



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

<p>Packaging</p> <p>Controlling heat sealing times on blister packs, packaging bags, etc.</p> <p>TIMER MAR1, MUR1, MXR1</p>	<p>Illuminated signs</p> <p>Managing flashing on illuminated signs.</p> <p>TIMER MLR</p>
<p>Ice maker</p> <p>Managing the duration of refrigeration.</p> <p>TIMER TUR1, MUR, MAR</p>	<p>Lighting for mobile homes</p> <p>Managing the duration of outdoor lighting of a mobile home if the light switch is left switched on.</p> <p>TIMED IMPULSE RELAY MXR</p>

Our full range of Timers can be found at:
www.crouzet-control.com



AMERICAS

CANADA

InnoVista Sensors™
1461 Lawrence Drive
Thousand Oaks, CA 91320
USA
Tel.: +1 (800) 677 5311
Fax: +1 (800) 677 3865
customer.service@us.crouzet.com

MEXICO

InnoVista Sensors™
Calzada Zavaleta 2505-C
Santa Cruz Buenavista
Puebla, 72150 - MEXICO
Tel.: +52 (222) 409 7000
mexico@crouzet.com

USA

InnoVista Sensors™
1461 Lawrence Drive
Thousand Oaks, CA 91320
USA
Tel.: +1 (800) 677 5311
Fax: +1 (800) 677 3865
customer.service@us.crouzet.com

COUNTRIES NOT LISTED

InnoVista Sensors™
1461 Lawrence Drive
Thousand Oaks, CA 91320
USA
Tel.: +1 (800) 677 5311
Fax: +1 (800) 677 3865
customer.service@us.crouzet.com

EUROPE / MIDDLE EAST / AFRICA

BELGIUM

InnoVista Sensors™
Dieweg 3 B
1180 Uccle - BELGIQUE
Tel.: +32 (0) 2 462 07 30
Fax: +32 (0) 2 461 00 23
klientenservice@crouzet.com

FRANCE

InnoVista Sensors™
2 rue du Docteur Henri Abel,
CS 60059
26902 Valence Cedex 9
FRANCE
Tel.: +33 (0) 475 802 101
Fax: +33 (0) 475 828 900
relationclient@crouzet.com

GERMANY / AUSTRIA

InnoVista Sensors™
Otto-Hahn-Str. 3
40721 Hilden
DEUTSCHLAND
Tel.: +49 (0) 2103/980-0
Fax: +49 (0) 2103/980-222
kundenservice@crouzet.com

ITALY

InnoVista Sensors™
Via Viganò De Vizzi, 93/95
20092 Cinisello Balsamo (MI)
ITALIA
Tel.: +39 (02) 66 599 211
Fax: +39 (02) 66 599 218
assistenzaclienti@crouzet.com

SPAIN / PORTUGAL

InnoVista Sensors™
C/Lleó, 11-13 2ª4ª
08911 Badalona - Barcelona
ESPAÑA
Tel.: +34 (93) 484 39 70
Fax: +34 (93) 484 39 73
atencionalcliente@crouzet.com

SWITZERLAND

InnoVista Sensors™
Gewerbepark - Postfach 56
5506 Mägenwil - SCHWEIZ
Tel.: +49 (0) 2103/980-0
Fax: +49 (0) 2103/980-222
kundenservice@crouzet.com

THE NETHERLANDS

InnoVista Sensors™
Industrieweg 17
2382 NR Zoeterwoude
NEDERLAND
Tel.: +31 (0) 71-581 20 30
Fax: +31 (0) 71-541 35 74
klientenservice@crouzet.com

COUNTRIES NOT LISTED

InnoVista Sensors™
2 rue du Docteur Henri Abel,
CS 60059
26902 Valence Cedex 9
FRANCE
Tel.: +33 (0) 475 802 102
Fax: +33 (0) 475 828 900
customer.relation@crouzet.com

ASIA / PACIFIC

CHINA

InnoVista Sensors™
11th floor, Chang Feng
International Tower,
89 Yunling Road (East),
Putuo District,
Shanghai 200 062 - CHINA
Tel.: +86 (21) 8025 7166
Fax: +86 (21) 6107 1771
china@crouzet.com

INDIA

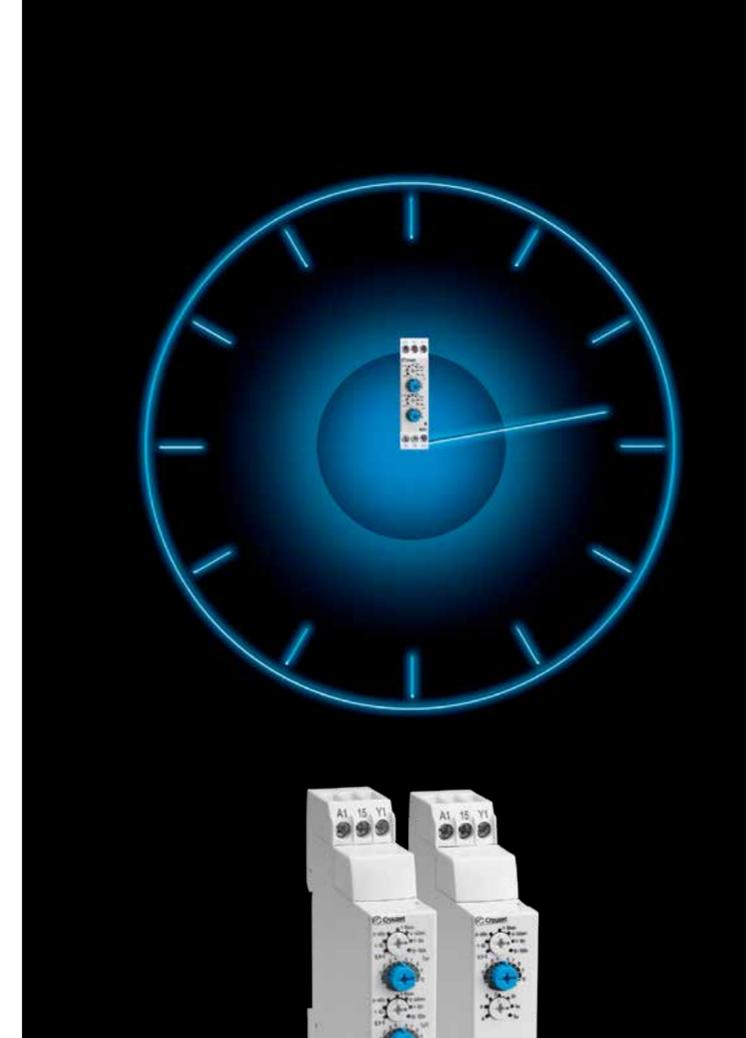
InnoVista Sensors™
4th floor, Trident Towers, #23 100
Feet Ashoka Pillar Road,
2nd Block, Jaynagar
Bangalore 560 011 - INDIA
Tel.: +91 (80) 4113 2204/05
Fax: +91 (80) 4113 2206
india@crouzet.com

SOUTH KOREA

InnoVista Sensors™
14F, Kbiz DMC Tower,
189, Seongam-Ro, Mapo-Gu,
Seoul 121-904
SOUTH KOREA
Tel.: +82 (2) 2629 8312
Fax: +82 (2) 2630 9800
korea@crouzet.com

EAST ASIA PACIFIC

InnoVista Sensors™
10/F, Wharf T&T Centre, Harbour
City, 7 Canton Road, Tsim Sha Tsui,
Kowloon, HONG KONG
Tel.: +86 (21) 8025 7177
Fax: +86 (21) 6107 1771
eap@crouzet.com



Chronos 2 timers

Time management

The basics

Crouzet Control,
is a brand of InnoVista Sensors™.

Expert in the design of efficient and innovative monitoring & control products, Crouzet Control, supported by an experienced worldwide team, offers a broad range of industry standard and application specific adapted products in timing, control relays and counting functions.

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 **range of power** supplies from 12 to 240 V in one unit for optimised stocks.
- A **timing range** of up to 100 hrs to cope with prolonged processing operations.
- Recognised **quality** and **reliability** ensures the correct operation of equipment.



www.crouzet-control.com



www.crouzet-control.com

Selection guide

Chronos 2 DIN rail mounted timers

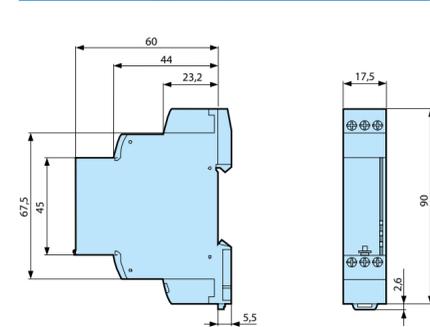
DIN rail modular casings

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	Relay	1 x 8 A changeover	0.1 s ⇒ 100 h	24 V ~ / 24 ⇒ 240 V ~	88 827 105	88 826 105	MUR1
		Di / D / Ac / Bw					88 827 115	88 826 115	MAR1
		A / At					88 827 125	88 826 125	MBR1
		B					88 827 135	88 826 135	MCR1
		C					88 827 145	88 826 145	MHR1
17.5	Screw terminals	H / Ht	Relay	1 x 8 A changeover	0.1 s ⇒ 100 h	24 V ~ / 24 ⇒ 240 V ~	88 827 150	88 826 150	MLR4
		L / Li					88 827 155	88 826 155	MLR1
		12 V ~					88 827 100	88 826 100	MUR4
		12 ⇒ 240 V ~					88 827 103	88 826 103	MUR3
		24 V ~ / 24 ⇒ 240 V ~					88 827 503	88 826 503	MURc3
17.5	Screw terminals	A / At / B / C / H / Ht	Solid state	0.7 A	0.1 s ⇒ 100 h	24 ⇒ 240 V ~	88 827 004	88 826 004	MUS2
		Di / D / Ac / Bw					88 827 014	88 826 014	MAS2
		Ad / Ah / N / O / P					88 827 044	88 826 044	MHS2
		Pt / TL / Tr / W					88 827 054	88 826 054	MLS2
		A / At / B / C / H / Ht							

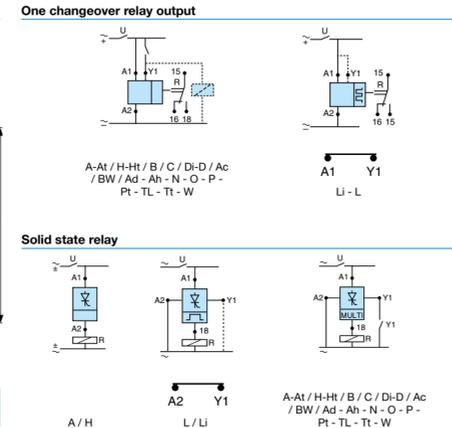
Naming of Chronos 2 timers

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

Dimensions (mm)



Connections



DIN rail industrial casings

Casing width (mm)	Connections	Functions	Type of output	Output(s)	Timing	Supply	Supply	Type
22.5	Screw terminals	A / At / B / C / H / Ht	Relay	1 x 8 A changeover	0.1 s ⇒ 100 h	24 V ~ / 24 ⇒ 240 V ~	88 865 105	TUR1
		Di / D / Ac / Bw					88 865 115	TAR1
		A / At					88 865 125	TBR1
		B					88 865 135	TCR1
		H / Ht					88 865 145	THR1
		L / Li					88 865 155	TLR1
22.5	Screw terminals	Q	Relay	2 x 8 A changeover	0.1 s ⇒ 160 s	12 V ~	88 865 175	TQR1
		A / At					88 865 185	TAR1*
		1 x 8 A changeover					88 865 300	TUR2A
		1 inst. or timed 8 A					88 865 300	TUR2A*
		1 x 8 A changeover					88 865 100	TUR4
		A / At					88 865 215	TA2R1
22.5	Spring terminals	A / At / B / C / H / Ht	Relay	1 x 8 A changeover	0.1 s ⇒ 100 h	24 V ~ / 24 ⇒ 240 V ~	88 865 215	TA2R1
		Di / D / Ac / Bw					88 865 215	RA2R1*
		A / At					88 865 103	TUR3
		1 x 8 A changeover					88 865 503	TURc3
		1 inst. or timed 8 A					88 865 385	TX2R1
		Ad / Ah / N / O / P					88 865 385	RX2R1*
22.5	Screw terminals	Pt / TL / Tr / W	Relay	1 x 8 A changeover	0.1 s ⇒ 100 h	230 ⇒ 440 V ~	88 865 185	TXR1
		Q					88 865 176	QR6
		1 x 8 A changeover					88 866 176	QR6*
		1 inst. or timed 8 A					88 865 303	TUR2R3
		A / At / B / C / H / Ht					88 866 303	TUR2R3*
		Di / D / Ac / Bw					88 865 305	TUR2R1

* Available in 2014. The casing of the new range will be different from the ones presented here. Further information can be found on the data sheets available at www.crouzet-control.com

Removable industrial casings

Casing width (mm)	Connections	Functions	Type of output	Output(s)	Timing	Supply	Supply	Type
35	Removable 8-pin base	A / At / B / C / H / Ht	Relay	1 x 8 A changeover	0.1 s ⇒ 100 h	24 V ~ / 24 ⇒ 240 V ~	88 867 105	OUR1
		Di / D / Ac / Bw					88 867 215	OA2R1
		A					88 867 135	OCR1
		C					88 867 155	OLR1
		L / Li					88 867 100	OUR4
		A / At / B / C / H / Ht					88 867 103	OUR3
35	Removable 11-pin base	Di / D / Ac / Bw	Relay	2 x 8 A changeover	0.1 s ⇒ 100 h	24 V ~ / 24 ⇒ 240 V ~	88 867 305	PU2R1
		A / At					88 867 415	PA2R1
		C					88 867 435	PC2R1
		L / Li					88 867 455	PL2R1
		A / At / B / C / H / Ht					88 867 300	PU2R4
		Di / D / Ac / Bw					88 867 303	PU2R3

Function diagrams

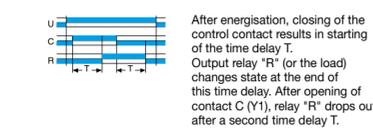
Generic functions

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

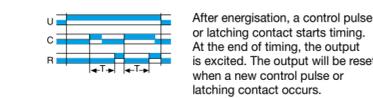
A function Delay on energisation



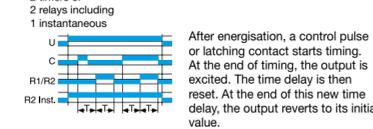
Ac function Timing after closing and opening of control contact



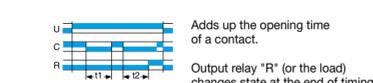
Ad function Delay on energisation (cannot be reset)



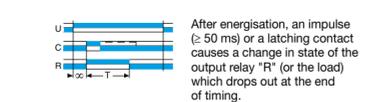
Ah function Single shot flip-flop (cannot be reset)



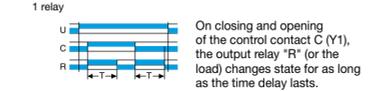
At function Timing on energisation with memory



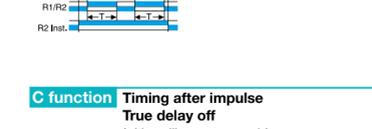
B function Timing on impulse (one shot) - Shaping (cannot be reset)



Bw function Pulse output (adjustable)



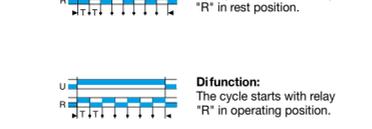
Ac function Timing after closing and opening of control contact



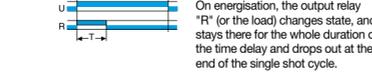
Ad function Delay on energisation (cannot be reset)



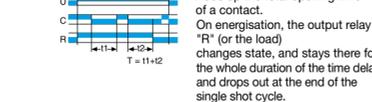
Ah function Single shot flip-flop (cannot be reset)



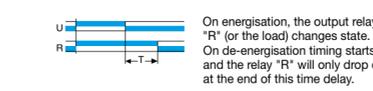
At function Timing on energisation with memory



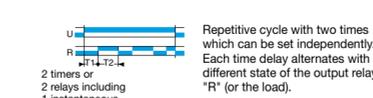
B function Timing on impulse (one shot) - Shaping (cannot be reset)



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



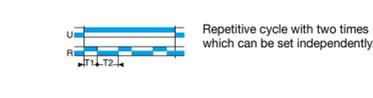
L function Asymmetrical flashing



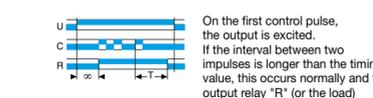
Q function "Star-delta" starting



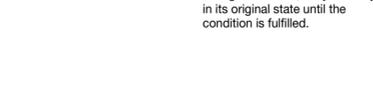
Li function Asymmetrical flashing



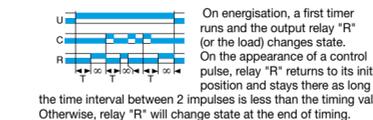
N function "Safe-guard"



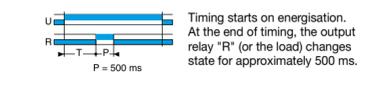
O function "Delayed safe-guard"



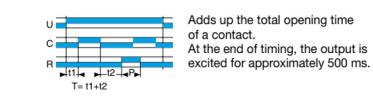
O function "Delayed safe-guard"



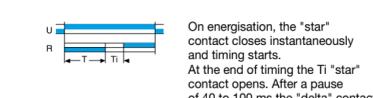
P function Delayed fixed-length pulse



Pt function Impulse counter (delay on)



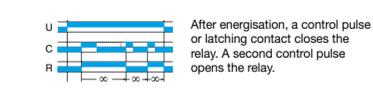
Q function "Star-delta" starting



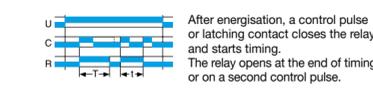
Li function Asymmetrical flashing



TL function Impulse relay



Tt function Timed impulse relay



W function Timing after pulse on control contact

