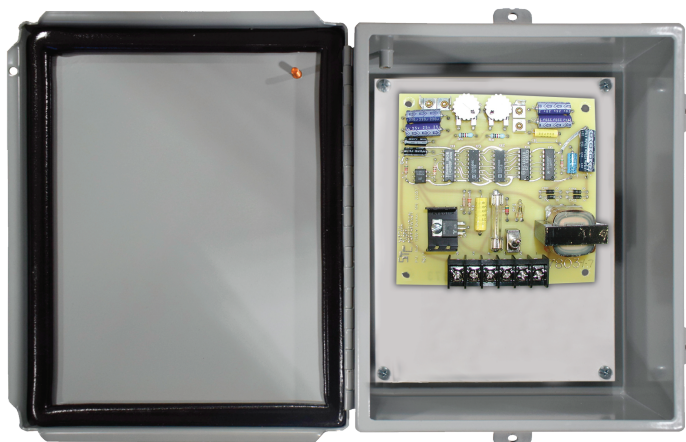


## TIME CONTROLLER

#29-10000

1 Output



### PROGRAM 1 FUNCTION

This WORKMASTER Time Controller (Time-Sequence Controllers available), allows its user to choose from 9 SHORT Time Ranges, or 3 LONG Time Ranges.

### COMPACT, SOLID STATE RELIABILITY

The Controller features 100% solid state reliability with integrated circuitry. The Board measures 4-1/2"H x 4-3/4"W x 1-1/2"D. The Controller is supplied in a NEMA 4 enclosure (8" x 6"). Other Non-Hazardous and Hazardous location enclosures are available.

### ADJUSTABLE SIGNAL INTERVALS

Time-Sequence (intervals) signals are adjustable over a range of 16-milliseconds to 7-hours. Special modifications for longer time ranges, and models with complex sequences are also available. LED indication is provided for each Output, and for power ON indication for ease of installation and troubleshooting.

### STOP FUNCTION (Pressure Switch Sensing)

The sequence may be stopped at any position, ON or OFF, and then restarted at that position for the programmed set-time.

### INSTALLATION

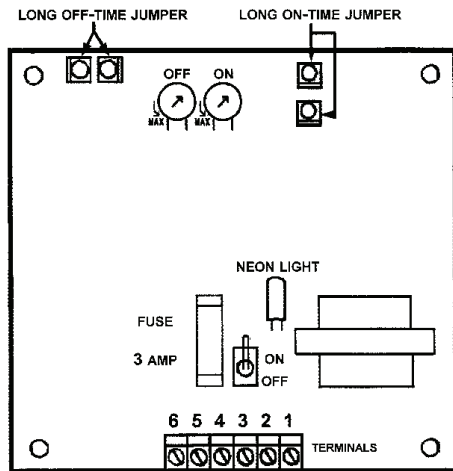
1. Mount the Controller's enclosure in a convenient location. The mounting orientation of the Controller doesn't affect performance.
2. Connect 120V/1Ph/60(50) Hz supply to Terminal H & N w/ NEUTRAL to N, and HIGH to H.
3. Connect remote switch to Terminals 5 and 6 (Normally-Open contacts), as requires. The load wires are connected to Terminals 4 (+) and 3 (-).
4. Output rating is 5-Amp at 120VAC (maximum).

### SELECT AND PROGRAM 1 OUTPUT

A remote switch can activate the "ON", "OFF" timer range. ON-time(s) and OFF-time(s), are independently adjustable within each time range. To adjust ON-time or OFF-time, simply rotate the appropriate potentiometer to the desired setting; if setting is too short to easily measure, the PWT-7603 Pulse Width Tested should be used.

### SELECT "ON" AND "OFF" TIME INTERVALS

To change the time range, use a flat-tip screwdriver and carefully adjust both the ON range and the OFF time range.



TERMINALS #5 & #6 ARE NORMALLY OPEN CONTACTS. REMOTE SWITCH CAN BE INSTALLED HERE. CLOSING CONTACTS TURNS ON OUTPUT SIGNAL; REOPENING CONTACTS RESETS OFF-TIME TO BEGINNING OF CYCLE.

TO LOAD (SOLENOID)  
(120 VAC OUTPUT 3 A MAX)

TERMINAL 4 IS LO (SAME AS NEUTRAL) OUTPUT  
TERMINAL 3 IS H OUTPUT

16VDC CAPACITOR SIZE FOR TIME RANGE							
TR#	TIME RANGE				C	R	
1	16	Millisecs	to	600	Millisecs	.01	250K
2	30	Millisecs	to	1.2	Seconds	.1	100K
3	.1	Second	to	5	Seconds	.1	250K
4	.2	Second	to	12	Seconds	.47	100K
5	.3	Second	to	20	Seconds	.1	250K
6	1	Second	to	60	Seconds	2.2	250K
7	2	Seconds	to	2	Minutes	10	100K
8	15	Seconds	to	10	Minutes	47	100K
9	30	Seconds	to	20	Minutes	47	250K
10	1	Minute	to	45	Minutes	100	250K
11	3	Minutes	to	2	Hours	470	250K
12	3	Minutes	to	8	Hours	470	1M

The Controller regulates time and sequence combinations. Two timers are on the PC-board: one for the OFF time period; the other for the ON time period. The Time Ranges (TR or T-Range), for each are independently adjustable, using the PC-board mounted Potentiometers marked OFF and ON.

The PC-board is shipped with TR-1 (16 to 600 milliseconds) installed for the ON time period; and TR-7 (2 seconds to 2 minutes) set for the OFF time period. If these factory set T-Ranges don't meet the specific application requirements of the job, different T-RANGES can be selected. The TABLE below lists the different T-Range settings under "TR" and their respective time periods under "TIME RANGE".

To lengthen the OFF time period, you need to do one or two things, depending upon the T-RANGE you choose:

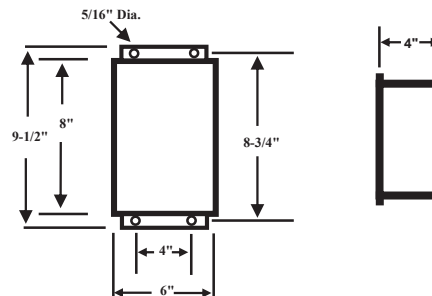
If choosing TR-8 (The maximum OFF time period increases from 2 minutes to 10 minutes), you need to add a Capacitor (with a value of 30 - 40 microfarads), to the OFF time jumper terminals (on the upper left of the PC-board).

If choosing TR-9, or greater, you need to: (1) ADD the appropriate capacitor (see "C" in the TABLE); (2) CHANGE the Potentiometer on the PC-board to the value shown in the TABLE. For TR-9; TR-10; TR-11, the OFF time Resistor (see "R" in the TABLE), needs to be 250K. For TR-12, it needs to be 1M.

To lengthen the ON time period, requires the addition of a capacitor and, perhaps, changing the Potentiometer, see TABLE below for more information.

**DANGER**

**DANGER:** As with every electrical installation, GROUNDING the NEMA box is mandatory; BONDING the hinged door is also an important safety practice, so a bonding stud has been provided on the inside, lower-right corner of the door.



PN: 10-00010

<b>WORKMASTER®</b> WE FIND A WAY — OR MAKE ONE!			
SCALE: 7	APPROVED BY: J. H. K.	DRAWN BY: E. H.	REVISED:
Pt N° 29-10000 1 Output			
FIELD CONNECTION DIAGRAM			780303