# Type: LEDO/2

## Delay On Operate, Multi-voltage Timer

Terminal Protection to IP20

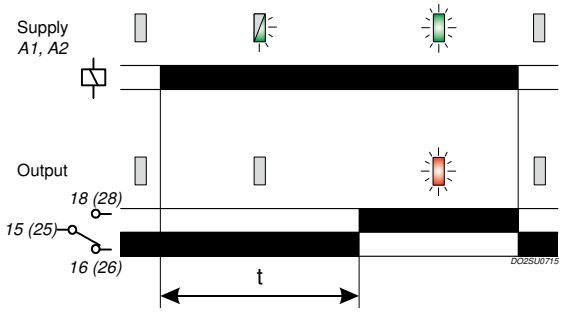


Dims: to DIN 43880
W. 17.5mm

- ***NEW*** **17.5mm DIN rail housing**
- **Supply Initiated Delay On Operate timing function**
- **7 Selectable time ranges (0.1 seconds – 100 hours)**
- **Fine adjustment of selected time range**
- **Multi-voltage input (12 – 230V AC/DC)**
- **1 x DPDT relay output 8A**
- **Green LED indication for supply / timing status**
- **Red LED indication for relay status**
- **Conforms to IEC 61812**

ISO 9001:2015
Cert. No. 14125771

## FUNCTION DIAGRAM




*LED operation:*




## 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 "Range" ❹ to the required position (depending on whether seconds, minutes or hours are required).
- Set the "Set %" adjustment ❸ as required. The "Set %" is a % of the selected range; so for example, a 30% setting on the 1 – 10 hour range will give 3 hours.

*Applying power.*

- Apply power across terminals "A1" and "A2" and the green LED ❶ will start flashing indicating timing in progress.
- The relay will remain de-energised (contacts **15 / 16** and **25 / 26** closed, **15 / 18** and **25 / 28** open) and red LED ❷ extinguished.
- After the delay period "t" has elapsed, the relay will energise (contacts **15 / 16** and **25 / 26** open, **15 / 18** and **25 / 28** closed) and the red LED will illuminate.
- The green LED will remain permanently lit.
- The whole timing process is repeated by removing and re-applying power.

*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.*

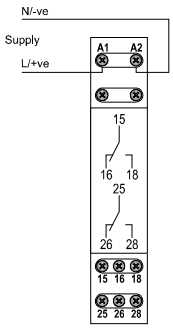
## TECHNICAL SPECIFICATION

| | | | | |
|---|---|---|---|---|
| Supply voltage U **(A1, A2)**: | 12 – 230V AC/DC | | | |
| Frequency range: | 48 - 63Hz (AC supplies) | | | |
| Supply variation: | AC: +15/- 10% 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 function: | Delay On Operate (Supply Initiated) | | | |
| 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[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 | | | |
| Drift with voltage: | ± 0.2% / V | | | |
| Power on indication / Timing[1]: | 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

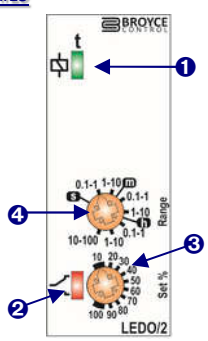
CE, C-tick and RoHS Compliant.
EMC: Immunity: EN 61000-6-2 (EN 61000-4-3 10V/m 80MHz - 2.7GHz)
Emissions: EN 61000-6-4

## CONNECTION DIAGRAM

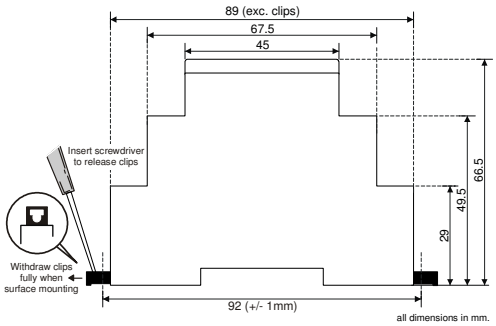



## SETTING DETAILS

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




## DIMENSIONS





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*The Information provided in this literature is believed to be accurate (subject to change without prior notice); however, use of such information shall be entirely at the user's own risk.*