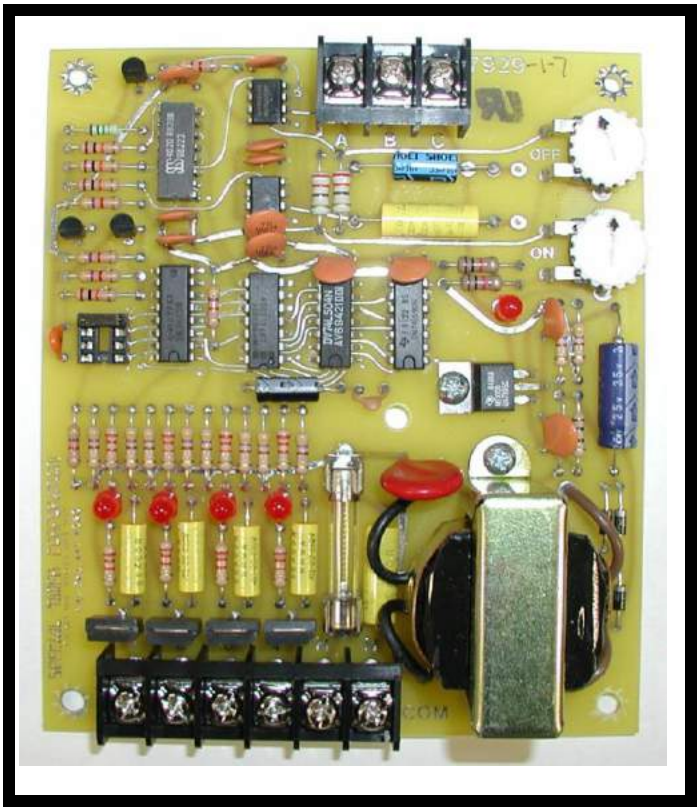
TIME-SEQUENCE CONTROLLER

#29-10100

1 to 4 Outputs



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 one wire w/ of each load to Terminals "1" thru "4" as required. The remaining wire (common) is to be connected to Terminal N.
4. Output rating is 3-Amp at 120VAC (maximum).

SELECT AND PROGRAM UP TO 4 OUTPUTS

The Controller's gold program jumper is used to select the number of Outputs from 1 to 4. To change the number of Outputs, carefully pull the jumper from its current socket, and, softly but firmly, reinsert it into the socket position corresponding to the number of Outputs desired (***Note:*** each socket closer to the bottom of the board reduces the Outputs by one). Run cycle: #1 "ON", then "OFF"; #2 "ON", then "OFF", and so on to the last selected output (4 available), then back to #1, and continuing.

PROGRAM UP TO 4 FUNCTIONS

This WORKMASTER Time-Sequence Controller (other models available), allows up to four (4) Time-Sequence Outputs.

COMPACT, SOLID STATE RELIABILITY

The Controller features 100% solid state reliability with integrated circuitry. The Board measures 5-1/2" x 4-7/8" x 1-1/2". The Controller is supplied in a NEMA 4 enclosure (8" x 6"). Other Non-Hazardous and Hazardous location enclosures are available.

ADJUSTABLE SIGNAL INTERVALS

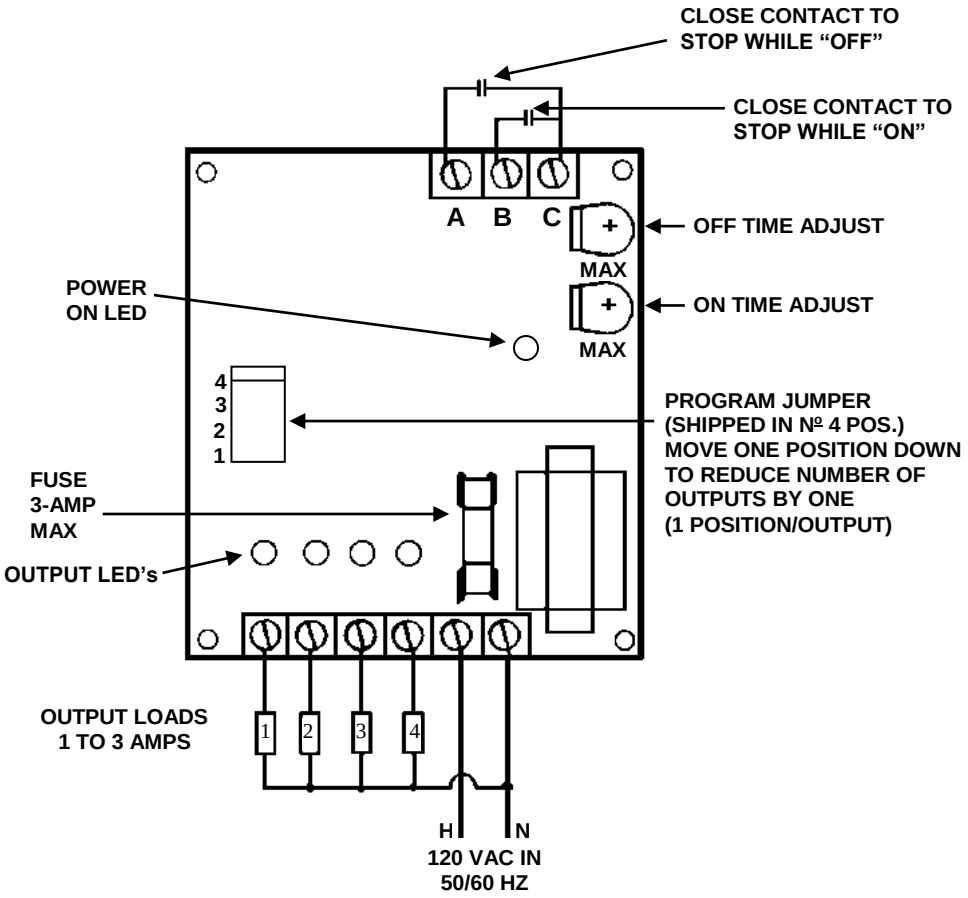
Time-Sequence (intervals) signals are adjustable over a range of 16-milliseconds to 8-hours. Special modifications for longer time ranges, and models with complex sequences are also available. LED indication is provided for each Output, and for power ON indication for ease of installation and troubleshooting.

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.

SELECT "ON" AND "OFF" TIME INTERVALS

The ON or OFF time is adjusted by simply rotating the Potentiometer to the appropriate setting. If the adjustment does not provide the needed time period, the Controller can be easily modified by adding or changing one or two components. A TABLE showing the available Time Ranges (TR) and the components required to obtain a needed TR is shown on the Field Connection Diagram on the reverse side of this sheet.



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) installed 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"**.

Lengthening the OFF time period, requires one, or two modifications, depending upon the T- Range selected.

If you choose TR-8, TR-9, TR-10, so that the maximum OFF time period is: 10-min (f/ R-8); 20-min (f/ TR-9); or 45-min (f/ TR-10), you'll need to add a capacitor across the A and C Terminals on the PC-board. The TABLE below lists the value of the Capacitor, in microfarads, under "**C**".

If you choose TR-11 or TR-12, the Potentiometer on the PC-board must also be changed. The Potentiometer (POT) on the PC-board is a 120K-Pot. The TABLE lists the resistor value of the POT, in ohms, under "**R**".

Lengthening the ON time period requires that a capacitor be connected across the B and C Terminals on the PC-board. For the higher TIME RANGES, again, the Potentiometer on the PC-board must be changed (as described above).

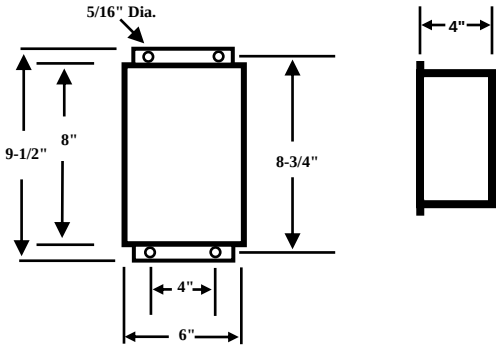
If the capacitors used to lengthen the T-Range are a polarized type (can be determined by looking at the capacitor, usually, only the Negative " – " will be marked); the Negative should be inserted into Terminal C.

On a voltmeter, this unit shows a constant output when no load is placed on the output. To simulate a test load, a solenoid, a motor contactor, or a 33K-ohm resistor will be sufficient load (120 VAC output). If using a Resistor, it must have a minimum of a 1/2-watt power dissipation capability.

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.

16VDC CAPACITOR SIZE FOR TIME RANGE							
TR#	TIME RANGE					C	R
1	16	Millisecs	to	600	Millisecs	.1	
2	30	Millisecs	to	1.2	Seconds	.2	
3	.1	Second	to	12	Seconds	1	
4	.2	Second	to	20	Seconds	2.2	
5	.3	Second	to	60	Seconds	3.3	
6	1	Second	to	60	Seconds	10	
7	2	Seconds	to	2	Minutes	22	
8	15	Seconds	to	10	Minutes	100	
9	.5	Minute	to	20	Minutes	220	
10	1	Minute	to	45	Minutes	470	
11	1	Minute	to	1.5	Hours	470	250K
12	1	Minute	to	8	Hours	470	1M



PN: 10-00011

WORKMASTER®
WE FIND A WAY — OR MAKE ONE!

SCALE:	APPROVED BY:	DRAWN BY:
DATE: 4/16/80	4/16/80	REVISED

Pt Nº 29-10100 1 – 4 Outputs

FIELD CONNECTION DIAGRAM | DRAWING NUMBER 792909