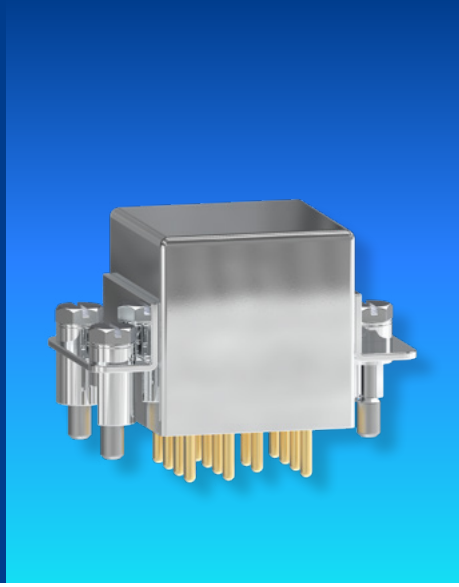
CROUZET

Timer Modules

Hermetically Sealed Relays



Electrical Control & Protection > Hermetically Sealed Relays > Timer **> Static Output**

Crouzet Hermetically Sealed Relays are ideal for switching electrical loads in harsh environments requiring extended lifetime. Available in multiple current options, voltage ratings and contact arrangements to meet the specific needs of each demanding applications in Aerospace, Railway, Nuclear and Defense.

Offer Description

- **Supply:** Direct current
- **Contact arrangement:** 1 SSO
- **Operating voltage:** 24 VDC, 36 VDC, 48 VDC, 72 VDC and 110 VDC
- **Maximum current consumption:** 30 mA at nominal voltage
- **Static output rating:** 1 mA to 0.25A at nominal voltage
- **Time delay:** Range N°1 from 0.25 to 63.75 secondes, Range N°2 from 0.25 to 63.75 minutes
- **Timing accuracy over temperature range:** ± 10%
- **Repetitive fidelity:** 2%
- **Recycling time:** T1 = 100 ms ± 5 ms, T2 = 150 ms ± 5 ms
- **Min. control pulse time:** 25 ms
- **Maximum supply voltage break time:** D or E modes: 2 ms ± 0.2 ms
  R mode: 0.3 ms ± 10%
- **Time delay programmation:** Time delay selection by wiring (see time delay & wiring chart)
- **Standard name & Time delay modes:** THLAO: On operate (E mode)
  THLOR: On release with positive control voltage (R mode)
  THM or THLM: Monostable (D mode)
- **Dimensions of case:** 44 mm max. (L) x 26 mm (W) x 25.7 mm (H) with coding keys M3
  26 mm (L) x 26 mm (W) x 25.7 mm (H) for plug-in without fixing
- **Weight:** 75 g max. with coding keys and 65 g max. for plug-in

Qualifications

- **Railway:** NF CF 62 003 / IEC 60571 / IEC61000-4-4 / EN 50155 / IEC 61373 / EN 50121-3-2 / IEC 60068-2-11 / EN45545-2 / NF F 16-101/102

Standard Offer

	Coil voltage	Part Number	Connection		Mounting		Key	Qualification	P/N
			Type	Material	Flange	Screw			
Time Delay On Operate (THLAO)	24 VDC	RM10EA1 H024D PG3K 00	Pin	Gold	Horizontal	M3	YUY	NF CF 62 003	MT3268042
	72 VDC	RM10EA1 H072D PG3K 00	Pin	Gold	Horizontal	M3	YWY	NF CF 62 003	MT3268026
		RM10EA1 H072D PG0X 00	Pin	Gold	Horizontal	-	-	326 000 MTE	MT3268140
	110 VDC	RM10EA1 H110D PG3K 00	Pin	Gold	Horizontal	M3	YXY	NF CF 62 003	MT3268057
Time Delay On Release (THLOR)	24 VDC	RM10RA1 H024D PG3K 00	Pin	Gold	Horizontal	M3	ZUY	NF CF 62 003	MT3268037
	72 VDC	RM10RA1 H072D PG3K 00	Pin	Gold	Horizontal	M3	ZWY	NF CF 62 003	MT3268027
		RM10RA1 H072D PG0X 00	Pin	Gold	Horizontal	-	-	326 000 MTR	MT3268150
	110 VDC	RM10RA1 H110D PG3K 00	Pin	Gold	Horizontal	M3	ZYZ	NF CF 62 003	MT3268029
Monostable (THM)	24 VDC	RM10DA1 H024D PG3K 00	Pin	Gold	Horizontal	M3	YUZ	NF CF 62 003	MT3268076
	36 VDC	RM10DA1 H036D PG3K 00	Pin	Gold	Horizontal	M3	YYZ	NF CF 62 003	MT3268082
	72 VDC	RM10DA1 H072D PG3K 00	Pin	Gold	Horizontal	M3	YWZ	NF CF 62 003	MT3268079
	110 VDC	RM10DA1 H110D PG3K 00	Pin	Gold	Horizontal	M3	YXZ	NF CF 62 003	MT3268061

Accessories

Soldering sockets

For wires or PCB EN 45545

Non-Sealed sockets

With crimp contacts EN 45545

Sockets with FASTON lugs

With crimp contacts EN 45545

Coil Characteristics

Nominal operating voltage	24 VDC	36 VDC	72 VDC	110 VDC
Maximum operating	33 V	45 V	90 V	137 V
Minimum operating voltage	16.8 V	25 V	50 V	77 V
Hold voltage	14.5 V	21.2 V	42.5 V	66 V
Drop-out voltage	2.5 V	3.5 V	7 V	11 V
THLAO: On operate (E mode)	YUY	-	YWY	YXY
THLOR: On release with positive control voltage (R mode)	ZUY	-	ZWZ	ZXY
THM: Monostable (D mode)	YUZ	YYZ	YWZ	YXZ

Electrical Characteristics

Dielectric strength at sea level: All terminals to case	1500 Vrms / 50 Hz
Initial insulation resistance at 500 VDC:	> 1000 MΩ
Protection against overvoltage and reverse supply as per IEC 60571	Yes
Supply overvoltage	1.4 Un max / 1 s
Surge tests	± 1000 V / 50 µs
Transient bursts	± 2000 V / 50 ns

Electromagnetic Compatibility

Capacitive coupling, relay supply wires and temporisation wires as per IEC61000-4-4	2 KV
Direct coupling, supply and control wires as per IEC61000-4-4	2 KV
Max. lentgh of wires	1 m

Environmental & Mechanical Characteristics

Operating temperature	-40 °C to +85 °C
Storage temperature	-55°C to +125 °C
Operating position	Any
Resistance against vibrations IEC 61373, Category I, Class B, Body mounted	Sinus: 20 g from 10 to 2 000 Hz Random: 0.3 g^2/Hz from 20 to 2000 Hz
Mechanical shock (any axis) IEC 61373, Category I, Class B, Body mounted	100 g - 6 ms
Shake resistance	40 g
Acceleration	15 g all directions
Leak rate	≤ $1x10^{-8}$ atm cm^3/s
Damp heat	EC 60068-2-67, Test condition Cab
Salt mist	IEC 60068-2-11, 96 h
Fire & Smoke	NF F 16-101/102; EN45545-2
REACh & RoHS	Refer to REACH and RoHS associated certificates

Time Delay Programmation

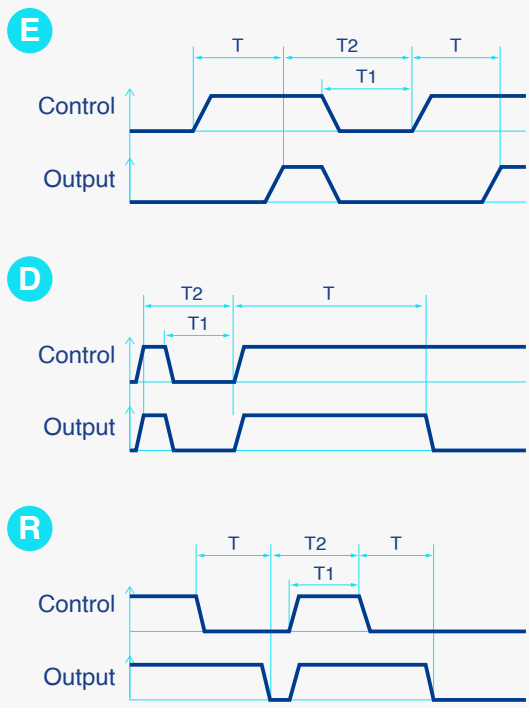
Timing range	Terminal to connect	Basic time
N°1 A1-B1 wired	B3-A2	0.25 s
	B3-A3	0.5 s
	B3-A4	1 s
	B3-B4	2 s
	B3-C4	4 s
	B3-C3	8 s
	B3-C2	16 s
	B3-B2	32 s
	Time delay from 0.25 to 63.75 seconds	

Timing range	Terminal to connect	Basic time
N°2 A1-B1 not wired	B3-A2	0.25 min
	B3-A3	0.5 min
	B3-A4	1 min
	B3-B4	2 min
	B3-C4	4 min
	B3-C3	8 min
	B3-C2	16 min
	B3-B2	32 min
	Time delay from 0.25 to 63.75 minutes	

Basic times are cumulative and time delay are obtained by addition of times affected to each wired terminals.

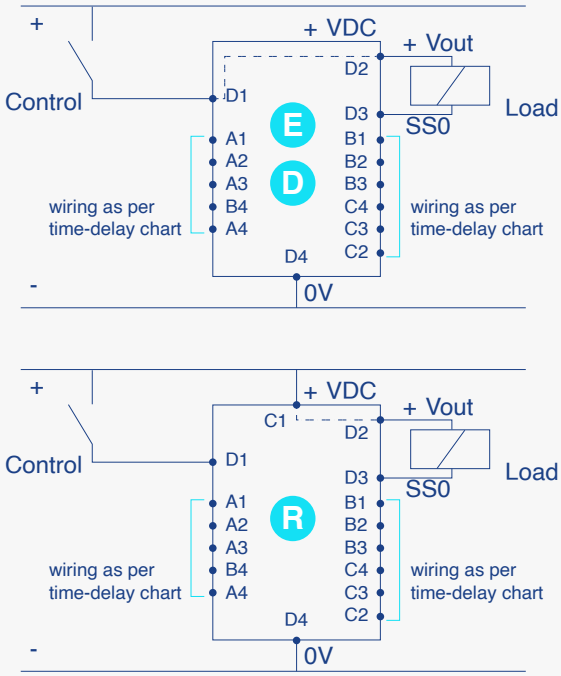
Connection Diagrams

Time Delay Modes



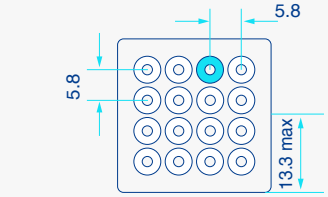
Recycling time = T1 = 100 ms ± 5 ms, T2 = 150 ms ± 5 ms
T = Temporisation

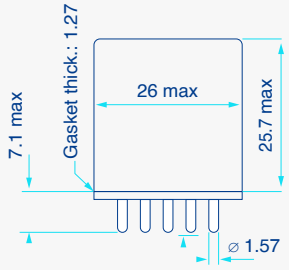
Electrical Diagram



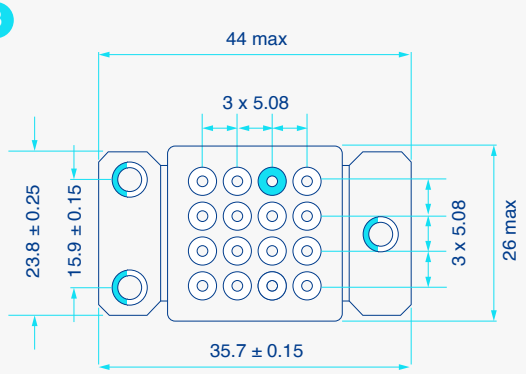
Mountings

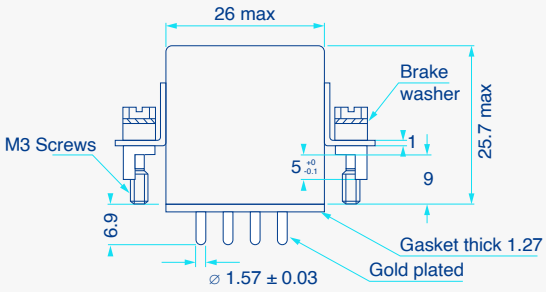
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3



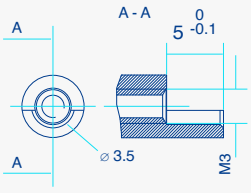


Coding keys for H mounting style

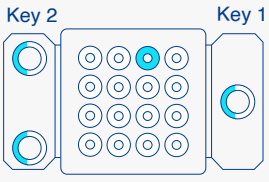
GUIDANCE CODES

U	V	W	X	Y	Z	
○	○	○	○	○	○	Key 1
○	○	○	○	○	○	Key 2
○	○	○	○	○	○	Key 3

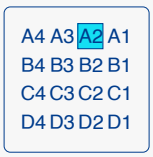
The coding example opposite is XXX



Symbolic representation



View from connections side



Pin Pattern

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