

# TZ SERIES

## ASTRONOMIC TIME SWITCHES

### WITH MANUAL BYPASS SWITCHES

### RESERVE POWER STANDARD

#### APPLICATIONS

Automatic control for night lighting when the ON operation is required at sunset and it may be desirable to override the automatic schedule ON or OFF.

- Schools
- Industrial Yards
- Show Windows
- Hallway Signs
- Parking Lots
- Highway Signs
- Bridges

**NOTE:** All models are designed to control a contactor circuit and are not recommended for direct switching of most lighting loads.

#### SPECIFICATIONS

**CONTACT RATINGS:** (Tungsten rated at 277V) 20 Amps per circuit, 1 HP at 120V.

**MANUAL BY-PASS SWITCHES:** Single pole, 20 Amps – one per circuit.

Factory prewired to terminal strip. ON-OFF-AUTO positions for each circuit independently – will not disturb automatic settings.

**TIMING MOTOR:** Heavy duty, self-starting synchronous motor with 16 hour spring driven reserve power standard. Power Consumption: 5 watts.

**AUTOMATIC OPERATION:** 24 hour astronomic dial, with special cams to vary the ON and OFF settings each day according to seasonal changes of sunset and sunrise. Turns ON only at sunset – can be set 20 or 40 minutes before or after normal sunset, to adapt to local conditions. Turn OFF can be set from 8:30 P.M. to 2:30 A.M., in half-hour intervals, or at sunrise.

**OMITTING DEVICE:** 7-spoke wheel marked with days of week – 3 omitting screws (P-14) supplied.

**OPERATING TEMPERATURE RANGE:** -40° to +165°F. (-40° to +74°C.)

**ENCLOSURE:** See page 27 for dimensions. General Purpose (NEMA 1) – Beige enamel, lockable hasp, with combination 1/2" - 3/4" K.O.'s on both sides, top and bottom. Optional "E" door (specify) available to replace standard removable cover when access to external by-pass switches is required.

**OTHER MOUNTINGS:** \*When ordering special enclosures ONLY, please use model number.

Metal Indoor/Outdoor NEMA 3: (suffix O) – Model 9006\*

Flush with lock & key – NEMA 1: (suffix FL5) – Model 9005\*

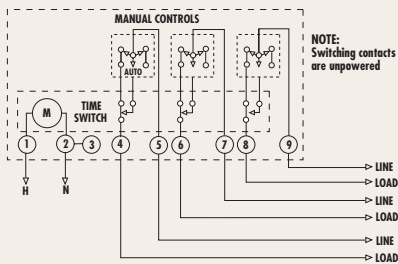


**OPTIONAL "E" COVER**

CAT NO	UPC CODE	SWITCH	AMPS	H.P. RATING	RESERVE POWER MOTOR		PART #
					AC VOLTAGE	HZ	
TZ-220L	29010	DPDT	20	1	120	60	36
TZ-222L	29011	DPDT	20		208-277	60	46
TZ-300L	29006	3PST	20	1	120	60	36
TZ-302L	29008	3PST	20		208-277	60	46

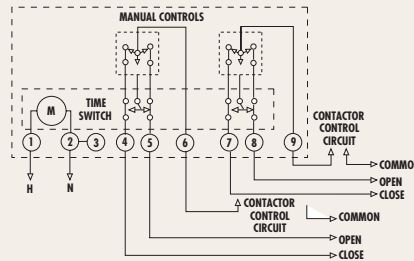
Add E suffix denoting extra case cover for external by-pass switches, to replace standard removable cover (only available for surface type enclosure).

#### WIRING DIAGRAMS



#### TZ300L

When single line source is used, jumper terminals 1-5-7-9 and connect all commons to terminals 2 and 3.



#### TZ220L

Wiring shown is for mechanically-held contactors. Use CLOSE terminal only for magnetically-held contactors and to control direct loads not exceeding 2000 watts.

#### SPECIFICATION WRITER'S GUIDE TZ SERIES

Furnish and install where shown a TORK Time Switch with Astronomic dial and day-omitting device, and a 3-way manual switch for each circuit. The Time Switch shall be powered by a self-starting synchronous motor with spring-driven reserve, which shall be sufficient to operate the time switch contacts at least 16 hours after power failure. On restoration of power, time switch shall transfer to synchronous motor drive and automatically rewind reserve. ON operation shall occur automatically at sunset (in city of use). OFF operation shall be adjustable from 8:30 P.M. to 2:30 A.M. in one-half hour increments or at sunrise. Both ON and OFF shall have a range of adjustability of 20 or 40 minutes before or after sunset and sunrise. Time Switch contacts shall be capable of carrying a minimum of 20 amperes per pole continuously at 277 volts and shall be DPST (3PST). Manual switches shall be provided as an integral part of the time switch, one for each pole, and shall permit manual switching to maintained ON or OFF positions until manually returned to AUTOMATIC position. Terminal strip shall be capable of receiving #10 AWG wires. Enclosure shall be NEMA 1 surface type, finished in beige enamel, and with 1/2" - 3/4" combination knock-outs on bottom, both sides and top. Provision shall be made for positive padlocking. (Specify "E" door for manual switches to be accessible when case is locked). Time switch shall be TORK Model TZ-\_\_\_ (to fit requirement).

