DIN rail mounted timers

Description	Type	Part number	Power supply	Functions (see pages 28-31)
Electronic timers				
Chronos 2 range - 17.5 mm				
	**MUR4**	**88826100**	12 V ≂	A-Ac-At-B-Bw-C-D-Di-H-Ht
	MUR3	**88826103**	12 ➞ 240 V ≂	A-Ac-At-B-Bw-C-D-Di-H-Ht
	MUR1	**88826105**	24 V ⎓ / 24 ➞ 240 V ∿	A-Ac-At-B-Bw-C-D-Di-H-Ht
	MAR1	**88826115**	24 V ⎓ / 24 ➞ 240 V ∿	A-At
	MBR1	**88826125**	24 V ⎓ / 24 ➞ 240 V ∿	B
	MCR1	**88826135**	24 V ⎓ / 24 ➞ 240 V ∿	C
	**MHR1**	**88826145**	24 V ⎓ / 24 ➞ 240 V ∿	H-Ht
	MLR1	**88826155**	24 V ⎓ / 24 ➞ 240 V ∿	Li-L
	MXR1	**88826185**	24 V ⎓ / 24 ➞ 240 V ∿	Ad-Ah-N-O-P-Pt-TL-Tt-W
	MURc3	**88826503**	12 ➞ 240 V ≂	A-Ac-At-B-Bw-C-D-Di-H-Ht
	MUS2	**88826004**	24 ➞ 240 V ∿	A-Ac-At-B-Bw-C-D-Di-H-Ht
	MAS5	**88826014**	24 ➞ 240 V ≂	A
	MHS2	**88826044**	24 ➞ 240 V ∿	H
	MLS2	**88826054**	24 ➞ 240 V ∿	Li-L
Chronos 2 range - 22.5 mm				
	**TUR4**	**88865100**	12 V ≂	A-Ac-At-B-Bw-C-D-Di-H-Ht
	TUR3	**88865103**	12 ➞ 240 V ≂	A-Ac-At-B-Bw-C-D-Di-H-Ht
	TUR1	**88865105**	24 V ⎓ / 24 ➞ 240 V ∿	A-Ac-At-B-Bw-C-D-Di-H-Ht
	TAR1	**88865115**	24 V ⎓ / 24 ➞ 240 V ∿	A-At
	TBR1	**88865125**	24 V ⎓ / 24 ➞ 240 V ∿	B
	TCR1	**88865135**	24 V ⎓ / 24 ➞ 240 V ∿	C
	**THR1**	**88865145**	24 V ⎓ / 24 ➞ 240 V ∿	H-Ht
	TLR1	**88865155**	24 V ⎓ / 24 ➞ 240 V ∿	Li-L
	TQR1	**88865175**	24 V ⎓ / 24 ➞ 240 V ∿	Q
	TQR6	**88865176**	230 ➞ 400 V ∿	Q
	TXR1	**88865185**	24 V ⎓ / 24 ➞ 240 V ∿	Ad-Ah-N-O-P-Pt-TL-Tt-W
	TXR4	**88865180**	12 V ≂	Ad-Ah-N-O-P-Pt-TL-Tt-W
	**TURc3**	**88865503**	12 ➞ 240 V ≂	A-Ac-At-B-Bw-C-D-Di-H-Ht
	TA2R1	**88865215**	24 V ⎓ / 24 ➞ 240 V ∿	A-At
	TU2R4	**88865300**	12 V ≂	A-Ac-At-B-Bw-C-D-Di-H-Ht
	TU2R3	**88865303**	12 ➞ 230 V ∿	A-Ac-At-B-Bw-C-D-Di-H-Ht
	TU2R1	**88865305**	24 V ⎓ / 24 ➞ 240 V ∿	A-Ac-At-B-Bw-C-D-Di-H-Ht
	TX2R1	**88865385**	24 V ⎓ / 24 ➞ 240 V ∿	Ad-Ah-N-O-P-Pt-TL-Tt-W
	TK2R1	**88865265**	24 V ⎓ / 24 ➞ 240 V ∿	K
Chronos 2 range - 35 mm plug-in				
	**OUR4**	**88867100**	12 V ≂	A-Ac-At-B-Bw-C-D-Di-H-Ht
	OUR3	**88867103**	12 ➞ 240 V ≂	A-Ac-At-B-Bw-C-D-Di-H-Ht
	OUR1	**88867105**	24 V ⎓ / 24 ➞ 240 V ∿	A-Ac-At-B-Bw-C-D-Di-H-Ht
	OCR1	**88867135**	24 V ⎓ / 24 ➞ 240 V ∿	C
	OLR1	**88867155**	24 V ⎓ / 24 ➞ 240 V ∿	Li-L
	OA2R1	**88867215**	24 V ⎓ / 24 ➞ 240 V ∿	A
	**PA2R1**	**88867415**	24 V ⎓ / 24 ➞ 240 V ∿	A-At
	PC2R1	**88867435**	24 V ⎓ / 24 ➞ 240 V ∿	C
	PL2R1	**88867455**	24 V ⎓ / 24 ➞ 240 V ∿	Li-L
	PU2R4	**88867300**	12 V ≂	A-Ac-At-B-Bw-C-D-Di-H-Ht
	PU2R3	**88867303**	12 ➞ 240 V ≂	A-Ac-At-B-Bw-C-D-Di-H-Ht
	PU2R1	**88867305**	24 V ⎓ / 24 ➞ 240 V ∿	A-Ac-At-B-Bw-C-D-Di-H-Ht

Timing	Outputs	Rated current	Casing width	Connection
0 → 1 s / 1 → 10 s / 0.1 → 1 min / 1 → 10 min / 0.1 → 1 h / 1 → 10 h / 10 → 100 h /	1 timed changeover relay	8 A	17.5 mm	Screw terminals
	1 timed changeover relay	8 A	17.5 mm	Screw terminals
	1 timed changeover relay	8 A	17.5 mm	Screw terminals
	1 timed changeover relay	8 A	17.5 mm	Screw terminals
	1 timed changeover relay	8 A	17.5 mm	Screw terminals
	1 timed changeover relay	8 A	17.5 mm	Screw terminals
	1 timed changeover relay	8 A	17.5 mm	Screw terminals
	1 timed changeover relay	8 A	17.5 mm	Screw terminals
	1 timed changeover relay	8 A	17.5 mm	Screw terminals
	1 timed changeover relay	8 A	17.5 mm	Spring terminals
	Solid state	0.7 A	17.5 mm	Screw terminals
	Solid state	0.7 A	17.5 mm	Screw terminals
	Solid state	0.7 A	17.5 mm	Screw terminals
	Solid state	0.7 A	17.5 mm	Screw terminals
0 → 1 s / 1 → 10 s / 0.1 → 1 min / 1 → 10 min / 0.1 → 1 h / 1 → 10 h / 10 → 100 h /	1 timed changeover relay	8 A	22.5 mm	Screw terminals
	1 timed changeover relay	8 A	22.5 mm	Screw terminals
	1 timed changeover relay	8 A	22.5 mm	Screw terminals
	1 timed changeover relay	8 A	22.5 mm	Screw terminals
	1 timed changeover relay	8 A	22.5 mm	Screw terminals
	1 timed changeover relay	8 A	22.5 mm	Screw terminals
	1 timed changeover relay	8 A	22.5 mm	Screw terminals
	1 timed changeover relay	8 A	22.5 mm	Screw terminals
	1 timed changeover relay	8 A	22.5 mm	Screw terminals
	1 timed changeover relay	8 A	22.5 mm	Screw terminals
	1 timed changeover relay	8 A	22.5 mm	Screw terminals
	1 timed changeover relay	8 A	22.5 mm	Screw terminals
	1 timed changeover relay	8 A	22.5 mm	Spring terminals
	2 timed changeover relay	8 A	22.5 mm	Screw terminals
	2 timed changeover relays (1)	8 A	22.5 mm	Screw terminals
	2 timed changeover relays (1)	8 A	22.5 mm	Screw terminals
	2 timed changeover relays (1)	8 A	22.5 mm	Screw terminals
	2 timed changeover relays (1)	8 A	22.5 mm	Screw terminals
0.06 → 0.6 s / 0.25 → 2.5 s / 2 → 20 s / 16 → 160 s	2 timed changeover relays (1)	8 A	22.5 mm	Screw terminals
1 s / 10 s / 1 min / 10 min / 1 h / 10 h / 100 h	1 timed changeover relay	8 A	35 mm	Plug-in 8-pin (2)
	1 timed changeover relay	8 A	35 mm	Plug-in 8-pin (2)
	1 timed changeover relay	8 A	35 mm	Plug-in 8-pin (2)
	1 timed changeover relay	8 A	35 mm	Plug-in 8-pin (2)
	1 timed changeover relay	8 A	35 mm	Plug-in 8-pin (2)
	2 timed changeover relay	8 A	35 mm	Plug-in 8-pin (2)
	2 timed changeover relay	8 A	35 mm	Plug-in 11-pin (3)
	2 timed changeover relay	8 A	35 mm	Plug-in 11-pin (3)
	2 timed changeover relays	8 A	35 mm	Plug-in 11-pin (3)
	2 timed changeover relays (1)	8 A	35 mm	Plug-in 11-pin (3)
	2 timed changeover relays (1)	8 A	35 mm	Plug-in 11-pin (3)
	2 timed changeover relays (1)	8 A	35 mm	Plug-in 11-pin (3)

(1) or 1 timed & 1 instantaneous

*(2) 8-pin connector base - **Part no.: 25622080***
*(3) 11-pin connector base - **Part no.: 25622130***

Generic functions

This section contains all the function diagrams for Crouzet timers.

U : Supply
R : Output or load relay
T : Timing

C (Y1) : Control contact
∞ : indefinite

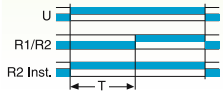
➞ Function A: Delay on energisation

1 relay

Single timing cycle which begins on energisation.

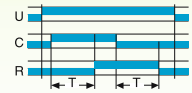
The output changes state after timing.

2 relays timed or 1 relay timed and 1 instantaneous



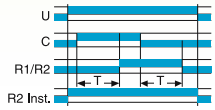
➞ Function Ac: Timing after closing and opening of control contact

1 relay



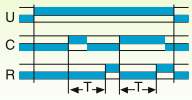
After energisation, closure of the control contact causes the timing period T to commence and output relay R (or the load) changes state at the end of this interval. When contact C (Y1) opens, relay R resets after a second timing period T.

2 relays timed or 1 relay timed and 1 instantaneous



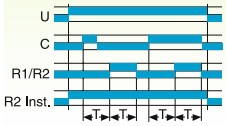
➞ Function Ad: Delay on energisation by switch (not resettable)

1 relay



After power-up, pressing or holding down the switch starts timing. At the end of timing, the output is energised. The output will be reset the next time the switch is pressed or held down.

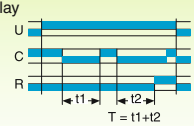
➞ Function Ah: Flashing single cycle by switch (not resettable)



After power-up, pressing or holding down the switch starts timing. At the end of timing, the output is energised. At the end of this second timing, the output falls back to its initial value.

➞ Function At: Timing on energisation with memory

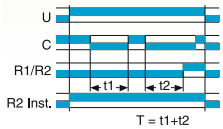
1 relay



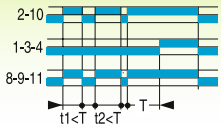
Provides a cumulative time for contact opening.

The output changes states at the end of the set time.

2 relays timed or 1 relay timed and 1 instantaneous

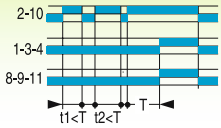


➞ Function A1: Delay on energisation



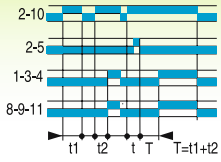
1 relay timed
1 relay 1 instantaneous

➞ Function A2: Delay on energisation



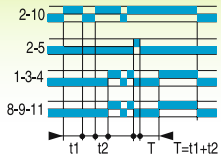
2 relays timed

➞ Function AM: Delay on energisation



Memory during timing

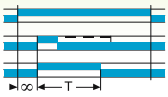
➞ Function AMt: Delay on energisation



Memory during and after timing

➞ Function B: Timing on impulse one shot On pulse (with constant supply)

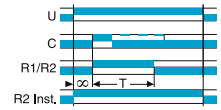
1 relay



After energisation; a pulse (≥ 50 ms) or a maintained control contact will cause the output to change state which reverts to the rest position at the end of timing.

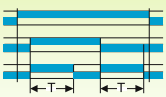
N.B.: this process enables shortening or lengthening of a signal.

2 relays timed or 1 relay timed and 1 instantaneous



➞ Function Bw: Pulse output (adjustable)

1 relay



A output relay R (or the load) changes state, and remains in the changed-over state for the timing period, both when control contact C (Y1) closes and when it opens.

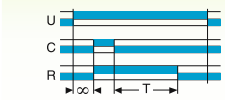
2 relays timed or 1 relay timed and 1 instantaneous

U : Supply
R : Output or load relay
T : Timing

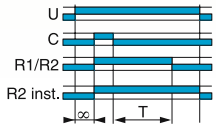
C (Y1) : Control contact
∞ : indefinite

➞ Function C: Timing after impulse Delay OFF (with constant supply)

1 relay



2 relays timed or 1 relay timed and 1 instantaneous

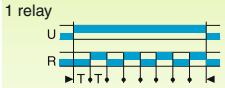


After energisation, once the control contact is closed the output state changes. Timing will only begin on the re-opening of this control contact (one shot). Relay R returns to its initial position at the end of the timing period.

➞ Function D or Di: Symmetric recycler

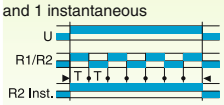
Repetitive cycle which switches the output alternately between the rest and operating position for equal time bases. **T1 + T2 = T total**

1 relay

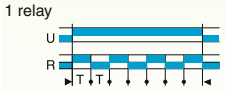


Function D:
the cycle begins with the output in rest position. Pause start.

2 relays timed or 1 relay timed and 1 instantaneous

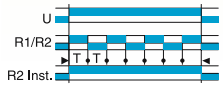


1 relay



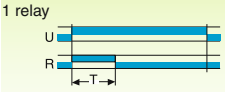
Function Di:
the cycle begins with the output in the operating position. Pulse start.

2 relays timed or 1 relay timed and 1 instantaneous

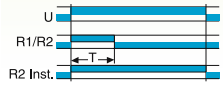


➞ Function H: Timing on energisation Interval timer - one shot

1 relay



2 relays timed or 1 relay timed and 1 instantaneous

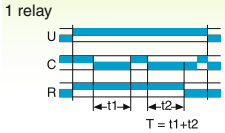


On energisation, the output changes state, remains in that state for the duration of timing and resets at the end of the single cycle.

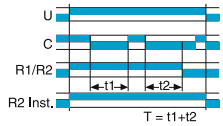
N.B. This is complementary to function A.

➞ Function Ht: Delay on energisation with memory

1 relay



2 relays timed or 1 relay timed and 1 instantaneous

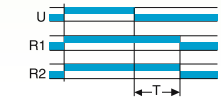


Provides a cumulative time for contact opening.
On energisation, the output changes state, remains in that state for the duration of timing and resets at the end of the single cycle.

➞ Function K: Delay on de-energisation - True delay OFF

1 relay

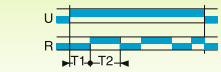
2 relays timed or 1 relay timed and 1 instantaneous



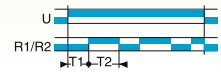
On energisation, the output changes state.
On de-energisation timing commences and the output only returns to the reset condition after timing.

➞ Function L: Asymmetric recycler

1 relay



2 relays timed or 1 relay timed and 1 instantaneous

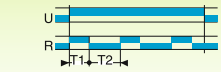


Repetitive cycle comprising 2 independent adjustable time bases.
Each time base corresponds alternately to a different output state.

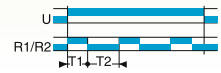
N.B.: The cycle starts with the output in the rest position.

➞ Function Li: Asymmetric recycler

1 relay



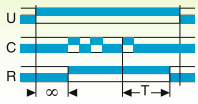
2 relays timed or 1 relay timed and 1 instantaneous



Repetitive cycle comprising 2 independent adjustable time bases.
Each time base corresponds alternately to a different output state.

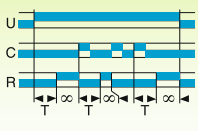
N.B.: The cycle starts with the output in the operating position.

➞ Function N: "Safe-guard"



At the first control pulse the output is energised. To complete the timing the interval between the two control pulses must be greater than the timing set.

➞ Function O: "Delayed safe-guard"

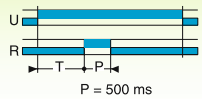


On energisation, a first timing sequence occurs and the output changes state.
With the closing of the control contact, the output resets and the timing starts, with the output being activated after timing. For the timing to be completed, the interval between the closing of two control contacts must be greater than the timing set.

U : Supply
R : Output or load relay
T : Timing

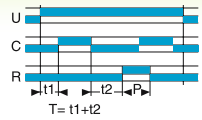
C (Y1) : Control contact
∞ : indefinite

➞ Function P: Delayed fixed-length pulse



Timing begins on energisation. At the end of the timing period output relay R (or the load) changes state for a period of approximately 500 ms.

➞ Function Pt: Impulse counter (delay on)

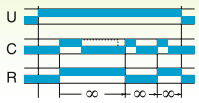


Calculates the total opening time of a contact. At the end of timing, the output is energised for approximately 500 ms.

➞ Function Q: "Star-delta"

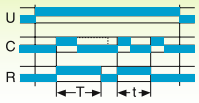
At the end of timing, the output is not energised. It remains "open" (not conducting) and will only change state after the fixed time of Ti has elapsed.
Dwell time selectable

➞ Function TL: Impulse relay



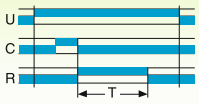
After power-up, pressing or holding down the switch closes the relay. Pressing the switch a second time opens the relay.

➞ Function Tt: Timed impulse relay



After power-up, pressing or holding down the switch closes the relay and starts timing. The relay opens at the end of timing or when the switch is pressed a second time.

➞ Function W: Timing after pulse on control contact

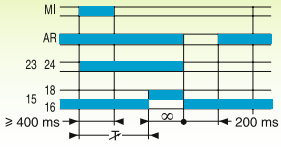


After energisation, if the control contact opens it causes output relay R (or the load) to change state and timing to start.
At the end of the timing period, relay R resets to its original state.

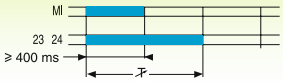
Dedicated functions **TOP2000**

➞ Function 2:

➞ Function 3:

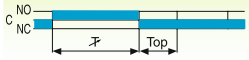


➞ Function 4:

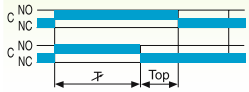


Dedicated functions **Manual reset**

➞ 1 pole:



➞ 2 poles:



➞ 3 poles: