

**17.5 mm DIN rail mounting MLR1 Part number 88826155**


- Relay or solid state output
- Multi-function or mono-function
- Multi-range
- Multi-voltage
- Screw or spring terminals
- LED status indicator (relay version)
- Option of connecting an external power supply to the control input
- 3-wire sensor control option

	Type	Functions	Timing	Output	Nominal rating	Connections	Supply voltage
88826105	MUR1	A - At - B - C - H - Ht - Di - D - Ac - Bw	0,1s→100h	1 changeover relay	8 A	Screw terminals	24 V DC / 24 →240 V AC
88826115	MAR1	A - At	0,1s→100h	1 changeover relay	8 A	Screw terminals	24 V DC / 24 →240 V AC
88826125	MBR1	B	0,1s→100h	1 changeover relay	8 A	Screw terminals	24 V DC / 24 →240 V AC
88826135	MCR1	C	0,1s→100h	1 changeover relay	8 A	Screw terminals	24 V DC / 24 →240 V AC
88826145	MHR1	H - Ht	0,1s→100h	1 changeover relay	8 A	Screw terminals	24 V DC / 24 →240 V AC
88826155	MLR1	Li-L	0,1s→100h	1 changeover relay	8 A	Screw terminals	24 V DC / 24 →240 V AC
88826100	MUR4	A - At - B - C - H - Ht - Di - D - Ac - Bw	0,1s→100h	1 changeover relay	8 A	Screw terminals	12 V AC / DC
88826103	MUR3	A - At - B - C - H - Ht - Di - D - Ac - Bw	0,1s→100h	1 changeover relay	8 A	Screw terminals	12→240 V AC/DC
88826503	MURc3	A - At - B - C - H - Ht - Di - D - Ac - Bw	0,1s→100h	1 changeover relay	8 A	Spring terminals	12 →240 V AC / DC
88826185	MXR1	Ad - Ah - N - O - P - Pt - Tl - Tt - W	0,1s→100h	1 changeover relay	8 A	Screw terminals	24 V DC / 24 →240 V AC
88826004	MUS2	A - At - B - C - H - Ht - Di - D - Ac - Bw	0,1s→100h	Solid state	0,7 A	Screw terminals	24 →240 V AC
88826014	MAS5	A	0,1s→100h	Solid state	0,7 A	Screw terminals	24 →240 V AC / DC
88826044	MHS2	H	0,1s→100h	Solid state	0,7 A	Screw terminals	24 →240 V AC
88826054	MLS2	Li - L	0,1s→100h	Solid state	0,7 A	Screw terminals	24 →240 V AC

**Timing**

Timing ranges (7 ranges)	1 s - 10 s - 1 min - 10 min - 1 h - 10 h - 100 h TK2R1: 0.6s - 2.5s - 20s - 160 s
Repetition accuracy with constant parameters	± 0.5% (IEC 1812-1)
Drift Temperature	± 0,05% / °C
Drift Voltage	± 0.2% / V
Display accuracy according to IEC 1812-1	± 10% / 25°C
Minimum pulse duration typically (relay version)	30 ms
Minimum pulse duration typically (solid state version)	50 ms
Minimum pulse duration typically (relay version under load)	100 ms
Maximum reset time by de-energisation typically (relay version)	100 ms
Maximum reset time by de-energisation typically (solid state version)	350 ms
Immunity from micro power cuts: typical	> 10 ms

**Supply**

Multi-voltage power supply	Depending on version
Frequency (Hz)	50 / 60
Operating range	85 to 110% Un (85 to 120% Un for 12V AC/DC)
Operator factor	100%
Max. absorbed power	0,6 W 24 V AC/DC 1,5 W 230 V AC 32 VA 230 V AC

**Output specification**

1 or 2 changeover relays, AgNi (cadmium-free)	2000 VA/80 W
Rated power	2000 VA/80 W
Maximum breaking current	8 A AC 8A DC
Minimum breaking current	10 mA / 5 V DC
Voltage breaking capacity	250 V AC/ DC
Electrical life (operations)	10 <sup>5</sup> operations 8 A 250 V resistive
Mechanical life (operations)	5x10 <sup>6</sup>
Breakdown voltage acc. to IEC 1812-1	2.5 kV / 1 min / 1 mA / 50 Hz
Impulse voltage acc. to IEC 664-1, IEC 1812-1	5 kV, wave 1.2 / 50 µs

**Solid state output**

Rated power	0,7 A AC/DC 20 °C (0,5 A UL)
Derating	5 mA / °C
Maximum admissible current	20 A ≤ 10 ms
Minimum breaking current	10 mA
Leakage current	< 5 mA
Voltage breaking capacity	250 V AC/ DC
Maximum voltage drop at terminals	3 wire 4V - 2 wire 8V
Electrical life (operations)	10 <sup>8</sup>
Mechanical life (operations)	10 <sup>8</sup>
Breakdown voltage acc. to IEC 664, IEC 255-5	2.5 kV to 1 mA / 1 min
Input type	Volt-free contact 3-wire PNP output control option residual voltage: 0.4V whatever the timer power supply

### General characteristics

Conforming to standards IEC 1812-1, EN 50081-1/2, EN 50082-1/2, LV directives (73/23/EEC + 93/68/EEC (CE marking) + EMC (89/336/EEC + IEC 669-2-3 (17,5 mm) )	■
Approvals	UL - CSA - cUL
Temperature limits use (°C)	-20 → +60
Temperature limits stored (°C)	-30 → +60
Installation category (acc. to IEC 664-1)	Voltage surge category
Creepage distance and clearance acc. to IEC 664-1	4 kV / 3
Protection (IEC 529)	IP 20 IP 40
Degree of protection acc. to IEC 529 Front face (except Tk2R1)	IP 50
Vibration resistance acc. to IEC 68-2-6	f = 10 ■ 55 Hz A = 0,35 mm
Relative humidity no condensation acc. to IEC 60068-2-3	93% sans condensation
Electromagnetic compatibility - Immunity to electrostatic discharges acc to IEC 1000-42	Level III (Air 8 kV / Contact 6 kV)
Immunity to electrostatic fields acc. ENV 50140/204 (IEC 61000-4-3)	Level III 10V/m (80 MHz to 1 GHz)
Immunity to rapid transient bursts acc. to IEC 61000-4-4	Level III (direct 2kV / Capacitive coupling clamp 1 kV)
Immunity to shock waves on power supply acc. to IEC 61000-4-5	Level III (2 kV / common mode 2 kV/residual current mode 1kV)
Immunity to radio frequency in common mode acc. to ENV (IEC 61000-4-6)	Level III (10V rms: 0.15 MHz to 80 MHz)
Immunity to voltage dips and breaks acc. to IEC 1000-4-11	30%/10 ms 60%/100 ms > 95%/5 s
Mains-borne and radiated emissions acc. to EN 55022 (EN 55011 Group 1)	Class B
Fixing: Symmetrical DIN rail (EN 50022)	35 mm
Connection capacity - without ferrule	2 x 2,5 mm <sup>2</sup>
Connection capacity - with ferrule	2 x 1,5 mm <sup>2</sup>
Spring terminals, 2 terminals per connection point - flexible wire	1,5 mm <sup>2</sup>
Spring terminals, 2 terminals per connection point - rigid wire	2,5 mm <sup>2</sup>
Housing material	Self-extinguishing
Weight: casing 17,5 mm	60 g
Weight: casing 22,5 mm	90 g
Weight: plug-in casing	80 g

### Display

Visualisation des états par 1 LED

- Verte clignotante sous tension

Indication du fonctionnement LED verte

Flashes brefs :

- minuterie sous tension, pas de temporisation en cours (sauf Di-D et Li-L) \*

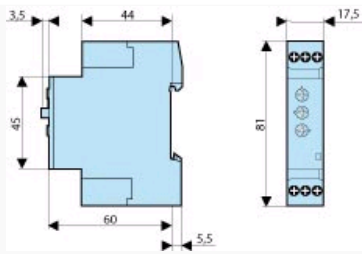
Clignotement :

- temporisation en cours

Allumage permanent :

- relais enclenché, pas de temporisation en cours

### Dimension Diagram :



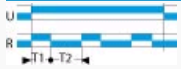
**Curves : Function L**



**Function L**

Double temporisation

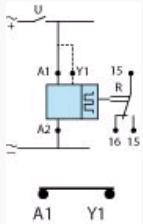
**Curves : Function Li**



**Function Li**

Asymmetrical recycler  
Pulse start

**: 1 changeover relay output**



**Functions**

Li - L