› Plug-In Timer
11 pins

- Multifunction or monofunction
- Compact body for space saving
- Wide time range (from 0.5 seconds to 10 days delay)
- Universal power supply (12-240 V≂)
- 1 or 2 relay outputs (SPDT / Changeover)
- Protective cover
- LED status indicator
- 3-wire PNP sensor compatible
- 11-pins connections

PU2R10MV1
Multifunctions U - Monofunction Ad - Instantaneous

PA2R10MV1
Monofunction A, At

PC2R10MV1
Monofunction C

PL2R10MV1
Monofunction L, Li

Product selection

Function	Output	Supply Voltage	Part Number
Multifunction U: (A, At, B, C, H, Ht, D, Di, Ac, Bw) Ad - Instantaneous	2 relays	12 to 240 V≂	**PU2R10MV1**
A, At	2 relays	12 to 240 V≂	**PA2R10MV1**
C	2 relays	12 to 240 V≂	**PC2R10MV1**
L, Li	2 relays	12 to 240 V≂	**PL2R10MV1**

PART NUMBERING SYSTEM

Type
O: Plug-in 8-Pins
P: Plug-in 11-Pins

Output Quantity
1: 1 Output
2: 2 Outputs

Output Power
10: 10 A

P **U** **2** **R** **10** **MV1**

Function
A: ON-Delay
C: OFF-Delay
L: Repeat Cycle
U: Multifuction U

Output Type
R: Relay

Power Supply
MV1: 12-240V AC/DC

You have a project? Contact us on **www.crouzet.com**

Description:

Syr-line, the new specialized range at Crouzet, aimed to satisfy the most unique requirements of your applications by innovating in design, engineering and development.

The Plug in Analog Timers, a new family of 11 timers with multifuction or monofunction, universal power supply, wide time range, with all the classic functions.

For more information about Crouzet's Syr-line range, please visit **www.crouzet.com**.

	PU2R10MV1	PA2R10MV1	PC2R10MV1	PL2R10MV1
Power Supply				
Rated supply voltage Un	12 to 240 V≂			
Voltage supply tolerance	-15 %, +10 %			
AC supply voltage frequency	50 / 60 Hz ± 5%			
Galvanic isolation of supply / inputs	No			
Power consumption @ Un	Approx. 3 VA (V∿) 1.5 W (V⎓)			
Immunity to power micro cuts	10 ms			
Timing Control				
Specified time ranges (7) (IEC 1812-1)	0.5..10 s, 0.05..1 min, 0.5..10 min, 0.05..1 h, 0.5..10 h, 0.05..1 day, 0.5..10 days			
Minimum control pulse duration (IEC 1812-1)	40 ms 100 ms with load			
Recovery time (after by de-energisation) (IEC 1812-1)	120 ms			
Repeatability (IEC 1812-1)	≤ ± 0.5 %			
Setting Accuracy (IEC 1812-1)	≤ ± 10 %			
Temperature drift	≤ ± 0.05 % / °C			
Voltage drift	≤ ± 0.2 % / V			
Relay output				
Contact arrangement	2 CO (SPDT) (ChangeOver -Single Pole Double Throw-) R1: Follow timing function R2: Follow timing function / Instantenous	2 CO (SPDT) (ChangeOver -Single Pole Double Throw-)		
Maximum switching voltage	250 V∿ / 10 A resistive / 125 V⎓ / 0.3 A resistive			
Switching current rate (resistive)	NO / NC: 10 A 250 V∿ / 10 A 30 V⎓ @ 25 °C NO / NC: 5 A 250 V∿ / 5 A 30 V⎓ @ 60 °C			
Minimum switching contact	10 mA / 5 V⎓			
Maximum switching power (resistive)	2500 VA / 300 W			
Electrical life	10^5 cycles min at 250 V∿/ 10 A resistive (NO only)			
Maximum rate (at max switching power)	360 cycles /hour			
Mechanical life	10 x 10^6 cycles			
Rated impulse voltage	4 kV (1.2/50 µs)			
Dielectric strength between coil / contacts (IEC 60664-1)	2.5 kV / 1 min / 1 mA / 50 Hz			
Dielectric strength between open contacts	1 kV / 1 min / 1 mA / 50 Hz			
Insulation				
Rated Insulation voltage (IEC 60664-1)	250 V			
Insulation coordination (IEC 60664-1)	Overvoltage category III; pollution degree 2; up to 2000 m above sea level			
Rated impulse voltage (IEC 60664-1)	4 kV (1.2/50 µs)			
Clearance / Creepage distances (IEC 60664-1)	3 mm / 3.2 mm			
Dielectric strength (EN-61812-1)	2.5 kV / 1 min / 1 mA / 50 Hz			
Insulation Resistance (NFC 93 050)	> 500 MOhms / 250 V⎓ / 1 min			
General specifications				
Status indication (LED)	Un: green LED blinks when count, flash when waiting Y1, continuous ON when supplied R: yellow LED blink when only R2 is ON (instantaneous), continuous ON when the 2 relays are ON.			
Casing	35 mm			
Mounting	Mounting base-mounted on socket			
Housing material (UL94)	Enclosure plastic type V0			
Degree of protection (IEC 60529)	IP40			
Operating temperature (IEC 60068-2)	-20 °C to +60 °C			

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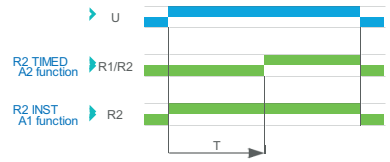
Storage temperature (IEC 60068-2)	-40 °C to +70 °C			
Humidity (IEC 60068-2-30)	93 % without condensation			
Vibration resistance (IEC 60068-2-6)	±0.15mm from 10 Hz…60 Hz 2 g from 60 Hz..150 Hz			
Shock resistance (IEC60068-2-27)	10 gn - 11 ms; 3 X 6 axis (Output non-energized) 5 gn - 11 ms; 3 X 6 axis (Output energized)			
Drop to concrete floor (IEC 60068-2-32)	High: 0.75 m			
Weight	90 g 110 g with packaging			
Standards				
CEE Directive: 2014/30/EU 2014/35/EU	EMC Low voltage			
Approvals / Marking	CE cULus Listed Industrial Control Equipment			
Security standard (IEC 60664-1)	Insulation coordination for equipment within low-voltage systems			
Conformity with environmental directives: 2015/863/UE 1907/2006 2012/19/UE	RoHS Reach WEEE			
Product standard (IEC 61812-1 / UL 60947-4-1)	Specified time relays for industrial use Industrial Control Equipment (NRNT- Industrial Control Switches) Refer to UL840 Insulation Coordination for Electrical Equipment			
Electromagnetic compatibility: IEC 61000-6-2 IEC 61000-6-3 IEC 61000-6-4	Generic standards Immunity for industrial environment Emission residential environment Emission industrial environment			
Immunity to electrostatic discharges (IEC61000-4-2)	Level III Air ±8 KV / Contact ±6 KV			
Immunity to radiated, radio-frequency, electromagnetic field (IEC61000-4-3)	Level III 10 V/m (80 MHz to 1 GHz) 80 % AM (1 kHz) 3 V/m (1.4 to 2 GHz) 80 % AM (1 KHz) 1 V/m (2 to 2.7 GHz) 80 % AM (1 KHz)			
Immunity to rapid transient bursts (IEC 61000-4-4)	direct ±4 kV 5/50 Tr/Th ns 5 KKz & 100 KHz Capacitive coupling clamp ± 2 KV 5/50 Tr/Th ns 5 KHz & 100 KHz			
Immunity to shock waves on power supply (IEC 61000-4-5)	Level III: line-to-earth ±2 kV / line-to-line ±1 kV			
Immunity to radiofrequency in common mode (IEC 61000-4-6)	Level III: 10 Vrms (0.15 to 80 MHz) 80 % AM (1 kHz)			
Immunity to voltage dips and breaks (IEC 61000-4-11)	0 % residual voltage during 1 cycle (Crit. B) 40 % residual voltage / 10 cycles 50 Hz / 12 cycles 60 Hz (Crit. C) 70 % residual voltage / 25 cycles 50 Hz / 30 cycles 60 Hz (Crit. C) Short interruptions: 0 % residual voltage / 250 cycles 50 Hz / 300 cycles 60 Hz (Crit. C)			
AC/DC main port emissions (IEC 61000-6-3 IEC 61000-6-4)	CISPR 16-2-1 (7.4.1), CISPR 16-1-2 (4.3) 0.15 MHz – 0.5 MHz, 66 dB(µV) – 56 dB(µV) quasi-peak, 56 dB(µV) – 46 dB(µV) average 0.5 MHz – 5 MHz, 56 dB(µV) quasi-peak, 46 dB(µV) average 5 MHz – 30 MHz, 60 dB(µV) quasi-peak, 50 dB(µV) average CISPR 14-1 0.15 MHz – 30 MHz CISPR 16-2-1 (7.4.1), CISPR 16-1-2 (4.3) 0.15 MHz – 0.5 MHz, 79 dB(µV) quasi-peak, 66 dB(µV) average 0.5 MHz – 30 MHz, 73 dB(µV) quasi-peak, 60 dB(µV) average			
Radiated emissions (IEC 61000-6-3 IEC 61000-6-4)	CISPR 16-2-3 30 MHz – 230 MHz, 30 dB(µV/m) Quasi-peak at 10 m 230 MHz – 1 000 MHz, 37 dB(µV/m) Quasi-peak at 10 m Or: 30 MHz – 230 MHz, 40 dB(µV/m) Quasi-peak at 3 m in a semi-anechoic chamber 230 MHz – 1 000 MHz, 47 dB(µV/m) Quasi-peak at 3 m in a semi-anechoic chamber			

	PU2R10MV1	PA2R10MV1	PC2R10MV1	PL2R10MV1

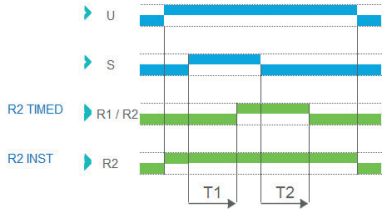
Function Diagrams

Basic Time Chart

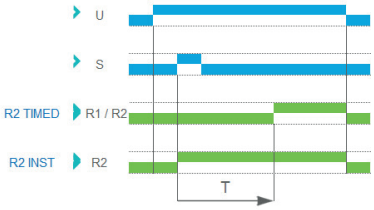
Function A - On-Delay (Delay on make)



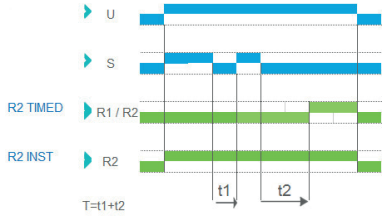
Function Ac - On/Off Delay (Delay on make/break)



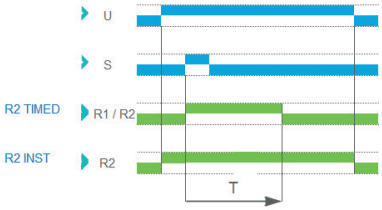
Function Ad - Delay on Start



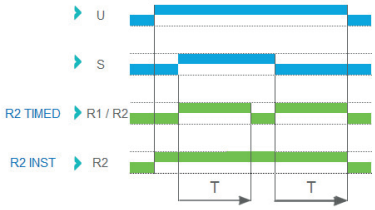
Function At - Summation time relay



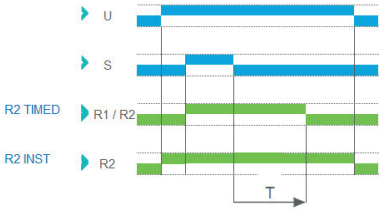
Function B - One-Shot



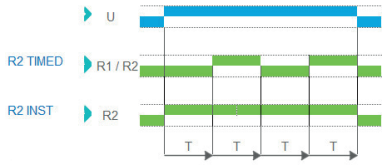
Function Bw



Function C - Off-Delay (Delay on break)

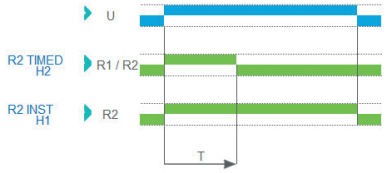


Function D - Symmetrical flashing (OFF Start)

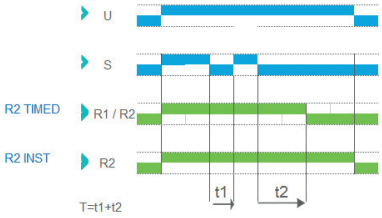


Function Di - Symmetrical flashing (ON Start)

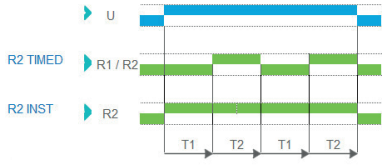
Function H - Interval



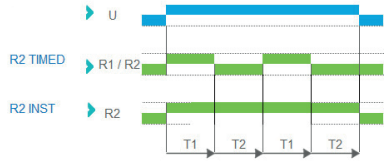
Function Ht - Interval summation time relay



Function L - Recycler (OFF Start)



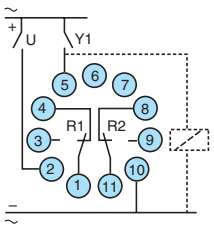
Function Li - Recycler (ON Start)



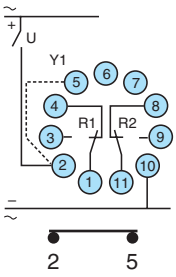
PU2R10MV1	PA2R10MV1	PC2R10MV1	PL2R10MV1

Connections

PU2R10MV1 - PA2R10MV1 - PC2R10MV1

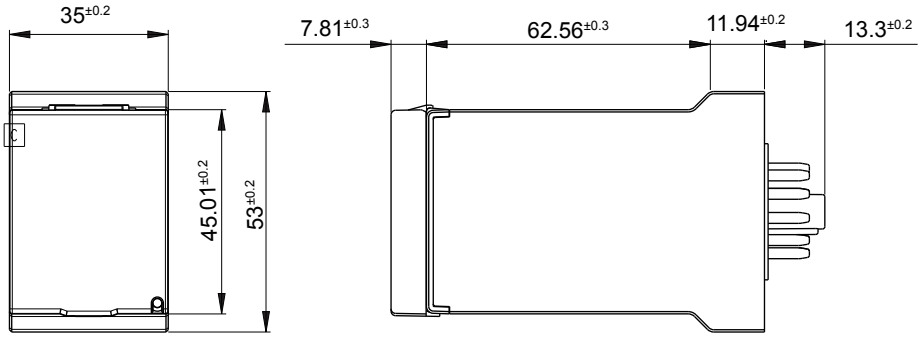


PL2R10MV1



PU2R10MV1	PA2R10MV1	PC2R10MV1	PL2R10MV1

Outline dimensions (mm)



PU2R10MV1	PA2R10MV1	PC2R10MV1	PL2R10MV1

Socket

RECOMENDED SOCKET

11 Pins for DIN Rail or Panel Mount (P/N: 25 622 080)

Warning:

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