

# Multifunction LCD Timer with Backlight TDMS

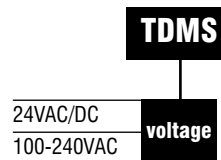


Programmable eight-function timer with seven time ranges from 0.001 sec to 9999 hours

- Key protect feature to prevent unauthorised timing mode change
- Display can be programmed to time UP or DOWN
- 100-240VAC or 24VAC/DC versions
- Backlit liquid crystal display of elapsed/remaining time and set time
- Two fully independent set times in recycling mode
- Long-life lithium battery for changing, displaying or storing the set time while power is off
- Universal contact or solid-state input terminals
- Signal inputs for start/gate and reset
- 48-DIN size with plug-in octal base
- Sockets available for panel, surface or DIN-rail mounting
- UL and CSA approved



## Options and ordering codes



## Specification

Display	2 x 4 digit LCD with backlight	
Accuracy (timing modes)	0.01% ± 20ms in total or less (for a signal start)	
Setting error	0.01% ± 50ms in total or less (for a power supply start)	
Repeat accuracy		
Variation due to voltage change		
Variation due to temperature change		
Signal inputs	Type	Volt-free input
	Contact resistance allowable	1kΩ max for contact closed, 100kΩ min. for contact open
	Residual voltage allowable	2V max for input ON
	Reset pulse width	1ms on 9.999 sec range, 20ms on all other ranges
Reset time	By turning off power	0.5 sec or less
	By signal input or manual reset	20ms or less
Mechanical life	50 million operations (18000 ops/hour)	
Electrical life	100,000 operations at 5A 250V AC/30V DC resistive load (1800 ops/hour)	
Allowable operating voltage range	0.85 to 1.1 times input voltage range	
Contact ratings	SPCO 5A at 250V AC/30V DC resistive load	
Supply frequency for AC voltage	50/60Hz	
Power consumption	Approx 1.5VA at 240V AC 50Hz, 0.8W at 24V DC	
Operating temperature	-10 to +55 °C (avoid ice on timer)	
Storage temperature	-25 to +65 °C (avoid ice on timer)	
Humidity	35-85% r.h. (non-condensing)	
Insulation resistance	100MΩ or more at 500V DC megger	
Dielectric strength	2000VAC rms 1min between current carrying parts and non current carrying parts	
Vibration	Mechanical/malfunction durability: 10-55Hz, 0.75mm double amplitude	
	Mechanical durability: 500m/s <sup>2</sup> (approx. 50G)	
Shock	Malfunction durability: 100m/s <sup>2</sup> (approx. 10G)	
Surge resistance	±4500V (±500V for 24V AC/DC model) 1.2x50μs applied twice according to JEC212	
Noise resistance	±2000V by noise simulator 1nsx1μs noise wave, 0 to 360° phase, 1 min, applied twice	
Static electricity resistance	Mechanical durability: 15kV, malfunction durability: 8kV	
Timing ranges	0.001 to 9.999 secs	1 sec to 99 min 59 secs
	0.01 to 99.99 secs	1 min to 99 hrs 59 mins
	0.1 sec to 999.9 secs	1 hr to 9999 hrs
	1 sec to 9999 secs	
Protection rating	IP54	
Weight	120g approx.	

# Multifunction LCD Timer with Backlight TDMS continued

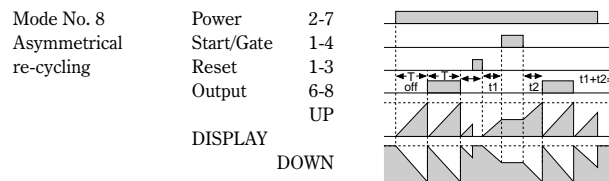
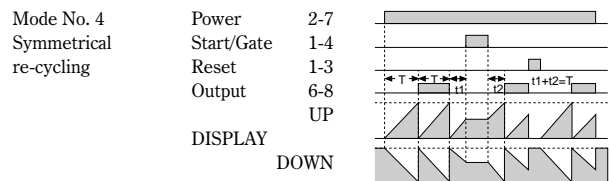
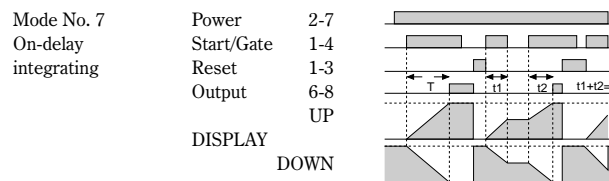
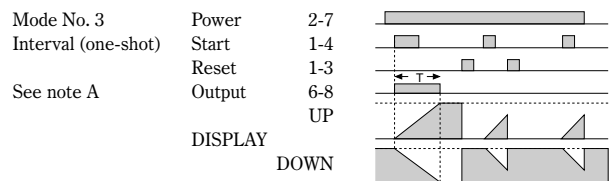
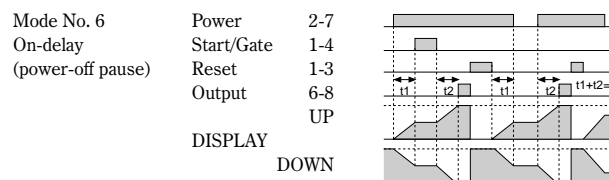
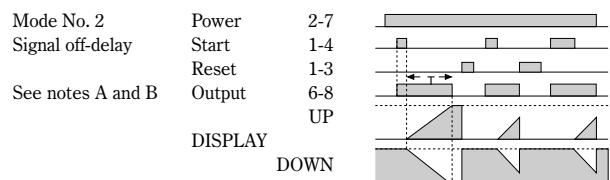
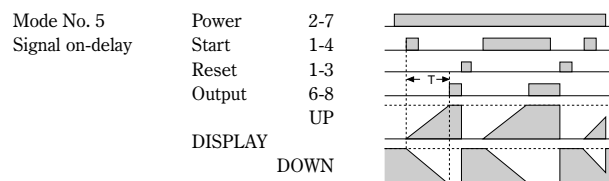
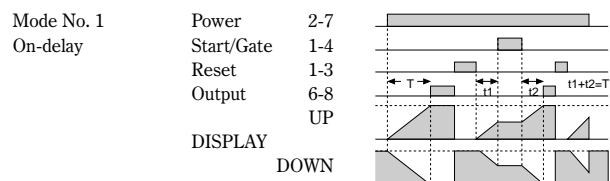


## Programmable for eight timing functions

Mode No. 1	On-delay
Mode No. 2	Signal off-delay
Mode No. 3	Interval (one-shot)
Mode No. 4	Symmetrical re-cycling

Mode No. 5	Signal on-delay
Mode No. 6	On-delay (Power off pause)
Mode No. 7	On-delay integrating
Mode No. 8	Asymmetrical re-cycling

## Timer



### Notes:

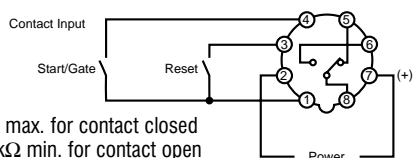
A In modes 2 and 3, after the time is up and the output turns off, a reset signal is not required before another start signal is given. The start signal itself will also effect a reset first.

### Notes:

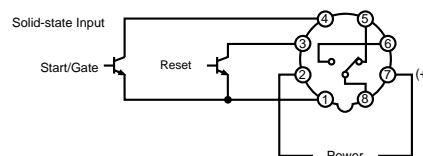
B In mode 2, if another start signal is applied before timing is up, the elapsed time resets and starts again, without the output turning off. Further, repeated start signals within the elapsed time can prevent the output turning off indefinitely. Therefore, the TDMS can be used in conjunction with IMO sensors to detect that machine shafts have stopped rotating before maintenance is carried out. Contact IMO for details.

## Wiring diagrams

The TDMS has universal contact/solid-state inputs:



Note: 1kΩ max. for contact closed  
100kΩ min. for contact open



Note: Signal inputs approx. 6VDC open circuit and approx. 2mA when short-circuited

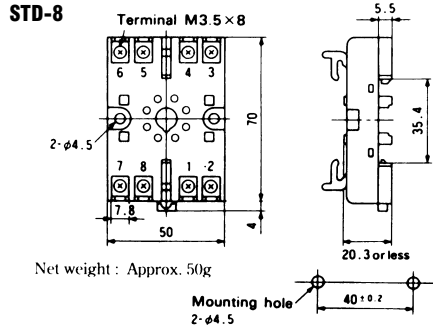
When powering the 24VAC/DC mode using DC, the supply positive lead should be connected to terminal 7.

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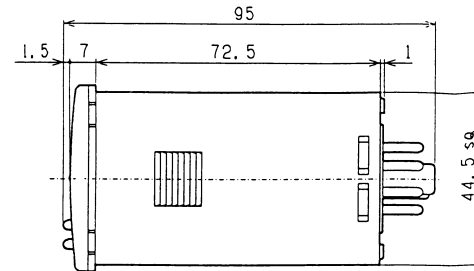


## Sockets

### Surface/DIN rail mounting – screw terminal

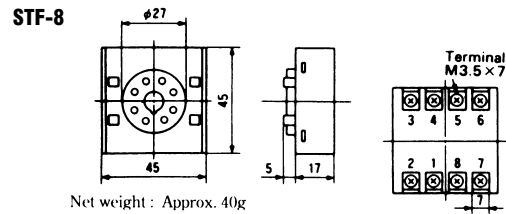


### Dimensions (mm)

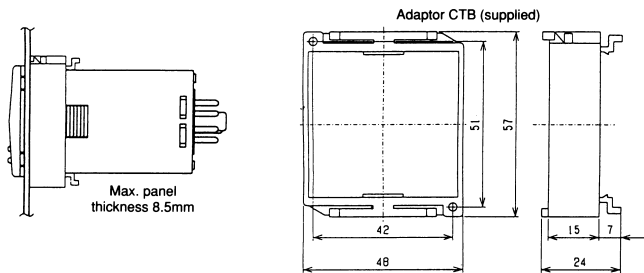


Net weight approx 120g

### Screw terminal



### Flush mounting



### solder terminal

