

# Multifunction Analog Timers

## DIN-Rail Mount 17.5 mm

Chronos2 MUR1, MUR3, MXR1 Series

*The Chronos 2 range of industrial timers: ideal for timing, monitoring and counting functions. Available in single or multi-function versions, to meet the specific needs of each application.*



24 VDC /  
24-240 VAC



12-240  
VAC/DC



IP40



Screw  
terminals

Electrical Control & Protection > Timer Relays > DIN-Rail > Analog > **Relay Output**

## Highlights

- Multifunction
- Multi-range
- Multi-voltage
- Screw terminals
- LED status indicator
- Possibility of external load connection in parallel to the control input
- 3-wire PNP sensor compatible
- Nominal rating 8 A

## Standards



## Part Numbers

**88827105**



Functions: Multifunction U (A - Ac - At - B - Bw - C - D - Di - H - Ht)

Series: MUR1

**88827103**



Functions: Multifunction U (A - Ac - At - B - Bw - C - D - Di - H - Ht)

Series: MUR3

**88827185**



Functions: Multifunction X (Ad - Ah - N - O - P - Pt - TL - Tt) + W

Series: MXR1

## Part numbering system

**Product line:**  
88: Control

**Output Type:**  
0: Relay  
1: Static

**Power Supply:**  
3: 12-240 VAC/DC  
4: 24-240 VAC or 24-240 VAC/DC  
5: 24 VDC / 24-240 VAC or 24-240 VAC/DC  
6: 230-240 / 380-440 VAC

**88**

**827**

**1**

**0**

**3**

**Casing:**  
827: 17.5 mm  
865/866: 22.5 mm

**Function:**  
0: Multifunction U  
1: Function A  
2: Function B  
3: Function C  
4: Function H/Ht  
5: Function L/Li  
6: Function K  
7: Function Q  
8: Multifunction X

## More info.



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## Specifications

**88827105**
**88827103**
**88827185**

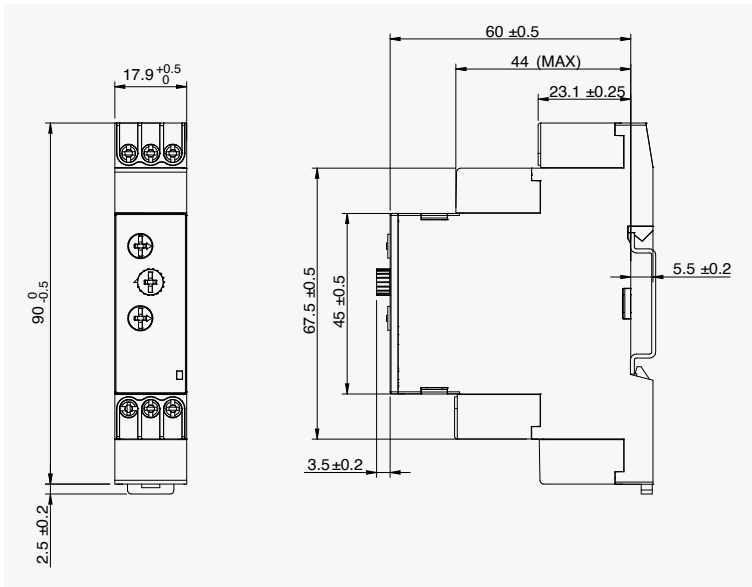
Inputs			
Supply voltage	24 VDC / 24-240 VAC	12-240 VAC/DC	24 VDC / 24-240 VAC
Voltage supply tolerance	-15%, +10%		
Operating factor	100%		
Max power consumption at Un	0.6 W (24 VDC)	0.4 W (12 VDC)	0.6 W (24 VDC)
	1.1 VA (24 VAC)	2 W (240 VDC)	1.1 VA (24 VAC)
	10 VA (120 VAC)	1 VA (12 VAC)	10 VA (120 VAC)
	28 VA (240 VAC)	4 VA (240 VAC)	28 VA (240 VAC)
Immunity to power micro cuts	< 10 ms		
Timing			
Timing ranges	1 s - 10 s - 1 min - 10 min - 1 h - 10 h - 100 h		
Minimum control pulse duration	30 ms DC / 50 ms AC		
Recovery time (after by de-energization)	120 ms		
Setting accuracy (full range)	IEC/EN 61812-1: ± 0.5% with constant parameters		
Drift temperature	± 0.05% /°C		
Drift voltage	± 0.2% / V		
Outputs			
Outputs configuration	1 changeover relay		
Maximum switching voltage	8 A 250 VAC resistive		
	8 A 30 VDC resistive		
Maximum switching power (resistive)	250 VAC / 8 A resistive		
	125 VDC / 0.3 A resistive		
Electrical life (operations)	10 <sup>5</sup>		
	8 A 250 VAC resistive		
Minimum breaking current	10 mA / 5 VDC		
Mechanical life (operations)	10x10 <sup>6</sup> cycles		
Rated power	2000 VA / 40 W		
Dielectric strength	IEC/EN 60664-1: 2.5 kV / 1 min / 1 mA / 50 Hz		
Insulation			
Insulation coordination	IEC/EN 60664-1: Voltage surge category III		
Rated impulse voltage	IEC/EN 60664-1, IEC/EN 61812-1, IEC 62314:2022: 5 kV (1.2/50 µs)		
Clearance / creepage distances	IEC/EN 60664-1: 4 kV / 3 mm Pollution degree 2		
Insulation resistance	IEC/EN 60664-1: 100 MΩ (500 VDC)		

## Specifications

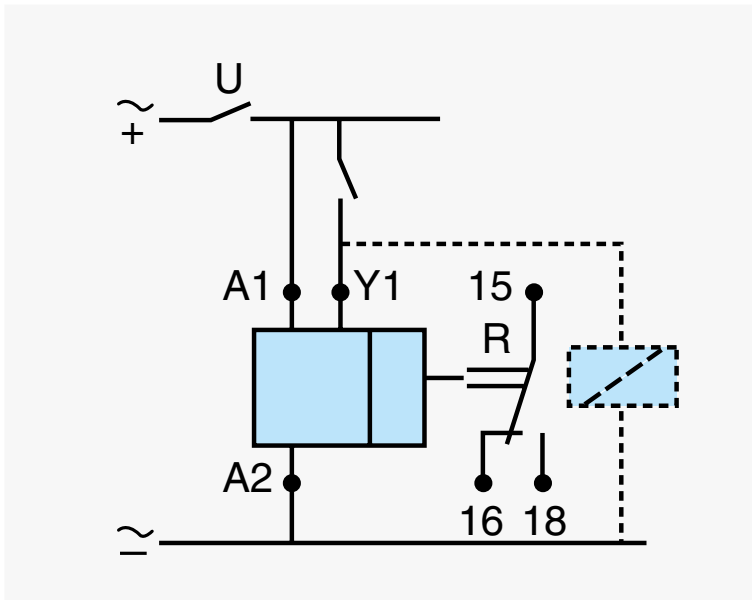
**88827105**
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**88827185**

General characteristics			
Display	No, but status indicator. Un: green LED blinks when counting, flashes when not counting (except for D & Di functions), lights up continuously when relay is closed and not counting.		
Display accuracy	IEC/EN 61812-1: $\pm 10\%$ / 25°C		
Casing	17.5 mm		
Mounting	IEC/EN 60715: 35 mm symmetrical DIN-Rail		
Mounting position	Vertical		
Housing material	Self-extinguishing Incandescent wire test		
Degree of protection	According to IEC/EN 60529 : Terminal block : IP20 Housing : IP40 Front face : IP50		
Terminal capacity	Single-wire without ferrule: 1x0,5 - 3,3 mm <sup>2</sup> (AWG 20 - AWG 12) 2x0,5 - 2,5 mm <sup>2</sup> (AWG 20 - AWG 14) Multi-wire with ferrule: 1x0.5 - 2.5mm <sup>2</sup> (AWG20 - AWG14) 2x0.5 - 1.5mm <sup>2</sup> (AWG20 - AWG16)		
Maximum tightening torques	IEC 60947-1 : 0.5 - 0.6 N.m		
Operating temperature	-20°C to +60°C		
Storage temperature	-30°C to +60°C		
Humidity	IEC/EN 60068-2-30: 93% non-condensing		
Vibration resistance	IEC/EN 60068-2-6: 20 m/s <sup>2</sup> / 10 Hz - 150 Hz		
Shock resistance	IEC/EN 60068-2-27: 15 g - 11 ms		
Short interruption on power line	IEC/EN 61000-4-11: 0% residual voltage, 250/300 cycles		
Weight	63 g	66 g	63 g
Packaging	Paper Compact carton Corrugated carton PE bags (not glued) Molded cellulose pulp (e.g.-box) PET pieces (recyclable)		
Standards			
Approvals / marking	CE, cULus Listed Industrial Control Equipment, CCC*		
Conformity with environmental directives	2015/863/UE: RoHS 1907/2006: Reach		
Immunity to electrostatic discharges	IEC/EN 61000-4-2: Level III (Air 8 kV / Contact 6 kV) IEC/EN 61000-4-3: Level I (1 V/m: 2.0 GHz - 2.7 GHz) Level II (3 V/m: 1.4 GHz - 2.0 GHz) Level III (10 V/m: 80 MHz - 1 GHz)		
Immunity to radiated, radio-frequency, electromagnetic field			
Immunity to rapid transient bursts	IEC/EN 61000-4-4: Level III (direct 2 kV / Capacitive coupling clamp 1 kV)		
Immunity to shock waves on power supply	IEC/EN 61000-4-5: Level III (2 kV / common mode 2 kV / residual current mode 1 kV)		
Immunity to radiofrequency in common mode	IEC/EN 61000-4-6: Level III (10 Vrms: 0.15 MHz - 80 MHz)		
Immunity to voltage dips and breaks	IEC/EN 61000-4-11: 0% residual voltage, 1 cycle 70% residual voltage, 25/30 cycles		

## Dimensions (mm)

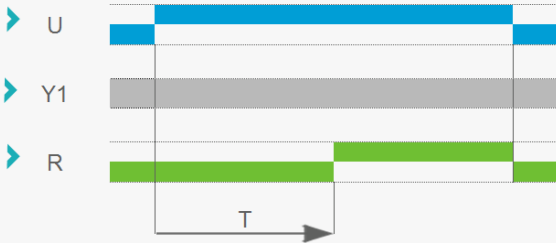


## Wiring diagrams

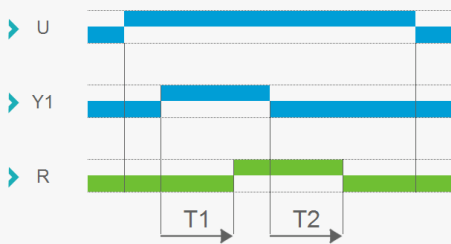


**Function diagrams**

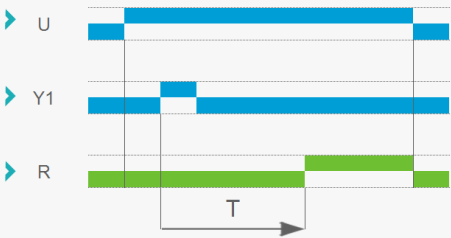
**Function A: On-Delay (Delay on make)**



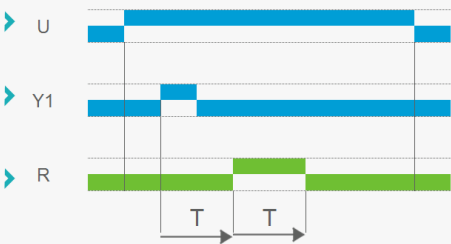
**Function Ac: On/Off Delay (Delay on make/break)**



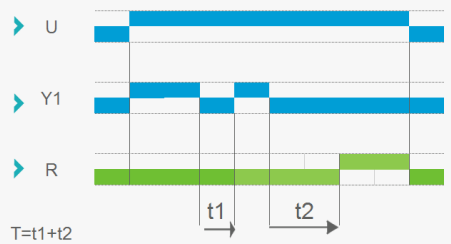
**Function Ad: Delay on Start**



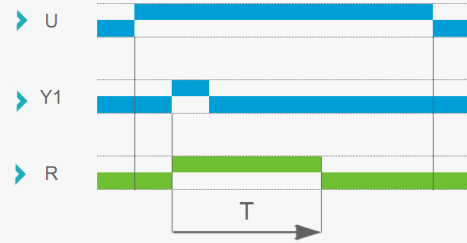
**Function Ah: Triggered Flashing Cycle (Single shot flip-flop)**



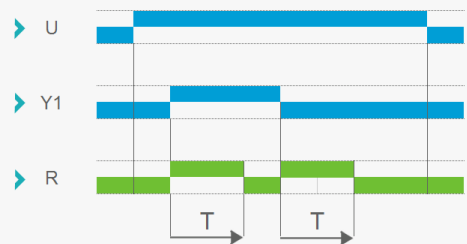
**Function At: Summation Time Relay**



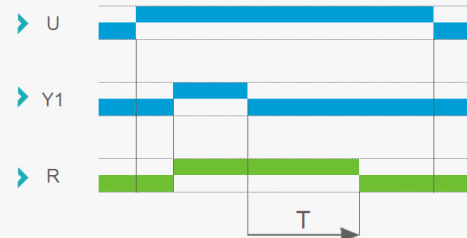
**Function B: One-Shot**



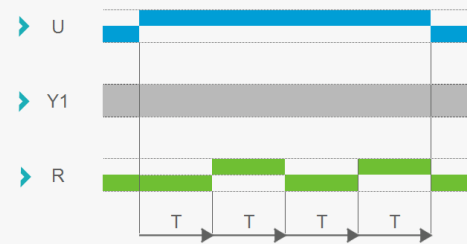
**Function Bw: Pulse output**



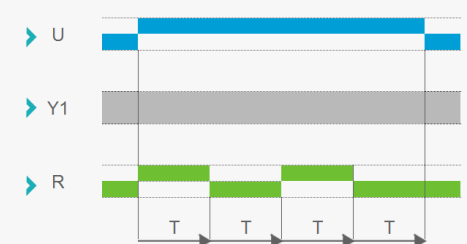
**Function C: Off-Delay (Delay on brake)**



**Function D: Flasher (Symmetrical) - OFF Start**

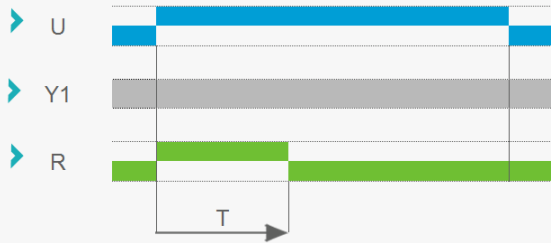


**Function Di: Flasher (Symmetrical) - ON Start**

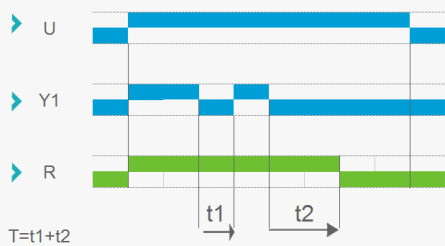


**Function diagrams**

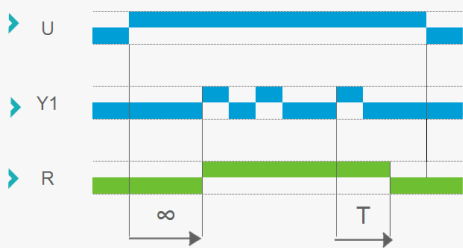
**Function H: Interval**



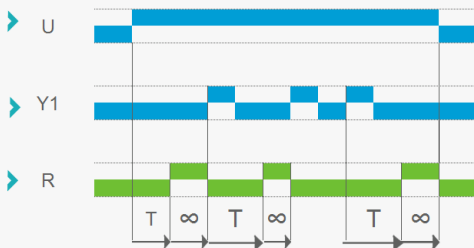
**Function Ht: Interval with Memory**



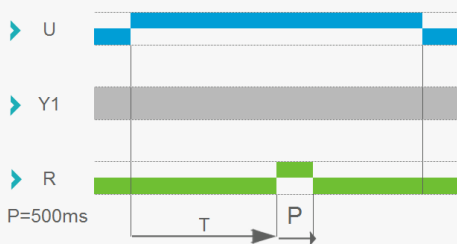
**Function N: Watchdog**



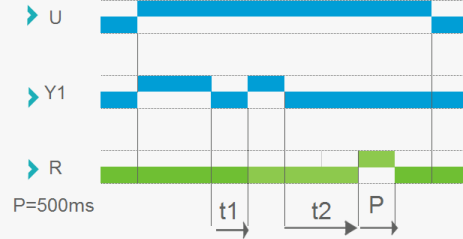
**Function O: Delayed watchdog**



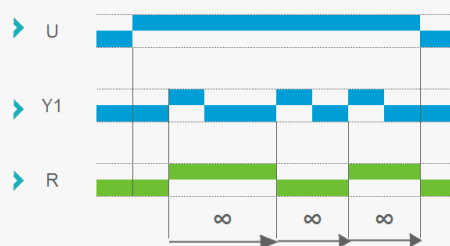
**Function P: Pulse delayed relay**



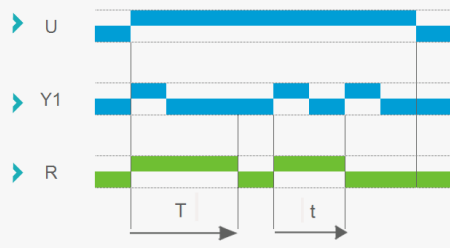
**Function Pt: Impulse counter (delay on)**



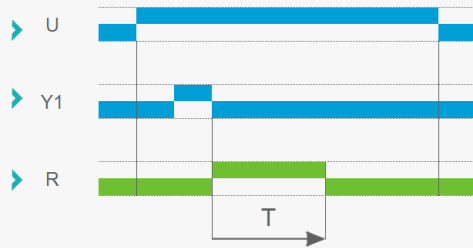
**Function TL: Latching (Alternating) - Leading Edge**



**Function Tt: Delayed Latching (Alternating) - Leading Edge**



**Function W: Timing after Pulse of Control Contact**



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