

# Chronos 2 electronic timers - Plug-in 11-pin (35 mm)

- Multi-function or mono-function
- Multi-range (7 ranges, available options)
- Multi-voltage
- DPDT Relay output 10A - 250V
- Plug-in
- 1 LED status indicator
- Option of connecting a small cord supply to the control input
- 3-wire sensor control option

Technical specifications	
<b>Timing</b>	
Repetition accuracy (with constant parameters)	± 0.5 % (CEI 1812-1)
<b>Drift</b>	
- Temperature	± 0.05 % / °C
- Voltage	± 0.2 % / V
Display precision according to IEC 1812-1	±10 % / 25 °C
Minimum pulse duration	
- Typically (relay version)	30 ms
- Typically (solid state version)	50 ms
- Typically under load (relay version)	100 ms
Maximum reset time by de-energisation	
- Typically (relay version)	100 ms
- Typically (solid state version)	350 ms
Immunity to breaks in supply voltage: typically	>10 ms
<b>Power supply</b>	
Multi-voltage power supply	depending on version, see page 6/13
Frequency	50/60 Hz
Operating range	85 to 110 % Un (85 to 120 % Un for 12V AC/DC)
Load factor	100 %
Maximum power consumption	0.6 W 24V AC/DC 1.5 W 230V AC 32 VA 230V AC
<b>Output elements relay output</b>	
1 or 2 changeover relays, AgNi (cadmium-free)	2000 VA / 80 W
Rated power	2000 V A / 80W
Maximum breaking current	10 A AC 10 A DC
Minimum breaking current	10 mA / 5 VDC
Voltage breaking capacity	250V AC/VDC
Electrical life	10 <sup>5</sup> operations 8 A 250V resistive
Mechanical life	5 x 10 <sup>6</sup> operations
Breakdown voltage acc. to IEC 1812-1	2.5 kV / 1min / 1 mA/50Hz
Impulse voltage acc. to IEC 664-1 IEC 1812-1	5 kV, wave 1.2 / 50 µs
<b>Display</b>	
State displayed by 1 LED	
- Flashing green when on	
Green LED operation indicator	
■■■■■ Pulsing:	
- timer on, no timing in progress (except functions Di-D and Li-L)	
■■■■■ Flashing:	
- timing in progress	
■■■■■ Permanently lit:	
- Relay waiting, no timing in progress	
Input type	
- Volt-free contact	
- 3-wire PNP output control option maximum residual voltage: 0.4 V whatever the timer power supply	0.4 V

## Other information

For special features, functions, etc. please contact us.

## Timing

### Types

### Part numbers and voltage

24V  $\overline{\text{---}}$  / 24 • 240V  $\sim$

12 V  $\sim$  /  $\overline{\text{---}}$

12 • 240 V  $\sim$  /  $\overline{\text{---}}$

### Functions

### Nominal current

### Accessories

11-pin connector base (for the whole range)

**S11**

### Timing ranges (7 ranges)

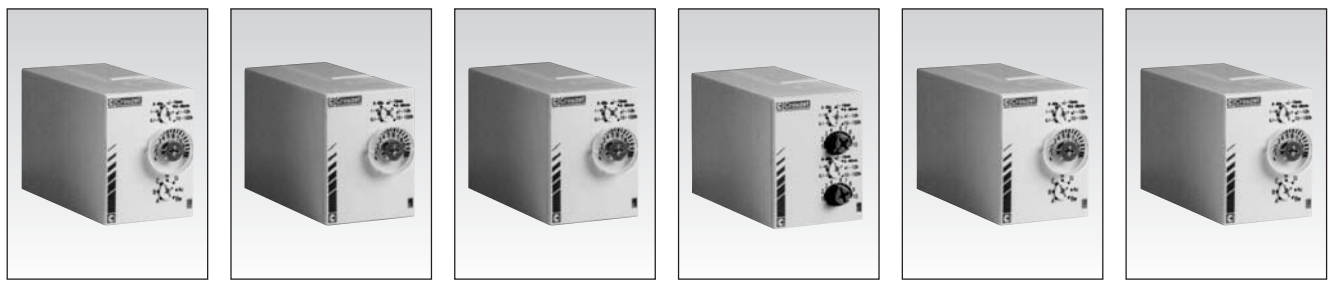
0.1s - 1s - 10s - 1 min - 10 min - 1 h - 10 h - 100 h

### General specifications

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 cUL listed CSA recognized	
Temperatures limits	
- use	-20 °C + 60 °C
- stored	-30 °C + 60 °C
Installation category (acc. to IEC 664-1)	Voltage surge category
Creepage distance and clearance acc. to IEC 664-1	4 kV / 3
Degree of protection acc. to IEC 529	
- terminal block	IP 20
- casing	IP 40
- front face (except Tk2R1)	IP 50
Vibration resistance acc. to IEC 68-2-6	f = 10 • 55 Hz A = 0.35 mm
Relative humidity acc. to IEC 68-2-3 without condensation	93 %
Electromagnetic compatibility	Level III
- Immunity to electrostatic discharges acc. to IEC 1000-42	(Air 8 K / Contact 6 KV)
- Immunity to electrostatic fields acc. to 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 (common mode 2 KV / residual current mode 1KV)
- Immunity to radiofrequency in common mode acc. to ENV	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: plug-in bases	11-pin
Casing material	Self-extinguishing
Weight: plug-in casing	80 g

Products and specifications subject to change without notice.

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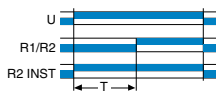


0.1s • 100h	0.1s • 100h	0.1s • 100h	0.1s • 100h	0.1s • 100h	0.1s • 100h
<b>PU2R1</b>	<b>PA2R1</b>	<b>PC2R1</b>	<b>PL2R1</b>	<b>PU2R4</b>	<b>PU2R3</b>
<b>88 867 305</b>	<b>88 867 415</b>	<b>88 867 435</b>	<b>88 867 455</b>	-	-
-	-	-	-	<b>88 867 300</b>	-
Multi-function A - At - B - C - H - Ht - Di - D - Ac - Bw	Bifunction A - At	Mono-function C	Bifunction Li - L	Multi-function A - At - B - C - H - Ht - Di - D - Ac - Bw	Multi-function A - At - B - C - H - Ht - Di - D - Ac - Bw
10 A DPDT	10 A DPDT	10 A DPDT	10 A DPDT	10 A DPDT	10 A DPDT
1 Relay Timed and 1 Relay Timed or Instant	2 relays	2 relays	2 relays	1 Relay Timed and 1 Relay Timed or Instant	1 Relay Timed and 1 Relay Timed or Instant

### Function diagrams

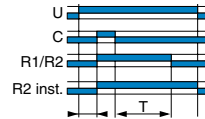
#### Function A

Delay on Make  
1 Relay Timed and  
1 Relay Timed or Instant



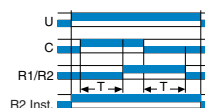
#### Function C

Delay on Break  
1 Relay Timed and  
1 Relay Timed or Instant



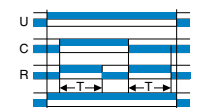
#### Function Ac

Combo Delay on Make/Delay on  
Break. Equal On/Off Time.  
1 Relay Timed and  
1 Relay Timed or Instant



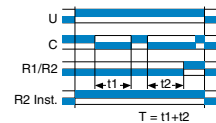
#### Function Bw

Pulse output (adjustable)  
1 Relay Timed and  
1 Relay Timed or Instant



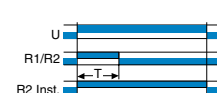
#### Function At

Accumulative Delay on Make  
1 Relay Timed and  
1 Relay Timed or Instant



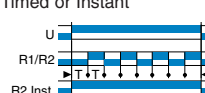
#### Function H

Interval  
1 Relay Timed and  
1 Relay Timed or Instant



#### Function D

Repeat Cycle  
Equal On/Off Time. Off Time First.  
1 Relay Timed and  
1 Relay Timed or Instant



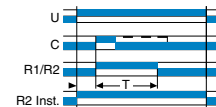
#### Function L

Repeat Cycle.  
Off Time First.  
2 relays



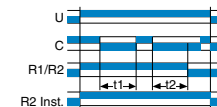
#### Function B

Single Shot  
1 Relay Timed and  
1 Relay Timed or Instant



#### Function Ht

Accumulative Interval  
1 Relay Timed and  
1 Relay Timed or Instant



#### Function Di

Repeat Cycle.  
On Time First.  
1 Relay Timed and  
1 Relay Timed or Instant

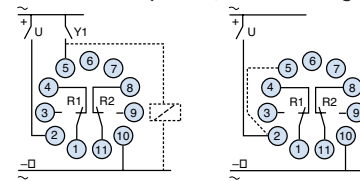


#### Function Li

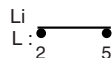
Repeat Cycle.  
On Time First.  
2 relays



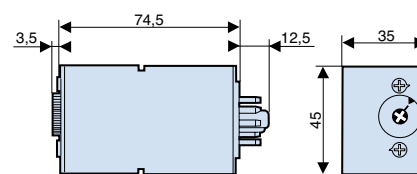
### Connections (Y1 = C, Function diagrams)



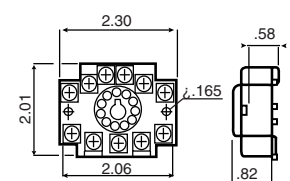
Functions:  
A - At / H - Ht / B / C  
Di - D / Ac / Bw



### Dimensions



### Accessories



11-pin connector base  
S11

### To order, specify:

**1** Type

**2** Part number

**3** Accessories

Example: Chronos 2 Timers PU2R1 88 867 305

11-pin connector base S11

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