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

Ordering codes

TDMS 100-240VAC

TDMS 24VAC/DC

Specifications

Display		2 x 4 digit LCD with backlight
Accuracy (timing modes) **Setting error** **Repeat accuracy** **Variation due to voltage change** **Variation due to temperature change**		 0.01%±20ms in total or less (for a signal start) 0.01%±50ms in total or less (for a power supply start)
Signal inputs	**Type**	Volt-free input
	Contact resistance allowable	1kΩmax 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
Shock		Mechanical durability: 500m/s^2 (approx. 50G) Malfunction durability: 100m/s^2 (approx. 10G)
Surge resistance		±4500V (±500V for 24V AC/DC model) 1.2x50µs applied twice according to JEC212
Noise resistance		±2000V by noise simulator Insx1µs 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.

Programmable for eight timing functions

see page 109 for timing chart

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

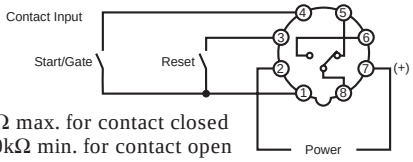
Mode No. 6
On-delay (Power off pause)

Mode No. 7
On-delay integrating

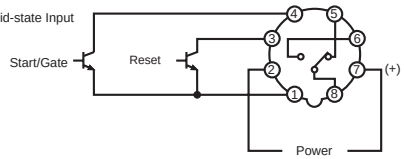
Mode No. 8
Asymmetrical re-cycling

Wiring diagrams

The TDMS has universal contact/solid-state inputs:



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



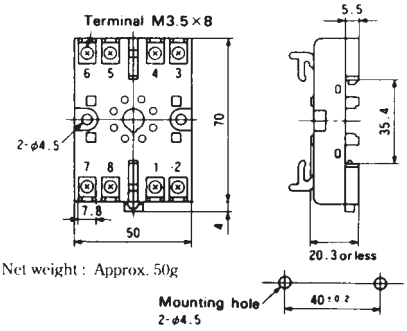
Note: Signal inputs approx. 6VDC open circuit and approx. 2mA when short-circuited

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

Sockets

Surface/DIN rail mounting – screw terminal

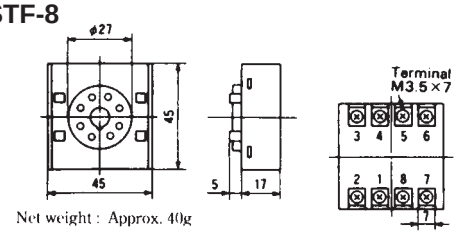
STD-8



Net weight : Approx. 50g

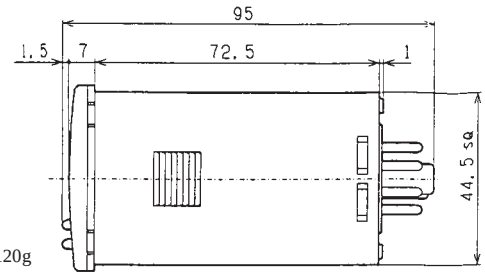
Flush mounting – screw terminal

STF-8



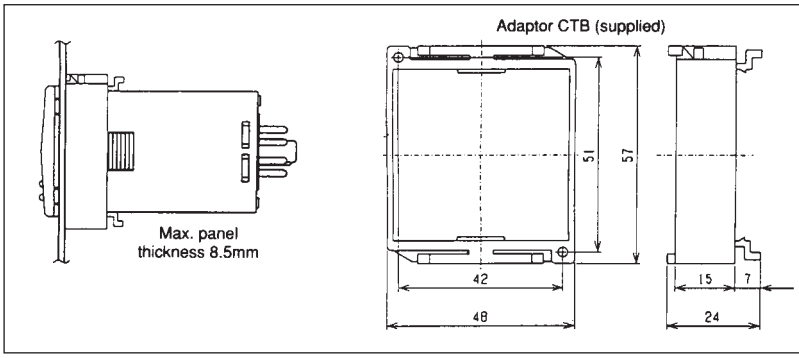
Net weight : Approx. 40g

Dimensions (mm)



Net weight approx 120g

Flush mounting



Flush mounting – solder terminal

ZSV8