

Single-Function Analog Timers

DIN-Rail Mount 17.5 mm

Chronos2 MAR1, MBR1, MCR1, MHR1 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



IP40



Screw terminals

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

Highlights

- Mono-function
- 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

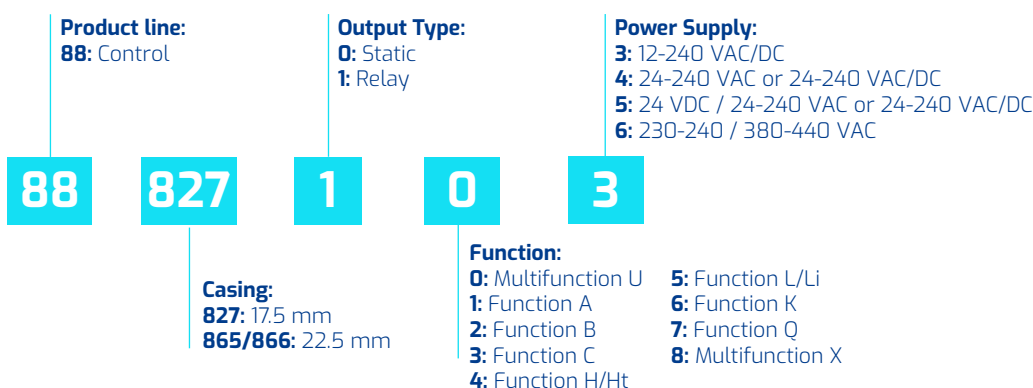
Standards



Part Numbers

88827115	88827125	88827135	88827145
Functions: A - At	Functions B	Functions C	Functions: H - Ht
Series: MAR1	Series: MBR1	Series: MCR1	Series: MHR1

Part numbering system



More info.



Specifications

88827115
88827125
88827135
88827145

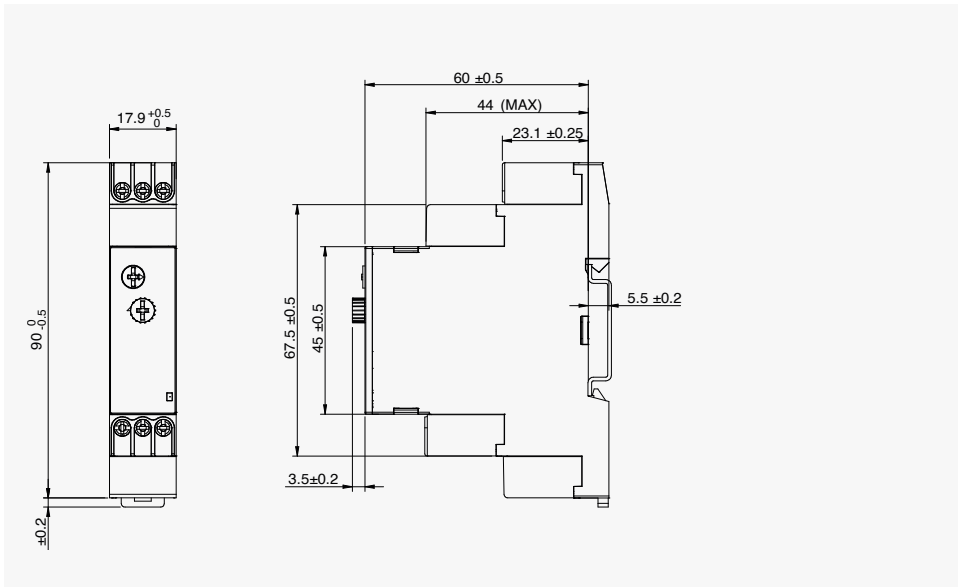
Inputs	
Supply voltage	24 VDC / 24-240 VAC
Voltage supply tolerance	-15%, +10%
Operating factor	100%
Max power consumption at Un	0.6 W (24 VDC) 1.1 VA (24 VAC) 10 VA (120 VAC) 28 VA (240 VAC)
Immunity to power micro cuts	< 10 ms
Timing	
Timing ranges	1 s - 10 s - 1 min - 10 min - 1 h - 10 h - 100 h
Minimum 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: $\pm 0.5\%$ with constant parameters
Drift temperature	$\pm 0.05\%$ / °C
Drift voltage	$\pm 0.2\%$ / 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 ⁵ 8 A 250 VAC resistive
Minimum breaking current	10 mA / 5 VDC
Mechanical life (operations)	10x10 ⁶ 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 μ s)
Clearance / creepage distances	IEC/EN 60664-1: 4 kV / 3 mm Pollution degree 2
Insulation resistance	IEC/EN 60664-1: 100 M Ω (500 VDC)

Specifications

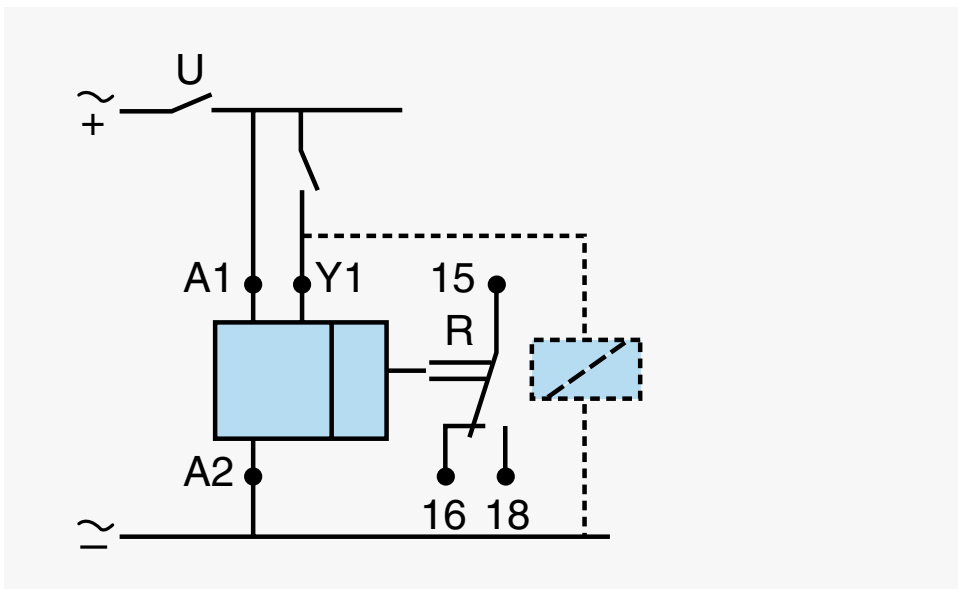
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General characteristics	
Display	No, but status indicator. Un: green LED blinks when counting, flashes when not counting, and lights up continuously when relay is closed and not counting.
Display accuracy	IEC/EN 61812-1: $\pm 10\%$ / 25°C
Casing	17.5 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 ² (AWG 20 - AWG 12) 2x0,5 - 2,5 mm ² (AWG 20 - AWG 14) Multi-wire with ferrule: 1x0.5 - 2.5mm ² (AWG20 - AWG14) 2x0.5 - 1.5mm ² (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 ² / 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
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)
Immunity to radiated, radio-frequency, electromagnetic field	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 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)

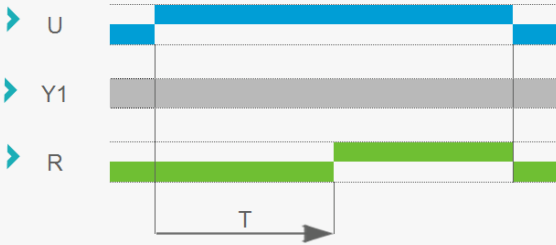


Wiring diagrams

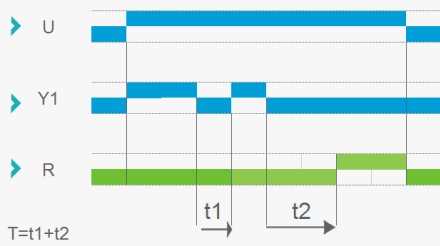


Function diagrams

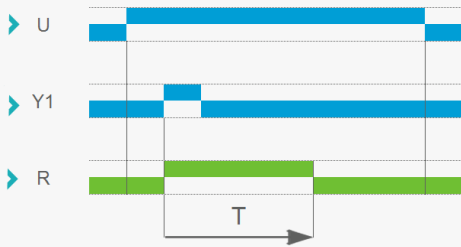
Function A: On-Delay (Delay on make)



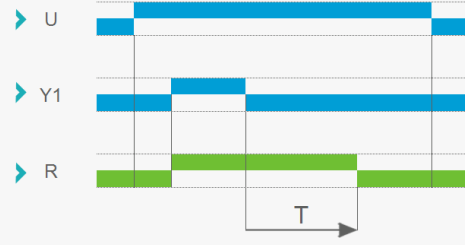
Function At: Summation Time Relay



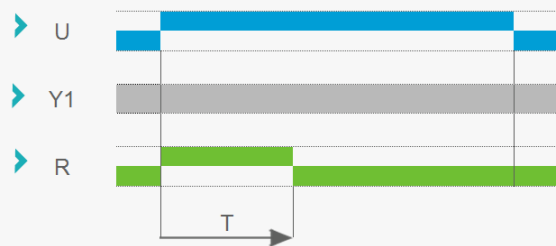
Function B: One-Shot



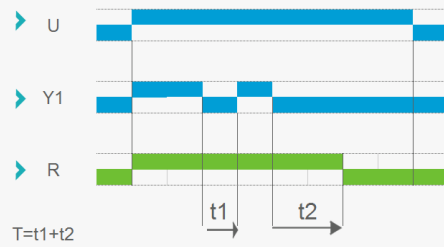
Function C: Off-Delay (Delay on brake)



Function H: Interval



Function Ht: Interval with Memory



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