

Chronos 2 timers

→ Plug-in

- Multi-function or mono-function
- Multi-range
- Multi-voltage
- Relay output 1 or 2 : 8 A - 250 V (10 A UL)
- LED status indicator
- Option of connecting an external power supply to the control input
- 3-wire sensor control option



Specifications

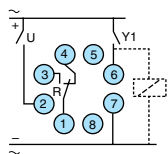
Type	Functions	Output	Nominal rating	Connections	Supply voltage	Code
OUR1	A - At - B - C - H - Ht - Di - D - Ac - Bw	1 changeover relay	8 A	8-pin	24 V DC / 24 → 240 V AC	88 867 105
OA2R1	A	2 changeover relays	8 A	8-pin	24 V DC / 24 → 240 V AC	88 867 215
OCR1	C	1 changeover relay	8 A	8-pin	24 V DC / 24 → 240 V AC	88 867 135
OLR1	Li - L	1 changeover relay	8 A	8-pin	24 V DC / 24 → 240 V AC	88 867 155
OUR4	A - At - B - C - H - Ht - Di - D - Ac - Bw	1 changeover relay	8 A	8-pin	12 V AC / DC	88 867 100
OUR3	A - At - B - C - H - Ht - Di - D - Ac - Bw	1 changeover relay	8 A	8-pin	12 → 240 V AC / DC	88 867 103
PU2R1	A - At - B - C - H - Ht - Di - D - Ac - Bw	2 timed changeover relays including 1 instantaneous	8 A	11-pin	24 V DC / 24 → 240 V AC	88 867 305
PA2R1	A - At	2 changeover relays	8 A	11-pin	24 V DC / 24 → 240 V AC	88 867 415
PC2R1	C	2 changeover relays	8 A	11-pin	24 V DC / 24 → 240 V AC	88 867 435
PL2R1	Li - L	2 changeover relays	8 A	11-pin	24 V DC / 24 → 240 V AC	88 867 455
PU2R4	A - At - B - C - H - Ht - Di - D - Ac - Bw	2 timed changeover relays including 1 instantaneous	8 A	11-pin	12 V AC / DC	88 867 300
PU2R3	A - At - B - C - Ht - Di - D - Ac - Bw	2 timed changeover relays including 1 instantaneous	8 A	11-pin	12 → 240 V AC / DC	88 867 303

Accessories

	Code
8-pin connector base	25 622 128
11-pin connector base (for the whole range)	25 622 077

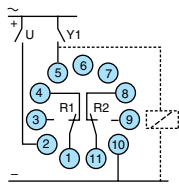
Connections

8-pin 1 relay output



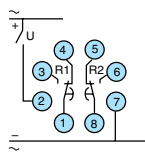
Functions A - At / H - Ht / B / C / Di - D / Ac / Bw

11-pin 2 relay outputs



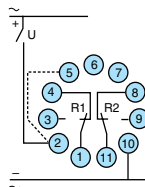
Functions A - At / H - Ht / B / C / Di - D / Ac / Bw

8-pin 2 relay outputs



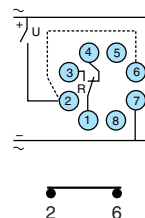
Function A

11-pin 2 relay outputs



Functions L - Li

8-pin 1 relay output

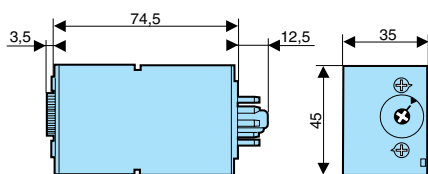


Functions Li - L

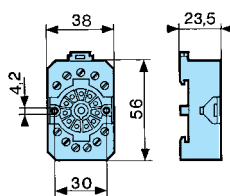
General characteristics

see page 45

Dimensions



Accessories



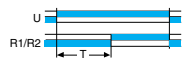
Curves

Function A



Delay on energisation 1 relay output

Function A



Delay on energisation 2 timers

Function A



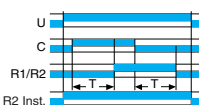
Delay on energisation with 2 timed outputs or 1 timed and 1 instantaneous

Function Ac



Timing after closing and opening of control contact 1 relay output

Function Ac



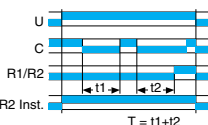
Timing after closing and opening of control contact with 2 timed outputs or 1 timed and 1 instantaneous

Function At



Timing on energisation with memory 1 relay output

Function At



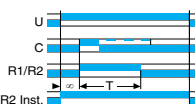
Timing on energisation with memory with 2 timed outputs or 1 timed and 1 instantaneous

Function B



Timing on impulse one shot 1 relay output

Function B



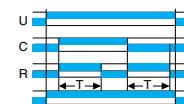
Timing on impulse one shot with 2 timed outputs or 1 timed and 1 instantaneous

Function Bw



Pulse output (adjustable) 1 relay output

Function Bw



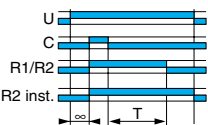
Pulse output (adjustable) with 2 timed outputs or 1 timed and 1 instantaneous

Function C



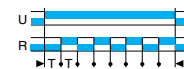
Timing after impulse 1 timer

Function C



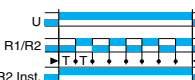
Timing after impulse with 2 timed outputs or 1 timed and 1 instantaneous

Function D



Flip-flop 1 relay output Pause start

Function D



Flip-flop Pause start with 2 timed outputs or 1 timed and 1 instantaneous

Function Di



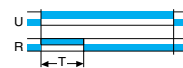
Flip-flop 1 relay output Pulse start

Function Di



Flip-flop Pause start with 2 timed outputs or 1 timed and 1 instantaneous

Function H



Timing on energisation 1 relay output

Function H



Timing on energisation 2 timers or 2 relays, including 1 instantaneous

Function L



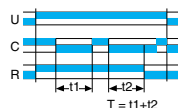
Asymmetrical recycler 1 relay Pause start

Function Li



Asymmetrical recycler 1 relay Pulse start 2 timers

Function Ht



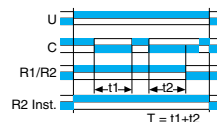
Delay on energisation with memory 1 relay

Function L



Asymmetrical recycler 1 relay Pulse start 2 timers

Function Ht



Delay on energisation with memory 2 timers or 2 relays, including 1 instantaneous

Function Li



Asymmetrical recycler 1 relay Pulse start

Chronos 2 timers: general characteristics

→ 17.5 mm

→ 22.5 mm

→ Plug-in

Timing	
Repetition accuracy with constant parameters	± 0.5 % (IEC 1812-1)
Temperature drift	± 0.05 % / °C
Voltage drift	± 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	
Relay output	
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/V DC
Electrical life (operations)	10 ⁵ operations 8 A 250 V resistive
Mechanical life (operations)	5x10 ⁶
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 17.5 mm	
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/V DC
Maximum voltage drop at terminals	3 wire 4V - 2 wire 8V
Electrical life (operations)	10 ⁶
Mechanical life (operations)	10 ⁶
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
Timing ranges (7 ranges)	1 s - 10 s - 1 min - 10 min - 1 h - 10 h - 100 h

Other 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 pending	
Temperatures 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) Terminal	IP 20
Protection (IEC 529) Housing	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 68-2-3	93 % without 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 1000-4-3)	Level III 10V/m (80 MHz to 1 GHz)
Immunity to rapid transient bursts acc. to IEC 1000-4-4	Level III (direct 2kV / Capacitive coupling clamp 1 kV)
Immunity to shock waves on power supply acc. to IEC 1000-4-5	Level III (2 kV / common mode 2 kV/residual current mode 1kV)
Immunity to radiofrequency in common mode acc. to ENV (CEI 1000-4-6)	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 ²
Connection capacity - with ferrule	2 x 1.5 mm ²
Spring terminals, 2 terminals per connection point - flexible wire	1.5 mm ²
Spring terminals, 2 terminals per connection point - rigid wire	2.5 mm ²
Material housing	Self-extinguishing
Weight : casing 17.5 mm	60 g
Weight : casing 22.5 mm	90 g
Weight : plug-in casing	80 g