

Chronos 2 timers

Time management

The basics

Crouzet,

a brand of Custom Sensors & Technologies, is a specialist in electromechanical, electronic technology, and software engineering. Based on Crouzet's 50 years of experience in time management, as well as experience in physical and mechanical values, we offer a range of automation components that includes: logic controllers, timers, control relays, counters, tachometers, machine safety equipment, and temperature controllers.

These products are particularly suited for use in water treatment, waste processing, renewable energy, HVAC, access control, building equipment, agriculture and industrial automation markets.

This document gives an overview of
the Chronos 2 DIN rail mounted timers.

These timers are available in 3 casings:

- DIN rail modular casing (width: 17.5 mm)
- DIN rail industrial casing (width: 22.5 mm)
- Plug-in industrial casing (width: 35 mm).



Features of the Chronos 2 timers

- Available in **mono-** or **multifunction** versions, to meet the specific needs of each application.
- **A timing range** of up to 100 hrs to cope with prolonged processing operations.
- **A range of power** supplies from 12 to 240 V in one unit for optimised stocks.
- Recognised **quality** and **reliability** ensures the correct operation of equipment.

Applications



Timers

Where are Chronos timers found?

In electrical cabinets associated with other automation functions for the following markets:

- Food industry
- Industrial automation systems
- Lighting
- Building equipment
- HVAC
- Small or large industrial machines

Packaging



Controlling heat sealing times on blister packs, packaging bags, etc.



TIMER
MAR1, MUR1, MXR1

Illuminated signs



Managing flashing on illuminated signs.



TIMER
MLR

Ice maker



Managing the duration of refrigeration.



TIMER
TUR1, MUR, MAR

Lighting for mobile homes



Managing the duration of outdoor lighting of a mobile home if the light switch is left switched on.



TIMED IMPULSE RELAY
MXR




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www.crouzet.com



Selection guide

Chronos 2 DIN rail mounted timers

DIN rail modular casings - The 17.5 mm range will migrate to new part numbers. The chart below shows the new part numbers

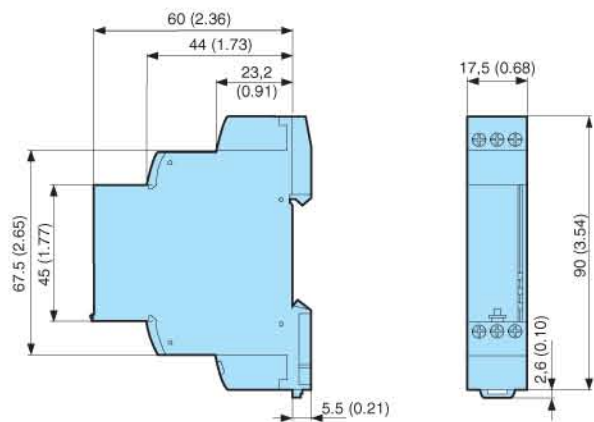
Casing width (mm)	Connections	Functions	Type of output	Output(s)	Timing	Supply	New part number	Old part number	Type
 17.5	Screw terminals	A / At / B / C / H / Ht Di / D / Ac / Bw	Relay	1 x 8 A changeover	0.1 s ⇒ 100 h	24 V ~ / 24 ⇒ 240 V ~	88 827 105	88 826 105	MUR1
		A / At					88 827 115	88 826 115	MAR1
		B					88 827 125	88 826 125	MBR1
		C					88 827 135	88 826 135	MCR1
		H / Ht					88 827 145	88 826 145	MHR1
		L / Li					88 827 150	88 826 150	MLR4
 17.5	Screw terminals	A / At / B / C / H / Ht Di / D / Ac / Bw	Relay	1 x 8 A changeover	0.1 s ⇒ 100 h	24 V ~ / 24 ⇒ 240 V ~	88 827 100	88 826 100	MUR4
	Spring terminals						88 827 103	88 826 103	MUR3
	Screw terminals	Ad / Ah / N / O / P Pt / TL / Tt / W					88 827 503	88 826 503	MURc3
		24 V ~ / 24 ⇒ 240 V ~					88 827 185	88 826 185	MXR1
		12 V ~							
		12 V ~							
 17.5	Screw terminals	A / At / B / C / H / Ht Di / D / Ac / Bw	Solid state	0.7 A	0.1 s ⇒ 100 h	24 ⇒ 240 V ~	88 827 004	88 826 004	MUS2
		A					88 827 014	88 826 014	MAS5
		H / Ht					88 827 044	88 826 044	MHS2
		L / Li					88 827 054	88 826 054	MLS2

Naming of Chronos 2 timers

M	U	ø/2	R	1
Dimensions	Functions	Output(s)	Type of output	Supply
M: 17.5 mm	A: A function	ø: 1 Output	R: Relay	1: 24 V ~ / 24 ⇒ 240 V ~
T: 22.5 mm	B: B function	2: 2 Outputs	S: Solid state	2: 24 ⇒ 240 V ~
R: 22.5 mm	C: C function			3: 12 ⇒ 240 V ~
O: Plug-in 8 pins	H: H function			4: 12 V ~
P: Plug-in 11 pins	L: L function			5: 24 ⇒ 240 V ~
	Q: Q function			6: 230 ⇒ 440 V ~
	U: Multifunction (A-At-B-C-H-Ht-Di-D-Ac-Bw)			
	X: Multifunction (Ad-Ah-N-O-P-Pt-TL-Tt-W)			

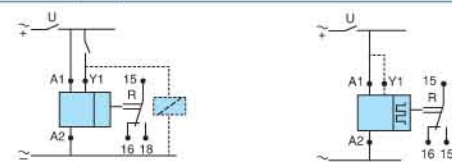
Dimensions in mm (inches)

DIN rail modular casings (17.5 mm)



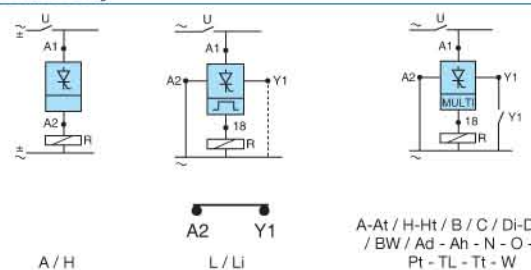
Connections

One changeover relay output



A-At / H-Ht / B / C / Di-D / Ac
/ Bw / Ad - Ah - N - O - P -
Pt - TL - Tt - W

Solid state relay




A / H

A2 Y1



A-At / H-Ht / B / C / Di-D / Ac
/ Bw / Ad - Ah - N - O - P -
Pt - TL - Tt - W

DIN rail industrial casings

Casing width (mm)	Connections	Functions	Type of output	Output(s)	Timing	Supply	Part number	Type					
 22.5	Screw terminals	A / At / B / C / H / Ht Di / D / Ac / Bw	Relay	1 x 8 A changeover	0.1 s ⇒ 100 h	24 V ~ / 24 ⇒ 240 V ~	88 865 105	TUR1					
		A / At					88 865 115	TAR1					
		B					88 865 125	TBR1					
		C					88 865 135	TCR1					
		H / Ht					88 865 145	THR1					
		L / Li					88 865 155	TLR1					
		Q					88 865 175	TQR1					
		K					88 866 175	RQR1*					
							88 865 265	TK2R1					
							2 x 8 A changeover	0.1 s ⇒ 160 s	88 865 300	TU2R4			
							1 x 8 A changeover 1 inst. or timed 8 A	0.1 s ⇒ 100 h	88 866 300	RU2R4*			
	1 x 8 A changeover	88 865 100	TUR4										
	2 x 8 A changeover	88 865 215	TA2R1										
 22.5	Screw terminals	A / At / B / C / H / Ht Di / D / Ac / Bw	Relay	1 x 8 A changeover	0.1 s ⇒ 100 h	24 V ~ / 24 ⇒ 240 V ~	88 866 215	RA2R1*					
	Spring terminals	A / At					88 865 103	TUR3					
		A / At / B / C / H / Ht Di / D / Ac / Bw					88 865 503	TURc3					
		12 ⇒ 240 V ~											
	 22.5	Screw terminals					Ad / Ah / N / O / P Pt / TL / Tt / W	Relay	1 x 8 A changeover 1 inst. or timed 8 A	0.1 s ⇒ 100 h	24 V ~ / 24 ⇒ 240 V ~	88 865 385	TX2R1*
							Q					88 866 385	RX2R1*
												88 865 185	TXR1
												88 865 176	TQR6
												88 866 176	RQR6*
												88 865 303	TU2R3
												12 ⇒ 240 V ~	88 866 303
			24 V ~ / 24 ⇒ 240 V ~	88 865 305	TU2R1*								
	24 V ~ / 24 ⇒ 240 V ~	88 866 305	RU2R1*										

* Available in 2014. The new part number's casings are different from the existing casings. Find out more on the technical datasheets available on www.crouzet.com

Plug-in industrial casings

Casing width (mm)	Connections	Functions	Type of output	Output(s)	Timing	Supply	Part number	Type	
 35	Plug-in 8-pin base	A / At / B / C / H / Ht Di / D / Ac / Bw	Relay	1 x 8 A changeover	0.1 s ⇒ 100 h	24 V ~ / 24 ⇒ 240 V ~	88 867 105	OUR1	
		A					88 867 215	OA2R1	
		C					88 867 135	OCR1	
		L / Li					88 867 155	OLR1	
		A / At / B / C / H / Ht Di / D / Ac / Bw					1 x 8 A changeover	88 867 100	OUR4
							12 V ~	88 867 103	OUR3
 35	Plug-in 11-pin base	A / At / B / C / H / Ht Di / D / Ac / Bw	Relay	1 x 8 A changeover 1 inst. or timed 8 A	0.1 s ⇒ 100 h	24 V ~ / 24 ⇒ 240 V ~	88 867 305	PU2R1	
		A / At					88 867 415	PA2R1	
		C					88 867 435	PCR1	
		L / Li					88 867 455	PL2R1	
		A / At / B / C / H / Ht Di / D / Ac / Bw					2 x 8 A changeover	88 867 300	PU2R4
							1 x 8 A changeover 1 inst. or timed 8 A	88 867 303	PU2R3

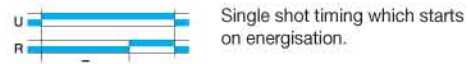
All Chronos 2 timers are CE, UL, cUL, CSA, GL certified

Function diagrams

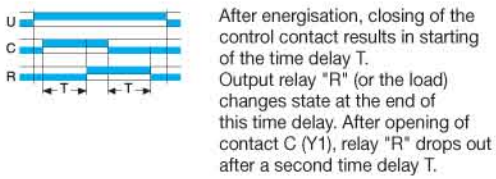
Generic functions

U : Supply
R : Output relay or load
T : Timing
∞ : Infinity
C (Y1) : Command

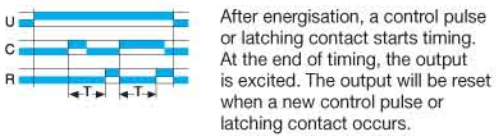
A function Delay on energisation



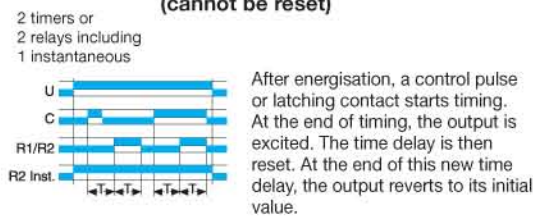
Ac function Timing after closing and opening of control contact



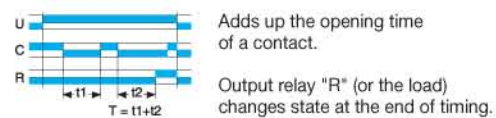
Ad function Delay on energisation (cannot be reset)



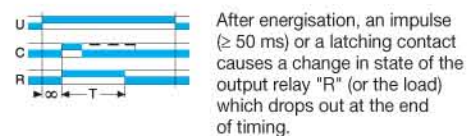
Ah function Single shot flip-flop (cannot be reset)



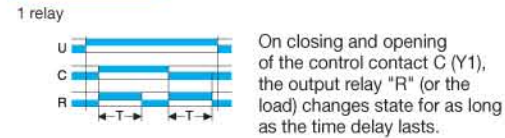
At function Timing on energisation with memory



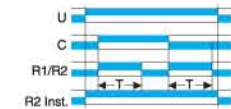
B function Timing on impulse (one shot) - Shaping (cannot be reset)



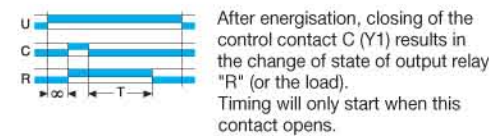
Bw function Pulse output (adjustable)



2 timers or 2 relays including 1 instantaneous



C function Timing after impulse True delay off (with auxiliary power supply)

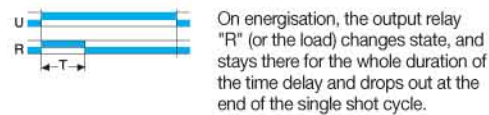


D or Di functions Symmetrical flashing

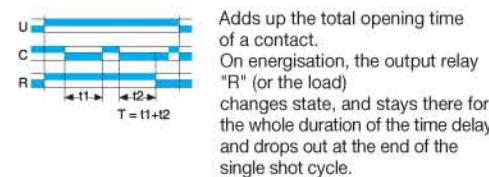
Repetitive cycle which alternately sets the output relay "R" (or the load) to operating and rest position for equal periods of time.



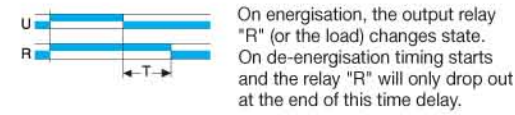
H function Timing on energisation - Pulse output (adjustable)



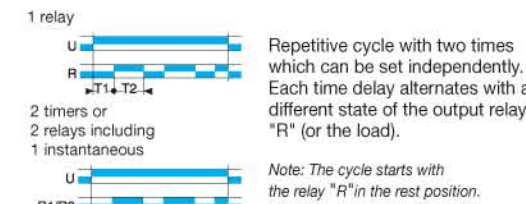
Ht function Delay on energisation with memory



K function Delay on de-energisation True delay off (without auxiliary power supply)



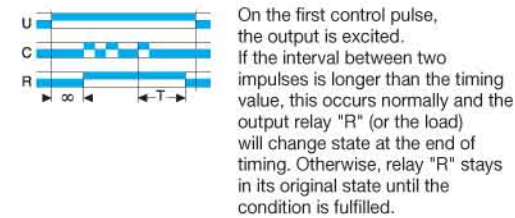
L function Asymmetrical flashing



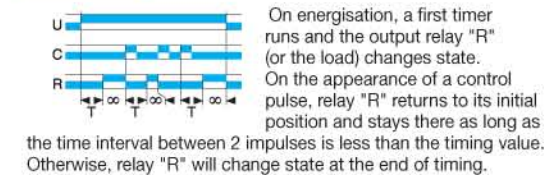
Li function Asymmetrical flashing



N function "Safe-guard"



O function "Delayed safe-guard"



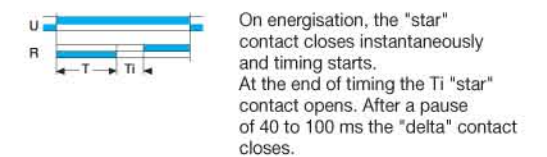
P function Delayed fixed-length pulse



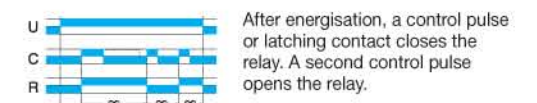
Pt function Impulse counter (delay on)



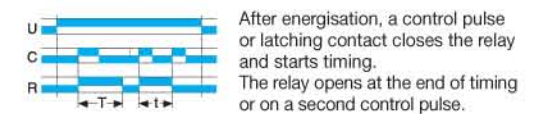
Q function "Star-delta" starting



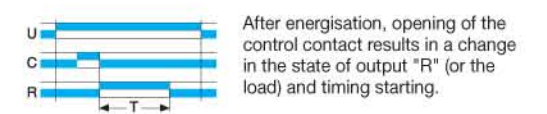
TL function Impulse relay



Tt function Timed impulse relay



W function Timing after pulse on control contact





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CAT/CZ/C2/EN/US
Ref.: 6714109JUS
04/2013

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Creation-Design: Actitudes, Communication Crouzet
Editing-Publishing: Crouzet Automatismes, Axxess
Photos-Graphics: Ginko

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