MR 28.10 *pro*

- 1 channel [CO]
- 20 different functions
- Time range 0.1 sec. up to 999 h.
- Minimum interval 0.1sec.
- Free adjustable time range
- *Power Fail Security (adjustable)
- *Security Request after Power Fail (adjustable)
- Elapsed time and pulse counter
- Security by PIN-Code
- Display with three text lines

Easy and intuitive pogramming

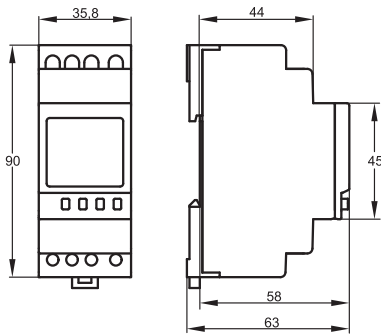
20 different functions

Basic functions
- Pulse shaping
- Fleeting
- Delaying
- Flashing

pulse

fleeting

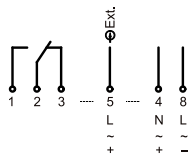*delay*

flasher

Highlights

- Text based menu and self-explanatory symbols
- Display with three high resolution text lines
- Easy handling. Quick and intuitive programmable
- Can be programmed with supply disconnected (10 years battery-reserve)
- Unlimited program security by E^2-PROM

* An interruption of the devices power supply turns off the relay. The state of the relay and the already elapsed time are saved and loaded on resumption of power supply. The saved state prior and the elapsed time to the power failure will be recovered after resumption of power supply. This process can be protected by a security request.

Digital multifunctional relay MR 28.10 *pro*
for DIN-rail mounting

MR 28.10 *pro*

Technical data

Supply voltages / versions	230 V, 50–60 Hz version 24 V ACDC version (please state when ordering)
Power consumption	230 V, 50–60 Hz version = 0.4–1.1 W 24 V ACDC version = 0.2–1.1 W (depending on the switching status)
Channel (potential-free)	Change-over, contact gap < 3 mm (µ)
Control input	voltage and phase of power supply
Contact material	**AgNi + Au (hard gold plated contact)
Switching capacity per channel	16 A / 250 V~ at cosφ=1 10 A with inductive load cosφ=0,6
Min. switching power	50 mW (5 V / 2 mA)
Max. starting current	30 A
Functionality	20 different functions
Time range (free adjustable)	000:00:00:1 up to 999:59:59:9 hhh:mm:ss:$\frac{1}{10}$s
Minimum interval	0.1 sec.
Debouncing time / operating time	max. 64 msec.
Reactivation time	max. 1.5 sec.
Timebase	Quartz crystal
Lifespan relay	10 A = approx. 100,000 switchings
Power back-up (at 20°C)	approx. 10 years (depends on the Lithium-battery life)
Program security	unlimited (E^2-PROM)
Display	high resolution LCD (visible area 7.5 cm^2)
Permitted ambient temperature	–30°…+55°C
Enclosure	self-extinguishing thermoplastic
Dimensions	45 x 35 x 58 mm
Distribution board mounting	35 mm DIN-rail (DIN EN 60715)
Type of connection	Screw terminals (pull-up type)
Type of protection	IP 20 to DIN EN 60529
Class of protection	II when installed according to regulations

**Hard gold plated contact. A distinction for this contact is made between following apaplications:
1. Small load range in which the gold layer is removed by a small extent only. 50 mW (5 V/2 mA) to 1,5 W / 24 V (Resistor load)
2. Medium or high load range in which after a few or after one switching the hard gold plated layer is removed and the properties of the contact base material AgNi take effect.

Overview functions

Pulse
- IRS – Interval Relay Standard
- IRR – Interval Relay Retriggerable
- PD – Pulse Delayed Relay

Fleeting
- FOM – Fleeting On Make
- FOB – Fleeting On Break
- FOMBS – Fleeting On Make and Break Standard
- FOMBF – Fleeting On Make and Break Finalizing

Flashing
- FPUS – Flasher Relay Pulsestarting Standard
- FPUA – Flasher Relay Pulsestarting Additive
- FPAS – Flasher Relay Pausestarting Standard
- FPAA – Flasher Relay Pausestarting Standard

Delaying
- OFDS – OFf Delay relay Standard
- OFDA – OFf Delay relay Additive
- ONDS – ON Delay relay Standard
- ONDA – ON Delay relay Additive
- ODFS – On Delay relay Fleeting Standard
- ODFA – On Delay relay Fleeting Additive
- OODS – On and Off Delay relay Standard
- OODF – On and Off Delay relay Finalizing
- OODA – On and Off Delay relay Additive

Order number	Channel	Timebase	Supply voltage
▮ **MR 28.10 *pro***	1	Quartz	230 V, 50–60 Hz
▮ **MR 28.10 *pro***	1	Quartz	24 V ACDC

◹ Housing colour