

OPERATING INSTRUCTIONS

GRASSLIN™

by Intermatic

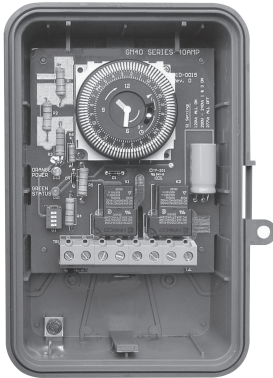
GM40 Series General Purpose Multi-Voltage Commercial DPDT Time Switch

⚠ WARNING Risk of Fire or Electric Shock

- Disconnect power at the circuit breaker(s) or disconnect switch(es) before beginning installation or servicing.
- More than one circuit breaker or disconnect switch may be required to de-energize the equipment before servicing.
- Do not use the manual off position of the timer for equipment servicing. Always disconnect the power at the circuit breaker(s) or disconnect switch(es).
- Use COPPER conductors ONLY.
- For 40 amp loads, use #8 AWG wire, rated 90°C min.
- Wire in accordance with national and local electrical code requirements.

⚠ CAUTION Risk of Damage to Timer

- Rotate timer dial clockwise only.



UL TYPE 3R Enclosure
U.S. Patent #6,563,237.1.

MAXIMUM CONTACT RATINGS PER POLE:

N.O. Contacts:

- 40A Resistive @ 120~277VAC
- 1HP, 16FLA, 90LRA @ 120VAC
- 2HP, 12FLA, 52LRA @ 208~277VAC
- 30A Ballast @ 120VAC
- 20A Ballast @ 277VAC
- 15A Tungsten @ 120VAC
- 300VA Pilot Duty 120~240VAC

N.C. Contacts:

- 30A Resistive @ 120~277VAC
- 1HP, 12FLA, 30LRA @ 120VAC
- 2HP, 10FLA, 30LRA @ 240VAC
- 2A Tungsten @ 120VAC
- 10A Ballast @ 277VAC

WIRING CONNECTIONS:

Screw box lug terminals. Up to one #8 AWG Wire.

ENVIRONMENTAL RATINGS:

Operating Temperature Range:
-40°F to 131°F (-40°C to 55°C)

Operating Humidity: 0 - 95% RH non-condensing

ENCLOSURE DIMENSIONS:

8.795" x 6.631" x 2.935" (H x W x D)

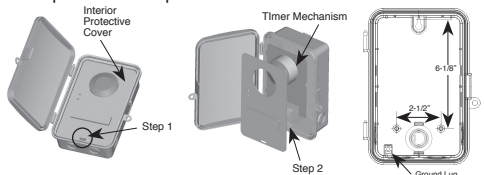
SHIPPING WEIGHT: 3 lbs.

Agency Approvals: UL Listed

INSTALLATION

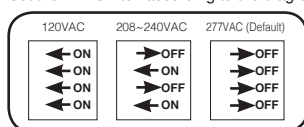
Note: For outdoor locations, raintight or wet local conduit hubs that comply with requirements of UL 514B (standard for fittings for conduit and outlet boxes) must be used.

1. Open door and then remove interior protective cover by releasing spring clip on bottom.
2. Remove timer mechanism by releasing spring clip on bottom.
3. Select knockouts to be used. Remove inner 1/2" knockout by inserting a screwdriver in the slot and carefully punch knockout loose. Remove slug. If 3/4" knockout is required, remove the outer ring with pliers after removing the 1/2" knockout. Smooth edges with knife if necessary.
4. Place enclosure in desired mounting location and mark the three mounting holes (refer to diagram). Start by placing set screw on top and attaching enclosure over keyhole; then screw in remaining two screws on bottom.
5. Connect conduit hubs to conduit before connecting the hubs to the enclosure. After inserting hubs into enclosure, carefully tighten hub lock nut. Do not over-torque.
6. Verify input voltage selection. Refer to DIP switch diagram for desired input voltage.
7. Wire in accordance with National and Local Codes (see wiring diagrams).
8. Grounding: Terminate all ground wires to ground lug on bottom of enclosure.
9. Replace interior protective cover.



INPUT VOLTAGE DIP SWITCH SETTING:

1. Do not apply power to the GM40 prior to setting correct Input Voltage DIP switch.
2. Determine the input voltage which will be applied to the GM40 (i.e. L1 and L2/N terminals, see wiring diagrams).
3. Set the DIP Switch according to the diagram below.



NOTE:

Unit is shipped with DIP Switches set for 277VAC Input Voltage.



APPLICATION

THE GM40 Multi-Volt Series Time Controls are universal, electromechanical time switches which can be field configured for various power supply voltages. The Voltage options include 120VAC, 208/240VAC and 277VAC—all within the same unit! Selection of the desired supply voltage is easily achieved by selecting the DIP to the corresponding input voltage as indicated on the printed circuit board assembly (refer to "input voltage DIP switch setting section on page 1). The mechanism is mounted in a UL TYPE 3R outdoor enclosure and has been designed for the control of lighting, heating, air conditioning, pumps, motors, or general electrical circuits in residential, commercial, industrial and agricultural facilities. All GM40 models are available as "Mechanism Only" (-M) for installation in other enclosures or control panels.

SPECIFIERS GUIDE

Furnish and install an Intermatic GM40 Multi-Volt Series 24 hour or (7 day) time switch with captive trippers and quartz or synchronous drive. Input voltage shall be 120, 208/240 or 277VAC selectable via simple to set DIP switch. All units shall incorporate both SPDT and DPDT contacts that shall be rated at 40A, 2 HP @ 277V. To set the starting time and to provide time indication, the unit shall have an authentic clock face with hour and minute hands. LED indicators shall provide Power and Status feedback. Enclosure shall be UL TYPE 3R suitable for both indoor or outdoor installation. Time Switch shall contain an OFF/AUTO/ON manual override. For Carry-over: The time switch shall have a quartz drive with 7 day reserve carry-over.

PROGRAMMING INSTRUCTIONS

SETTING THE TIME: Rotate the program dial gradually clockwise until the day of the week (7 day) and time of day on the outer dial is nearly aligned with the triangle marker at 2 o'clock position. Then set time to the minute by rotating minute hand clockwise. **CAUTION:** Do not rotate dial or minute hand counter-clockwise.

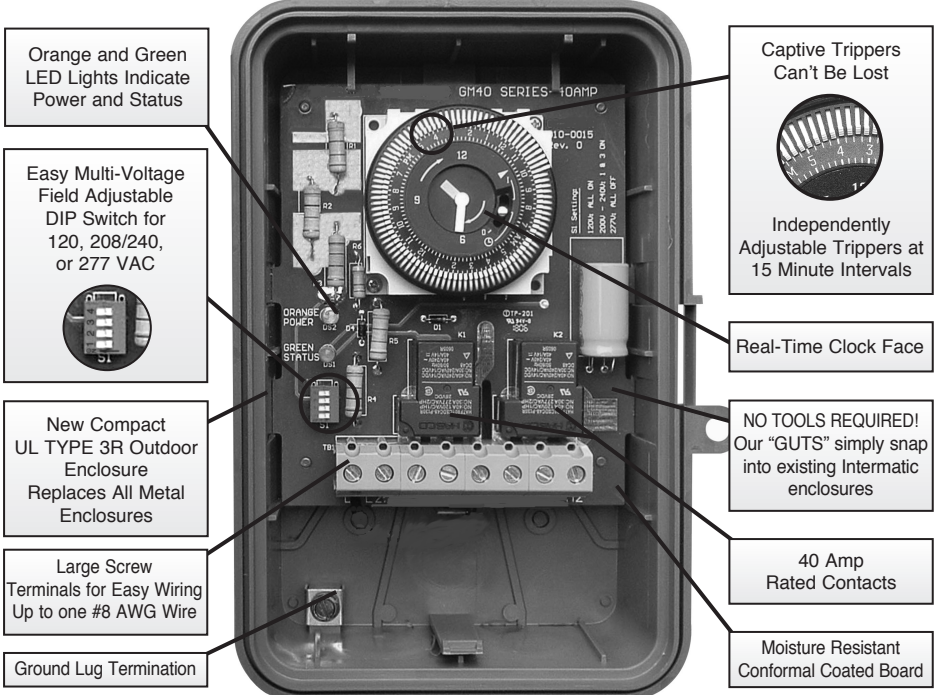
PROGRAMMING: The 24 hour model has trippers of 15 minute increments, and an AM/PM indication on the outer dial. The 7 day model has trippers of 2 hour increments. The outer dial shows the 7 days of the week and AM/PM for each day. Push the captive trippers outward for the time period(s) that the load is to be on (Normally open contacts closed).

MANUAL OVERRIDE: With the manual switch in the middle position, the GM40 is in automatic mode and will switch at the programmed times. In the upper position "I", the load is permanently OFF.

BATTERY POWERED RESERVE (Quartz Models):

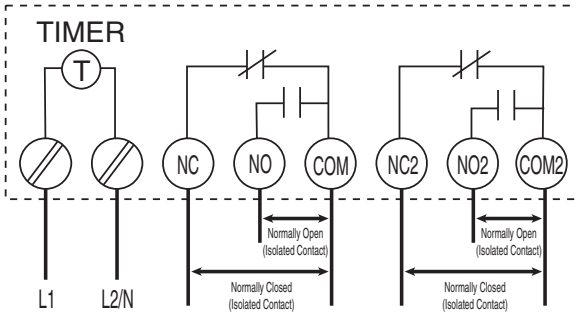
In case of power failure, the built-in nickel-metal hydride battery maintains the time of day for 7 days. During power outage relays are de-energized.

The GM40 is the only electromechanical general purpose time switch that offers multi-voltage selection, SPDT and DPDT contacts, 40 Amp rating, indoor and outdoor enclosure - all standard in one model.



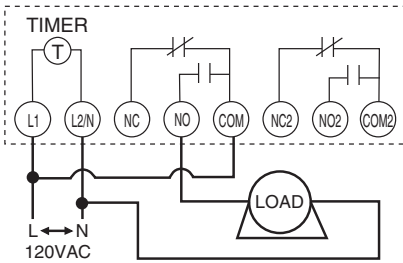
GM40 - 120, 208/240, or 277 Volts - The only one to stock.

GM40 TERMINAL DESIGNATIONS

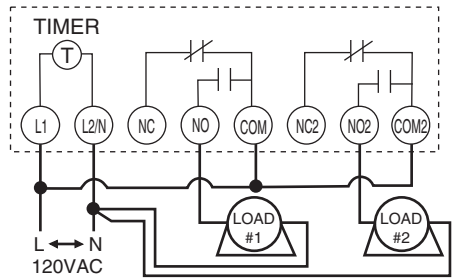


GM40 TYPICAL WIRING DIAGRAMS

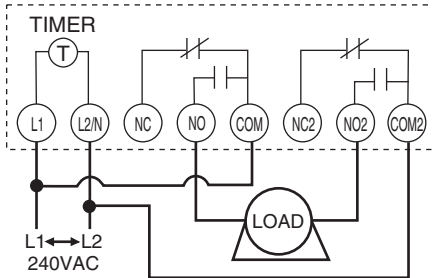
Typical Wiring Diagram (120VAC Application)
Controlling One 120VAC Load



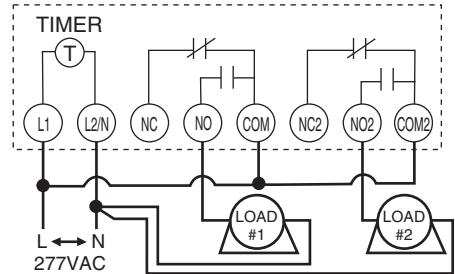
Typical Wiring Diagram (120VAC Application)
Controlling Two 120VAC Loads



Typical Wiring Diagram (240VAC Application)
Controlling One 240VAC (Dual Phase) Load



Typical Wiring Diagram (277VAC Application)
Controlling Two 277VAC Loads



Note: Refer to page 1 for proper Input Voltage DIP Switch selection.

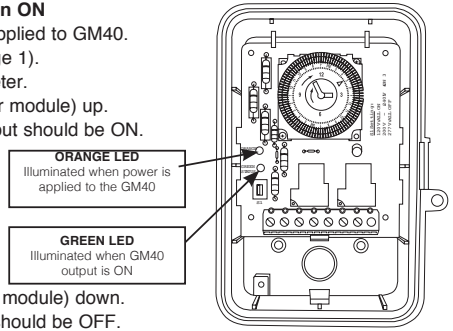
GM40 TROUBLESHOOTING GUIDE

PROBLEM: LOAD (Lights/Pumps/Motor, etc.) does not turn ON

1. Check ORANGE Power LED, if ON it indicates power is applied to GM40.
2. Verify correct input voltage DIP switch setting (refer to page 1).
3. Check voltage across terminals L1 and L2/N with Multi-meter.
4. Slide manual override switch (located on right side of timer module) up.
The GREEN LED should illuminate indicating that the output should be ON.
5. Check wiring (refer to page 3).

PROBLEM: LOAD (Lights/Pumps/Motor, etc.) does not turn OFF

1. Verify manual override switch is set to the middle position.
2. Verify correct programming dial (refer to page 2).
3. Slide manual override switch (located on right side of timer module) down.
The GREEN LED should turn OFF indicating that the output should be OFF.



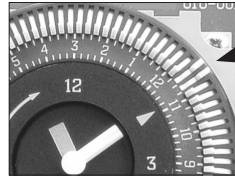
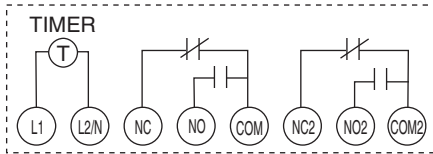
GM40 CONTACT TERMINALS TRANSITION

White arrow on timer module points to current time.



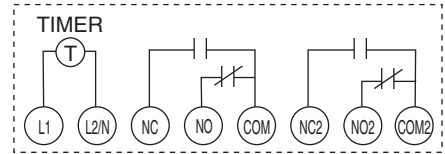
Trippers are "IN"
Indicates
Output is OFF
GREEN LED - OFF

Status of Contacts



Trippers are "OUT"
Indicates
Output is ON
GREEN LED - ON

Status of Contacts



Note: Power must be applied across terminals L1 and L2/N in order for contacts to transition.

LIMITED ONE YEAR WARRANTY

If within the warranty period specified, this product fails due to a defect in material or workmanship, Intermatic Incorporated will repair or replace it, at its sole option, free of charge. This warranty is extended to the original purchaser only and is not transferable. This warranty does not apply to: (a) damage to units caused by accident, dropping or abuse in handling, acts of God or any negligent use; (b) units which have been subject to unauthorized repair, opened, taken apart or otherwise modified; (c) units not used in accordance with instructions; (d) damages exceeding the cost of the product; (e) sealed lamps and/or lamp bulbs, LED's and batteries; (f) the finish on any portion of the product, such as surface and/or weathering, as this is considered normal wear and tear; (g) transit damage, initial installation costs, removal costs, or reinstallation costs.

INTERMATIC INCORPORATED WILL NOT BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES. SOME STATES DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THE ABOVE LIMITATION OR EXCLUSION MAY NOT APPLY TO YOU. THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS OR IMPLIED WARRANTIES. ALL IMPLIED WARRANTIES, INCLUDING THE WARRANTY OF MERCHANTABILITY AND THE WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE, ARE HEREBY MODIFIED TO EXIST ONLY AS CONTAINED IN THIS LIMITED WARRANTY, AND SHALL BE OF THE SAME DURATION AS THE WARRANTY PERIOD STATED ABOVE. SOME STATES DO NOT ALLOW LIMITATIONS ON THE DURATION OF AN IMPLIED WARRANTY, SO THE ABOVE LIMITATION MAY NOT APPLY TO YOU.

This warranty service is available by either (a) returning the product to the dealer from whom the unit was purchased, or (b) completing a warranty claim on line at www.intermatic.com. This warranty is made by: Intermatic Incorporated, Customer Service 7777 Winn Rd. Spring Grove, Illinois 60081-9698. For warranty service go to: <http://www.intermatic.com> or call 815-675-7000.

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