Type: LMMT/2

Multifunction, Multi-voltage Timer

Terminal Protection to IP20



Dims: to DIN 43880
W. 17.5mm

- ***NEW*** **17.5mm DIN rail housing**
- **7 Selectable functions (3 Supply Initiated, 4 Switch Initiated)**
- **7 Selectable time ranges (0.1 seconds – 100 hours)**
- **Fine adjustment of selected time range**
- **LED warning indication if function is changed whilst powered**
- **Switch initiated functions ideal for use in Watchdog circuits**
- **Multi-voltage input (24 – 230V AC/12 – 230V DC)**
- **1 x DPDT relay output 8A**
- **Green LED indication for supply / timing status**
- **Red LED indication for relay status**
- **Conforms to IEC 61812**

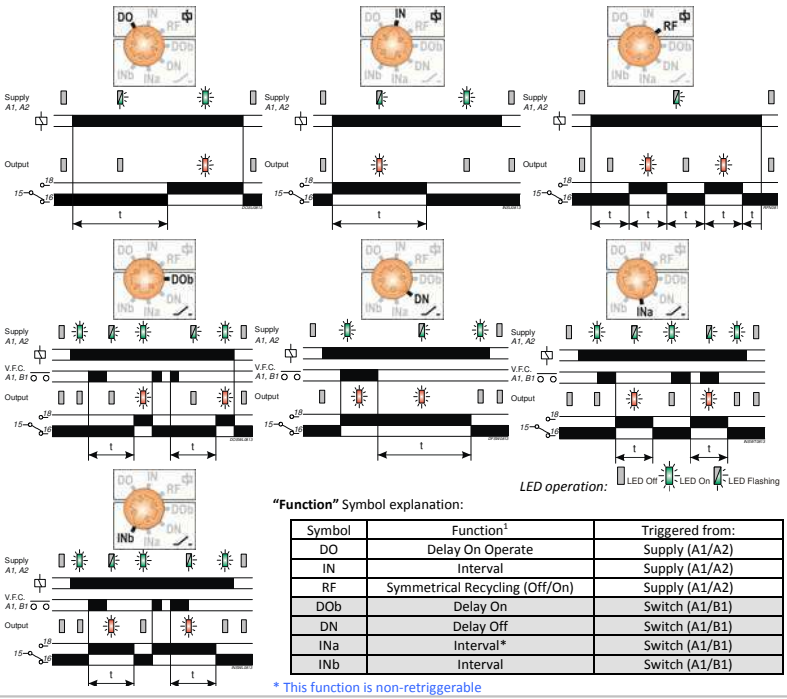
Wiring Information *and* ***Product Demonstration*** *Videos can also be found on our YouTube channel*

https://www.youtube.com/user/BroyceControlLtd



ISO 9001:2015
Cert. No. 14125771

FUNCTION DIAGRAMS



"Function" Symbol explanation:

Symbol	Function[1]	Triggered from:
DO	Delay On Operate	Supply (A1/A2)
IN	Interval	Supply (A1/A2)
RF	Symmetrical Recycling (Off/On)	Supply (A1/A2)
DOb	Delay On	Switch (A1/B1)
DN	Delay Off	Switch (A1/B1)
INa	Interval*	Switch (A1/B1)
INb	Interval	Switch (A1/B1)

* This function is non-retriggerable

TECHNICAL SPECIFICATION

Supply voltage U **(A1, A2)**:	24 – 230V AC/12 – 230V DC			
Frequency range:	48 - 63Hz (AC supplies)			
Supply variation:	AC: +15/-20%, DC: +/-15%			
Overvoltage category:	III (IEC 60664)			
Rated impulse withstand voltage:	4kV (1.2/50µS) IEC 60664			
Power consumption (max.):		12V	24V	110V	230V
	AC:	0.6VA	0.8VA	2.6VA	6.8VA
	DC:	0.52W	0.48W	0.94W	1.9W
Timing functions (7):				
Supply initiated:	Delay On (DO), Interval (IN), Symmetrical Recycling Off/On (RF)			
Switch initiated:	Delay On (DOb), Delay Off (DN), Interval (Trailing) (INa), Interval (Leading) (INb)			
Timing ranges (7):	Seconds:	Minutes:	Hours:	
	0.1 – 1	0.1 – 1	0.1 – 1	
	1 – 10	1 – 10	1 – 10	
			10 - 100	
Reset time[3]:	< 100mS			
Accuracy:	± 1% of maximum full scale			
Adjustment accuracy:	< 5% of maximum full scale			
Repeat accuracy:	± 0.5% at constant conditions (IEC 61812)			
Drift with temperature:	± 0.05% / °C			
Drift with voltage:	± 0.2% / V			
External trigger input **(A1 > B1)**:	Volt Free Contact, Open Collector			
External loading:	Yes, between B1 and A2 (i.e. LED, Relay, Lamp)			
Trigger threshold:	>75% of voltage present between A1 and A2 (auto-set)			
Minimum trigger time:	AC: 60mS DC: 40mS (B1 terminal unloaded)			
Maximum input frequency:	10 Hz (with 50:50 duty cycle)			
Maximum cable length:	10m (between Timer and external switching device)			
Power on indication / Timing[2]:	Green LED			
Relay status	Red LED			
Ambient temp:	-20 to +60°C			
Relative humidity:	+95%			
Output **(15, 16, 18 / 25, 26, 28)**:	DPDT relay			
Output rating:	AC1	250V 8A (2000VA)		
	AC15	250V 5A (no), 3A (nc)		
	DC1	25V 8A (200W)		
Electrical life:	≥ 150,000 ops at rated load			
Dielectric voltage:	2kV AC (rms) IEC 60947-1			
Rated impulse withstand voltage:	4kV (1.2/50µS) IEC 60664			
Housing:	Orange flame retardant UL94			
Weight:	≈ 70g			
Mounting option:	On to 35mm symmetric DIN rail to BS EN 60715 or direct surface mounting via 2 x M3.5 or 4BA screws using the black clips provided on the rear of the unit.			
Terminal conductor size	≤ 2 x 2.5mm² solid or stranded			
Approvals:	Conforms to IEC 61812.			

c UL us LISTED IND. CONT. EQ. E111187

CE, C-tick and RoHS Compliant.
EMC: Immunity: EN 61000-6-2 (EN 61000-4-3 10V/m 80MHz - 2.7GHz). Emissions: EN 61000-6-4

INSTALLATION AND SETTING

Installation work must be carried out by qualified personnel.

- BEFORE INSTALLATION, ISOLATE THE SUPPLY.
- Connect the unit as required.

Setting the unit.

- Set the "Function" selector ❺ to the required position[1].
- Set the "Range" ❹ to the required position choosing seconds, minutes or hours then set the "Set %" adjustment ❸ as required. The "Set %" is a % of the selected range, so 60% of the 1 – 10 hour range will give 6 hours.

Applying power.

- Apply power and the green LED ❶ will illuminate or start flashing depending on Function selected. If a Switch initiated function is selected, the LED will begin flashing upon closing of the external input.
- The red relay LED ❷ will illuminate to indicate the relay is in the energised state.

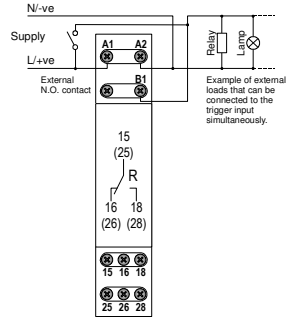
Note:

[1] If the "Function" selector is changed whilst the power is applied, the relay will remain in its current state and the green LED will flash at a faster rate. Power must be removed and re-applied for the new Function to operate.

[2] In accordance with IEC 61812, the green LED is permitted to extinguish during a voltage dip or momentary interruption of the power supply providing the state of the output relay does not change.

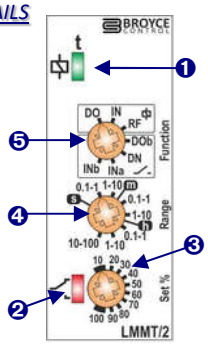
[3] The dip / interruption (reset) duration and levels are defined in the product standard however, the standard allows for these to be different from the levels actually specified.

CONNECTION DIAGRAM

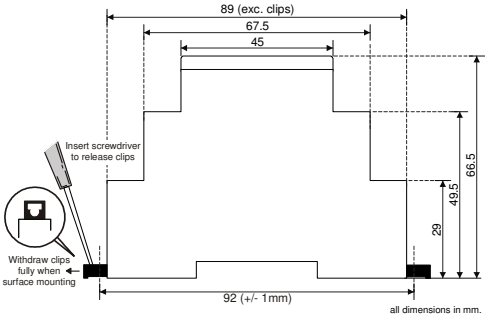


SETTING DETAILS

1. Power supply status / Timing (Green) LED
2. Relay output status (Red) LED
3. "Set %" adjustment
4. Time delay "Range" selector
5. Timing "Function" selector



DIMENSIONS



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