Type: LMAT

Multi Attempt to Start Timer

Terminal Protection to IP20

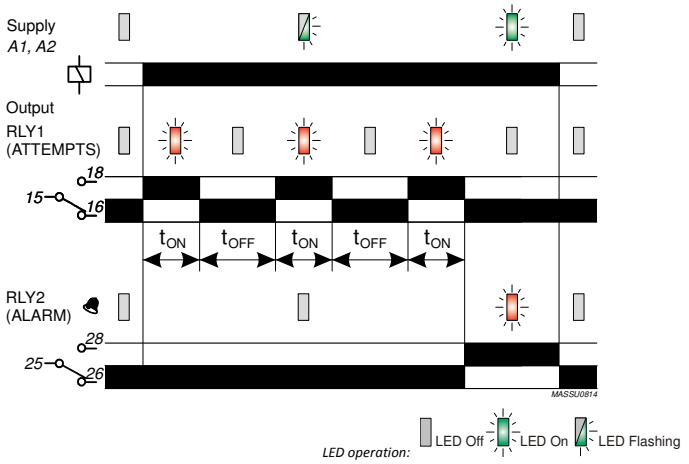


Dims: to DIN 43880
W. 17.5mm

- ***NEW*** **17.5mm DIN rail housing**
- **Two relay outputs (RLY1 - "Attempts", RLY2 - "Alarm")**
- **7 Selectable "No. of Attempts" (2 – 8)**
- **Separate adjustments for RLY1 "On" and "Off" times (1 – 60 seconds)**
- **Multi-voltage input (12 – 48V AC/DC)**
- **2 x SPDT relay output 8A**
- **Green LED indication for supply / timing status**
- **Red LED indication for relay statuses**
- **Conforms to IEC 61812**

ISO 9001:2015
Cert. No. 14125771

FUNCTION DIAGRAMS



TECHNICAL SPECIFICATION

Supply voltage U **(A1, A2)**:		12 – 48V AC/DC	
Frequency range:		48 - 63Hz (AC supplies)	
Supply variation:		+15/-30%	
Power consumption (max.):		12V	24V
	AC:	0.6VA	0.8VA
	DC:	0.52W	0.48W
Attempts to Start (7) settings:		2, 3, 4, 5, 6, 7 or 8	
Timing function (RLY1):		Attempts to Start Output	
Timing delay adjustment:		1 – 60 seconds "t_{ON}" and "t_{OFF}"	
Timing function (RLY2):		Alarm Output	
Time delay:		Instantaneous after RLY1 has de-energised following the last attempt	
Reset time[2]:		< 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	
Power on indication / Timing[1]:		Green LED	
Relay status (RLY1)		Red LED	
Relay status (RLY2 - Alarm)		Red LED	
Ambient temperature:		-20 to +60°C	
Relative humidity:		+95%	
Output **(15, 16, 18 / 25, 26, 28)**:		SPDT relay (x2)	
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:		≈ 80g	
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 "Start Attempts" ❹ selector to the required position depending on how many attempts the equipment is allowed before the alarm output operates.
- Set the "On Time (s)" ❺ and "Off Time (s)" ❻ adjustments as required. "On Time" is used to set the duration the relay is energised for and "Off Time" how long it remains de-energised.

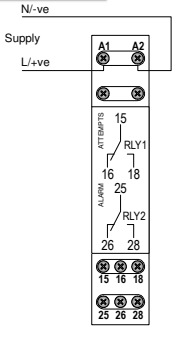
Applying power.

- Apply power and the green LED ❶ will start flashing to indicate timing is in progress.
- Contacts 15 and 18 will close as soon as power is applied (RLY1) and the red relay LED ❸ will illuminate. This will remain for the duration set by the "On Time". At the end of this Contacts 15 and 18 will open and 15 and 16 close with the red LED ❸ extinguishing for the duration set by the "Off Time".
- If RLY1 is allowed to energise for the final attempt, at the end of the last "t_{ON}" period it will then de-energise and RLY2 will then energise (Contacts 25 and 28 closing). Red LED ❷ will illuminate and green LED ❶ will remain permanently on.
- The unit will then remain in this state until power is removed. Re-applying power will repeat the whole timing sequence again.

Note:

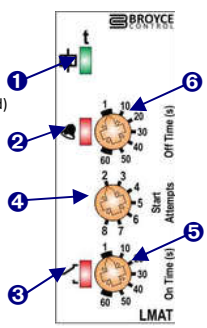
[1] In accordance with IEC 61812, the green LED is permitted to extinguish during a voltage dip or momentary interruption of the power supply providing the state of the output relay does not change.
[2] The dip / interruption (reset) duration and levels are defined in the product standard however, the standard allows for these to be different from the levels actually specified.

CONNECTION DIAGRAM

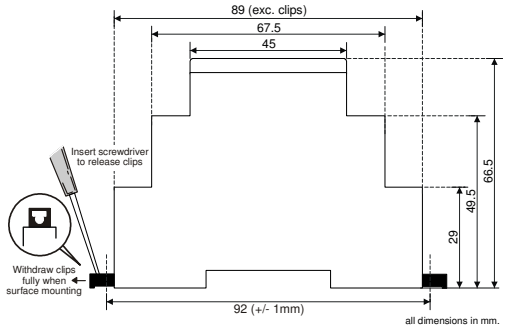


SETTING DETAILS

1. Power supply status / Timing (Green) LED
2. RLY2 "Alarm" output status (Red) LED
3. RLY1 output status (Red) LED
4. "Start Attempts" selector
5. "On Time [t_{ON}]" adjustment
6. "Off Time [t_{OFF}]" adjustment



DIMENSIONS



Broyce Control Ltd., Pool Street, Wolverhampton, West Midlands WV2 4HN. England
Tel: +44 (0) 1902 773746 Fax: +44 (0) 1902 420639 Email: sales@broycecontrol.com Web: www.broycecontrol.com

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