Point-of-Use Surge Protective Devices (SPD) are designed for heavy industrial use with 3 modes of surge protection (L-N, L-G, N-G). Features a 15 A resettable breaker and #14 AWG SJT power cord with molded plug. CSA certified to ANSI/UL 1449, 3rd Edition.

Applications
• Surge Protection

Features
• Three Modes of protection
• Metal Oxide Varistor (MOV) surge protection technology
• 15 A resettable breaker
• #14 AWG SJT power cord with molded plug
• LED protection indicator
• Extruded aluminum housing
• 5-year product warranty
• $5,000, $10,000 or $25,000 connected equipment warranties on appliances and electronics
• CSA certified to ANSI/UL 1449, 3rd Edition

IG112463   IG112663

Model #	Voltage Protection Rating (V)			Cord Length	Outlets	Illuminating ON/OFF Switch	EMI/RFI Noise Filtration	Color	Product Warranty	Connected Equipment Warranty
	(L–N)	(L–G)	(N–G)							
IG112463	700	600	600	6'	4	Yes	No	White	5-Year limited	5-Year / $10,000
IG112663	700	600	600	6'	6	Yes	No	White	5-Year limited	5-Year / $10,000
IG112663BLK10	700	600	600	10'	6	Yes	No	Black	5-Year limited	5-Year / $10,000
IG206153	400	400	500	15'	6	No	Yes	White	5-Year limited	5-Year / $25,000
IG20B123	700	600	600	6'	6	No	No	White	5-Year limited	5-Year / $5,000
IG2012B153	700	600	600	15'	6	No	No	White	5-Year limited	5-Year / $5,000

Ratings	
Input Voltage	125 VAC, 60 Hz
SPD Type	3
MCOV*	130
Surge Protection Technology	MOV
Operating Temperature	-4°F - 104°F (-20°C - 40°C)
Dimensions	See dimension drawings below
Warranty	5-Year limited

Maximum Continuous Operating Voltage

ACCESSORIES

Model Number	Description
24EG5133	Mounting Bracket Plate for Type 3 SPD Surge Strips

24EG5133

IG SERIES DIMENSIONS (SURGE STRIPS)

IG112663, IG112663BLK10   IG112463   IG206153, IG20B123, IG2012B153

INTERMATIC®

IG1300 Series
TYPE 2 SPD

The IG1300 Series provides protection for telephone and coax lines in addition to AC Power. Trusted, state-of-the-art TPMOV® (Thermally Protected Metal Oxide Varistor) surge protection technology eliminates the potentially hazardous failure modes that are commonly associated with standard MOV technology. A green LED indicator provides status of protection. The IG1300 Series Surge Protective Devices are designed for Type 2 applications for installations after service entrances. CSA certified to ANSI/UL 1449, 3rd Edition, UL 497A for phone line and UL 497B for coax cable.

APPLICATIONS
- Distribution Panel • Service Entrance

FEATURES
- Six modes of protection for AC SPD
- TPMOV® surge protection technology for AC SPD
- Green LED indicator provides status of protection
- Provides telephone (analog phone line, modem or DSL) and coax line protection (cable TV, cable Internet or Satellite TV)
- Type 3R plastic rainproof enclosure for indoor/outdoor installations
- 5-year product warranty
- $10,000 connected equipment warranty on appliances and electronics
- CSA certified to ANSI/UL 1449, 3rd Edition
- UL 497A for phone line protection
- UL 497B for coax protection

IG1300-2T-1C3

Model #	Enclosure Type	No. of Telephone Lines Protected	No. of Coax Lines Protected	Maximum Continuous Operating Voltage				Voltage Protection Rating			
				(L-N)	(L-L)	(L-G)	(N-G)	(L-N)	(L-L)	(L-G)	(N-G)
IG1300-2T-1C3	Outdoor type 3R plastic	2	1	150	300	300	150	700	1200	1200	700
IG1300-4T-2C3		4	2								

LR38068
TYPE 2

Ratings	
Input Voltage	120/240 VAC, 50/60 Hz
Phase	Single
SPD Type	2
Modes of Protection	6 (L1-N, L2-N, L1-G, L2-G, N-G, L1-L2)
In (kA)*	20 kA
SCCR (kA)**	50 kA
Surge Protection Technology	TPMOV®
Operating Temperature	-31°F - 185°F (-35°C - 85°C)
# of Leads / Length	4 / 24"
Lead Gauge	#12 AWG, Tinned Copper
Dimensions H x W x D	10" x 6.5" x 4" (254 mm x 165 mm x 102 mm)
Warranty	5-Year limited
Connected Equipment Warranty	5-Year limited / $10,000

*Nominal Discharge Current ** Short Circuit Current Rating*

TYPE 2 INSTALLATION

Main (Off)

A= Black (Line, right half)
B= Black (Line, left half)
C=White (Neutral)
D= Green (Ground)

WANT TO KNOW MORE?

Protect Industrial Facilities with PANELGUARD® Surge Protection
Scan the QR code with your smartphone or tablet to learn how to eliminate the threat of a business-crippling power surge event by putting a PANELGUARD® Surge Protective Device at the heart of your industrial or commercial facility.

HVAC Surge and Power Protection Solutions

Protect expensive HVAC equipment from unexpected power surge events, brownouts and short cycling with our robust surge protection solutions. These durable SPDs are simple to install and provide a lasting defense against power quality issues.

Residential HVAC Systems

Add the AG3000 and COMPRESSOR DEFENDER™ to residential HVAC systems to safeguard equipment long after the system manufacturer's warranty expires. The dynamic duo protects electrical components and provides lasting homeowner value.

Distribution Panel

Connect our surge protection solutions to residential or commercial distribution panels to provide a layer of coverage against power surge events. This method of installation can be completed in minutes and provides lasting protection.

Storm Season Protection

When dangerous weather strikes, safeguard heating and cooling system components, such as ductless mini-splits, heat pumps and central air conditioners, from sudden power quality issues with our robust SPDs.

Advanced Technology

AG3000 and COMPRESSOR DEFENDER™ solutions use TPMOV® surge protection technology to eliminates failure modes commonly associated with standard MOVs. This allows the SPDs to deliver superior performance over the long haul.

Contents

Additional Solutions and Resources

Ready to get started? Scan the QR code to the right for a variety of helpful resources, including sell sheets, product instructions, installation videos and more!

AG3000

AG3000
HVAC SURGE PROTECTIVE DEVICE

Power surges are the silent killer for home appliances and HVAC equipment. Most homeowners protect their electronics, but leave more valued equipment unprotected. Surges can wipe out equipment and leave you searching for answers. Search no more. The easy-to-install AG3000 Surge Protective Device (SPD) is the perfect add-on for HVAC equipment. A green LED indicator provides the status of protection. Trusted, state-of-the-art TPMOV® (Thermally Protected Metal Oxide Varistor) technology eliminates the potentially hazardous failure modes that are commonly associated with standard MOV technology. UL Listed to ANSI/UL 1449, 4th Edition.

APPLICATIONS
• Distribution Panel • Service Entrance • HVAC Equipment Protection

FEATURES
• Three modes of protection: L-G, L-L, L-N
• TPMOV® surge protection technology
• Green LED indicator provides status of protection
• Type 4X watertight and UV resistant plastic enclosure
• 3-year product warranty
• $7,500 connected equipment warranty for 3 years

Ratings	
Service Voltage	120/240 VAC Single-Phase
Phase	Single
SPD Type	1, 2
MCOV (Max Continuous Overvoltage)	L-N/G 150, L-L 300
In (Nominal Discharge Rating)	20 kA
SCCR (Short Circuit Current Rating)	100 kA
Maximum Surge Current Rating	50 kA
Voltage Protection Rating (VPR)	L-L 1200, L1-N/G 700
Modes of Protection	3 (L1-N, L2-N, L1-L2)
Surge Protection Technology	TPMOV®
Lead Gauge	#10 AWG, Tinned Copper
Dimensions H x W x D	3 ⁷⁄₈" x 1 ⁵⁄₈" x 4 ³⁄₁₆" (98 mm x 41 mm x 106.4 mm)
Operating Temperature	-40°F - 158°F (-40°C - 70°C)
Warranty	3-Year limited
Connected Equipment Warranty	3-Year / $7500

Model #	Enclosure
AG3000	Indoor/outdoor type 4X

Want to Know More?

Take residential or light commercial projects to new heights with the Intermatic AG3000 and Compressor Defender™. Our dependable new surge protective devices make for a smart add-on to seasonal HVAC maintenance contracts and require only 10 minutes to install.

An ideal fit for central air conditioning systems, mini splits, heat pumps and more, the AG3000 and Compressor Defender provide layered surge protection and include a $7,500 warranty on all connected equipment. Once installed, they can be the difference when protecting a home or business from damaging power surge events, brown outs and short cycling issues.

INTERMATIC®

WIRING DIAGRAMS

Line

120 V

Neutral

120 V

0 V

Ground

Line (BLACK)

Line (BLACK)

Neutral (WHITE)

120 VAC Two wire single-phase with separate ground.
Found at connections for individual pieces of equipment such as pumps, single phase motors and HVAC applications.
NOTE: Both Black wires connect to Line.

Typical Distribution Panel Installation

Main Breaker

2-Pole, 20 A circuit breaker shown

A=Black (Line)
B=Black (Line)
C=Grounded/Neutral (White)

AG3000 Wiring Diagram - Type 2
120 VAC

AC Disconnect

L1

Grounded/Neutral

Main Service Panel

black
black
white

AG3000

AG3000 Wiring Diagram - Type 2
240 VAC

AC Disconnect

L1

Grounded/Neutral

L2

Main Service Panel

black
white
black

AG3000

DIMENSIONS

13/16"

4 3/16"

1"

Ø 1 1/8"

1 5/8"

13/16"

1 5/16"   1"

AG SERIES

3 7/8"

1 "

11/16"

1/2" NPSM

CD1-024R

CD1-024R
COMPRESSOR DEFENDER™ UNDERVOLTAGE, SURGE AND SHORT CYCLE PROTECTIVE DEVICE

The Compressor Defender is the only all-in-one undervoltage and surge power protection device on the HVAC Market, providing protection for central A/C and heat pump condensing units and their associated motors, controls and components—both electronic and mechanical. It can be installed inside the condensing unit or externally on the outdoor A/C disconnect. Autosense voltage technology protects at any voltage from 120-240 VAC, making it an ideal solution for residential or light commercial installations. Trusted, state-of-the-art TPMOV® (Thermally Protected Metal Oxide Varistor) surge protection technology eliminates the potentially hazardous failure modes that are associated with standard MOV technology. The device is also designed with integrated 3-minute short cycle time delay protection.

APPLICATIONS
• Distribution Panel • Service Entrance • HVAC Equipment Protection

FEATURES
• TPMOV® surge protection technology
• 3-year, $7500 connected equipment warranty
• Auto-sense voltage technology
• Quick-reacting, 5-line cycle undervoltage response time
• 120/208-240 VAC universal input
• 24 VAC/VDC, 2 A control thermostat output
• 3-minute short cycle time delay
• Two LED indicators provide real time status for quick and easy troubleshooting and functional visibility for end users
• Surge protection complies with the latest UL 1449, 4th Edition, surge protective device requirements
• Undervoltage protection complies with AHRI standard 110-2016 Range B Protective Device
• Undervoltage Response Time: 5 line cycles*
• Power Disruption Response Time: 3 line cycles*
• Type 3 Outdoor, UV resistant plastic enclosure
*Typical Response Time

Model #	Enclosure
CD1-024R	Outdoor type 3

Ratings		
Input Voltage	120/208-240 VAC Single Phase, 60 Hz	
Thermostat Relay	Normally Closed Relay, 24 VAC	
SPD Type	2	
Modes of Protection	3 (L1-N, L2-N, L1-L2)	
Control Output Current Rating	2 A @ 24 VAC, isolated NC contact	
Max Continuous Overvoltage (MCOV)	L-N/G: 150, L-L: 300	
Voltage Protection Rating (VPR)	L-N/G: 700, L-L: 1200	
Nominal Discharge Rating (In)	20 kA	
SCCR (Short Circuit Current Rating)	100 kA	
Maximum Surge Current Rating	50 kA	
Undervoltage Response Time	5 line cycles*	
Power Disruption Response Time	3 line cycles*	
Short Cycle Delay	3 min	
Enclosure	Outdoor type 3	
Lead Gauge	#10 AWG, Tinned Copper	
Undervoltage Pickup Table	**Nominal System Voltage**	**Range B Protection**
	120 VAC	104
	208 VAC	180
	240 VAC	208
Operating Temperature	-40°F - 158°F (-40°C - 70°C)	
Warranty	3-Year limited	
Connected Equipment Warranty	3-Year/ $7,500	

*Typical Response Time

INTERMATIC®

WIRING DIAGRAMS

Applicable to both single- and two-stage central A/C & heat pumps.

Contactor Wiring

From *Compressor Defender™*

BLACK

RED

Y1

24 VAC

C

Compressor Contactor

Typical 208/240 VAC Recommended Application

Line Ground Line

Black
White
Black

Compressor **DEFENDER**™

Line   Line
A/C Disconnect
Load   Load

24 VAC

Y1 ⎯ Y1

Typical 120 VAC Application

Line ⎯ BLACK

NOTE: Both black wires connect to Line.

Grounded ⎯ WHITE

BLACK w/WHITE SLEEVE

120 VAC two-wire single-phase with separate ground.
Found at connections for individual pieces of equipment, such as pumps, single-phase motors, and HVAC applications.

Compressor **DEFENDER**™

24 VAC

Y1 ⎯ Y1

MOUNTING

Mounting Inside Panel/ Condenser

Bracket Included ➡

Sheet Metal Screw

LED Diagnostic Indicator Key

Condition	Green LED	Red LED
Surge Protection	ON	-
No Surge Protection	OFF	-
Undervoltage	-	Flash
Short Cycle Protection	Flash	-
Unit Power Lost	OFF	OFF

Weatherproof Cover Solutions

Keep outdoor receptacles and outlets shielded from the elements with our versatile lineup of weatherproof covers. Available in plastic, extra-duty plastic and extra-duty die-cast options, our rugged solutions provide lasting code-compliant protection.

Outdoor Receptacle Protection

Ensure outdoor receptacles stay protected all year long with our wide selection of in-use weatherproof covers. Our industry-leading solutions are available in a variety single- and double-gang models and are an excellent choice in residential, commercial and industrial applications.

Simple Code Compliance

Secure and code compliant, our in-use covers are the perfect solution for commercial applications. They're available in a variety of colors, which can be used to match with business branding, as well as vertical and horizontal orientations.

Backyard Aesthetics

Do away with unflattering "wall warts" by installing our sleek, low-profile expandable in-use covers in residential applications. These modern covers enhance building aesthetics and include an expandable front window that can be collapsed to save space when not in use.

Vehicle Charging and Power Access

Keep outlets in outdoor applications such as vehicle charging and campsite power access protected from the elements with our rugged in-use weatherproof covers. Available extra-duty models align with commercial and industrial code standards.

Contents

Additional Solutions and Resources

Ready to get started? Scan the QR code to the right for a variety
of helpful resources, including sell sheets, product instructions,
installation videos and more.

Weatherproof Covers
Low-Profile Extra-Duty Plastic Covers

Low-Profile, Expanded Possibilities

Our low-profile expandable in-use weatherproof covers provide a sleek, easy-to-use alternative to traditional in-use weatherproof cover options. The unique design of the WP6000, WP6200, WP7000 and WP7200 Series includes an expandable front window that can be collapsed to save space when not in use. This improves aesthetics while delivering dependable, code-compliant protection for a range of outdoor applications.

Available in standard and extra-duty configurations, our new plastic low-profile in-use covers are an excellent upgrade to any home or business.

Includes:

- **Improved Aesthetics** – Unlike traditional covers, Low-Profile In-Use Covers include an expandable front window that can be collapsed to save space when not in use

- **Simple, Secure Access** – An innovative new design provides a no-hassle latch with lockable hasp that can be opened effortlessly with one hand

- **Quick Installation** – GFCI pre-set; keyhole slots help electrical contractors complete installation in minutes

- **Configuration Options** – Available in single-gang and double-gang configurations, as well as standard and extra-duty; select white, gray or bronze color options; single-gang models accommodate both vertical and horizontal installations

- **Code Compliant** – WP7000 and WP7200 Series Low-Profile In-Use Covers comply with 2020 NEC Article 406.9 (B)(1) for wet locations and Extra-Duty applications; CEC 26-708 Compliant; RoHS Compliant

Upgrade today with the trusted market leader for in-use weatherproof covers.
For more information, visit intermatic.com/low-profile-in-use-cover.

INTERMATIC®

Low-Profile Extra-Duty Plastic In-Use Weatherproof Covers
SINGLE-GANG COVERS & DOUBLE-GANG COVERS

Plastic In-Use Weatherproof Covers are easy to install and include a gasket, mounting screws, base, cover assembly and inserts to meet the needs of a variety of applications.

APPLICATIONS
• Receptacle Protection

FEATURES
• 100% Paintable surface
• Complies with 2020 NEC Article 406.9 (B)(1) for wet locations and extra-duty applications
• CEC Section 26-708 compliant
• UL Certified for Type 3R outdoor enclosures
• Meets requirements for cold impact testing: -60° F (-51° C)
• Heavy-duty UV stabilized polycarbonate cover, mounting base, and inserts
• ⅛" (3 mm) thick, neoprene gasket with slits for mounting screws
• Lockable hasp: All models accept up to 0.19" dia shank
• Impact rated: 12 lbf. impact test to ensure cover remains intact
• Reinforced hinge pin designed to exceed 40 lbf. hinge hang/stress test
• Warranty: 1-year limited
• NEW Faster Installation, Pre-Set for GFCI, No insert required

SINGLE-GANG COVERS
• Two inserts provided with all models that allow each model to meet multiple installations
   (up to 8 configurations)

DOUBLE-GANG COVERS
• Four inserts provided with all models that allow each model to meet multiple installations
   (up to 16 configurations)

WP7000BR

WP7200G

SINGLE-GANG - VERTICAL/HORIZONTAL

Model #	Color	Style	Depth
WP6000G	Clear, Gray	Standard	1.5" (38.1 mm)
WP6000W	Clear, White	Standard	1.5" (38.1 mm)
WP6000BR	Bronze, Clear	Standard	1.5" (38.1 mm)
WP7000G	Clear, Gray	Extra-Duty	1.5" (38.1 mm)
WP7000W	Clear, White	Extra-Duty	1.5" (38.1 mm)
WP7000BR	Bronze, Clear	Extra-Duty	1.5" (38.1 mm)
WP7003G	Clear, Gray	Extra-Duty	1.5" (38.1 mm)

For accessories see page 152

DIMENSIONS

SINGLE-GANG

DOUBLE-GANG

Model #	Color	Style	Depth
WP6200G	Clear, Gray	Standard	1.5" (38.1 mm)
WP7200G	Clear, Gray	Extra-Duty	1.5" (38.1 mm)
WP7200W	Clear, White	Extra-Duty	1.5" (38.1 mm)
WP7200BR	Bronze, Clear	Extra-Duty	1.5" (38.1 mm)

For accessories see page 152

DOUBLE-GANG

INTERMATIC®

Weatherproof Covers

WP3110MXD

WP1010HMXD

Extra-Duty Die-Cast In-Use Weatherproof Covers
SINGLE-GANG COVERS & DOUBLE-GANG COVERS

Die-Cast In-Use Aluminum Weatherproof Covers are extra-duty rated and easy to install. Heavy-duty die-cast aluminum construction ensures long-lasting durability. Covers come with a gasket, mounting screws, base, cover assembly and inserts to meet the needs of a variety of applications.

APPLICATIONS
• Engine Block Heaters • Receptacle Protection • Walk-in Refrigeration Cooler/Freezer

FEATURES
• Complies with 2020 NEC Article 406.9 (B)(1) for wet locations and
  extra-duty applications
• Exceeds CEC Article 26-708
• UL Certified for Type 3R outdoor enclosures
• Meets requirements for cold impact testing: -60° F (-51° C)
• Heavy-duty die-cast aluminum cover and mounting base with UV stabilized
  polycarbonate inserts
• $\frac{1}{8}$" (3 mm) thick, neoprene gasket with slits for mounting screws
• Lockable hasp: All models accept up to $\frac{1}{4}$" (6 mm) dia shank
• Impact rated: 12 lbf. impact test to ensure cover remains intact
• Reinforced hinge pin designed to exceed 40 lbf. hinge hang/stress test
• Warranty: 1-year limited

SINGLE-GANG
• Three inserts provided with all models that allow each model to meet multiple
  installations (up to 8 configurations)
• Max cord size: #12 AWG or smaller

DOUBLE-GANG
• Six inserts provided with all models that allow each model to meet multiple installations
  (up to 70 configurations)
• Max cord size: #12 AWG or smaller

WP1010MXD

WP1250MVXD

WP1030MXD

WP1250MXD

SINGLE-GANG

Model #	Color	Depth	Flexi-Guard Inserts
WP1010MXD	Gray	3 $\frac{1}{8}$" (79 mm)	WP17
WP1010HMXD*	Gray	3 $\frac{1}{8}$" (79 mm)	WP17
WP1250MVXD	Gray	4 $\frac{5}{8}$" (117 mm)	WP17
WP3110MXD	Gray	2 $\frac{3}{4}$" (70 mm)	WP17

Note: WP1010HMXD is a horizontal mount.
For accessories see page 152

DOUBLE-GANG

Model #	Color	Depth	Flexi-Guard Inserts
WP1030MXD	Gray	3 $\frac{1}{8}$" (79 mm)	WP217
WP1250MXD	Gray	4 $\frac{5}{8}$" (117 mm)	WP217

For accessories see page 152

INTERMATIC®

DIMENSIONS

SINGLE-GANG

WP1010HMXD

DOUBLE-GANG

Weatherproof Covers
Extra-Duty Plastic In-Use Covers

WP5000G

Clear/Gray · Gray · Beige · Black · White · Bronze

WP5500C

WP5103C

Extra-Duty Plastic In-Use Weatherproof Covers
SINGLE-GANG COVERS & DOUBLE-GANG COVERS

Plastic In-Use Weatherproof Covers are extra-duty rated and easy to install. Covers come with a gasket, mounting screws, base, cover assembly and inserts to meet the needs of a variety of applications.

APPLICATIONS
• Receptacle Protection

FEATURES
• Complies with 2020 NEC Article 406.9 (B)(1) for wet locations and extra-duty applications
• CEC Section 26-708 compliant
• UL Certified for Type 3R outdoor enclosures
• Meets requirements for cold impact testing: -60° F (-51° C)
• Heavy-duty UV stabilized polycarbonate cover, mounting base, and inserts
• ⅛" (3 mm) thick, neoprene gasket with slits for mounting screws
• Lockable hasp: All models accept up to ¼" (6 mm) dia shank
• Impact rated: 12 lbf. impact test to ensure cover remains intact
• Reinforced hinge pin designed to exceed 40 lbf. hinge hang/stress test
• Warranty: 1-year limited

SINGLE-GANG
• NEW Faster Installation, Pre-Set for GFCI, No insert required
• Two inserts provided with all models that allow each model to meet multiple installations (up to 16 configurations)
• Max cord size: (2) #14 AWG or (1) #12 AWG

DOUBLE-GANG
• Six inserts provided with all models that allow each model to meet multiple installations (up to 70 configurations)
• Max cord size: (2) #12 AWG or (1) #10 AWG
• 30/50 A (1) #6 AWG

SINGLE-GANG - VERTICAL/HORIZONTAL

Clear/Gray	Gray	Black	White	Bronze	Depth	Flexi-Guard Inserts
WP5000C	WP5000G	WP5000BL	WP5000W	–	2 ¼" (57 mm)	WP17
WP5100C	WP5100G	WP5100BL	WP5100W	WP5100BR	2 ¾" (70 mm)	WP17
WP5103C*	–	–	–	–	2 ¾" (70 mm)	WP17
WP5110C	–	–	–	–	3 ⅝" (92 mm)	WP17

* Includes 3/0 adapter plate for 3" (76 mm) round box.
For accessories see page 152

DOUBLE-GANG - VERTICAL

Clear/Gray	Gray	Black	White	Beige	Depth	Flexi-Guard Inserts
WP5220C	WP5220G	WP5220BL	WP5220W	WP5220B	2 ¼" (57 mm)	WP217
WP5221C	–	–	–	–	2 ¼" (57 mm)	WP101, WP102
WP5225C	WP5225G	–	–	–	2 ¾" (70 mm)	WP217
WP5240C	–	–	–	–	3 ⅝" (92 mm)	WP217
WP5500C	–	–	–	–	4 ¾" (121 mm)**	WP107, WP213

* Includes 3/0 adapter plate for 3" (76 mm) round box.   **30/50 A = 4 ¾" (121 mm) depth.
For accessories see page 152

INTERMATIC®

SINGLE-GANG

DOUBLE-GANG

2 3/4"
2 1/4"   3 5/8"

1 11/16"MIN
1 13/16"MAX

2"
5 5/8"
6 5/16"

2 3/4"
2 1/4"   3 5/8"

6 1/16"

7/8"
3 7/8"
4 11/16"

6 5/8"

5 1/4"

WP5103C

⌀.165
(2) PLACES   CL   A

4.31
3.28
2.75   2.25

2.58
A

⌀4.00   .188
.24

DOUBLE-GANG
30/50 A

1 1/8"

5 5/8"

1 1/16"

1 5/16"
2 5/16"

Weatherproof Covers

WP3103C

WP1100C

WP3100

Plastic In-Use Weatherproof Covers, Single-Gang, 16 Configurations

SINGLE-GANG COVERS

Plastic In-Use Weatherproof Covers are easy to install and include adhered gasket, mounting screws, base, cover assembly and inserts to meet the needs of a variety of applications.

APPLICATIONS
• Receptacle Protection

FEATURES
• Complies with 2020 NEC Article (406.9 (B)(1) for damp and wet locations
• UL Certified for Type 3R outdoor enclosures
• Meets requirements for cold impact testing: -60° F (-51° C)
• Heavy-duty UV stabilized polycarbonate cover, mounting base and inserts
• ⅛" (3 mm) thick, pre-adhered neoprene gasket with slits for mounting screws
• Lockable hasp: All models accept up to ¼" (6 mm) dia shank, except WP3100C & WP3103C accept up to ⅛" (3 mm) dia shank
• Three inserts provided with all models that allow each model to meet multiple installations (up to 16 configurations)
• Max cord size: (2) #14 AWG or (1) #12 AWG
• Mounts vertically or horizontally
• Warranty: 1-year limited

SINGLE-GANG - VERTICAL/HORIZONTAL HINGE

Model #	Color	Depth	Flexi-Guard Inserts
WP3100C	Clear	2 ¾" (70 mm)	WP17
WP3103C	Clear	2 ¾" (70 mm)	WP17
WP1100C	Clear	2 ¾" (70 mm)	WP17
WP1100WC	White	2 ¾" (70 mm)	WP17
WP1110C	Clear	3 ⅝" (92 mm)	WP17

For accessories see page 152

DIMENSIONS

4.06"

5.77"

WET LOCATIONS ONLY WHEN COVER CLOSED

WP3100

3.02"
1.53" 1.49"

Dia. 0.5"

2.75"
INSIDE DEPTH

3-5/8"
2-3/4"

WP1100C, WP1110C

5-3/8"

3-1/2"

INTERMATIC

Plastic In-Use Weatherproof Covers, Single-Gang, 8 Configurations

SINGLE-GANG COVERS

Plastic In-Use Weatherproof Covers are easy to install and include adhered gasket, mounting screws, base, cover assembly and inserts to meet the needs of a variety of applications.

APPLICATIONS
• Receptacle Protection

FEATURES
• Complies with 2020 NEC Article (406.9 (B)(1) for damp and wet locations
• UL Certified for Type 3R outdoor enclosures
• Meets requirements for cold impact testing: -60° F (-51° C)
• Heavy-duty UV stabilized polycarbonate cover, mounting base and inserts
• ⅛" (3 mm) thick, pre-adhered neoprene gasket with slits for mounting screws
• Three inserts provided with all models that allow each model to meet multiple installations (up to 8 configurations)
• Max cord size: (2) #14 AWG or (1) #12 AWG
• Warranty: 1-year limited

WP1000HC

WP1000C

DIMENSIONS

SINGLE-GANG - VERTICAL HINGE

Model #	Color	Depth	Flexi-Guard Inserts
WP1000C	Clear	2 ¼" (57 mm)	WP17
WP1000GC	Gray	2 ¼" (57 mm)	WP17
WP1010C	Clear	3 ⅛" (79 mm)	WP17

For accessories see page 152

3-1/8" WP1010
2-1/4" WP1000
5-1/2"
3-13/16"

SINGLE-GANG - HORIZONTAL HINGE

Model #	Color	Depth	Flexi-Guard Inserts
WP1000HC	Clear	2 ¼" (57 mm)	WP17
WP1000HGC	Gray	2 ¼" (57 mm)	WP17
WP1010HC	Clear	3 ⅛" (79 mm)	WP17
WP1150C	Clear	4 ¾" (121 mm)	WP17

For accessories see page 152

3-1/8" WP1010H
2-1/4" WP1000H
4-1/4"
5"

4-3/4" WP1150C
5-3/8"
3-1/2"

Plastic In-Use Weatherproof Covers, Double-Gang
DOUBLE-GANG COVERS

Plastic In-Use Weatherproof Covers are easy to install and include a gasket, mounting screws, base, cover assembly and inserts to meet the needs of a variety of applications.

APPLICATIONS
• Receptacle Protection

FEATURES
• Complies with 2020 NEC Article (406.9 (B)(1) for damp and wet locations
• UL Certified for Type 3R outdoor enclosures
• Meets requirements for cold impact testing: -60° F (-51° C)
• Heavy-duty UV stabilized polycarbonate cover, mounting base and inserts
• ⅛" (3 mm) thick neoprene gasket with slits for mounting screws
• Two inserts provided with all models for multiple installations
• Max cord size: (2) #14 AWG or (1) #12 AWG, WP1050 (2) #14 AWG or (1) #10 AWG
• Warranty: 1-year limited

WP1020C

DIMENSIONS

3-1/8" WP1030C
2-1/4" WP1020C
5-1/2"
5"

WP1050
4 - 3/4"
6"
5"

DOUBLE-GANG – VERTICAL HINGE

Model #	Color	Depth	Flexi-Guard Inserts
WP1020C	Clear	2 ¼" (57 mm)	WP101, WP102
WP1030C	Clear	3 ⅛" (79 mm)	WP101, WP102
WP1050	Clear	4 ¾" (121 mm)	WP102, WP107

For accessories see page 152

INTERMATIC®

Plastic In-Use Weatherproof Covers, Double-Gang, 70 Configurations

DOUBLE-GANG COVERS

Plastic In-Use Weatherproof Covers are easy to install and include a gasket, mounting screws, base, cover assembly, and inserts to meet the needs of a variety of applications.

APPLICATIONS
• Receptacle Protection

FEATURES
• Complies with 2020 NEC Article (406.9 (B)(1) for damp and wet locations
• UL Certified for Type 3R outdoor enclosures
• Meets requirements for cold impact testing: -60° F (-51° C)
• Heavy-duty UV stabilized polycarbonate cover, mounting base and inserts
• ⅛" (3 mm) thick neoprene gasket with slits for mounting screws
• Six inserts provided with all models that allow each model to meet multiple installations (up to 70 configurations)
• Max cord size: (2) #14 AWG or (1) #12 AWG, WP1250 (2) #14 AWG or (1) #10 AWG
• Warranty: 1-year limited

WP1250

DOUBLE-GANG - VERTICAL HINGE

Model #	Color	Depth	Flexi-Guard Inserts
WP1220C	Clear	2 ¼" (57 mm)	WP217
WP1230C	Clear	3 ⅛" (79 mm)	WP217
WP1250C	Clear	4 ¾" (121 mm)	WP217

For accessories see page 152

DIMENSIONS

WP1230C
WP1220

3-1/8"
2-1/4"
5-1/2"
5"

WP1250C

4-3/4"
6"
5"

Flexi-Guard Inserts

All original series weatherproof covers include Flexi-guard inserts and mounting screws. Simply place the insert into the cover, rotate as needed, then snap it into place.

ACCESSORIES

Model #	Description
WP17	Single-Gang Inserts (3)
WP217	Double-Gang Inserts (6)
WP101	Double-Gang Duplex Insert
WP102	Double-Gang GFCI Insert
WP107	Double-Gang Round Insert, 1 ⅜", 1 ⅝", 1 ¾"
WP213	Double-Gang Round Insert, 2 ⅛", 2 ⅝"

INTERMATIC®

Rugged Design, Code-Compliant Protection

Our durable die-cast, low-profile, and plastic in-use weatherproof covers offer rugged protection in all types of applications.

STAY COMPLIANT 2020 NEC CODE, ARTICLE 406.9 (B)(1)

Intermatic Weatherproof Covers meet or exceed the latest NEC requirements for extra-duty applications and wet locations.

- For the 2020 NEC, all 15 and 20 ampere, 125 and 250 volt receptacles installed in a wet location still must have an enclosure and covers that are weatherproof whether an attachment plug cap is inserted or not.

- A revision now requires all enclosures and covers installed in wet locations for 15 and 20 ampere, 125 and 250 volt receptacles to be listed, and of the "extra-duty" type, not just boxes supported from grade.

- This requirement is now also required for dwelling units as well. The requirement for weather-resistant type receptacles in wet locations is still applicable in the 2020 NEC. This change also provoked changes to Article 590.4(D)(2) for extra-duty covers for all 15 and 20 ampere, 125 and 250 volt receptacles installed at temporary installations in a wet location.

- CEC Section 26-708 compliant.

- Standard weatherproof cover compliance guidelines apply only to 2020 Article 314.15.

WATCH AND LEARN

Our durable line-up of Die-cast and Plastic Weatherproof Covers offers long-lasting protection in all types of rugged applications: industrial, commercial, manufacturing, residential, and more!

Tired of fussing with bulky outdoor weatherproof covers? Upgrade to new WP6000 and WP7000 Series Low-Profile Expandable In-Use Weatherproof Covers from Intermatic.

Pool and Spa Solutions

Control and Protect your valuable pool equipment and landscape lighting with our affordable, time-saving pool and spa solutions. From timer controls and enclosures to safety transformers and surge protective devices, our products provide lasting value to pool owners while simplifying installation and setup.

Power Management and Protection

Lay a solid foundation with our versatile control panels and robust surge protection solutions. Designed to streamline installation, our load centers offer a variety of options and can be paired with SPDs to provide a lasting defense against harmful power quality issues.

Underwater Lighting

Expand the functionality of underwater luminaires by installing our safe, reliable transformer solutions. Hybrid solutions like our COMBOCONNECT™ Junction Box Transformer reduce clutter on the pool pad while maximizing performance.

Valve Control

Find the perfect flow for pool and spa equipment, fountains, pumps and more with our easy-to-operate valve actuators. These solution reduce the steps needed for cam adjustment and can be used in a variety of water applications.

Landscape Design

Elevate backyard décor with a selection of Intermatic timer controls. These solutions can be used to control ON/OFF schedules of garden and patio lights, as well as schedules for water features and outdoor decorations.

Contents

Additional Solutions and Resources

Ready to get started? Scan the QR code to the right for a variety of helpful resources, including sell sheets, product instructions, installation videos and more.

T101M

24-Hour Mechanical Time Switch Only
T100 SERIES

Heavy-duty mechanical time switches control a single load. Highest HP ratings in the industry for loads up to 40 amps, providing direct 24 hr. control of most loads.

Applications
- Timing/Scheduling ON/OFF • Pump control

Features
- Highest motor load ratings in the industry
- Minimum ON/OFF times of 1 hour
- Up to 12 ON/OFF operations per day
- One ON and one OFF tripper included
- Can be installed in most Intermatic enclosures
- Available with pool heater protection
- Teeter-type terminals for multiple load connections
- Can be installed in most Intermatic enclosures

Model #	Switch Type	Input Voltage	Electronic Ballast	Inductive	Restive (Heater)	Tungsten (Incandescent)	Pilot Duty
Without Pool Heater Protection							
T101M	SPST	120 VAC, 60 Hz	16 A, 120 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz
T103M	DPST		16 A, 120-277 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz
T104M	DPST	208-277 VAC, 60 Hz	16 A, 120-277 VAC	40 A, 120-277 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz
T106M	1 NO/1 NC, SPDT		16 A, 208-277 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz
With Pool Heater Protection							
T104M201	DPST	208-277 VAC, 60 Hz	16 A, 120-277 VAC	40 A, 120-277 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz

WIRING DIAGRAMS

Typical 120 Volt Installation

Typical 240 Volt Installation

NOTES: 1. Grounding connections are not shown but must be provided.
Refer to the National Electrical Code for details.
2. Diagrams above are only two of the many variations this Panel can accommodate.

Ratings	
Motor	2 HP, 24 FLA @ 120 VAC, 60 Hz, 5 HP, 28 FLA @ 240 VAC, 60 Hz
Heater Control Circuit	10 A, 250 VAC MAX, 60 Hz
Resistive	See Model Chart
Inductive	See Model Chart
Electronic Ballast	See Model Chart
Tungsten	See Model Chart
Pilot Duty	See Model Chart
Max Power Consumption	3 W
Operating Temperature	-40°F - 130°F (-40°C - 54°C)
Warranty	1-Year limited

ACCESSORIES

INTERMATIC

24-Hour Mechanical Time Switch in Enclosure
T100 SERIES

Heavy-duty mechanical time switches control a single load. Highest HP ratings in the industry for loads up to 40 amps, providing direct 24 hr. control of most loads.

Applications
• Heater Thermostat Control • Motor Control • Pump Control

Features
• Highest motor load ratings in the industry
• Minimum ON/OFF times of 1 hour
• Up to 12 ON/OFF operations per day
• One ON and one OFF tripper included
• Available with pool heater protection
• Teeter-type terminals for multiple load connections

T104P3   T104R3

Model #	Switch Type	Input Voltage	Electronic Ballast	Inductive	Restive (Heater)	Tungsten (Incandescent)	Pilot Duty	Enclosure
Without Pool Heater Protection								
T101P3	SPST	120 VAC, 60 Hz	16 A, 120 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz	Outdoor type 3R plastic
T104P3	DPST	208-277 VAC, 60 Hz	16 A, 120-277 VAC	40 A, 120-277 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz	
T106P3	1 NO/1 NC	208-277 VAC, 60 Hz	16 A, 208-277 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz	
T101R3	SPST	120 VAC, 60 Hz	16 A, 120 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz	Outdoor type 3R metal
T104R3	DPST	208-277 VAC, 60 Hz	16 A, 120-277 VAC	40 A, 120-277 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz	
With Pool Heater Protection								
T101P201	SPST	120 VAC, 60 Hz	16 A, 120 VAC	40 A, 120-480 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	1000 VA, 120-480 VAC, 60 Hz	Outdoor type 3R plastic
T104P201	DPST	208-277 VAC, 60 Hz	16 A, 120-277 VAC	40 A, 120-277 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz	
T101R201	SPST	120 VAC, 60 Hz	16 A, 120 VAC	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	40 A, 120-240 VAC, 60 Hz	1000 VA, 120-240 VAC, 60 Hz	Outdoor type 3R metal
T104R201	DPST	208-277 VAC, 60 Hz	16 A, 120-277 VAC	40 A, 120-277 VAC, 60 Hz	40 A, 120-480 VAC, 60 Hz	40 A, 120-277 VAC, 60 Hz	1000 VA, 120-277 VAC, 60 Hz	

Note: The heater protection switch (fireman switch) is closed when the time switch contacts are open to allow remote operation of the heater.
A flow or pressure switch therefore must always be part of the heater control circuit.

Ratings	
Motor	2 HP, 24 FLA @ 120 VAC, 60 Hz, 5 HP, 28 FLA @ 240 VAC, 60 Hz
Heater Control Circuit	10 A, 250 VAC MAX, 60 Hz
Resistive	See Model Chart
Inductive Ballast	See Model Chart
Electronic Ballast	See Model Chart
Tungsten	See Model Chart
Pilot Duty	See Model Chart
Max Power Consumption	3 W
Operating Temperature	-40°F - 130°F (-40°C - 54°C)
Enclosure Dims (H x W x D) Plastic Outdoor Metal Indoor	10" x 6.5" x 4" (254 mm x 165.1 mm x 101.6 mm) 10.125" x 6.5" x3.625" (257.2 mm x 165.1 mm x 92.1 mm)
Knockout Dimensions Bottom Left Right Back	(2) ½" and ¾" (1) combination ½" and ¾" (1) combination ½" and ¾" (1) combination ½" and ¾"
Warranty	1-Year limited

ACCESSORIES
For accessories and replacement parts please see page 184-185.

T10004R

T10604R
Control 2 speed pumps

Control System with Type 3R Power Center
T10000R SERIES

The T10000R Series Control Centers feature an all-weather enclosure and can contain control center only, one or two heavy duty timer mechanisms.

Applications
- Distribution/Control Panel • Motor Control • Pump Control

Features
- Available with one or two heavy-duty time switch mechanisms
- Accepts PF1000M, P1403ME, P1353ME, P4043ME, P4243ME, T100M OR RC2000M Series mechanisms
- Load center dead front has two knockouts for switches or GFCIs and one on the side
- Wiring devices may be installed in these load centers with the use of Standoffs, sold separately (21T156A and 21T166A)
- Control two-speed pumps with the T10604R
- Electrostatically applied light beige finish.

Model #	Mechanism	Switch Type	Mechanism Supply Voltage
T10000R	Power Center Only	–	–
T10004R	(1) T104M	DPST	208-277 VAC, 60 Hz
T10006R	(1) T106M	1 NO/1 NC	208-277 VAC, 60 Hz
T10101R	(2) T101M	SPST	120/120 VAC, 60 Hz
T10404R	(2) T104M	DPST	208-277 VAC, 60 Hz
T10604R	T106M & T104M	SPDT/DPST	208-277 VAC, 60 Hz
T12404R*	T104M201 & T104M	DPST	208-277 VAC, 60 Hz

* The heater protection switch (fireman switch) is closed when the time switch contacts are open to allow remote operation of the heater. A flow or pressure switch therefore must always be part of the heater control circuit.

Ratings	
Center Rating	92 Amp per leg, 168 Amp Max. 120-240 VAC or 120-208 VAC single phase - 60 Hz
Resistive	30 A, 120-240 VAC, 60 Hz
Inductive	30 A, 120-240 VAC, 60 Hz
Tungsten	30 A, 120-240 VAC, 60 Hz
Pilot Duty	1000 VA, 120-240 VAC, 60 Hz
Max Power Consumption	3 W
Motor	2 HP, 24 FLA @ 120 VAC, 60 Hz, 5 HP, 28 FLA @ 240 VAC, 60 Hz
Operating Temperature	-40°F - 130°F (-40°C - 54°C)
Enclosure Dimensions H x W x D	12.875" x 10.875" x 4.75" (327 mm x 276.2 mm x 120.7 mm)
Knockout Dimensions	
Bottom	(5) combination ½" - ¾" and (2) combination ¾" - 1"
Left	(1) combination ½" - ¾"
Right	(1) 1 ¾" x 2 ¾" for mounting switches or GFCI
Back	(1) combination ½" - ¾" and (1) ¾" - 1"
Warranty	1-Year limited

WIRING DIAGRAMS

NOTES: 1. Grounding connections are not shown but must be provided. Refer to the National Electrical Code for details.
2. Diagrams above are only two of the many variations this Panel can accommodate.

INTERMATIC

60 A Control System with Type 3R Load Center
T21000R SERIES

The T20000R Series load center panels feature an all-weather enclosure and contain a 4 circuit breaker base, an equipment grounding bar and can contain load center only or a heavy duty timer mechanisms. The circuit breaker base accepts interchangeable type breakers made by a number of different manufacturers.

Applications
- Distribution/Control Panel • Motor Control • Pump Control

Features
- Four breaker spaces
- Accepts PF1000M, P1403ME, P1353ME, P4043ME, P4243ME, T100M or RC2000M Series mechanisms
- Accepts many interchangeable type breakers made by a number of different manufacturers
- Load center dead front has two knockouts for switches or GFCIs and one on the side
- Wiring devices may be installed in these Load Centers with the use of Standoffs, sold separately

T21000R

Model #	Mechanism	Switch Type	Mechanism Supply Voltage
T21000R	Load Center Only	–	–
T21001R	T101M	SPST	120 VAC, 60 Hz
T21004R	T104M	DPST	208-277 VAC, 60 Hz

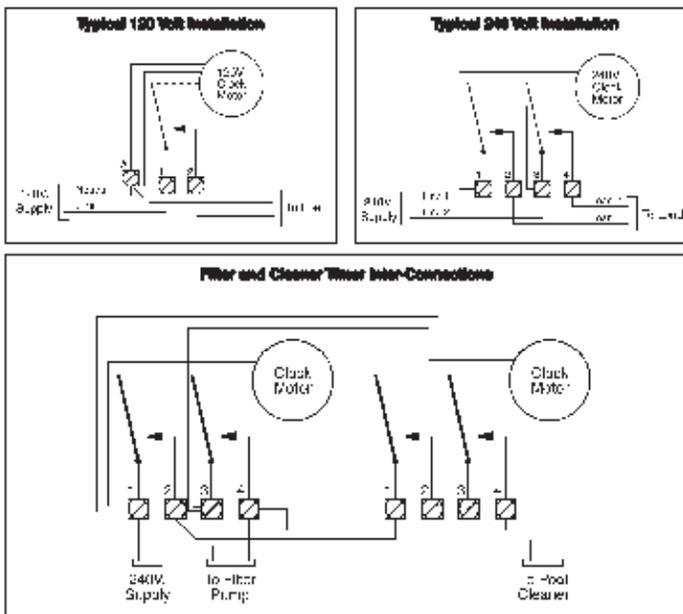| Ratings	
Load Center Rating	60 A, 120/240 VAC or 120/208 VAC, Single Phase
Resistive	30 A, 120-240 VAC, 60 Hz
Inductive	30 A, 120-240 VAC, 60 Hz
Tungsten	30 A, 120-240 VAC, 60 Hz
Pilot Duty	1000 VA, 120-240 VAC, 60 Hz
Motor	2 HP, 24 FLA @ 120 VAC, 60 Hz, 5 HP, 28 FLA @ 240 VAC, 60 Hz
Operating Temperature	-40°F - 130°F (-40°C - 54°C)
Dimensions H x W x D	16.875" x 8.875" x 4.75" (428.6 mm x 225.4 mm x 120.7 mm)
Knockout Dimensions	
Bottom	(5) combination ½" - ¾" and (3) combination ¾" - 1"
Left	(1) combination ½" - ¾"
Right	(1) 1 ¾" x 2 ¾" for mounting switches or GFCI
Back	(1) combination ½" - ¾" and (1) ¾" - 1"
Warranty	1-Year limited

T21001R

WIRING DIAGRAMS

NOTES: 1. Grounding connections are not shown but must be provided. Refer to the National Electrical Code for details. 2. Diagrams above are only two of the many variations this Panel can accommodate.

ACCESSORIES

T30004R

T30604R
Control 2 speed pumps

100 A Control System with Type 3R Load Center
T30000R SERIES

Can be used as a load center only, or add mechanisms or wiring devices for complete control systems.

Applications
- Distribution/Control Panel • Motor Control • Pump Control

Features
- Eight breaker spaces
- Reduces installation costs
- Eliminates the need for additional service panels
- Accepts PF1000M, P1403ME, P1353ME, P4043ME, P4243ME, T100M OR RC2000M Series mechanisms
- Control two-speed pumps with the T30604R
- Fully compatible with all electrical requirements for pool/spa installations
- Load center dead front has two knockouts and one on the side for switches or GFCIs
- Wiring devices may be installed in these load centers with the use of Standoffs, sold separately

Model #	Mechanism	Switch Type	Mechanism Supply Voltage
T30000R5	Load Center Only	–	–
T30004R	(1) T104M	DPST	240 VAC, 60 Hz
T30404R	(2) T104M	DPST/DPST	240/240 VAC, 60 Hz
T30401R	T104M & T101M	DPST/SPST	240/120 VAC, 60 Hz
T30604R	T106M & T104M	SPDT/DPST	240/240 VAC, 60 Hz
T32404R*	T104M201 & T104M	DPST/DPST	240/240 VAC, 60 Hz

* The heater protection switch is closed when the time switch contacts are open to allow remote operation of heater. A flow or pressure switch must always be part of heater control circuit.

Ratings	
Load Center Rating	100 A, 120-240 VAC, Single Phase, 60 Hz
Resistive	40 A, 120-240 VAC, 60 Hz
Inductive	40 A, 120-240 VAC, 60 Hz
Tungsten	40 A, 120-240 VAC, 60 Hz
Pilot Duty	1000 VA, 120-240 VAC, 60 Hz
Motor	2 HP, 24 FLA @ 120 VAC, 60 Hz, 5 HP, 28 FLA @ 240 VAC, 60 Hz
Dimensions H x W x D	16.875" x 10.875" x 4.75" (428.6 mm x 276.2 mm x 120.7 mm)
Operating Temperature	-40°F - 130°F (-40°C - 54° C)
Knockouts Bottom Left Right Back	 (3) ½" (4) combination ½" - ¾" and (2) combination ¾" - 1" (1) combination ¾" - 1" (1) 1 ¾" x 2 ¾" for mounting switches and GFCI (4) ½" and (3) combination ½" - ¾"
Warranty	1-Year limited

WIRING DIAGRAMS

Typical 120 Volt Installation

Typical 240 Volt Installation

Filter and Cleaner Timer Inter-Connections

NOTES: 1. Grounding connections are not shown but must be provided. Refer to the National Electrical Code for details.
2. Diagrams above are only two of the many variations this Panel can accommodate.

ACCESSORIES

For accessories and replacement parts
please see page 184-185.

INTERMATIC

125 A Control System with Type 3R Load Center
T40000R SERIES

Can be used as a Load Center only, or add mechanisms or wiring devices for complete control systems.

Applications
- Distribution/Control Panel

Features
- Eight breaker spaces
- Reduces installation costs
- All-in-one electrical load center eliminates the need for additional service panels
- Accepts any combination of PF1000M Series, P1403ME, P1353ME, P4043ME, P4243ME, T100M Series or RC2000M Series mechanisms
- Fully compatible with all electrical requirements for pool/spa installations
- Load center dead front has four knockouts for switches or GFCIs (Note: T40000R4 has one knockout)
- Wiring devices may be installed in these Load Centers with the use of Standoffs, sold separately

T40004R

Model #	Mechanism(s)	Switch Type	Mechanism Supply Voltage
T40004R	(1) T104M	DPST	240 VAC, 60 Hz
T40404R	(2) T104M	DPST	240 VAC, 60 Hz
T40000R4	Load Center with Compartment for Optional Wiring Devices	–	–

Ratings	
Load Center Rating	125 A MAX, 120-240 VAC, Single Phase, 60 Hz
Resistive	40 A, 120-240 VAC, 60 Hz
Inductive	40 A, 120-240 VAC, 60 Hz
Tungsten	40 A, 120-240 VAC, 60 Hz
Pilot Duty	1000 VA, 120-240 VAC, 60 Hz
Motor	2 HP, 24 FLA @ 120 VAC, 60 Hz, 5 HP, 28 FLA @ 240 VAC, 60 Hz
Operating Temperature	-40°F - 130°F (-40°C - 54°C)
Enclosure Dimensions H x W x D	20.875" x 12.875" x 4.75" (530.2 mm x 327 mm x 120.7 mm)
Knockout Dimensions	
Bottom	(5) ½" - ¾", (4) ½", (2) ¾" - 1", 1 ¼"
Left	(2) ½" - ¾"
Right	(1) 1 ¾" x 2 ¾" for mounting switches and GFCI
Back	(4) ½" - ¾", (2) 3/4" - 1"
Warranty	1-Year limited

WIRING DIAGRAMS

ACCESSORIES

For accessories and replacement parts please see page 184-185.

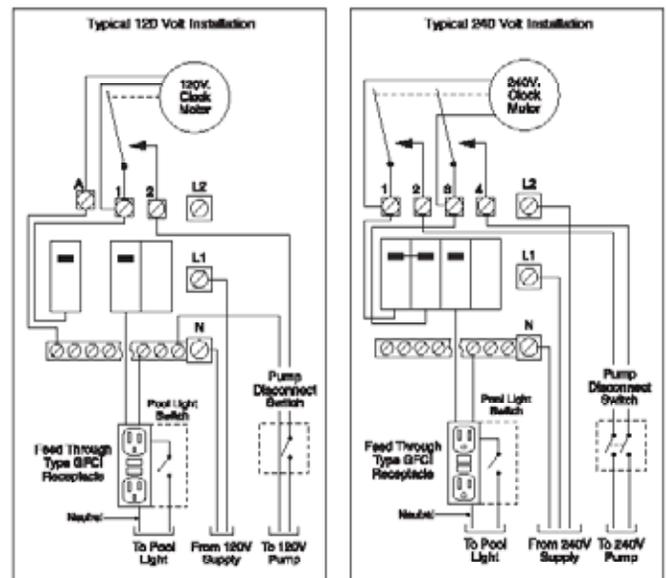*NOTES: 1. Grounding connections are not shown but must be provided. Refer to the National Electrical Code for details. 2. Diagrams above are only two of the many variations this Panel can accommodate.*

Protect Expensive Pool Equipment with the **PS3000 SPD + Load Center**

Even the best laid plans for pool season can be sunk in an instant when an unexpected power surge occurs. Without the right surge protection device in place, transients and voltage surges can damage expensive pool equipment, keeping homeowners out of the water and holding the bill for costly maintenance.

But there's a simple way to prevent disaster in the upcoming pool season.

Ideal for Retrofits and New Construction

Designed for simple installation in a variety of settings, the PS3000 can be quickly wired into pool and spa breaker/automation panels or existing home electrical service panels for complete protection of all downstream equipment.

PS3000 units can also be paired with an Intermatic Load Center for added convenience and functionality. This is typically done in new pool builds, with the Load Center serving as the protecting central hub for connected pool and spa equipment.

Load Center

+

PS3000 SPD*

Common PS3000 Applications:
• Pool and spa LED lighting • Gas and electric high-efficiency heaters
• Single and variable speed pool pumps • Pool automation systems
• Water feature pumps • Chlorinators • Suction cleaners • Stereo and speaker systems • Portable hot tubs

INTERMATIC®

Control System with Transformer and Power or Load Center
MECHANICAL CONTROLS

These mechanical control systems include built-in transformers for ease of installation.

Applications
- Distribution/Control Panel • Landscape Lighting • Motor Control • Pump Control
- Underwater Lighting

Features
- All-in-one control power for pool/spa installation
- Easy to wire
- Can house additional Intermatic mechanisms and components
- Control two-speed pumps with the T40604RT3
- Heavy-duty Type 3R metal indoor/outdoor power and load center
- Wiring devices may be installed in these Load Centers with the use of Standoffs, sold separately
- Knockout on the side for additional wiring device

T10004RT1

T40000RT3

Model #	Description	Mechanism Supply Voltage	Transformer		
			Watts	Input Voltage	Output Voltage
Power Center					
T10004RT1	Control Panel with 100 W Transformer and T104M Mechanism	240 VAC, 60 Hz	100	1 A, 120 VAC, 60 Hz	12, 13, 14 VAC
T10004RT3	Control Panel with 300 W Transformer and T104M Mechanism	240 VAC, 60 Hz	300	3 A, 120 VAC, 60 Hz	12, 13, 14 VAC
Load Center with Eight Breaker Spaces					
T40000RT3	100 A Load Center Only with 300 W Transformer, 8-Breaker Spaces	–	300	–	–
T40003RT3	100 A Load Center with 300 W Transformer and T103M Mechanism, 8-Breaker Spaces	120 VAC, 60 Hz	300	3 A, 120 VAC, 60 Hz	12, 13, 14 VAC
T40004RT1	100 A Load Center with 100 W Transformer and T104M Mechanism, 8-Breaker Spaces	240 VAC, 60 Hz	100	1 A, 120 VAC, 60 Hz	12, 13, 14 VAC
T40004RT3	100 A Load Center with 300 W Transformer and T104M Mechanism, 8-Breaker Spaces	240 VAC, 60 Hz	300	3 A, 120 VAC, 60 Hz	12, 13, 14 VAC
T40604RT3	100 A Load Center with 300 W Transformer and T104M & T106M Mechanisms, 8-Breaker Spaces	240 VAC, 60 Hz	300	3 A, 120 VAC, 60 Hz	12, 13, 14 VAC

Ratings	
Power Center Rating	120-240 VAC, 60 Hz single-phase
Load Center Rating	100 A, 120-240 VAC, Single Phase, 60 Hz
Switch Type T40604RT3	DPST 1 NO/1 NC, DPST
Resistive	40 A, 120-240 VAC, 60 Hz
Inductive Ballast	40 A, 120-240 VAC, 60 Hz
Tungsten	40 A, 120-240 VAC, 60 Hz
Pilot Duty	1000 VA, 120-240 VAC, 60 Hz
Motor	2 HP, 24 FLA @ 120 VAC, 60 Hz, 5 HP, 28 FLA @ 240 VAC, 60 Hz
Operating Temperature	-40°F - 130°F (-40°C - 54°C)
Warranty	1-Year limited

Dimensions	
Power Center H x W x D	12.875" x 12.875" x 4.75" (327 mm x 327 mm x 120.7 mm)
Load Center H x W x D	20.875" x 12.875" x 4.75" (530.2 mm x 327 mm x 120.7 mm)
Knockouts T10000R Series	
Bottom	(5) ⅞" - 1 ⅞", (2) ⅞", (2) 1 ⅛" - 1 ⅜"
Left	(1) ⅞" - 1 ⅛"
Right	(1) 1 ¾" x 2 ¾" for mounting switches and GFCI
Back	(1) ⅞" - 1 ⅛", (1) 1 ⅛" - 1 ⅜"
Knockouts T40000R Series	
Bottom	(5) ⅞" - 1 ⅞", (4) ⅞", (2) 1 ⅛" - 1 ⅜" - 1 ⅝"
Left	(2) ⅞" - 1 ⅛"
Right	(1) 1 ¾" x 2 ¾" for mounting switches and GFCI
Back	(4) ⅞" - 1 ⅛", (2) 1 ⅛" - 1 ⅜"

WIRING DIAGRAMS

Typical 120 Volt Installation

Typical 240 Volt Installation

NOTES: 1. Grounding connections are not shown but must be provided. Refer to the National Electrical Code for details. 2. Diagrams above are only two of the many variations this Panel can accommodate.

ACCESSORIES

For accessories and replacement parts please see page 184-185.

Align Equipment to Pool Needs
with a **Next Generation Load Center Panel**

It's no surprise that the average pool setup integrates more technology than the backyards of past generations. From filters and heaters to variable speed pumps and nicheless LED lights, there is more equipment than ever connected to the average pool pad.

By combining the most versatile busbar design in the business with built-in safety transformer functionality, new Intermatic load center panels allow professionals to connect multiple pieces of pool equipment and an array of low-voltage underwater lights with ease. Unlike our standard panels, our next-gen panels are timer-less, making them an ideal choice for new construction projects.

From the outside, these new solutions blend right in. They feature a familiar dead front design and the same powder coat paint and color utilized in previous pool panel offerings.

Our next gen panels are designed for pool only applications that do not require a time clock provision which allows for more internal wiring space. These new panels offer reduced audible noise (in transformer versions) and come with device mounting brackets for switch/GFCI provisions. Updated side knockouts also accommodate larger in-use receptacle weatherproof covers for added convenience.

INTERMATIC®

Next Generation Load Centers
Simple solutions for simple pools.

Need a solution for a basic pool with a variable speed pump?
Look no further than the Intermatic next generation load center.

Tackle any pool project with the next generation Intermatic load centers. Designed versatility and ease of installation, these panels are built specifically for pool systems. They're the ideal choice for connecting underwater luminaires and essential pool equipment.

Wiring Space

Built-in Breaker Base

Knock-out Adjustment
Exterior GFCI knock-out moved to accommodate WP5000/WP7000 covers

Quiet Transformer and Enclosure
Newly designed panel with extended transformer cover minimizes audible noise

Built-in Brackets for Wiring Devices

Knock-out Adjustment
Increased low and high voltage knock outs

Model Number	Description	Transformer		
		Watts	**Input Voltage**	**Output Voltage**
P40000R5	125 Amp load center only	–	–	–
P40000RT1	100 Amp load center only with 100 Watt transformer	100	1 A 120 VAC 60Hz	12, 13, 14 VAC
P40000RT3	100 Amp load center only with 300 Watt transformer	300	3 A 120 VAC 60Hz	12, 13, 14 VAC

Ratings	
Load Center Rating	
P40000R5	125 A, 120-240 VAC
P40000RT1 & P40000RT3	100 A, 120-240 VAC
Enclosure Type	Outdoor Type 3R Metal
Operating Temperature	-40°F - 130°F (-40°C - 54°C)
Knockouts	
Bottom	(1) 1" - 1-¼", (2) ¾" - 1", (6) ½" - ¾"
Left	(2) ½" - ¾"
Right	(1) 1-¾" x 2 - ¾" for mounting switches and GFCI
Back	(1) ¾" -1", (2) ½" - ¾"
Warranty	1-Year limited

LIKE TO KNOW MORE?

Scan the QR code to the right for a variety of helpful resources, including sell sheets, product instructions, installation videos and more.

PX50

PX100S

PX300

PX600S

Safety Transformers
PX SERIES

These safety transformers are specifically designed to supply 12-14 VAC and are suitable for direct connection to underwater pool/spa lights. A grounded shield between the primary and secondary winding assures safe operation. Built-in circuit protection will disconnect power to the transformer in case of an overload.

Applications
• Landscape Lighting • Underwater Lighting

Features
● Mounting brackets on the top and bottom
● Built-in circuit protection disconnects power temporarily in case of overload*
● Complies with NEC Code 680.23 requirements for underwater luminaries
● Built in Noise filter reduces electronic noise and interference in low-voltage lighting applications
● Stainless steel options for quiet audible sound levels.

Model #	Input Voltage	Output Voltages	Watts
3R Beige Metal			
PX50	.5 A, 120 VAC, 60 Hz	12 VAC, 13 VAC, 14 VAC	50 W
PX100	1 A, 120 VAC, 60 Hz		100 W
PX300	3 A, 120 VAC, 60 Hz		300 W
PX600	6 A, 120 VAC, 60 Hz		600 W
3R Stainless Steel			
PX50S	.5 A, 120 VAC, 60 Hz		50 W
PX100S	1 A, 120 VAC, 60 Hz		100 W
PX300S	3 A, 120 VAC, 60 Hz		300 W
PX600S	6 A, 120 VAC, 60 Hz		600 W

*Disconnection is not permanent; the transformer is equipped with a thermal protector. The circuit will "re-energize" when the transformer cools.

Ratings PX50, 100, 300	
Enclosure Dimensions H x W x D	7.25" x 5.25" x 4.5" (184.2 mm x 133 mm x 114.3 mm)
Knockout Dimensions	
Bottom	(4) combination ½" - ¾"
Left	(2) combination ½" - ¾"
Right	(2) combination ½" - ¾"
Back	(2) combination ½" - ¾"
Warranty	1-Year limited

Ratings PX600 (PX600S)	
Enclosure Dimensions H x W x D	10" x 10" x 5.375" (254 mm x 254 mm x 136.5 mm)
Knockout Dimensions	
Bottom	(2) combination ½" - ¾", (4) combination ¾" - 1"
Left	(2) combination ½" - ¾"
Right	(2) combination ½" - ¾"
Back	(2) combination ½" - ¾"
Warranty	1-Year limited

Why Choose
PX Series Safety Transformers?

Though similar products can share the same basic look and functionality, what's under the surface makes all the difference when it comes to reliability and value. For example, installing high-performance safety transformers can help streamline installations and ensure consistency from one season to the next, whereas an inferior solution can cause delays and maintenance headaches.

Intermatic safety transformers, such as the PX100, PX300 and COMBOConnect® Junction Box Transformer, are manufactured in an ISO-certified facility that includes more than 40 on-site specialty engineers and offer unique features that help them stand out in a crowded field.

Designed for High-Performance, Built to Last

Super Quiet Stainless Steel
Non-magnetic Stainless steel reduces audible hum in low-voltage lighting applications

Automatic Breaker Reset
Built-in circuit protection will disconnect power to the transformer in case of defect or overload

Premium Construction
Manufactured in an ISO-certified facility that includes more than 40 on-site specialty engineers

New Built-in Noise Filter
Reduces electronic noise and interference when used in low-voltage lighting applications

Wiring Flexibility
Extra space within the enclosure simplifies installations

PX100S

INTERMATIC®

PJBX52100

PJB2175   PJB4175

COMBOConnect®
PJBX52100

The COMBOConnect® solution combines the simplicity of a standard connection box with the power of a low-voltage transformer of 100 W.

Applications
- Landscape Lighting • Underwater Lighting

Features
- Patented design that combines a standard junction box with a built-in transformer
- Two high-voltage openings (one for inlet power, one to daisy chain to other j-boxes), five low-voltage openings (one more than typical larger junction boxes to better accommodate nicheless lights)
- Includes built-in 100 W safety transformer;Built-in electronic noise reduction
- Unit is 20 percent smaller than standard junction box and transformer components
- Connections are designed to be easily accessible
- Uses insulated terminals for wiring connections
- Mount via wall, post or rod (PA119 mounting bracket sold separately.)
- Complies with NEC Code 680.24 requirements for junction boxes and per NEC 411 for low-voltage landscape lighting
- 1-year warranty

Model Number	Light Connections	Mounting Options	Dimensions H x W x D
PJBX52100	5	Bracket, Post, Rod, Wall	5" x 8" x 6" (127 mm x 203.2 mm x 152.4 mm)

WIRING LOCATIONS

Pool/Spa Light Junction Boxes
PJB SERIES

These polymeric junction boxes are code compliant and provide safe, reliable connections for low-voltage lights. Specially designed for pools, pool-spa combinations, and landscape applications. Junction boxes are for outdoor use only.

Applications
- Landscape Lighting • Underwater Lighting

Features
- Accommodates flexible cords and non-metallic conduits from ½" to 1"
- Watertight, multi-fixture enclosure
- Easy access ground bar
- PA114 Wall/Post Mounting Bracket (sold separately)
- Complies with NEC Code 680.24 requirements for junction boxes
- 1-year warranty

Model Number	Light Connections	Mounting Options	Dimensions H x W x D
PJB2175	2	Bracket, Post, Rod, Wall	7.25" x 3" x 4" (184.2 mm x 76.2 mm x 101.6 mm)
PJB4175	4		8.75" x 5" x 4.625" (222.3 mm x 127 mm x 117.5 mm)

INSTALLATION PJB2175 & PJB4175

ACCESSORIES

For accessories and replacement parts please see page 184-185.

PE103

P1403ME

Electronic Pump Motor Controller with Seasonal Adjustment
PE103

Control 1 or 2 speed pumps and 1 auxiliary load with this 3-circuit programmable device. The seasonal adjustment feature can be programmed to automatically adjust filter pump ON/OFF schedules according to the season.

Application
- Motor Control • Pump Control

Features
- Saves up to 40% in monthly utility bills compared to standard timers
- Meets most rebate incentives
- Enables separate daily schedules
- Easy-to-follow on-screen setup for programming
- DST adjustment included
- Auto-voltage adjust
- Efficient low-speed operation for all seasons
- User programmable high and low-speed events
- 100+ hour supercapacitor memory retention
- Available with Type 3R indoor/outdoor lockable metal enclosure

Model #	Description
PE103	Electronic Pump Motor Controller with Seasonal Adjustment, 4-Circuit, Type 3R Metal Enclosure
P1403ME	Electronic Pump Motor Controller with Seasonal Adjustment, 4-Circuit, Mechanism Only

Ratings	
Input Voltage	120-277 VAC, 50/60 Hz
Max ON/OFF Operations	3
Number Of Circuits	3
Max Power Consumption	7 W
Switch Type	4-SPST
Resistive	30 A @ 24 VAC, 120-277 VAC, 50/60 Hz; 20 A @ 28 VDC
Inductive	30 A @ 24 VAC, 120-277 VAC, 50/60 Hz
Tungsten	5 A @ 120-277 VAC, 50/60 Hz
Motor	16 FLA, 96 LRA @ 120 VAC, 50/60 Hz; 17 FLA, 80 LRA @ 240 VAC, 50/60 Hz
Warranty	1-Year limited

2-SPEED PUMP WIRING DIAGRAMS

SINGLE SPEED PUMP WIRING DIAGRAMS

INTERMATIC

Digital 3-Circuit Time Switch
P153 SERIES

This multipurpose 24-hour control is capable of automatically switching loads according to a preset daily schedule. Controls single- and two-speed pumps and cleaner/booster pumps. Three ON/OFF events per circuit per day.

Applications
• Motor Control • Pump Control Protection

Features
• Controls single- and two-speed pumps and cleaner/booster pumps
• Three ON/OFF events per circuit per day
• Seven preprogrammed modes, see chart below for details
• Freeze and heater protection
• LCD readout
• Multivoltage input and output
• Countdown and override features enable programs to be overridden and automatically resumed without requiring the user to reprogram the system

Model #	Description
P1353ME	24-Hour Time Control, 3-Circuit, Mechanism Only
PE153	24-Hour Electronic Time Control, 3-Circuit, Type 3R Metal Enclosure
PE153F	24-Hour Electronic Time Control, 3-Circuit, Freeze Protection Probe, Type 3R Metal Enclosure
PE153P	24-Hour Electronic Time Control, 3-Circuit, Type 3R Plastic Enclosure
PE153PF	24-Hour Electronic Time Control, 3-Circuit, Freeze Protection Probe, Type 3R Plastic Enclosure

Ratings	
Input Voltage	120/240 VAC, 50/60 Hz
Switch Type	3-SPST
Resistive	17 A, 120/240 VAC, 50/60 Hz
Tungsten	5 A, 120/240 VAC, 50/60 Hz
Motor	80 LRA @ 120/240 VAC, 50/60 Hz; 17 FLA @ 120/240 VAC, 50/60 Hz
Warranty	1-Year limited

PE153

PE153PF

P1353ME

7 PREPROGRAMMED MODES

Mode #	Switches Control	Additional Comments
1	Aux 1, Aux 2, Aux 3	—
2	Pump High, Pump Low, Aux 3	2-speed pump timing and protection
3	Pump, Aux 2, Booster/Cleaner Pump	Filter/cleaner pump timing and protection
4	Pump High, Pump Low, Booster/Cleaner Pump	2-speed and filter/cleaner pump timing and protection
5	Pump L1, Pump L2, Aux 3	1st and 2nd switch controls a 240 VAC pump, where L1 and L2 are disconnected when the pump is OFF
6	Aux 1, Aux 2, Aux 3 Heater green mode	Identical to Mode 1, with capability to run a heater when the filter pump is manually turned ON only This mode is ideal for connecting Circuit 1 to a circulation pump in a spa *
7	Pump High, Pump Low, Common Hot Leg	Identical to Mode 2, with the capability to break both hot lines of a 240 VAC two-speed pump connection

* When spa is not in use, the clock does not turn the heater ON. When spa is in use, the heater can be activated by manually switching Circuit 1 ON

ACCESSORIES

For accessories and replacement parts please see page 184-185.

PE20000

PE25300F

PE30000

PE35300

60 A Pool/Spa Control System with Type 3R Load Center
PE20000 SERIES

This system can be used as a load center only, or add mechanisms or wiring devices for complete control systems.

Applications
- Distribution/Control Panel

Features
- Four breaker spaces
- 3-SPST mechanism (P1353ME) controls single- and two-speed filter pumps, cleaner/booster pumps and pool/spa landscape lighting
- Includes low voltage wiring compartment.
- Load center dead front has two knockouts for switches or GFCIs
- Wiring devices may be installed in these load centers with the use of Standoffs, sold separately
- Also compatible with T100 Series

Model Number	Description
PE20000	60 A Load Center
PE25300F	60 A Load Center with P1353ME Mechanism and Freeze Protection Probe
PE25300	60 A Load Center with P1353ME Mechanism

Ratings	
Input Voltage	120/240 VAC, 50/60 Hz
Switch Type	3-SPST
Resistive	17 A, 120/240 VAC, 50/60 Hz
Tungsten	5 A, 120/240 VAC, 50/60 Hz
Motor	80 LRA @ 120/240 VAC, 50/60 Hz; 17 FLA @ 120/240 VAC, 50/60 Hz
Auxiliary Switch	2 A, 24 VAC
Enclosure Dimensions H x W x D	16.875" x 10.875" x 4.75" (428.6 mm x 276.2 mm x 120.7 mm)
Knockout Dimensions	See PE3000 Series Ratings
Warranty	1-Year limited

80 A Pool/Spa Control System with Type 3R Load Center
PE30000 SERIES

This system can be used as a load center only, or add mechanisms or wiring devices for complete control systems.

Applications
- Distribution/Control Panel

Features
- Eight breaker spaces
- 3-SPST mechanism (P1353ME) controls single and two-speed filter pumps, cleaner/booster pumps and pool/spa landscape lighting
- Includes low voltage wiring compartment.
- Load center dead front has four knockouts for switches or GFCIs
- Transformer option provides low-voltage for LED lights
- Wiring devices may be installed in these load centers with the use of Standoffs, sold separately
- Also compatible with T100 Series

Model Number	Description
PE30000	80 A Load Center
PE30000T3	80 A Load Center with 300 W Transformer
PE35300	80 A Load Center with P1353ME Mechanism

Ratings	
Input Voltage	120/240 VAC, 50/60 Hz
Switch Type	3-SPST
Resistive	17 A, 120/240 VAC, 50/60 Hz
Tungsten	5 A, 120/240 VAC, 50/60 Hz
Motor	80 LRA, 17 FLA @ 120/240 VAC, 50/60 Hz
Auxiliary Switch	2 A, 24 VAC
Enclosure Dimensions H x W x D	22.875" x 14.875" x 4.75" (581 mm x 377.8 mm x 120.7 mm)
Knockout Dimensions Bottom Left Right Back	(1) 1 ⅛" diameter hole, (6) ½" - ¾", (3) ¾" - 1" (2) ½" - ¾" (1) 1 ¾" x 2 ¾" (1) ¾" - 1"
Warranty	1-Year limited

ACCESSORIES

For accessories and replacement parts please see page 184-185.

INTERMATIC

Remotely Operated Control System
RC2163BFE POOL/SPA COMBINATION CONTROL PANEL

This system controls Pool / Spa valve rotation, heater, single speed pump, and 120V blowers.

Applications
- Heater Thermostat Control • Motor Control • Pump Control

Features
- Eight breaker spaces
- Use spring wound timer, toggle switch, wireless receiver/transmitter to operate equipment
- 3-Wire heater control
- (2) PE24VA 24-V valve actuators included
- Heavy-duty Type 3R metal indoor/outdoor load center

Model Number	Description
RC2163BFE	Pool/Spa Remotely Operated Combination Control System

Note: Remote switch not included.

RC2163BFE

Ratings	
Load Center Rating	100 A, 120/240 VAC or 120/208 VAC, Single Phase, 60 Hz
Input Voltage	120/240 VAC, 60 Hz
Motor Load Ratings Single Speed	1 1/2 HP @ 120 VAC, 3 HP @ 240 VAC, 60 Hz
No. of Actuator Connections	3 (simultaneous rotation)
Dimensions H x W x D	16.875" x 10.875" x 4.75" (428.6 mm x 276.2 mm x 120.7 mm)
Warranty	1-Year limited

WIRING DIAGRAM

TIMER

MEMORY HOLD-UP BATTERY

NEUT. LINE

120 VOLT PC BOARD

120 VOLT SENSOR

CONTROL SUPPLY

BLK WHT ORG

REMOTE LOCATED 120V SWITCHING DEVICE*

120/24V. TRANSFORMER

SENSOR RELAY

24 V SWITCH*

24 V SENSOR

BRN BRN

NEUT. WHITE LINE BLACK

120V. SUPPLY

24 VOLT PC BOARD

SW 1
TRANS
24 VAC
STEP

PUMP RELAY

HEATER SELECTOR SWITCH

120V Pump - Connect **NEUTRAL** to **WHITE** lead **and** pump **NEUTRAL**. Connect 120V. line to **BLACK** lead and **BLUE** lead to pump **LOAD** terminal. Cap **RED** and **YELLOW** leads.

Low Voltage Board

LINE 2
LOAD 2
LOAD 1
LINE 1

240V. SUPPLY/LOAD CONNECTIONS

BLK WHT RED

120V. SUPPLY

REMOTE LOCATED RADIO RECEIVER

***Use either the 120V or the 24V remote sensor connection. Insulate (cap) the other line(s).**

Valve Actuator Connections

3 Amp Automotive fuse

T-STAT
Low — 1
High — 2
Common — 3
Freeze or Heater Protection Sensor — 4, 5

Single Thermostat Heater

PC Board
From Heater Thermostat
Selector Switch on Heater
C
H
L
On
Off
Jumper

1. Connect two 18 gauge wires in SERIES with Heater's Selector Switches.
2. Connect one of the wires to terminal "C" and the other to terminal "L". INSTALL JUMPER BETWEEN TERMINALS "L" AND "H".
3. Leave heater switch in ON position.

Dual Thermostat Heater

PC Board
From Heater Thermostats
Selector Switch on Heater
C
H
L
High
Off
Low

1. Connect three 18 gauge wires in PARALLEL with Heater's Selector Switches.
2. Connect the wire from central post (Common) of heater switch to terminal "C", High to "H" and Low to "L".
3. Leave heater switch in OFF position.

PE653RC

MultiWave® Basic Control System
PE653RC

The MultiWave® Basic Control System is a wireless electronic controller for pool and spa automation. It includes a five-circuit receiver with a built-in 24-hour timer as well as a wireless remote with batteries. The system also offers air and water sensors, an antenna relocation cap and a mounting base for easy installation. Utilize this solution to retrofit existing mechanical timers or as part of a new construction project. Intermatic's wireless pool and spa controls utilize Z-wave™ technology for wireless transmission.

APPLICATIONS
• Heater Thermostat Control • Motor Control • Pump Control

FEATURES
• Controls 5 circuits
• Single or two speed pumps; Pentair VSP; heater control, blowers, lights, cleaners
• 24-hour timing with 3 ON/OFF events per circuit
• Includes receiver, wireless remote, water and air temperature sensors, (3) AA batteries, equipment labels, flathead screwdriver, raintight enclosure, raintight cap and mount for remote mounting antenna
• Type 3R metal indoor/outdoor enclosure
• See MultiWave ECS and ECS Plus Systems for additional control options

Model #	Description
PE653RC	24-Hour MultiWave® Basic Control , 5-Circuit, Type 3R Metal Enclosure

Ratings	
Max Power Consumption	5 W
Input Voltage	120-240 VAC 50/60 Hz
Circuit 1	
Resistive	20 A, 120 VAC, 20 A, 240 VAC
Motor	80 LRA @120/240 VAC; 17 FLA @120/240 VAC
Tungsten	5 A
Circuit 2-5	
Resistive	15 A
Motor	60 LRA @120/240 VAC; 10 FLA @120/240 VAC
Tungsten	5 A
Enclosure Dimensions H x W x D	9.375" x 5.5" x 3.75" (238.1 mm x 139.7 mm x 95.3 mm)
Knockouts	
Bottom	(2) combination ½" - ¾"
Left	(1) combination ½" - ¾"
Back	(1) combination ½" - ¾"
Right	(1) combination ½" - ¾"
Warranty	2-Year limited

PE25065RC

MultiWave® ECS System
PE25065RC

This system includes the MultiWave Basic and an Expansion Module to control up to four valve actuators, two heaters, various variable speed pumps and solar heating/cooling. The Remote Switch feature provides simple ON/OFF control of several components (i.e., spa heater, spa blower, spa lights) simultaneously with the flip of a single switch.

APPLICATIONS
• Heater Thermostat Control • Motor Control • Pump Control

FEATURES
• Four breaker spaces
• Controls 5 circuits
• Controls 4 actuator ports (actuators not included), 2 for pool to spa valve rotation, 1 for water feature valve rotation, and 1 for solar applications
• Controls 2 heater circuits
• USB port for ease of upgrading firmware
• Load center dead front has two knockouts for switches and GFCIs
• Remote switch for simple ON/OFF control of several components at the same time*
*Remote switch sold separately

Model #	Description
PE25065RC	MultiWave® ECS System with 60 A Load Center, Expansion Module

Ratings	
Load Center Rating	60 A, 120/240 VAC or 120/208 VAC, Single Phase
Input Voltage	120-240 VAC 50/60 Hz
Circuit 1	
Resistive	20 A
Motor	80 LRA @120/240 VAC; 17 FLA @120/240 VAC
Tungsten	5 A
Circuit 2-5	
Resistive	15 A
Motor	60 LRA @120/240 VAC; 10 FLA @120/240 VAC
Tungsten	5 A
Enclosure Dimensions H x W x D	16.875" x 10.875" x 4.75" (428.6 mm x 276.2 mm x 120.7 mm)
Knockout Dimensions	
Bottom	(1) 1 ⅛" diameter hole, (6) combination ½" - ¾", (3) combination ¾" - 1"
Left	(2) combination ½" - ¾"
Back	(1) combination ¾" - 1
Right	(1) 1 ¾" x 2 ¾" for mounting switches or GFCI
Warranty	2-Year limited

INTERMATIC®

PE35065RC

MultiWave® ECS Plus System
PE35065RC

This system includes the MultiWave ECS, two PE24VA
Intermatic Valve Actuators and an upgraded 80 A Load Center with 8 breaker base.

APPLICATIONS
 • Heater Thermostat Control • Motor Control • Pump Control

FEATURES
• Eight breaker spaces
• Controls 5 circuits
• Controls 4 actuator ports (2 actuators included), 2 for pool to spa valve rotation, 1 for water feature valve rotation and 1 for solar applications
• Controls 2 heater circuits
• USB port for ease of upgrading firmware
• Load center with eight position 80 A breaker base
• Load center dead front has four knockouts for switches and GFCIs
• Remote switch for simple ON/OFF control of several components at the same time*
*Remote switch sold separately

Model #	Description
PE35065RC	MultiWave® ECS System with 80 A Load Center, Expansion Module and Two Valve Actuators

Ratings	
Load Center Rating	80 A, 120/240 VAC or 120/208 VAC, Single Phase
Input Voltage	120-240 VAC 50/60 Hz
Circuit 1	
Resistive	20 A
Motor	80 LRA @120/240 VAC; 17 FLA @120/240 VAC
Tungsten	5 A
Circuit 2-5	
Resistive	15 A
Motor	60 LRA @120/240 VAC; 10 FLA @120/240 VAC
Tungsten	5 A
Enclosure Dimensions H x W x D	22.875" x 14.875" x 4.75" (581 mm x 377.8 mm x 120.7 mm)
Knockout Dimensions	
Bottom	(1) 1 ⅛" diameter hole, (6) combination ½" - ¾", (4) ½", (2) combination 1 ⅛" - 1 ⅜" - 1 ¹¹⁄₁₆"
Left	(2) combination ½" - ¾"
Back	4) combination ¾" - 1", (2) combination ¾" - 1"
Right	(1) 1 ¾" x 2 ¾" for mounting switches or GFCI
Warranty	2-Year limited

PE30065RC

MultiWave® Basic with 80 A Load Center
PE30065RC & PE30065RCT3

A wireless electronic controller for pool or spa automation. Retrofit existing mechanical timers or install with new construction. Has an 80 A load center.

APPLICATIONS
 • Heater Thermostat Control • Motor Control • Pump Control

FEATURES
• Eight breaker spaces
• Controls 5 circuits
• Controls pumps, lights, cleaners and heaters
• Operates single, two and Pentair® IntelliFlo® and IntelliPro® variable-speed pumps
• 24-hour timing with 3 ON/OFF events per circuit
• Includes receiver, wireless remote, water and air temperature sensors, (3) AA batteries, equipment labels, flathead screwdriver, raintight enclosure, raintight cap and mount for remote mounting antenna
• See MultiWave ECS and ECS Plus Systems for additional control options
• Type 3R indoor/outdoor metal load center
• Four knockouts for GFCIs and switches

Model #	Description
PE30065RC	24-Hour MultiWave® Basic Control , 5-Circuit, 80 A Load Center, Type 3R Metal Enclosure
PE30065RCT3	24-Hour MultiWave® Basic Control , 5-Circuit, 80 A Load Center, 300 W Transformer, Type 3R Metal Enclosure

Ratings	
Load Center Rating	80 A, 120/240 VAC or 120/208 VAC, Single Phase
Input Voltage	120-240 VAC 50/60 Hz
Circuit 1	
Resistive	20 A
Motor	80 LRA @120/240 VAC; 17 FLA @120/240 VAC
Tungsten	5 A
Circuit 2-5	
Resistive	15 A
Motor	60 LRA @120/240 VAC; 10 FLA @120/240 VAC
Tungsten	5 A
Transformer	
Input Voltage	120 VAC, 60 Hz
Output Voltage	12, 13, 14 VAC
Enclosure Dimensions H x W x D	22.875" x 14.875" x 4.75" (581 mm x 377.8 mm x 120.7 mm)
Knockout Dimensions	
Bottom	(1) 1 ⅛" diameter hole, (6) combination ½" - ¾", (4) ½", (2) combination 1 1/8" - 1 3/8" - 1 11/16"
Left	(2) combination ½" - ¾"
Back	(4) ½", (2) combination 1 ⅛" - 1 ⅜" - 1 ¹¹⁄₁₆"
Right	(1) 1 ¾" x 2 ¾" for mounting switches or GFCI
Warranty	2-Year limited

PE653

MultiWave® 5-Circuit Wireless Receiver
PE653

FEATURES
- Ideal addition to an existing enclosure installation
- Connects with PA122 water/solar temperature sensor and 178PA28A air sensor
- Communicates with pumps, cleaners, heaters and lights
- Ideal for upgrading mechanical timers
- 2-year warranty

Model #	Description
PE653	MultiWave® 5-Circuit Wireless Receiver

PE953

MultiWave® Wireless Remote
PE953

FEATURES
- On-demand control of MultiWave functions and other devices
- Backlit display shows time of day, equipment status, water and air temperatures and ON/OFF schedules
- Water-resistant
- Includes 3 AA batteries and equipment labels
- 2-year warranty

Model #	Description
PE953	Wireless Remote, MultiWave systems

PA122

Water/Solar Temperature Sensor
PA122

FEATURES
- Monitors pool/spa water temperature to control conventional gas or electric heating
- Monitors water temperature for solar heating/cooling
- 1-year warranty

Model #	Description
PA122	Water/Solar Temperature Sensor, 10k OHM, For MultiWave systems

178PA28A

Freeze Probe Kit
178PA28A

FEATURES
- Monitors outside air temperature
- Protects pool/spa equipment and plumbing
- Perfect for below-freezing outdoor environments
- 1-year warranty

Model #	Description
178PA28A	Freeze Probe Kit, 10k OHM, For MultiWave systems

INTERMATIC®

P4043ME

PE140

PE24VA

Valve Actuator Controls
P4043ME

This switching device is most suited for controlling electronic valve actuators which direct the flow of water to water features, fountains, slides, etc. It can also be used with a spring wound timer or simple switch to control fountains or other aquatic features.

APPLICATIONS
• Valve Control

FEATURES
• Easily snaps into most existing Intermatic enclosures with available mechanism support bracket
• Controls up to three valve actuators (simultaneous rotation)
• Switches heater thermostat HIGH/LOW
• Remote control capabilities*

Switch not included

Model #	Description
P4043ME	Valve Actuator Control - Mechanism Only
PE140	Valve Actuator Control, Type 3R Metal Enclosure

Ratings	
Input Voltage	120/240 VAC, 50/60 Hz
Valve Actuator Supply	24 VAC, 40 VA
Warranty	1-Year limited

24-Volt Valve Actuator
PE24VA

Designed with quality in mind, Intermatic's 24-Volt valve actuators provide reliable control of 2-way and 3-way diverter valves for pool/spa combinations and water features. The water flow can be altered for specific applications through the adjustable cam, which rotates diverter valves to multiple degree settings. The cam settings can be easily adjusted by simply removing the lid. These valve actuators are compatible with all pool/spa valves currently offered in the industry and will retrofit into all pool/spa control systems.

APPLICATIONS
• Valve Control

FEATURES
• Reliable control of 2-way and 3-way diverter valves
• Easy-to-adjust cam rotates valves to multiple settings
• Compatible with all pool/spa valves and controls

Model #	Description
PE24VA	24-Volt Valve Actuator

Ratings	
Valve Actuator Supply	24 VAC, 60 Hz
Amp	0.75 A
Cord Length	25 ft
Warranty	1-Year limited

PE24GVA

Next Gen 24-Volt Valve Actuator
PE24GVA

The Intermatic® PE24GVA valve actuator is designed for today's pool automation systems. It is fully adjustable with a simplified tool-less setup. This valve actuator was designed specifically with the installers and pool owners in mind. The spin and set cams make it a breeze to work with. These valve actuators are compatible with all pool/spa valves currently offered in the industry and will retrofit into all pool/spa control systems.

APPLICATIONS
• Valve Control

FEATURES
• Reliable control of 2-way and 3-way diverter valves
• Easy-to-adjust cam rotates valves to multiple settings
• Compatible with all pool/spa valves and controls

Ratings	
Valve Actuator Supply	24 VAC, 60 Hz
Amp	0.75 A
Cord Length	25 ft
Warranty	1-Year limited

Model #	Description
PE24GVA	24-Volt Valve Actuator

INTERMATIC®

PF1112T

PF1222TB1

Control System with Freeze Protection and Power or Load Center
PF1100 & PF1200 SERIES MECHANICAL PANELS

Protects pool/spa equipment against freeze damage.

APPLICATIONS
• Protection • Pump Control

FEATURES
• GFCI and switch mounting capabilities
• Turns pump and heater ON when outdoor temperature drops below user-adjustable setpoint on thermostat
• Heavy-duty Type 3R metal indoor/outdoor enclosure

Ratings	
Power Center Rating	120/240 VAC, 60 Hz, Single-Phase
Load Center Rating	60 A Max, 120-240 VAC, Single Phase 60 Hz
Operating Voltage	240 VAC, 60 Hz
Switch Type	DPST
Resistive	17 A, 240 VAC, 60 Hz
Motor	3 HP, 240 VAC, 60 Hz
Thermostat Range	33°F - 42°F (0.5°C - 5.6°C)
Power Center Dimensions H x W x D	12" x 12.875" x 4.25" (304.8 mm x 327 mm x 108 mm)
Load Center Dimensions H x W x D	16.875" x 10.875" x 4.75" (428.6 mm x 276.2 mm x 120.7 mm)
Warranty	1-Year limited

Model #	Description	Heater Protection
PF1112T	Freeze Protection Control Center with Timer and Thermostat for 240V Applications, Type 3R Metal Enclosure	No
PF1202T	Freeze Protection Control Center with 2 Timers and Thermostat for 240V Cleaner Applications, Type 3R Metal Enclosure	No
PF1222TB1*	Freeze Protection 4/8 Breaker Base Panel with 2 Timers and Thermostat for 240V Cleaner Applications, Heater Protection, Type 3R Metal Enclosure	Yes

*Four breaker spaces and heater protection
Note: Wiring devices may be installed in these Load Centers with the use of Standoffs.

PF1102M

PF1102T

Single-Circuit Freeze Protection Controls
PF1100 MECHANICAL SERIES

Protects pool/spa equipment against freeze damage. Turns pump and heater on when the outdoor temperature drops. Integrated adjustable thermostat.

APPLICATIONS
• Protection • Pump Control

FEATURES
• Turn pump and heater ON when outdoor temperature drops below user-adjustable setpoint on thermostat
• Models with or without mechanical timer mechanism
• Heavy-duty metallic rainproof enclosure
• For use with pool and spa, pond, fountain or marina type applications

Ratings	
Operating Voltage PF1102 PF1103	240 VAC, 60 Hz 120-240 VAC, 60 Hz
HP PF1102 PF1103	3 HP @ 240 VAC, 60 Hz 1 1/2 HP @ 120 VAC, 3 HP @ 240 VAC, 60 Hz
Thermostat Range	33°F - 42°F (0.5°C - 5.6°C
Enclosure Dimensions H x W x D	9.625" x 5.75" x 3.625" (244.5 mm x 146.1 mm x 92.1 mm)
Knockout Dimensions Bottom Left Back Right	(2) ½" - ¾" (1) ½" - ¾" (4) ½" - ¾", (1) ½" - ¾" (1) ½" - ¾"
Warranty	1-Year limited

Model #	Description
PF1102M*	Freeze Protection Thermostat only for 240V Applications, Mechanism
PF1102	Freeze Protection Thermostat only for 240V Applications, Type 3R Metal Enclosure
PF1103	Freeze Protection Thermostat only for 120/240V Applications, Type 3R Metal Enclosure
PF1102MT	Freeze Protection Timer with Thermostat for 240V Applications, Mechanism
PF1103MT*	Freeze Protection Timer with Thermostat for 120/240V Applications, Mechanism
PF1102T	Freeze Protection Timer with Thermostat for 240V Applications, Type 3R Metal Enclosure
PF1103T	Freeze Protection Timer with Thermostat for 120/240V Applications, Type 3R Metal Enclosure

*Neutral must be installed

INTERMATIC®

Outdoor Radio Receivers
RC600 SERIES

Control loads with the receiver mounted ON/OFF button or wirelessly via a remote transmitter. For indoor/outdoor use. Turn your pool lights on from any spot around your house.

APPLICATIONS
• Motor Control • Pump Control • Lighting

FEATURES
• Respond to handheld transmitter (provided separately below)
• For indoor/outdoor use
• Handle a variety of switching applications
• Enable connected loads to be turned ON/OFF remotely
• Maximum range 100 ft
• Beige outdoor grade plastic enclosure

RC613R   RC613

Model #	Description
RC613	Radio Receiver with manual ON/OFF button
RC613L	Radio Receiver with manual ON/OFF button -- (3) 36" Long Leads
RC613R	Heavy-Duty Receiver Module with Manual ON/OFF button

Ratings	
RC613/RC613L	
Switch Type	SPST
Resistive	20 A, 120 VAC, 60 Hz
Tungsten	10 A, 1200 W, 60 Hz
Motor	1 HP, 120 VAC, 60 Hz
RC613R	
Switch Type	DPST
Resistive	30 A, 120/240 VAC, 60 Hz
Tungsten	12.5 A, 1500 W, 60 Hz
Motor	1 1/2 HP @ 120 VAC, 3 HP @ 240 VAC, 60 Hz
Enclosure H x W x D	
RC613/RC613L	4.5" x 3" x 1.75" (114.3 mm x 76.2 mm x 44.5 mm)
RC613R	8" x 4.25" x 3.375" (203.2 mm x 108 mm x 85.7 mm)
Warranty	1-Year limited

Handheld 3-Channel Radio Transmitter
RC939

Transmit signals to the RC family of radio receivers for remote ON/OFF control. Controls shared pool/spa equipment including booster pump. Operates up to three RC600 series receivers.

APPLICATIONS
• Motor Control • Pump Control • Lighting

FEATURES
• Operates up to three RC600 Series receivers
• Range 100 ft.
• Replaceable battery

RC939

Model #	Description	Range	Battery
RC939	Handheld 3-Channel Radio Transmitter	100 ft*	CR2032

*Range depends on many factors including age of battery, proximity of large metal objects, location of receiver, and environmental conditions at the time of transmission.

Ratings	
Dimensions H x W x D	2.5" x 1.25" x ½" (63.5 mm x 31.8 mm x 12.7 mm)
Warranty	1-Year limited

ACCESSORIES

For accessories and replacement parts please see pages 184-185.

RC2343PT

Multifunction Air Switches with 24-Hour Timer
RC2000 SERIES

Control ON/OFF timing safely, without electricity, near the water.
APPLICATIONS
•Pump Control • Motor Control
FEATURES
• Remote control for one or two separate loads
• Multiple ON/OFF settings per day
• Flexible air hose (RC117 sold separately) enables operation up to 100 feet
• Type 3R plastic indoor/outdoor enclosure
• Requires a neutral

Ratings	
Input Voltage	120-240 VAC, 60 Hz
Switch Type	4-Function
Switch Ratings (Each Circuit)	
Resistive	20 A, 120/240 VAC, 60 Hz
Motor	1 HP, 120 VAC, 60 Hz, 2 HP, 240 VAC, 60 Hz
Enclosure H x W x D	9 ⅝" x 5 ¾" x 3 ⅝" (244.5 mm x 146.1 mm x 92.1 mm)
Warranty	1-Year limited

Model #	Description
RC2343PT	One or Two Speed Pump and Blower OM/OFF with Timer

RC4G

RC127B

Air Switches and Accessories
RC SERIES

Used for air controlled equipment
APPLICATIONS
• Motor Control • Pump Control
FEATURES
• Replaces existing buttons and accessories

RC117

RC510

Model #	Description
RC4G	1" Gunite Air Button - 100 ft Range
RC6F	1 ½" Fiberglass Air Button - 100 ft Range
RC117	Air Tubing - 75 ft Length
RC127B	Air Tubing and Air Button (RC4G) - 75 ft Length
RC150	Air Tubing - 500 ft Length
RC510	Air Tubing Coupler (pack of 10)

ACCESSORIES

INTERMATIC®

PB873MKZ   PB913N/PB914N   PB913N66/PB914N66   PB913N84/ PB914N84

Panel Mount Timers
PB SERIES

These timers provide automatic control for pumps, cleaners and other types of loads. Timers have three-way mounting; flush in round opening, raised in rectangular opening or on base. Quick connect terminals for easy installation.

APPLICATIONS
• Motor Control • Pump Control

FEATURES
• Automated control for pumps, cleaners and other types of loads
• 3 different mounting methods
• Quick connect terminals for easy installation
• 24-hour timing cycle - MIN ON time 1-hr, MAX ON time 23-hr, 30-min intervals
• 7-day timing cycle - 6 to 162-hr ON time, 3-hr intervals

Model #	Description	Input Voltage	No. of Trippers	Manual Override
Without Manual Override				
PB873MKZ	7-Day 120V Mechanical Panel Mount Timer, 56 Trippers	120 VAC, 60 Hz	56	No
PB913N	24-Hour 120V Mechanical Panel Mount Timer, 48 Trippers	120 VAC, 60 Hz	48	No
PB914N	24-Hour 208-277 V Mechanical Panel Mount Timer, 48 Trippers	208-277 VAC, 60 Hz	48	No
With Manual Override				
PB913N66	24-Hour 120V Mechanical Panel Mount Timer with Manual Override, 48 Trippers	120 VAC, 60 Hz	48	Yes
PB914N66	24-Hour 208-277 V Mechanical Panel Mount Timer with Manual Override, 48 Trippers	208-277 VAC, 60 Hz	48	Yes
PB913N84	24-Hour 120V Mechanical Panel Mount Timer with Manual Override, 4 Trippers	120 VAC, 60 Hz	4	Yes
PB914N84	24-Hour 208-277V Mechanical Panel Mount Timer with Manual Override, 4 Trippers	208-277 VAC, 60 Hz	4	Yes

Ratings	
Switch Type	SPST
Resistive	20 A (16 A*), 120-277 VAC, 60 Hz
Tungsten	1250 W, 125 VAC, 60 Hz
Pilot Duty	360 VA, 120-240 VAC, 60 Hz
Motor	1 HP, 16 FLA @ 120 VAC, 60 Hz, 2 HP, 12 FLA @ 240 VAC, 60 Hz
Quick Connect Terminals	(4) 1/4" male (2) for load (2) for independent clock motor, Terminals
Dimensions H x W x D	3.333" x 2.813" x 1.953" (84.6 mm x 71.4 mm x 49.6 mm)
Warranty	1-Year limited

*(16A) CSA

ACCESSORIES

For accessories and replacement parts please see page 184-185.

Protect it all with the PS3000 Surge Protective Device

Did you know most power surges are caused by the on-and-off cycling of typical home appliances, not by adverse weather conditions? Homeowners rely on surge strips to protect expensive home electronics, such as computers, high definition TV's and surround sound systems, but what about expensive pool equipment? The easy-to-install PS3000 Surge Protective Device is perfect for pool and spa equipment. It is typically installed at the pool electrical panel and uses state-of-the-art TPMOV® surge technology to protect all equipment downstream of the connection point.

SCAN TO LEARN MORE

Don't let your pool season plans fall into the deep end because of an unexpected power surge event – invest in the PS3000 Surge Protective Device from Intermatic.

INTERMATIC®

Pool and Spa Surge Protective Device Type 1 or Type 2
PS3000

Mount the PS3000 to your pool electrical panel to protect all your expensive pool and spa equipment against power surges. Designed with trusted, state-of-the-art TPMOV® (Thermally Protected Metal Oxide Varistor) surge protection technology to eliminate the potentially hazardous failure modes that are commonly associated with standard MOV technology.

APPLICATIONS
• Distribution Panel • Surge Protection

FEATURES
• TPMOV® Surge Protection Technology
• UL Listed to ANSI/UL 1449, 4th edition
• 120/240 VAC single-phase SPD for use on a variety of pool equipment
• Green LED protection indicator
• Type 4X watertight and UV resistant plastic enclosure
• Three modes of protection
• Includes (3) 18", #10 AWG tinned copper leads
• 3-year warranty
• $7,500 connected equipment warranty

PS3000

Model #	Wiring Configuration
PS3000	L1, L2, L/N-G

Ratings	
Service Voltage	120/240 VAC Single-Phase
SPD Type	1, 2
Nominal Discharge Current (In)	20 kA
SCCR*	100 kA
Max Surge Current	50 kA
Voltage Protection Rating (VPR)	
L-N/G	700
L-L	1200
MCOV**	
L-N	150
L-L	300
Dimensions H x W x D	3.875" x 1.625" x 4.1875" (98 mm x 41 mm x 106.4 mm)
Warranty	3-Year limited

WIRING DIAGRAMS

120/240 VAC

Service Transformer Secondary — L1 (black) / Neutral (white) / L2 (black) — Service Equipment Overcurrent device

PS3000

Typical distribution panel installation

181

Electronic Panel Mount Timers
PB300 SERIES

These compact Electronic Timers are specially suited for applications where equipment needs to be cycled ON and OFF up to 8 times per day, and where automatic operation of the equipment requires occasional override by someone other than a qualified service professional. They offer rugged construction, resistance to surges and humidity, operate between wide temperature extremes and come with a 5 year service life replaceable lithium battery. A light indicator illuminates when the timer is in the ON position. Select feature allows timers to be continuously ON, OFF or in AUTO mode.

APPLICATIONS
• Motor Control • Pump Control

FEATURES
• 24-hour and 7-day models
• Turn equipment ON/OFF up to 8 times per day
• Select feature enables timers to be continuously in ON/OFF/AUTO mode
• Rugged construction
• Beige, plastic enclosure
• 3-year service life replaceable lithium battery

PB313E

PB373E

Model #	Resistive/Supply Voltage	HP/FLA
24 hour		
PB313E	16 A, 120 VAC, 50/60 Hz	1/2 HP, 8 FLA @ 120 VAC, 50/60 Hz
PB313EK*	16 A, 120 VAC, 50/60 Hz	1/2 HP, 8 FLA @ 120 VAC, 50/60 Hz
PB314E	16 A, 240 VAC, 50/60 Hz	1/2 HP, 8 FLA @ 240 VAC, 50/60 Hz
PB314EK*	16 A, 240 VAC, 50/60 Hz	1/2 HP, 8 FLA @ 240 VAC, 50/60 Hz
7 day		
PB373E**	20 A, 120 VAC, 50/60 Hz	1 HP, 16 FLA @ 120 VAC, 50/60 Hz
PB374E**	20 A, 240 VAC, 50/60 Hz	2 HP, 12 FLA @ 240 VAC, 50/60 Hz

*EK models are replacement kits for PB Series timers.
**Output voltage is same as supply.

Ratings	
Switch Type	
24-Hour Model	SPDT
7-Day Models	SPST
Dimensions **H x W x D**	2.375" x 2.375" x 1.0625" (60.3 mm x 60.3 mm x 27 mm)
Warranty	1-Year limited

Electronic Time Switch Mechanisms
P7103ME

These digital time switches allow multiple ON/OFF cycles within a 24-hour time period for up to seven days.

APPLICATIONS
• Motor Control • Pump Control

FEATURES
• Turn equipment ON/OFF up to 8 times per day
• To-the-minute programming accuracy
• Dual-voltage input (3-wire)
• Timer override
• Select feature enables timers to be continuously in ON/OFF/AUTO mode
• 3-year service life, replaceable lithium battery

P7103ME

Model #	Description
P7103ME	7-Day Electronic Time Switch Mechanism - Mechanism Only

*Standard mechanism fits in all standard Intermatic enclosures and power and load centers.

Ratings	
Input Voltage	120 VAC, 50/60 Hz
Switch Type	DPST
Resistive	20 A, 120/240 VAC, 50/60 Hz
Tungsten	12.5 A (1500 W), 120 VAC, 50/60 Hz
Motor	1 1/2 HP @ 120 VAC, 50/60 Hz; 3 HP @ 240 VAC, 50/60 Hz
Dimensions **H x W x D**	9.4375" x 6.5" x 3.6875" (239.7 mm x 165.1 mm x 93.7 mm)
Warranty	1-Year limited

P1251P

Two-Circuit Portable Outdoor Timers
P1200 SERIES

Use these convenient plug-in timers instead of hard-wired controls. They offer plug-in receptacles for convenience and ease of use. They have built-in GFCI protected circuits.

APPLICATIONS
• Landscape Lighting • Motor Control • Pump Control

FEATURES
• 24-hour with 23 ½-hour MAX ON time
• Timed circuit controlled by timer
• Timed and photocontrol circuit controlled by photocell and timer (P1251P only)
• Built-in GFCI protected circuits and three-prong grounded plug for time switch supply
• Type 3R plastic indoor/outdoor enclosure
• 2 ON/OFF trippers standard
• Accepts up to 12 sets of trippers

Ratings	
Resistive	15 A, 1800 W, 60 Hz
Tungsten	15 A, 1800 W, 60 Hz
Motor	1 HP, 15 FLA, 90 LRA @ 120 VAC
Dimensions H x W x D	9.375" x 5.5" x 4" (238.1 mm x 139.7 mm x 101.6 mm)
Cord	3 wire, outdoor grade, 24" with grounded plug
Warranty	1-Year limited

Model #	Photocontrol	Rect/Plug
P1251P	Yes	5-15
P1261P	No	5-15

ENCLOSURES

2T2485GA

2T2502GA

Model #	Description
2T2483GR	Flush Mount Metal, Type 1
2T2485GA	Case-Outdoor, Type 3R Metal, Beige
2T2502GA	Case-Outdoor, Type 3R Plastic, Beige
2T2503A	Case-Outdoor, Type 3R Plastic, Beige

2T2485GA Dimensions

2T2502GA Dimensions

INTERMATIC®

ACCESSORIES

Model #	Description
119--00085	Transformer - 100 W, 120 V, 60 Hz
124--00066	Insulator for 3-Circuit Timers
124--00139A	Insulator breaker base 4 pole
124-00140A	Insulator breaker base 8-pole
107HB254	Green (ON) tripper for HB11, HB1113RC, HB1116R, HB3116R8, P1121 (Outdoor)
107HB255	Red (OFF) tripper for HB11, HB1113RC, HB1116R, HB3116R8, P1121 (Outdoor)
124T1952	Insulator (Black) for Double-Pole Time Switch (T103, T104, T105, T173, T174, T175, T176, T185, WH40)
124T2411A	Insulator for Mechanical Time Switches - 10 Pack
133RC1144	Pressure Sensing Momentary Air Switch - 3 A
143RC140	Relay - 4-Function Stepper
143RC151	Relay - DPST, 3 HP, 24 VAC
143T145A	Relay - DPST, 3 HP, 24 VDC
119T267	Transformer - 100 W, 120 V, 60 Hz
119T340	Transformer - 300 W, 120 V, 60 Hz
143T135	Relay - DPST, 3 HP, 240 VAC
143T136	Relay - DPST, 3 HP, 120 VAC
156PB10398A	Trippers - Clip, ON/OFF, 24-Hr for PB and PF1100 Series
156T1978A	Extra/replacement trippers 1 ON and 1 OFF
156T4042A	Fireman Switch
156T6738A	Orange Vinyl Cushion/Insulator for Time Switch Manual Lever, 10 pack
178PA28A	Freeze Probe Kit, 10k OHM, For MultiWave systems
178T24	Freeze Protection Thermostat
178T26A	TSTAT ASY-FREEZE PROTECT (contains 178T24) For PF1xxx Freeze Protection units
21T156A	Spacer-Standoff, 3" long - 4 pack
21T166A	Spacer-Standoff, 3" long - 2 pack
22T904A	Breaker Hold-Down Kit (If breaker is used as a backfed device)
6LV1352	Light Shield Accessory for EK4036S, EK4436SM, K4000 Series Button Photocontrols
PA102	Switch Assembly with Thermostat and Relay
PA114	Mounting Bracket for Pool/Spa Light Junction Boxes
PA115	Trippers - OFF - 25 pack
PA117	Replacement Latch Kit
PA119	Mounting Bracket for PJBX52100 COMBOConnect®
PA122	Water/Solar Temperature Sensor, 10k OHM, For MultiWave systems
PE953	Wireless Remote, MultiWave systems
WG1570-10	WG1570-10
WG1573-10D	208-277 VAC, 60 Hz Motor for T102, T104, T106, T172, T174, WH40
WP1000C	Plastic In-Use Weatherproof Cover, Single-Gang, Vrt, 2.25" Clear
WP5100C	Extra-Duty Plastic In-Use Weatherproof Cover, Single-Gang, Vrt/Hrz, 2.75" Clear

PA119   22T904A

143T135   143RC140

PA115   156PB10398A

178T24   119--00085

Enclosure Solutions

Protect timer controls and various styles of receptacles from the elements with code-compliant outdoor enclosures. Our die-cast, low-profile and plastic weatherproof covers offer rugged protection in all types of applications, including industrial, commercial and residential.

Type 1 Enclosures

Install Type 1 enclosures in indoor applications for a secure, finished look. These heavy-duty steel solutions provide a tidy access point for essential timer controls and can be locked to prevent unauthorized access.

Type 3R Enclosures

Choose Type 3 enclosures in outdoor applications for lasting protection against the elements all year round. These solutions can be used with mechanical and electronic timers to support a variety of scheduling needs.

Built-in Knockouts

Save time during installation by using one of the built-in knockouts found throughout our enclosures. These thoughtfully placed spaces can be quickly punched out to run wiring and tailor the enclosure to meet project requirements.

Specialty Mounting

Ensure a perfect fit with a selection of mounting brackets. These solutions help panel mount standardized electronic or mechanical timers.
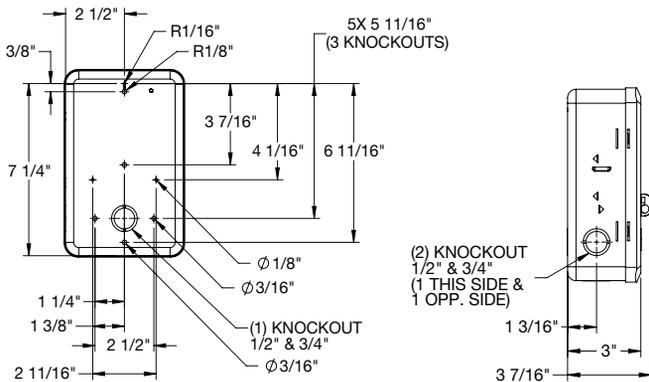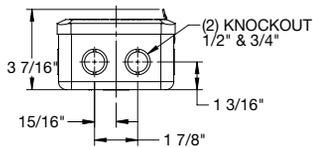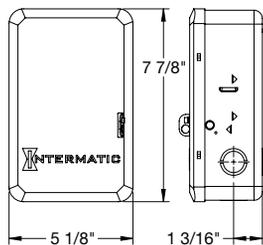
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ENCLOSURE DIMENSIONS

2T2040GA

Indoor Metal Enclosure
TYPE 1 - METAL

These drawn steel, powder coated enclosures offer a spring style hasp to ensure the enclosure remains closed and allows for a lock to be used to prevent unauthorized access to the controls.

FEATURES
- Drawn steel with gray powder coat paint finish
- Combination ½" and ¾" nominal knockouts with one on back and each side of enclosure, and two on bottom
- Convenient mounting holes
- Lockable hasp holds door closed

Model #	Color	Dimensions H x W x D
2T2040GA	Gray	7 ⅞" x 5 ⅛" x 3 ⁷⁄₁₆" (200 mm x 130.2 mm x 87.3 mm)

Accepts a wide range of Intermatic Time Switches, including most T100, T170, T1900, T2000, C8800, EH, ET1100, ET1700, ET2000, ET8000, ET90115, and ET90215 Series units.
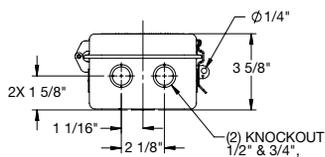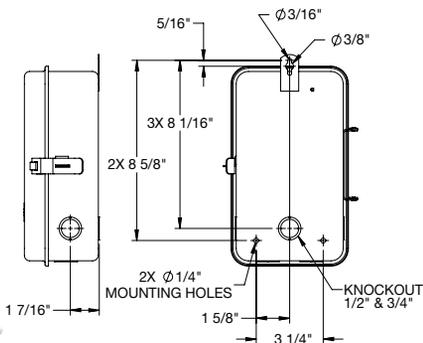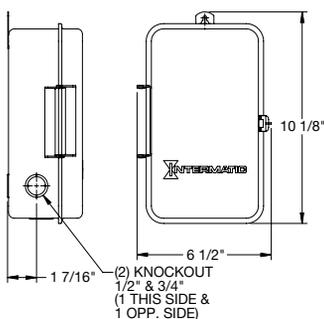
ENCLOSURE DIMENSIONS

2T511GA

2T2485GA

Outdoor Metal Enclosures
TYPE 3R RAINPROOF - METAL

These drawn steel, powder coated enclosures keep controls protected from rain, sleet, snow, and ice. They have a swinging hasp that allows for a lock to be used to prevent unauthorized access to the controls.

FEATURES
- Drawn steel with gray or beige powder coat paint finish
- Combination ½" and ¾" nominal knockouts with one on back and each side of enclosure, and two on bottom
- Separate grounding terminal
- Convenient mounting holes
- Lockable hasp holds door closed

Model #	Color	Dimensions H x W x D
For Most Mechanical and Electronic Controls		
2T511GA*	Gray	10 ⅛" x 6 ½" x 3 ⅝" (257.2 mm x 165.1 mm x 92.1 mm)
2T2485GA*	Beige	10 ⅛" x 6 ½" x 3 ⅝" (257.2 mm x 165.1 mm x 92.1 mm)
For Carry-Over Models		
2T2331GA**	Gray	10 ⅛" x 6 ½" x 3 ¹¹⁄₁₆" (257.2 mm x 165.1 mm x 93.7 mm)

*Available for T100, T170, T1900, T2000 ,C8800, EH, ET1100, ET1700, ET2000, ET8000, ET90115, and ET90215 Series units.
**Available for T100CR, T170CR, T1400, and T1800 Series units.

Outdoor Plastic Enclosures
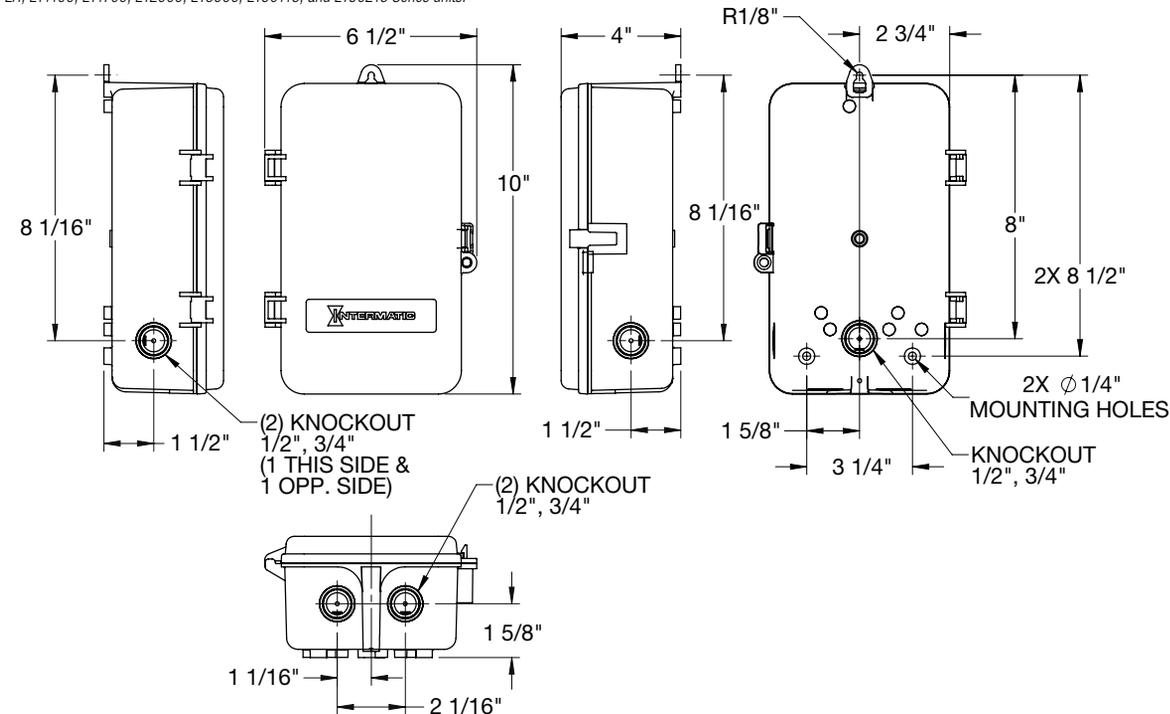### TYPE 3R RAINPROOF - PLASTIC

These heavy-duty industrial grade plastic enclosures include molded mounting brackets for easy installation and have a lockable hasp to prevent unauthorized access to the controls. These plastic enclosures are non-corroding, and are great for applications in high moisture or dusty locations.

FEATURES

• Heavy-duty industrial grade plastic

• Perfect for high humidity and dusty environments

• Combination ½" and ¾" nominal knockouts with one on back and each side of enclosure, and two on bottom

• Lockable hasp holds door closed

Model #	Color	Dimensions H x W x D
2T2500GA	Gray	10" x 6 ½" x 4" (254 mm x 165.1 mm x 101.6 mm)
2T2502GA	Beige	10" x 6 ½" x 4" (254 mm x 165.1 mm x 101.6 mm)
2T2926A	Gray	10" x 6 ½" x 4" (254 mm x 165.1 mm x 101.6 mm)

Accepts a wide range of Intermatic Time Switches, including most T100, T170, T1900, T2000, C8800, EH, ET1100, ET1700, ET2000, ET8000, ET90115, and ET90215 Series units.

2T2500GA   2T2926A

(2) KNOCKOUT 1/2", 3/4"
(1 THIS SIDE & 1 OPP. SIDE)

(2) KNOCKOUT 1/2", 3/4"

R1/8"   2 3/4"

2X 8 1/2"

2X ⌀ 1/4" MOUNTING HOLES

KNOCKOUT 1/2", 3/4"

Case-Outdoor, Type 3R Plastic, Gray
E200

FEATURES

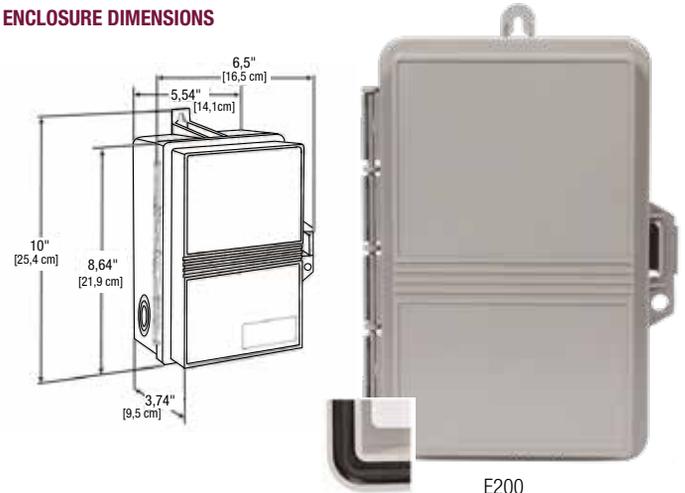• Type 3R Outdoor enclosure

• High impact all-plastic enclosure eliminates rust and corrosion

• Rugged heavy duty construction

• Provision for a padlock seal

• Five combinations of ½" and ¾" knockouts

ENCLOSURE DIMENSIONS

Model #	Color	Dimensions H x W x D
E200	Gray	8 ⁴¹⁄₆₄" x 6 ½" x 3 ¾" (219.45 mm x 165 mm x 95 mm)

E200

2T308A

Flush Mount Metal Enclosures
TYPE 1 RATED
These enclosures are great for concealing the controls in the wall to provide a finished, flush appearance. Enclosures are made of heavy-duty steel and also include a locking mechanism to prevent unauthorized access to the controls.
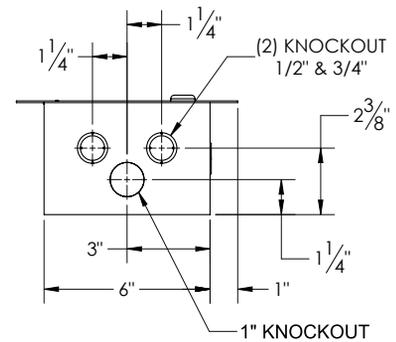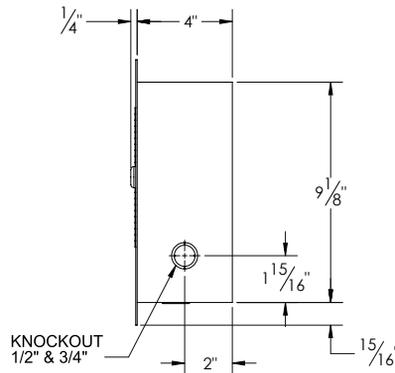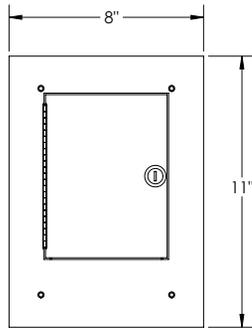
FEATURES
- Heavy-duty construction with hinged door
- Lockable door with key
- Various mounting holes

Model #	Color	Dimensions H x W x D
Riveted Mounting Bracket		
2T2365GA*	Gray	9 ⅛" x 6" x 4 ⅛" (231.8 mm x 152.4 mm x 104.8 mm)
Adjustable Bracket Mount Locations		
2T308A**	Gray	9 ⅛" x 6" x 4 ⅛" 231.8 mm x 152.4 mm x 104.8 mm

*Available for ET1100, ET1700, ET2000, ET8000, EH, ET90115, and ET90215 series units.
**Available for T100, T170, T1900, T2000, and C8800 series units.

Enclosure Dimensions

Mounting Bracket for Intermatic Standardized Timer Mechanisms
22T338GR
This bracket has been designed to be used when mounting the controls into areas where an enclosure will not be needed or when mounting the control into another form of enclosure. The bracket also accepts a wide range of Intermatic controls

FEATURES
- Ideal for panel mounting mechanical or electronic time switch controls

Model #	Description	Dimensions H x W x D
22T338GR	Mounting Bracket for Intermatic Standardized Timer Mechanisms	6" x 5" x 2" (152.4 mm x 127 mm x 50.8 mm)

Accepts a wide range of Intermatic Time Switches, including most T100, T170, T1900, T2000, C8800, ET1100, ET1700, ET2000, ET8000, ET90115, and ET90215 series units.

22T338GR

Intermatic®

ELECTRICAL DISTRIBUTION PRODUCT OFFERING FOR MEXICO
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Para satisfacer el mercado Mexicano, Intermatic ofrece los siguientes productos a distribuidores eléctricos industriales. Los productos cumplen con los requisitos de seguridad y calidad exigida por el mercado Mexicano y están respaldados por certificación NOM. Para información detallada del producto, por favor referirse a la sección y pagina indicada. Intermatic continua expandiendo su oferta de productos para el mercado Mexicano, por favor contactar a nuestros representantes de ventas para productos no listados.

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FM1D20A-240MX	31

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Visit Intermatic.com for more information.

Intermatic®

Mechanical/Electronic	Time Switch Type	24-Hour, 7-Day or 365-Day	# of Circuits	A Rating	Switch Rating	Total ON/OFF Events
Electromechanical	Auto-Voltage or Multivoltage	24-Hour or 7-Day	1	40	SPDT, DPDT	96-Events for 24-Hours/ 48-Events for Weekly with Captive Trippers
Mechanical	Panel Mount	24-Hour or 7-Day	1	21	SPDT	96-Events for 24-Hours/ 48-Events for Weekly with Captive Trippers
Mechanical	Flush, Surface or DIN Rail Mount	24-Hour or 7-Day	1	21	SPDT	96-Events for 24-Hours/ 48-Events for Weekly with Captive Trippers
Mechanical	General Purpose	24-Hour	1	40	SPST, SPDT, DPDT	12
Mechanical	24-Hour with Skipper	24-Hour	1	40	SPST, SPDT, DPDT, 4PST	10
Mechanical	24 Hour with Skipper	24-Hour	1	20	SPDT	96
Mechanical	Percentage Cycle Timer	1, 3, 5, 10, 30-Minutes; 1, 4-Hours (CT1000 does not have a 4-Hour Increment)	1	20	SPST	3% to 97% Cycle Duration
Mechanical	Irrigation/Sprinkler	24-Hour with Skip-a-day Selection	1	15-25	SPDT	60
Mechanical	Compact 7-Day	7-Day	1	20	SPDT	84
Mechanical	7-Day Dial with/without Carry-over	7-Day	1	40	4PST	Different ON/OFF Program for Each Day of the Week
Mechanical	Water Heater	24-Hour	1	40	DPST	T104-20 (2 ON/OFF per Day) WH (1 ON/OFF per Day)
Electromechanical	Defrost Timer	24-Hour	1	40	SPDT, SPST	1 to 24/24-Hour Period
Mechanical	In-Wall Spring Wound	Decorator and Commercial Style	1	15	Varies	Various increments with/without "HOLD"
Mechanical	In-Wall Mechanical	24-Hour	1	20	SPST	36 (72 Captive Trippers in 20-Minute Increments)
Electronic	Auto-Voltage 120-277 VAC	24-Hour or 7-Day	1	40	SPDT, DPDT	96
Electronic	Panel Mount	24-Hour and/or 7-Day	1 & 2	16	SPDT	Various
Electronic	Flush, Surface or DIN Rail Mount	24-Hour and/or 7-Day	1 & 2	16	SPDT	Various
Electronic	24-Hour, Multivoltage	24-Hour	1 & 2	30	SPST, DPST	28
Electronic	24-Hour with Holiday, Multivoltage	24-Hour with Exceptions	1, 2 & 4	30		96+
Electronic	7-Day, Multivoltage	7-Day with Exceptions	1 & 2	30	SPST, SPDT, DPST	28
Electronic	7-Day with Holiday, Multivoltage	7-Day with Exceptions	1, 2 & 4	30		96+
Electronic	7-Day Astronomic, Multivoltage	Astronomic 7-Day	1 & 2	30	SPST, SPDT, DPST	28
Electronic	7-Day Astronomic with Holiday, Multivoltage	Astronomic 7-Day with Exceptions	1, 2 & 4	30		96+
Electronic	365-Day Advanced Control	365-Day	1, 2, 4, 8 & 16	30	SPST, SPDT, DPST, DPDT	2000+
Electronic	Water Heater	7-Day with Exceptions	1	30	SPST, DPST	42
Electronic	In-Wall	Count Down Timers in Various Increments	1	15	SPST	N/A
Electronic	In-Wall	Programmable Countdown Timer 24-Hour	1	20	Single Pole/Three Way	1
Electronic	In-Wall	Programmable 7-Day	1	15	Single Pole	7
Electronic	In-Wall	Programmable 7-Day with Astro	1	15/20	Single Pole/Three Way	40/Week

INTERMATIC®

Minimum ON/OFF Time	Temperature Input	Skip-A-Day	Carry-over	Astro	Daylight Saving Time	Product Series	Page(s)
15-Minutes for 24-Hours/ 48-Events for Weekly with Captive Trippers	No	Yes	Optional	No	No	GM40AV	50
15 Minutes for 24 Hours/48 Events for Weekly with Captive Trippers	No	No	Optional	No	No	FM1 - SERIES	47
15 Minutes for 24 Hours/48 Events for Weekly with Captive Trippers	No	No	Optional	No	No	MIL72 SERIES	48-49
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12 Minute		Yes	No	No	No	R8800/T8800 Series	57
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1 Minute	No	Yes	Yes	No	Yes	FMD - SERIES	30-33
1 Minute	No	Yes	Yes	No	Yes	FMD - A&E SERIES	30-33
1 Minute		Yes	Yes	No	Yes	ET1100	26
1 Minute		Yes	Yes	No	Yes	ET2100	24
1 Minute		Yes	Yes	No	Yes	ET1700	26
1 Minute		Yes	Yes	No	Yes	ET2700	24
1 Minute		Yes	Yes	Yes	Yes	ET8000	26
1 Minute		Yes	Yes	Yes	Yes	ET2800	24
1 Second		Yes	Yes	Yes	Yes	ET90000	22
1 Minute		Yes	Yes	No	No	EH Series	59
Varies		N/A	N/A	N/A	N/A	EI200	69
1 Second		N/A	N/A	No	No	EI400	68
1 Minute		N/A	N/A	No	No	EI500	65
1 Minute		N/A	N/A	Yes	Yes	STO1/EI600	64

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Timers | HVAC/R Solutions | Photocontrols

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