

On delay. Multiscale. AC/DC supply



moduLo

TM P

Time of scale range	Control power	Catalog number	Price
	[V]		\$ each
0.1-1s 1-10s 6s-1min 1-10min 6min-1h 1h-10h 0.1-1 day 1-10 days ON only OFF only	24-48VDC 24-240VAC	TM P	59.00

General characteristics

- Multiscale, multivoltage.
- On delay, delay on make, with start at relay energizing
- One relay output with 1 SPDT contact
- Delay time adjustable on front by rotary switch: 10-100%
- Green LED indicator for power on
- Red LED indicator for relay state; flashing for delay and steady when relay energized
- Modular 17.5mm (0.7in) wide; suitable for screw fixing or 35mm DIN rail (IEC/EN 60715) mounting
- Degree of protection: IP40 on front (only when mounted in housing or electric board with IP40); IP20 on terminals.

Certifications and compliance

UL listed for USA and Canada, file E93601.
Compliant with standards: IEC/EN 61812-1.

Operational diagram

See page W-8.

Multifunction. Multiscale. AC/DC supply. 1 relay output



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TM M1

Time of scale range	Control power	Catalog number	Price
	[V]		\$ each
0.1-1s 1-10s 6s-1min 1-10min 6min-1h 1h-10h 0.1-1 day 1-10 days ON only OFF only	12-240V AC/DC	TM M1	79.00

General characteristics

- Multifunction, multiscale, multivoltage
- Enabling input
- One relay output with 1 SPDT contact for TM M1
- Two relay outputs, one with 1 delayed SPDT contact and the other with 1 normally open (N/O) contact, programmable as instantaneous or delayed for TM M2
- Selectable functions: (a) On delay; delay on make with start at relay energizing. (b) Pulse on relay energizing with start when energized. (c) Flasher starting with OFF interval. Equal timing recycle. (d) Flasher starting with ON interval. Equal timing recycle. (e) Off delay; relay energizing at external contact closing with start on break. (f) Pulse on relay energizing with start on external contact closing. (g) Pulse on relay energizing with start on external contact opening. (h) On-off delay. Delay on make, with start at external contact closing, and delay at break, with start at external contact opening. (i) Step relay at each closing of an external contact. (j) Pulse generator, unequal timing recycle; starting with OFF pulse time and 0.5s ON pulse.
- Delay time adjustable on front by rotary switch: 10-100%
- Green LED indicator for power on
- Red LED indicator for relay state; flashing for delay and steady when relay energised
- Modular 17.5mm (0.7in) wide; suitable for screw fixing or 35mm DIN rail (IEC/EN 60715) mounting
- Degree of protection: IP40 on front (only when mounted in housing or electric board with IP40); IP20 on terminals.

Certifications and compliance

UL listed for USA and Canada, file E93601.
Compliant with standards: IEC/EN 61812-1.

Operational diagram

See page W-8 for TM M1 and W-9 for TM M2.

Multifunction. Multiscale. AC/DC supply. 2 relay outputs



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TM M2

Time of scale range	Control power	Catalog number	Price
	[V]		\$ each
0.1-1s 1-10s 6s-1min 1-10min 6min-1h 1h-10h 0.1-1 day 1-10 days ON only OFF only	12-240V AC/DC	TM M2	89.00

Certifications and compliance

UL listed for USA and Canada, file E93601.
Compliant with standards: IEC/EN 61812-1.

Operational diagram

See page W-8 for TM M1 and W-9 for TM M2.

TYPE	TM P	TM M1	TM M2	TM PL	TM D	TM ST	TM LS		
DESCRIPTION									
	On delay	Programmable multifunction	Programmable multifunction timing	Asymmetrical recycle	True off delay	For starting	Staircase illumination		
	Multiscale	Multiscale	Multiscale	Multiscale	Multiscale	Multiscale	Single scale		
	Multivoltage	Multivoltage	Multivoltage	Multivoltage	Multivoltage	Multivoltage	Single voltage		
CONTROL CIRCUIT									
Rated control power Us	24-48VDC	12-240VAC/DC			24-240VAC/DC	24-48VDC	220-240VAC		
	24-240VAC					24-240VAC			
	380-440VAC								
Rated frequency	50/60Hz								
Operating voltage range	0.85-1.1 Us								
Power consumption/dissipation (maximum)	1.2VA/0.8W (24-48VDC) 16VA/0.9W (110-240VAC)	0.6VA/0.3W (12-48VDC) 1.6VA/1.2W (110-240VAC)	1.1VA/0.8W (12-48VDC) 1.8VA/1.2W (110-240VAC)	0.15VA/0.15W (12-48VDC) 0.9VA/0.8W (110-240VAC)	0.1VA/0.1W (24-48V) 1.1VA/0.8W (110-240VAC)	1.2VA/0.8W (24-48VDC) 16VA/0.9W (110-240VAC)	12VA /0.8W (energized) 5VA/0.5W (de-energized)		
TIMING CIRCUIT									
Time setting range	Multiscale	Multiscale	Multiscale	Multiscale	Multiscale	Multiscale	Multiscale		
	0.1-1s	0.1-1s	0.1-1s	0.1-1s	0.06-0.6s	0.1-1s	0.5-20min		
	1-10s	1-10s	1-10s	1-10s	0.6-6s	1-10s			
	6s-1min	6s-1min	6s-1min	6s-1min	6s-1min	6s-1min			
	1-10min	1-10min	1-10min	1-10min	12s-2min	1-10min			
	6min-1h	6min-1h	6min-1h	6min-1h					
	1-10h	1-10h	1h-10h	1h-10h					
	0.1-1day	0.1-1day	0.1-1day	0.1-1day					
	1-10days	1-10days	1-10days	1-10days					
	ON only	ON only	ON only	3-30days					
	OFF only	OFF only	OFF only	10-100days					
	Setting accuracy	<±9%							
	Repeat accuracy	< ±0.2%						<±0.2%	
Influence of voltage variation	<±0.01%						<±0.5%		
Average variation of set delays related to +70°F/+20°C at -4°F/-20°C	<±2%						<±0.25%		
Minimum power time	—				≥20ms	—	—		
Minimum ON time	—	25ms (no maximum limit)			—	—	50ms (no max lim.)		
Resetting time	during timing	≥ 100ms			—	≥100ms	≥ 100ms		
	elapsed time	≥ 50ms			—	≥50ms	—		
Immunity time for microbreakings	≤ 50ms	≤25ms	≤15ms	≤25ms	—	≤40ms	≤ 20ms		
OUTPUT CONTACTS									
Contact arrangement	1 delayed double-throw	1 delayed double-throw	1 inst./delayed N/O + 1 delayed DT	1 delayed double-throw	1 delayed double-throw	2 delayed N/O	1 delayed N/O		
Maximum switching voltage	250VAC								
Conventional free air thermal current Ith	8A				5A	8A	16A		
UL (IEC/EN 60947-5-1) designation	B300 (AC1 8A 250VAC)						—		
Electrical life (with rated load)	10 ⁵ cycles								
Mechanical life	30x10 ⁶ cycles								
Tightening torque (maximum)	7lbin / 0.8Nm								
Conductor section (min-max)	24-12AWG / 0.2-4mm ²								
INSULATION (input-output)									
Rated insulation voltage	250V								
Rated impulse withstand voltage	4kV								
Power frequency withstand voltage	2kV (50Hz - 60s)								
AMBIENT CONDITIONS									
Operating temperature	-5...+140°F (−20...+60°C)								
Storage temperature	-20...+175°F (−30...+80°C)								
Housing	Self-extinguishing polyamide								

Note: N/O = normally open
inst. = instantaneous
DT = double-throw