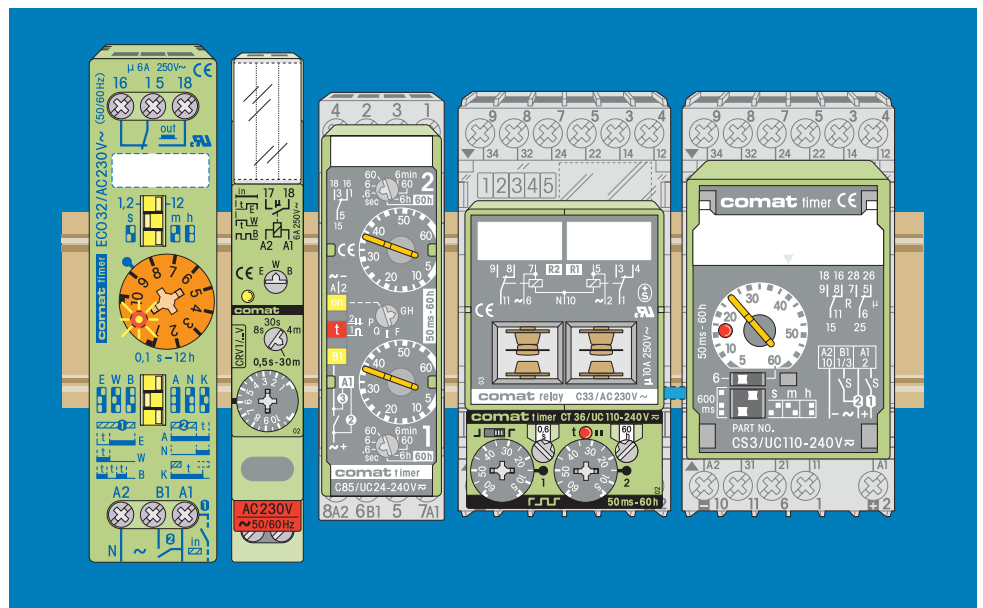
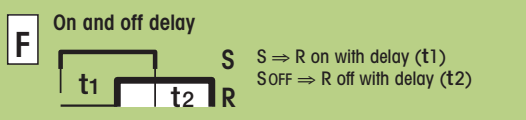
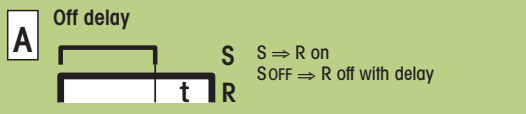
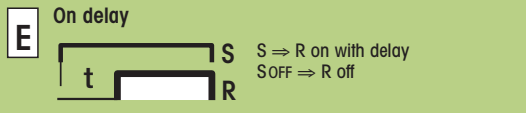


# Time Delay Relays

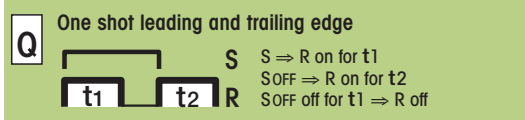
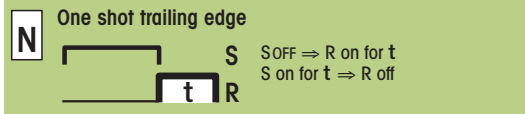
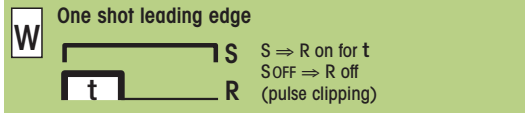


- Time Cubes®
- Multifunction Time Delay Modules
- Time Delay Relays
- Pulse Shapers
- Step-on Step-off Relays
- Power Relays
- Socket
- Accessories

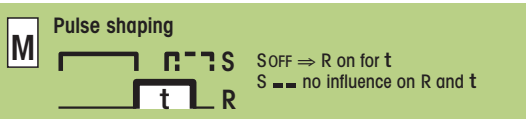
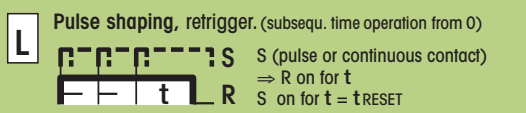
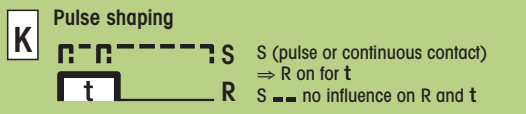
Delay functions



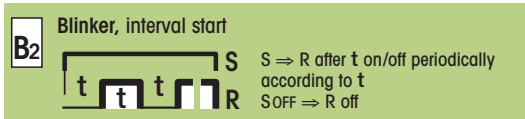
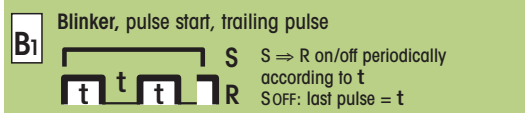
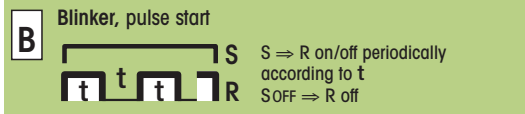
Shot timing modes



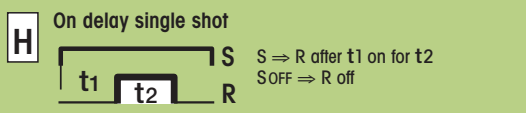
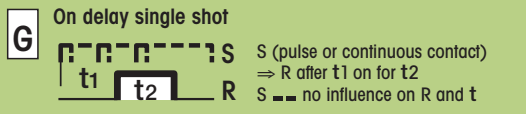
Pulse shaping



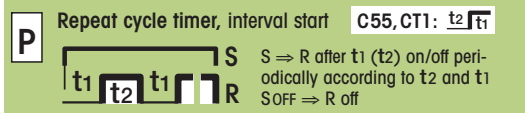
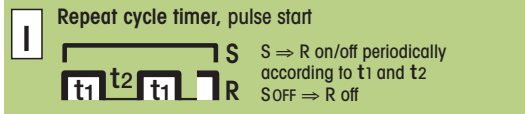
Blinker functions



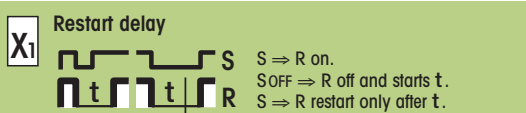
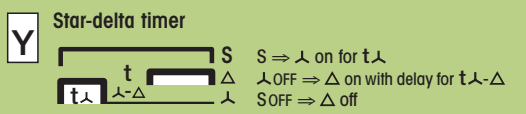
Delayed pulse



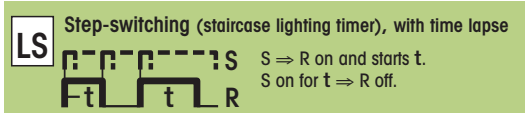
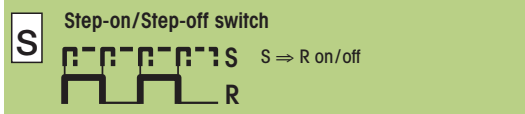
Repeat cycle timer



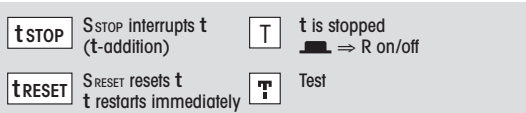
Special functions



Special functions



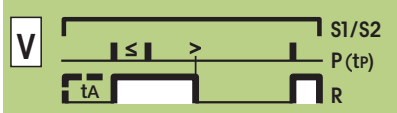
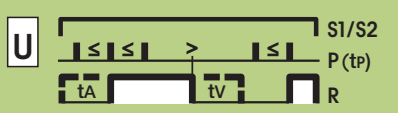
Stop/Reset



S = Triggering  
R = Output circuit  
⇒ = switches...



Pulse sequence monitoring



S1/S2 = Monitoring start  
P = Pulse sequence  
tp = Pulse separation

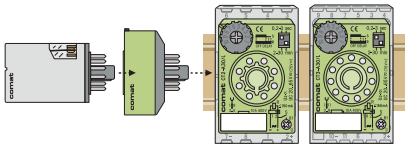
≤: Pulse separation is smaller than the time tp  
>: Pulse separation is larger than the time tp

Start with S1 = without start-up short-out tA  
Start with S2 = with start-up short-out tA

t<sub>v</sub> = settable alarm delay (t<sub>A</sub> = t<sub>v</sub>)



**Plug-in Time Cubes for Industrial Relays**



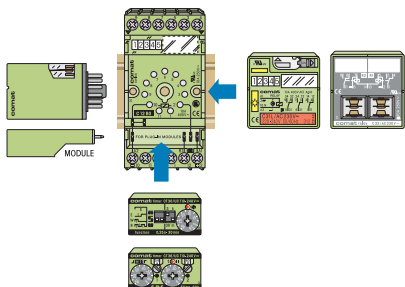
**8-/11-pole plug-in time delay relay system**

The simplest time delay relay system world-wide, fitting all 8 or 11-pin relay sockets (octal/sub-magnalite).

Original time cubes® are simply placed between socket and relay without rewiring.

In this way, even as a retrofit, all industrial relays can be provided with the required timing functions without additional space being required. The contact connections of the relay on the socket remain trough-connected.

**The Comat CT System**



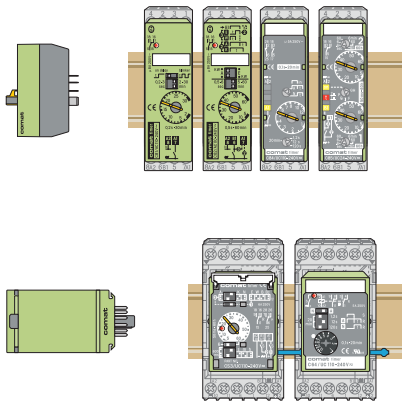
The time delay relays and monitoring relays consist of the plug-in CT time function modul and 11-pole CT output relay and the system socket C12B. Both system components can be combined freely with one another. This allows the equipment to be selected optimally for specific use.

Subsequent modifications, for example a change from mechanical contacts to solid-state outputs, are possible at any time by simple reconnection.

This provides the user a complete, universal system, the high flexibility of which is unique throughout the world.

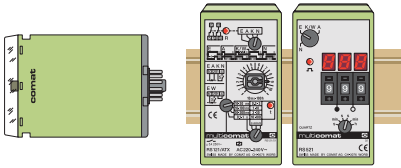
	Series	Time range	Socket type	Contact	Page
<b>Monofunktions-Timer</b> 5 different timing functions with delay time settings	<b>CT2</b>	0,2s-30min			61
<b>Monofunktions-Timer</b> 5 different timing functions with delay time settings	<b>CT3</b>	0,2s-30min			61
<b>Economy Timer</b> 3 timing functions. Mains controlled. LED indication	<b>CT30.1</b>	0,25s-30min			63
	<b>CT30.3</b>	0,25s-30min			63
	<b>CT30.5</b>	0,25s-30min			63
	<b>CT30.7</b>	0,25s-30min			63
<b>Universal Timer</b> 7 timing functions. Mains controlled. Flashing LED shows time lapse.	<b>CT32.1</b>	0,15s-60min			63
	<b>CT32.3</b>	0,15s-60min			63
	<b>CT32.5</b>	0,15s-60min			63
	<b>CT32.7</b>	0,15s-60min			63
<b>Universal Timer</b> 12 functions, mains controlled. Flashing LED shows elapsing time. Increased setting accuracy with 1:5 scale deviation.	<b>CT33.1</b>	30ms-60h			63
	<b>CT33.3</b>	30ms-60h			63
	<b>CT33.5</b>	30ms-60h			63
	<b>CT33.7</b>	30ms-60h			63
<b>Universal Repeat Cycle Timer</b> Pulse or interval start. Independent setting of t1/t2. Flashing LED shows time laps.	<b>CT36.1</b>	2 x 50ms-60h			63
	<b>CT36.3</b>	2 x 50ms-60h			63
	<b>CT36.5</b>	2 x 50ms-60h			63
	<b>CT36.7</b>	2 x 50ms-60h			63

Plug-in Time Delay Relays



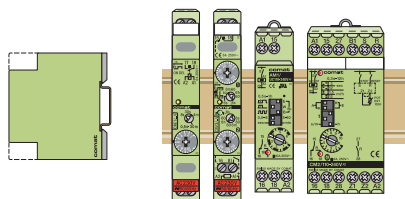
	Series	Time range	Socket type	Contact	Page
Economy-Time Delay Relay 2 functions	<b>C81</b>	0,2s-30min		8A	67
Economy-Time Delay Relay 4 functions	<b>C82</b>	0,5s-60min		8A	67
Universal Multifunctional Time Delay Relay	<b>C83</b>	50ms-60h		8A	67
Time Delay Relay, no auxiliary voltage	<b>C84</b>	0,1s-20min		5A	67
Double Time Delay Relay and Repeat Cycle Timer, 6 functions	<b>C85</b>	2x 50ms-60h		8A	67
Economy Time Delay Relay 4 functions	<b>CS1</b>	50ms-60min		8A	68
Universal Multifunctional Time Delay Relay, 7 functions	<b>CS2</b>	50ms-60h		8A	68
Universal Multifunctional Time Delay Relay	<b>CS3</b>	50ms-60h		6A	68
Universal Multifunctional Time Delay Relay	<b>C63</b>	50ms-60h		6A	68
Time Delay Relay without auxliary voltage	<b>C64</b>	0,1s-20min		5A	69
Restart Delay Relay	<b>C65/66</b>	1-6min		6A	69
Universal Multifunctional Time Delay Relay, 2 functions (digital)	<b>C52</b>	0,1s-60min		8A	70
Universal Multifunctional Time Delay Relay, 10 functions (digital)	<b>C53</b>	0,1s-60h		8A	70
Universal Multifunctional Time Delay Relay, 10 functions (digital)	<b>C53.3</b>	0,1s-60h		0,5A	70
Universal Multifunctional Time Delay Relay, 10 functions (digital)	<b>C53.4</b>	0,1s-60h		2A	70
Universal Multifunctional Time Delay Relay, 15 functions (digital)	<b>C55</b>	0,01s-60days		5A	70
Universal Multifunctional Time Delay Relay, 15 functions (digital)	<b>C55.3</b>	0,01s-60days		0,5A	70
Universal Multifunctional Time Delay Relay, 15 functions (digital)	<b>C55.4</b>	0,01s-60days		2A	70
Universal Multifunctional Time Delay Relay, 15 functions (digital)	<b>C56</b>	0,01s-60days		5A	70

Plug-in Time Delay Relays  
multi**comat**



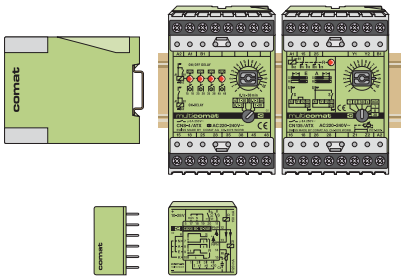
	Series	Time range	Socket type	Contact	Page
<b>RS Serie</b>					
Multifunctional Time Delay Relay, 5 functions	<b>RS 121</b>	10 ms-100h		$\overset{1}{/} \overset{2}{/} \overset{3}{\cup} 5A$	74
Multifunctional Time Delay Relay, 5 functions	<b>RS121.P</b>	10 ms-100h		$\overset{1}{/} \overset{3}{\cup} 5A$	74
Multifunctional Time Delay Relay 5 functions with t-stop- and t-reset-function	<b>RS121.R</b>	10 ms-100h		$\overset{1}{/} \overset{3}{\cup} 5A$	74
Universal Cycle Timer	<b>RS122-</b>	0,1s-30h		$\overset{1}{/} \overset{2}{/} \overset{3}{\cup} 5A$	75
Digital Multifunctional Time Delay Relay, 5 functions	<b>RS 321</b>	10 ms-99,9h		$\overset{1}{/} \overset{2}{/} \overset{3}{\cup} 5A$	76
Digital Multifunctional Time Delay Relay with digital display of elapsing time, 5 functions	<b>RS 521</b>	10 ms-99,9h		$\overset{1}{/} \overset{2}{/} \overset{3}{\cup} 5A$	76
Economy Multifunctional Time Delay Relay, 5 functions	<b>RS 41-M</b>	0,1s-15min		$\overset{1}{/} \overset{3}{\cup} 6A$	76
<b>C Serie</b>					
Digital Multifunctional Time Delay Relay with digital display of elapsing time, 5 functions	<b>CPX 519</b>	0,01s-999 min		$\overset{1}{/} \overset{2}{/} \overset{3}{\cup} 6A$	77
Digital Cycle Timer	<b>CTI 519</b>	2x 0,01s-999 min		$\overset{1}{/} \overset{2}{/} \overset{3}{\cup} 6A$	77
Digital Multifunctional Time Delay Relay, 2 functions	<b>CEA-226</b>	0,1s-990 min		$\overset{1}{/} \overset{2}{/} \overset{3}{\cup} 6A$	77
Multifunctional Time Delay Relay, 5 functions	<b>CPX 129</b>	0,1s-15h		$\overset{1}{/} \overset{2}{/} \overset{3}{\cup} 6A$	78
Time Delay Relay with 3 double functions (t1/t2 individual)	<b>CFG 126</b>	2 x 0,1s-5 min		$\overset{1}{/} \overset{2}{/} \overset{3}{\cup} 6A$	78
Cycle Timer	<b>CTI 129</b>	2 x 0,1s-15h		$\overset{1}{/} \overset{2}{/} \overset{3}{\cup} 6A$	78
Multifunctional Time Delay Relay, 2 functions	<b>CEA-126</b>	0,1s-15min		$\overset{1}{/} \overset{2}{/} \overset{3}{\cup} 6A$	79
Single Shot Relay 3 functions	<b>CWR-102</b>	0,1-1,5s		$\overset{1}{/} \overset{2}{/} \overset{3}{\cup} 6A$	79
<b>CX Serie</b>					
Multifunctional Time Delay Relay 3 functions	<b>CX 38</b>	2 x 0,1s-15h		$\overset{1}{/} \overset{2}{/} \overset{3}{\cup} 6A$	80
Star-delta Timer ON.. with instantaneous contact	<b>CX 39</b>	1-100 ms 0,1s-15h		$\overset{1}{/} \overset{2}{\cup} \overset{3}{/} \overset{4}{\cup} 6A$	80

DIN Time Delay Relays

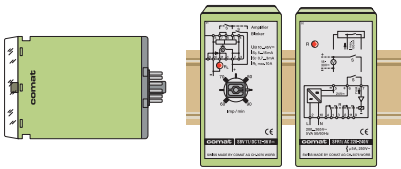


	Series	Time range	Overall width	Contact	Page
<b>Mono function Time Delay Relay</b>					
Economy Time Delay Relay ON-Delay	CRE1	0,5s-30min	13	⌋ ⊞ 6A	82
Economy Time Delay Relay OFF-Delay	CRA1	0,3s-30min	13	⌋ ⊞ 6A	82
Mono function Economy Time Delay Relay	AE2	0,8s-12min	17,5	⌋ ⊞ 10A	82
Mono function Economy Time Delay Relay	AA2	0,8s-12min	17,5	⌋ ⊞ 10A	82
Star-Delta Time Delay Relay	CY1	0,5-60s	17,5	⌋ ⊞ 6A	82
<b>Extra slim 13mm</b>					
Multifunctional Time Delay Relay 3 functions	CRV1	0,5s-30min	13	⌋ ⊞ 6A	83
Universal Time Delay Relay 3 functions	CRV2	50ms-60h	13	⌋ ⊞ 6A	83
Universal Time Delay Relay 7 functions	CSV2	8ms-10h	13	⌋ ⊞ 1,5A	83
Double Time Delay Relay	CRV3	50ms-60h	13	⌋ ⊞ 6A	83
Universal Repeat Cycle Timer	CRT3	50ms-60h	13	⌋ ⊞ 6A	83
<b>DIN A (Installation distribution panel)</b>					
Economy Time Delay Relay 4 functions	AM1	0,5s-60min	17,5	⌋ ⊞ 10A	84
Universal Time Delay Relay 4 functions	AM2	0,5s-60min	17,5	⌋ ⊞ 10A	84
Universal Time Delay Relay with instantaneous contact, 4 functions	AM3	0,5s-60min	35	⌋ ⊞ 10A	84
Universal Function Relay with 9 functions including Staircase Lighting Timer	CIM1	0,6s-60h	17,5	⌋ ⊞ 16A	84
<b>DIN C (Industry)</b>					
Universal Time Delay Relay 4 functions	CM1	50ms-12h	17,5	⌋ ⊞ 6A	85
Universal Time Delay Relay, 4 functions with external potentiometer and t Stop/ t Reset input	CM2	0,3s-12h	35	⌋ ⊞ 6A	85
Universal Time Delay Relay, 7 functions Service ON/OFF	CM3	50ms-60h	17,5	⌋ ⊞ 6A	85
Time Delay Relay, no auxiliary voltage	CNR1	0,1s-12min	17,5	⌋ ⊞ 5A	86
Universal Repeat Cycle Timer	CT1	0,1s-30h	17,5	⌋ ⊞ 6A	86
<b>22,5mm mounting series</b>					
Economy Time Delay Relay 3 functions	ECO31	0,5s-20min	22,5	⌋ ⊞ 6A	87
Multifunctional Time Delay Relay 6 functions	ECO32	0,1s-12h	22,5	⌋ ⊞ 6A	87

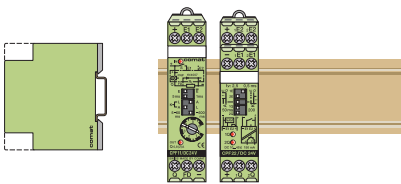
**Specially Time Delay Relays**



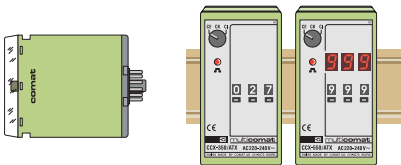
**Amplifier Relays**



**Pulse Shapers**



**Preset Counters**

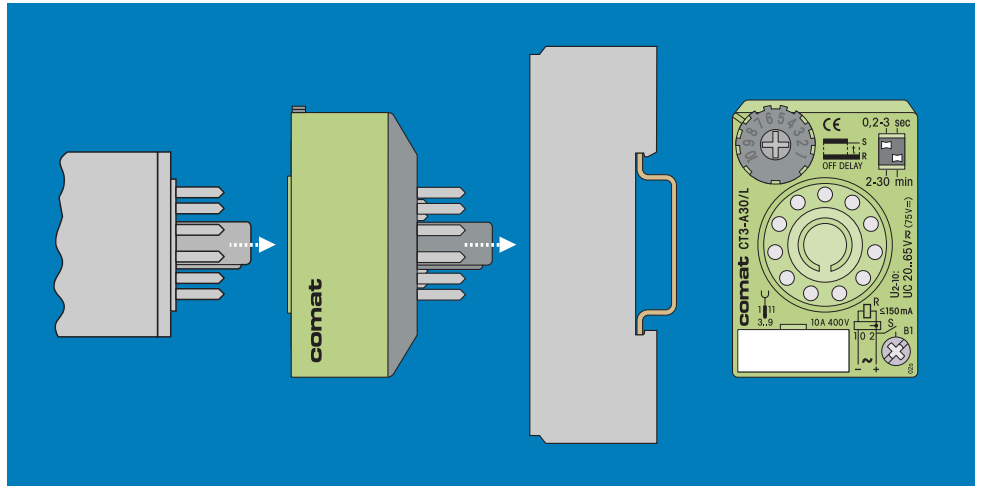


	Series	Time range	Socket type	Contact	Page
Cascade Relay	<b>CNS-4</b>	0,1s-30 min	DIN 35	4 x 6A	90
Multifunctional Time Delay Relay 2 functions, external potentiometer	<b>CN 135</b>	0,1s-30 min	DIN 35	8A	90
Universal Timer Module for PCB mounting 5 functions	<b>CU 23</b>	0,01s-300 min	32 x 32 mm	PNP 120 mA NPN 150 mA	90
Amplifier Relay, Switching Amplifier	<b>SFR1</b>	Amplifier for 3 wire and Namur Sen- sors. Potential free contacts.		5 A	92
Amplifier Relay, Switching Amplifier	<b>SFR2</b>	Amplifier for 3 wire and Namur Sen- sors. Potential free contacts.		6 A	92
Amplifier Blinker	<b>SBV11</b>	For direction indi- cation blinkers in vehiles. High life expectancy.		10A DC	93
Switching Amplifier	<b>SSV11</b>	For high switching numbers.		10A DC	93
Single Channel Pulse Shaper 4 functions	<b>CPF11</b>	5-600 ms	DIN 17,5	PNP DC 0,8A	94
Double Channel Pulse Shaper 4 functions	<b>CPF22</b>	50/200 ms	DIN 17,5	2 x DC 150 mA	94
Preset Counters 3 functions	<b>CCX350</b>	Switching after the preset number of pulses are rea- ched, max. 999		6 A	95
Preset Counters with display 3 functions	<b>CCX550</b>	Switching after the preset number of pulses are rea- ched, max. 999		6 A	95

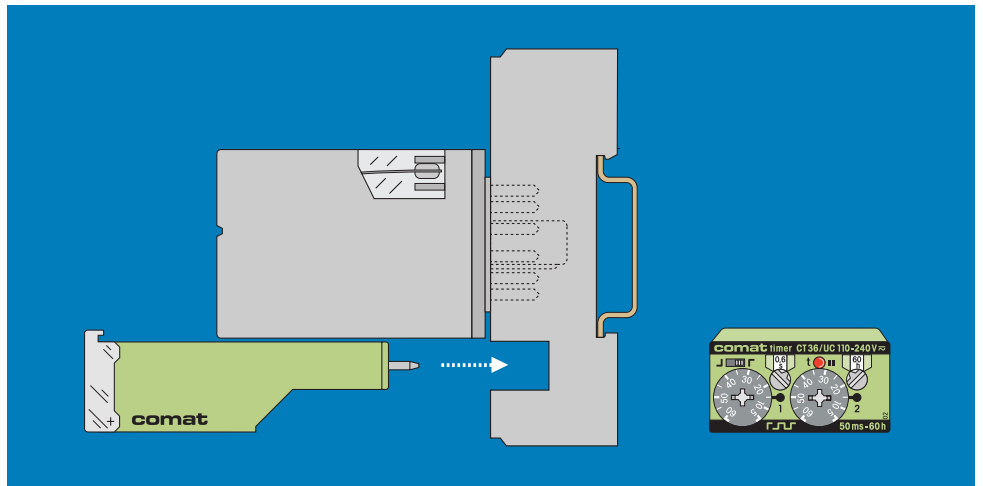


*Time Delay Relays*

# Plug-in Time Cubes and Time Delay Modules



Time Cubes®: CT2 and CT3



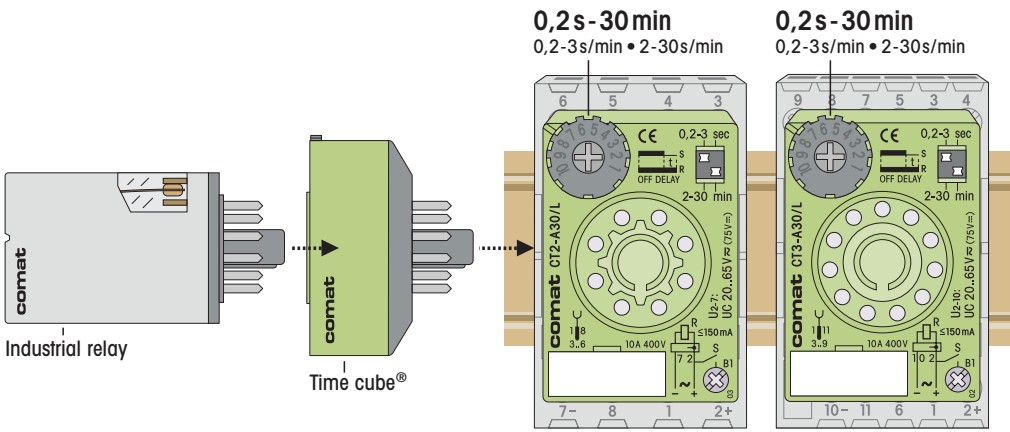
CT-System: CT30, CT32, CT33, CT36





Time Cubes

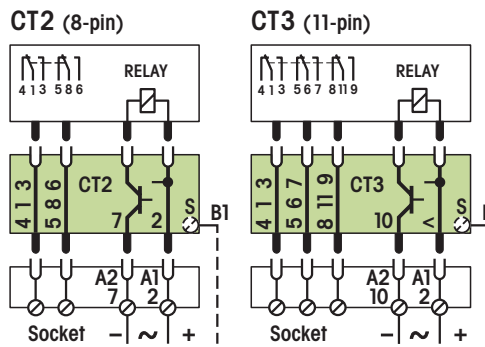
**SIMPLY PLUGGED BETWEEN**



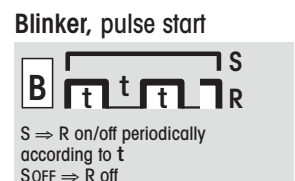
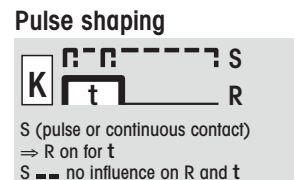
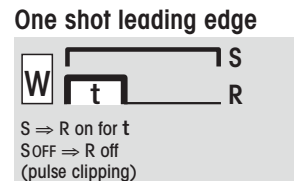
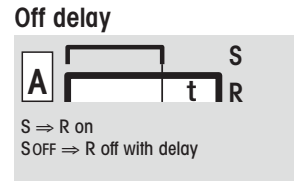
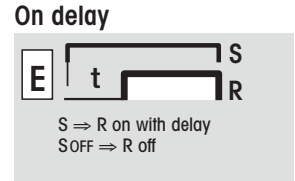
**8-/11-pole Plug-in Time Delay Relay System**  
 The simplest time delay relay system world-wide, fitting all 8 or 11-pin relay sockets (octal/sub-magnalite).  
 Original time cubes® are simply placed between socket and relay without rewiring.  
 In this way, even as a retrofit, all industrial relays can be provided with the required timing functions without additional space being required. The contact connections of the relay on the socket remain through-connected.

All new types ..30 (0,2s-30min) are fully compatible with all previous types ..20, ..21 and ..25.

CE and others: [www.comat.ch](http://www.comat.ch)

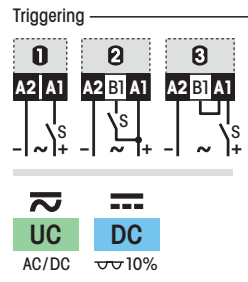


10A 250V~

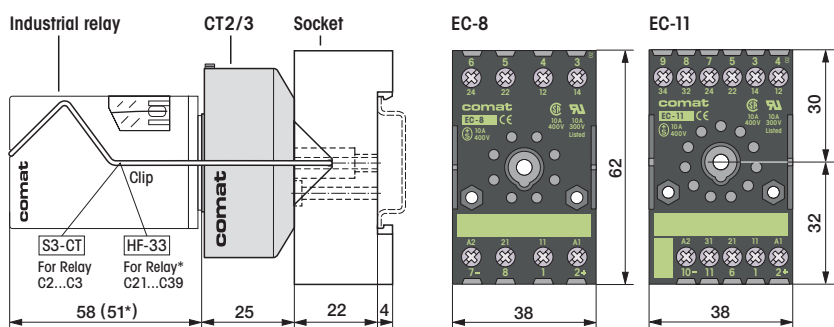


ON OFF S = Triggering  
 R = Output circuit  
 ⇒ = switches...

Order no.	Function	UC180-265V	UC90-150V	UC90-265V	UC20-65V	DC9,5-18V
2 = 8-pole 3 = 11-pole	E-0	CT...-E30/...	H	L	S	
	A-0	CT...-A30/...	U	M	L	S
	K-0	CT...-K30/...	U	M	L	S
	W-0	CT...-W30/...	H	L	S	
	B-0	CT...-B30/...	H	L	S	



- Ordering example**
- Time cubes CT2-E30/H  
Socket EC-8 or CS-8
  - Relay C2-...
  - Time cubes CT3-E30/H  
Socket EC-11 oder C11A
  - Relay C3-...





## Multifunction Time Delay Relays, Modular

### The Comat CT System is modular.

The time delay relays and monitoring relays consist of the plug-in CT electronic module and an 11-pole CT output relay. Both system components can be combined freely with one another. This allows the equipment to be selected optimally for specific use.

Subsequent modifications, for example a change from mechanical contacts to solid-state outputs, are possible at any time by simple reconnection. This provides the user a complete, universal system, the high flexibility of which is unique throughout the world.

The system socket C12B0 serves as a basis for the vibration-free reception of the electronic module. It has a 4-pole module slot in which the CT-module –also without output relay– locks in such a way that it is vibration-free. Contact is via twin knife contacts which ensure optimal contact reliability.

With the A2-connector C-A2 plug-in flush in the socket, the neutral conductor (N / -) can be connected as a 10A bus from socket to socket. This considerably reduces wiring work.

Robust terminals for cross-sections up to 4mm<sup>2</sup> and generous labelling facilities are other advantages of this practical comat system socket. As variants to the standard socket C12B0, two identical sockets, but with printed device diagram, are available (C12B1/2). By clearly identifying the connections, these sockets ensure rapid, error-free and therefore economical wiring. When a service is required, they facilitate fault location.

The CT module demonstrates comat's practical experience in the area of industrial electronics. All control and display elements are arranged on the front and are labelled in a self-explanatory manner for international use. The values set are also clearly legible when the module has been installed.

Printed diagrams explain the functions, and the connection scheme directly indicates the appropriate terminals in the system socket.

A transparent front cover provides protection from unauthorized misadjustment and additionally locks the module onto the output relay.

Triggering is performed with the operating voltage (L1 or +). Hence, no potential-free contacts are required. Triggering complies with the machine standards. A parallel connection of other users to B1 is admissible.

The 2 voltage ranges UC110-240V and UC24-48V have been chosen by comat to ensure a high level of reliability in triggering. They permit use with an AC or DC supply and optimal adaptation to the operating conditions of modern controls.

In case of an even broader voltage range, e.g. 24-240V it is often possible to achieve only currents of a few 100µA in the trigger circuit B1 with simultaneous low threshold voltages to less than 20V. This may lead to unintentional triggering due to capacitive/inductive pickups, or faulty switching may occur owing to sufficiently loaded control contacts. During operation, 50V are readily measured on open-ended lines.

The consumption of the CT modules comes to less than 1W.

The output relays have the complete device diagram, the performance data and the complete order no. on the front, supported by a colour code, which indicates an AC coil with red and a DC coil with blue. The .1 and .2 relays have a safety manual operation facility as a standard feature, which switches the contacts only after a lock has been released (two-hand principle).

The standard contacts .1 and .3 have proved their worth millions of times in heavy current applications. The contact material AgNi permits a large switching range and thanks to generous dimensioning achieves a high number of cycles. With its high breaking capacity of up to 10A/400V, this contact is a reliable allround contact for use both in mains circuits and in the lower voltage range from 12V/10mA.

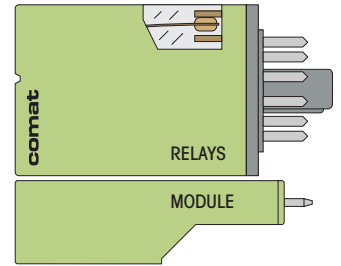
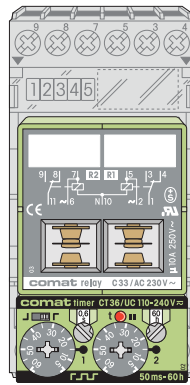
The twin contacts .2 and .4 switch every circuit with two independent reeds. Compared with single contacts, they provide up to 100 times greater safety with regard to the level of possible faulty switchings. In spite of their high breaking capacity of up to 6A/250V, these contacts are particularly suitable for low switching currents and switching voltages down to 1mA/6V.

The solid-state relays are used instead of mechanical contacts. In the standard version .5, the relay has a potential-free output which switches an AC or DC load in the same way as a mechanical contact. However, it functions without bounce or wear, withstands overloads, has short-circuit protection and has a practically unlimited life even with full output load.

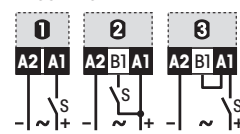
Preferred applications are high switching frequency, for example as repeat cycle timers, flashing bars with bulb load or extreme inductive loads, for example large solenoid valves, couplings, motors, etc.

An additional protective wiring of the output or of the load is not necessary in these comat relays for any application.

They are completely insensitive in an aggressive atmosphere, for example in the chemical industry, in waste water treatment plants, etc.



### Triggering



CE and others: [www.comat.ch](http://www.comat.ch)

Timer module	Function/triggering	Time range
<b>CT30</b> Economy timer 3 functions, voltage controlled, output LED. Seismic approved.	E W B 0	0,25 s - 30 min 0,25-3 s... 2,5-30 min
<b>CT32</b> Universal timer 7 functions, voltage controlled, time lapse display, blinking. Seismic approved.	E 2 3 A N K B1 2 W B 3	0,15 s - 60 min 0,15-1,5 s... 6-60 min ★
<b>CT33</b> Universal timer 12 functions, voltage controlled, time lapse display, blinking, high setting accuracy by dial graduation 1:5.	E 2 3 2 A N L F K G B1 W H B 3	30 ms - 60 h 30-150 ms... 12-60 h ★
<b>CT36</b> Universal repeat cycle timer Pulse or pause start. t1/t2 separately settable. Time lapse display t1/t2.	I P 0	2 x 50 ms - 60 h 2 x 50-600 ms... 5-60 h ★

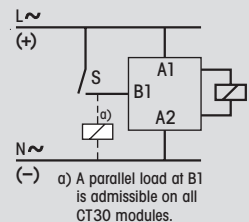
F Q G H E 0 Triggering  
t2=t1 t2=0,5 s Function (page \*) ★ TF60 setting (page \*)

### Note on use

According to the standards «Safety of machines» e.g. EN 60204-1, EN 292-2, triggering with A2-potential (N/-) is only admissible in exceptional circumstances.

For that reason the comat CT modules are triggered by A1-potential (L/+).

This makes them unrestrictedly suitable also for use in machines and systems which must conform with machine or CE guidelines or directives.

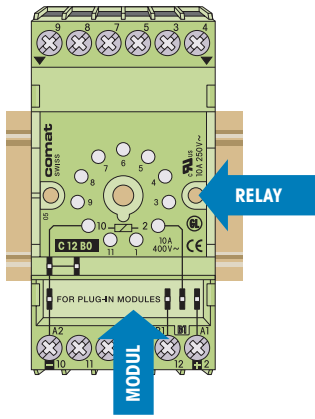


Order no. for individual module (without output relay):

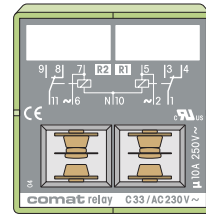
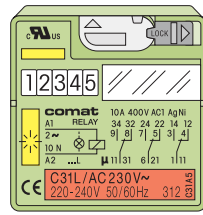
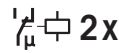
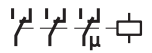
UC110-240V	UC115V, UC230V	UC115V, UC230V	UC110-240V
UC24-48V	UC24-48V	UC24-48V	UC24-48V
CT30 / ...V	CT32 / ...V	CT33 / ...V	CT36 / ...V



# Time Delay Relay assembled (module + output relay)

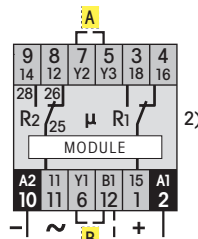
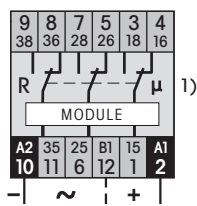


## Contact outputs

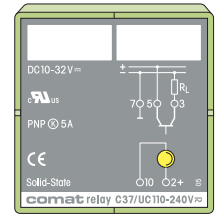
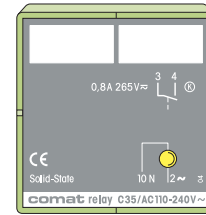


**.1** RELAY: C31L/...  
3 changeover cont.  
**10A 250V~ 1)**

**.3** RELAY: C33/...  
2x1 changeover cont.  
(with instan.t.contact)  
**10A 250V~ 2)**

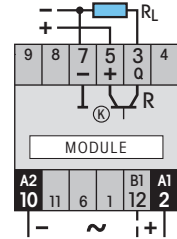
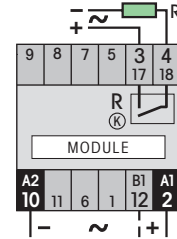


## Solid-state outputs

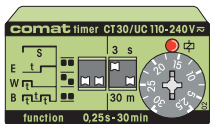


**.5** RELAY: C35/...  
Solid-state output  
for AC or DC load  
**0,8A 10-265V~**

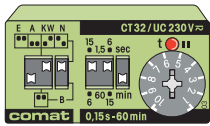
**.7** RELAY: C37/...  
Solid-state output  
for DC load  
**5A 10-30V==**



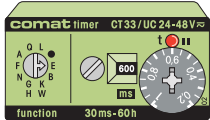
CE and others: [www.comat.ch](http://www.comat.ch)



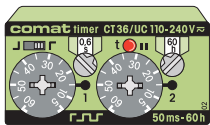
Order no.



Order no.



Order no.



Order no.

Order no. for module + output relay (delivery unit):

AC 24, 48, 115, 230V	AC 24, 48, 115, 230V
DC 24, 48, 110, 220V	DC 24, 48, 110V
CT30.1/...V	CT30.3/...V

Order no. for module + output relay (delivery unit):

AC110-240V	UC110-240V
UC 24-48V	UC24-48V
CT30.5/...V	CT30.7/...V

AC 24, 48, 115, 230V	AC 24, 48, 115, 230V
DC 24, 48, 110, 220V	DC 24, 48, 110V
CT32.1/...V	CT32.3/...V

AC115, 230V	UC115, 230V
UC 24-48V	UC24-48V
CT32.5/...V	CT32.7/...V

AC 24, 48, 115, 230V	AC 24, 48, 115, 230V
DC 24, 48, 110, 220V	DC 24, 48, 110V
CT33.1/...V	CT33.3/...V

AC115, 230V	UC115, 230V
UC 24-48V	UC24-48V
CT33.5/...V	CT33.7/...V

AC 24, 48, 115, 230V	AC 24, 48, 115, 230V
DC 24, 48, 110, 220V	DC 24, 48, 110V
CT36.1/...V	CT36.3/...V

AC110-240V	UC110-240V
UC 24-48V	UC24-48V
CT36.5/...V	CT36.7/...V

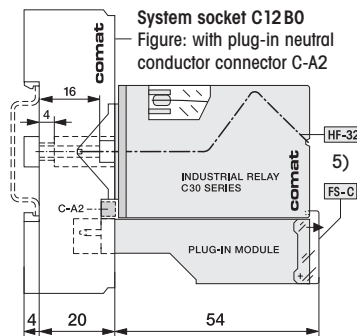
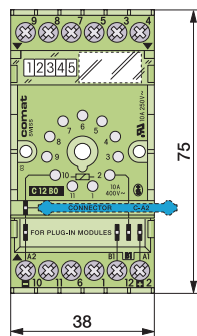
A Jumper 5-7 : R2 = R1  
B Jumper 6-12 : R2 = S

AC 50/60Hz UC AC/DC DC 10%

The Time Relays CT30..., CT32..., CT33... and CT36... consist of modules (incl. cover) and output relays. The socket has to be ordered separately.

The modules can also be combined with other Comat relays. In this case the relays and the modules have to be ordered separately.

Please refer to chapter industrial relays for datas..



Please refer to chapter Industrial Relays for relay datas.

- 1) Same relay, but with twin contacts 6A 250V~ order no. CT...2/...V
- 2) Same relay, but with twin contacts 5A 250V~ order no. CT...4/...V
- 3) To module CT30 (Relay without output LED)
- 4) To module CT32 + 36 (L = Relay with output LED)
- 5) For relay C3... (instead of C31/32, or CT...1/.2): Retaining clip S3-C Front cover FS-R

### Ordering example

Timer CT32.1/AC230V  
Socket C12B0

Order no. for individual output relay (without module):

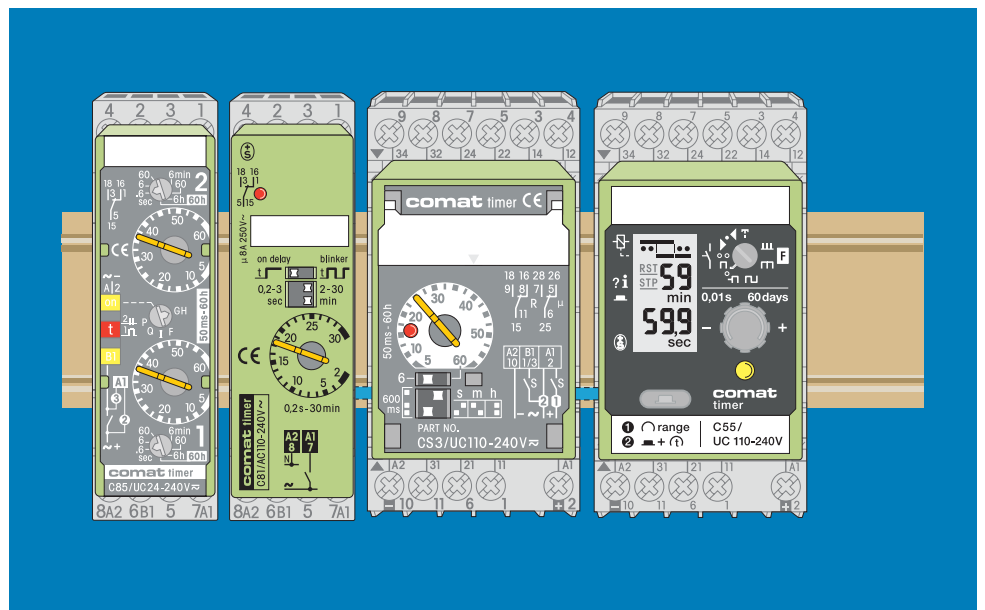
AC 24, 48, 115, 230V	AC 24, 48, 115, 230V	AC110-240V	UC110-240V
DC 24, 48, 110, 220V	DC 24, 48, 110, 220V	UC 24-48V	UC24-48V
C31/...V <sup>3)</sup>	C31L/...V <sup>4)</sup>	C35/...V	C37/...V

\* Function Page: 52; ★TF-60 setting: Page 53; Socket and Accessories: Page 97



Time Delay Relays

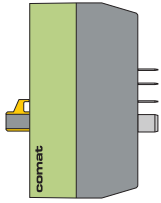
# Plug-in Time Delay Relays



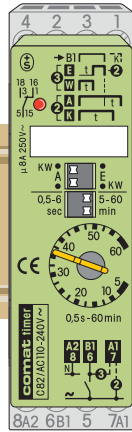
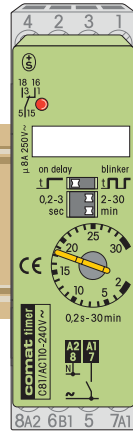
- Multifunction Time Delay Relays
- Restart Delay Relays







CE and others:  
www.comat.ch



**C81**

**Economy Time Delay Relay**  
on delay or blinking,  
voltage controlled,  
output-LED.

**C82**

**Economy Time Delay Relay**  
on delay,  
off delay,  
one shot leading edge,  
pulse shaping K,  
voltage controlled,  
output-LED.

**C83**

**Universal Multifunctional Time Delay Relay**  
• 12 functions + ON (Test),  
voltage controlled.  
• Time lapse display  
(double blinking = t2)  
• Input-LED (24-240V)  
• Output-LED  
• Seismic approved.

**C84**

**Time Delay Relay,  
no auxiliary voltage**  
• Off delay  
• One shot trailing  
edge  
• Triggering display  
• Minimum triggering  
time 150 ms only  
• Seismic approved.

**C85**

**Double Time Delay Relay  
and Repeat Cycle Timer**  
• 6 functions + test  
• t1/t2 separately settable  
• Time lapse display  
(double blinking = t2)  
• Input-LED (24-240V)  
• Output-LED  
• Seismic approved.

**22,5 mm Plug-in Time Delay Relay System**  
for all delay, shot timing and blinking functions.  
Double functions, repeat cycle timing and functions without auxiliary voltage.

**E 0** Triggering  
Function (page \*)

**E B2 0**

**E 00**  
**A K 0 W 0**

**E 00 W H B 0 2**  
**A N L F K G B1 Q**

**A N 0**  
no auxiliary voltage

**I P 00**  
**F Q G 0 H 0**

**Time range**  
★ TF60 setting (page \*)

0,2 s-30 min  
0,2-3s...2-30 min

0,5 s-60 min  
0,5-6s...5-60 min

50 ms-60 h★  
50-600ms...5-60h

0,1s-20 min  
0,1-1,2s...1,7-20 min

2x 50 ms-60 h★  
2 x 50-600ms...5-60h

μ MAX

8A 250V~

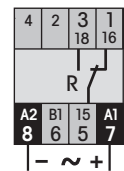
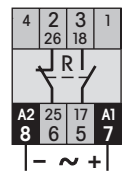
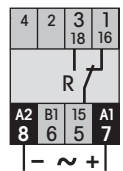
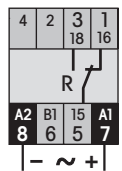
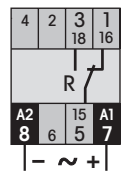
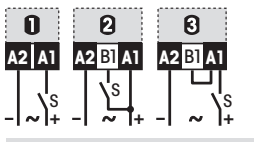
8A 250V~

8A 250V~

5A 250V~

8A 250V~

**Triggering**



~ AC 50/60Hz

AC110-240V

AC110-240V

AC230V

AC115V

UC24-240V

UC24V

UC110-240V

UC24-48V

AC230V

AC115V

UC24-240V

UC24V

Ordering no. →

C81 / ...V

C82 / ...V

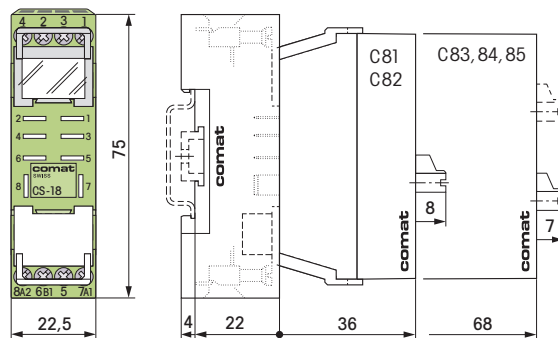
C83 / ...V

C84 / ...V

C85 / ...V

System socket CS-18  
Figure: with inserted retaining clips  
(standard delivery with relay)

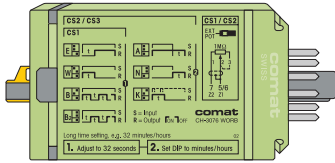
**F Q** **G H**  
t2=t1 t2=0,5s



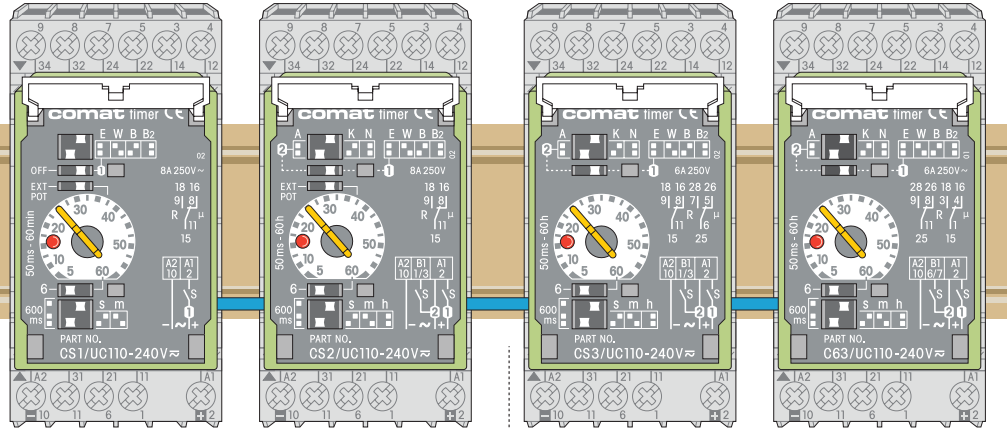
**Ordering example**

Timer C83/UC24-240V  
Socket CS18

\* Function Page: 52; ★TF-60 setting: Page 53; Socket and Accessories: Page 97



CE and others:  
www.comat.ch



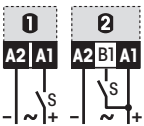
**11-pole Plug-in Time Delay Relay System** for all delay, short timing and blinking functions from 50 ms up to 60 hours. CS1, CS2 with connection for remote potentiometer. Front panel mounting with FZ-50.

**E** Triggering  
Function (page \*)

**Time range**  
★ TF60 setting (page \*)

**UC** AC/DC

Triggering



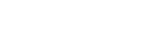
**UC** AC/DC

Ordering no.

**CS1**

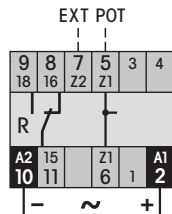
**Economy Time Delay and Blinker Relay**  
With additional connection for remote potentiometer SP-01/1M (up to 50m).

Replaces fully compatible **CSE2, CSB2**



**50 ms - 60 min** ★  
50-600 ms...5-60 min

**8 A 250V~**



**UC110-240V**  
**UC24-60V**

CS1 / ...V

**CS2**

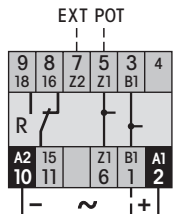
**Universal Multifunctional Time Delay Relay** like CS1, but with 7 functions and delay times up to 60 hours.

Replaces fully compatible **CSA2, CSK2, CSN2**



**50 ms - 60 h** ★  
50-600 ms...5-60h

**8 A 250V~**



**UC110-240V**  
**UC24-60V**  
**UC12-15V**

CS2 / ...V

**CS3** (2nd contact: 6-5-7)

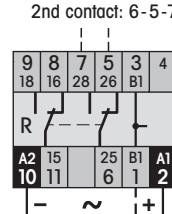
**Universal Multifunctional Time Delay Relay** like CS2, but with 2nd contact instead of Z1-Z2 (terminal 6-5-7).

Replaces fully compatible **CSE3, CSA3**



**50 ms - 60 h** ★  
50-600ms...5-60h

**6 A 250V~**



**UC110-240V**  
**UC24-60V**  
**UC12-15V**

CS3 / ...V

**C63** (2nd contact: 1-4-3)

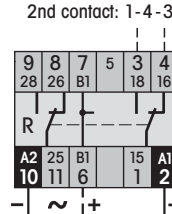
**Universal Multifunctional Time Delay Relay** like CS3, but with 2nd contact on terminal 1-4-3.

Replaces fully compatible **CX35, CX36**



**50 ms - 60 h** ★  
50-600ms...5-60h

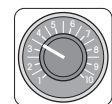
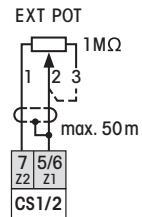
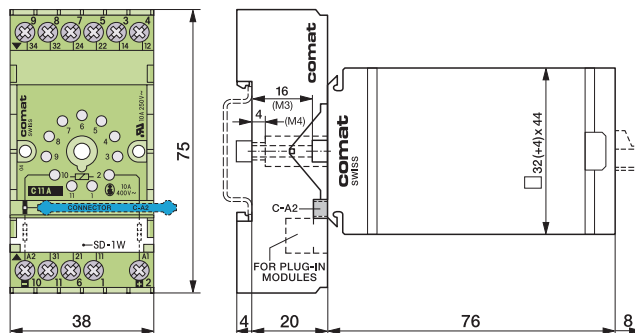
**6 A 250V~**



**UC110-240V**  
**UC24-60V**  
**UC12-15V**

C63 / ...V

**System socket C11A**  
Figure: with plug-in neutral conductor connector C-A2 (standard delivery).

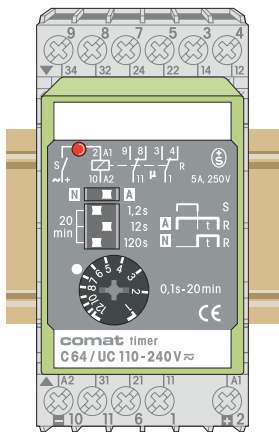


Built-in potentiometer **SP-01/1M** (page \*)

Ordering example

**Timer CS2/UC110-240V**  
**Socket C11A**

\* Function Page: 52; ★ TF-60 setting: Page 53; Socket and Accessories: Page 97



**C64**

**Time Delay Relay without auxiliary voltage**

True off delay or one shot trailing edge after cut off power supply.  
Minimum triggering time 150 ms only.  
Seismic approved.

Replaces RS124, CSR2

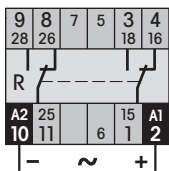
A N 1

without auxiliary voltage

0,1s-20 min  
0,1-1,2s...1,7-20 min

5 A 250V~

Do not connect 5-6-7!



UC110-240V

UC24-60V

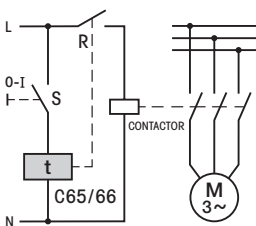
C64 / ...V

**Ordering example**

Timer C64/UC110-240V  
Socket C11A



CE and others:  
www.comat.ch



X1 Function (page\*)  
1 Triggerring

Time range  
Partial ranges

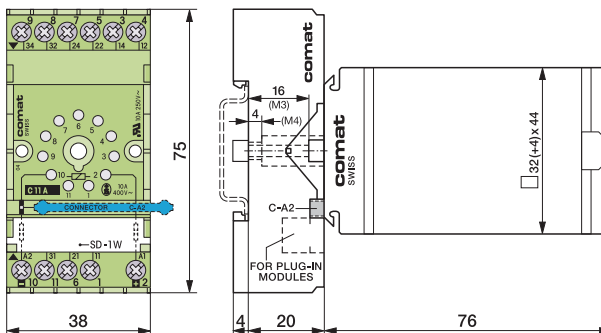
Triggerring



~ AC

Ordering no. →

System socket C11A  
Figure: with plug-in neutral conductor connector C-A2 (standard delivery).

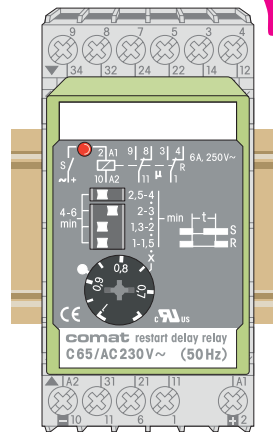


**Ordering example**

Timer C65/AC230V  
Socket C11A

**Restart Delay Relay**

NO UNDEFINED PROCESS CONDITIONS AFTER MAINS INTERRUPTION



**C65 (50Hz) C66 (60Hz)**

**Restart Delay Relay**

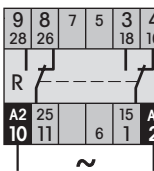
The C65 (50Hz) and C66 (60Hz) are special timers with no auxiliary voltage to guarantee a minimum OFF time after removal of supply. After the interruption of supply, the device will not reclose before the set time (1-6 mins.) has elapsed, even if there has been a new command to switch ON.  
Typical application: After a mains failure it is not possible to restart (close contacts) before the machine is at rest. Example: Motor (see diagram on the left).

X1



1-6 min  
1-1,5 ... 4-6 min

6 A 250V~



~ 50Hz

AC230V

AC115V

C65 / ...V

~ 60Hz

AC230V

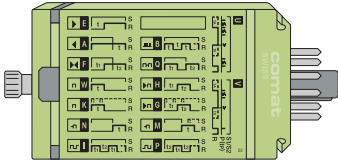
AC115V

C66 / ...V

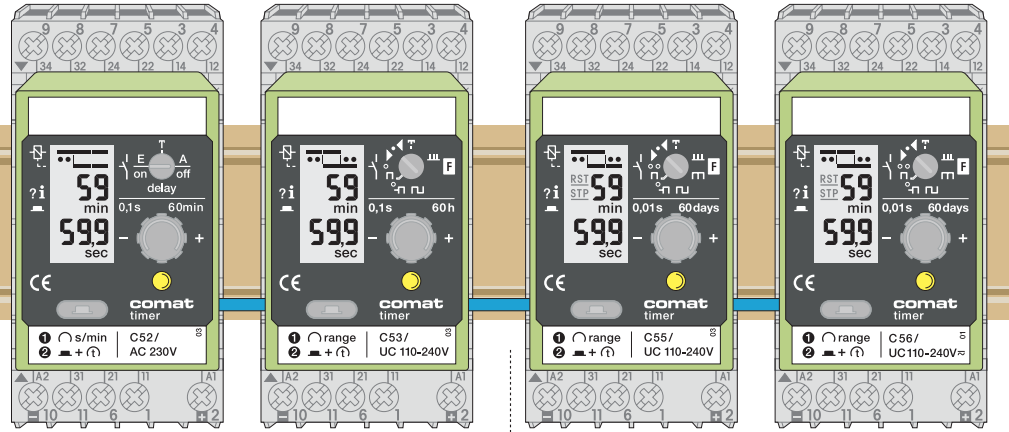
\* Function Page: 52; ★TF-60 setting: Page 53; Socket and Accessories: Page 97



**THE MASTERS**



CE and others:  
www.comat.ch



**11-pole Plug-in Time Delay Relay System** for all timing modes from 10 ms up to 60 days. Extremely accurate due to quartz time base. Digital functions and residual time display. Front panel mounting with FZ-50. Test function  $\nabla$ .

**C52**

**Universal Multifunctional Time Delay Relay**  
• 2 functions  
• 0.1s - 60 min (quartz)  
• 1 change-over contact

**C53 (C53.3, C53.4)**

**Universal Multifunctional Time Delay Relay**  
• 10 functions  
• 0.1s - 60h (quartz)  
• 1 change-over contact  
• Alternatively solid-state output .3 or .4

**C55 (C55.3, C55.4)**

**Universal Multifunctional Time Delay Relay**  
• 15 functions incl. Puls sequence monitoring (U/V)  
• 0.01s - 60 days (quartz)  
• Setting step up to 60s : 1ms  
• t-STOP and t-RESET input  
• 2 changeover contacts  
• Alternatively solid-state output .3 or .4  
• Seismic approved)

**C56**

**Universal Multifunctional Time Delay Relay** like type C55, but with potential free triggering of START, STOP and RESET (insulation from 2-10: 2kV).

**E-1** Triggering  
Function (page \*)

**E-2-3**  
**A-2**

**E W H B I-2-3**  
**A K N F Q-2**

**E W H B I P-2-3**  
**A K N M G F Q-2**  
**U V-3**

**E W H B I P-2-3**  
**A K N M G F Q-2**  
**U V-3**

**Time range**  
Partial ranges

0,1s - 60 min

0,1s - 60h  
0,1s - 60 min ... 0,1 min - 60h

0,01s - 60 days  
0,01 - 60s ... 0,1 h - 60 days

0,01s - 60 days  
0,01 - 60s ... 0,1 h - 60 days

$\mu$  \ MAX

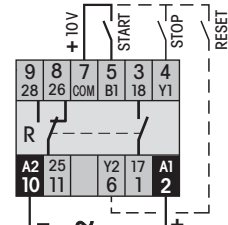
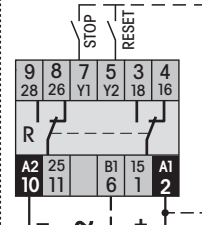
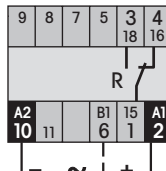
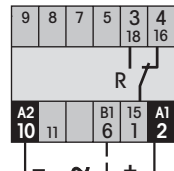
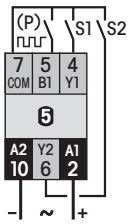
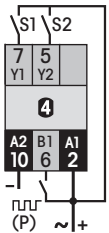
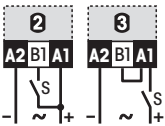
8A 250V~

8A 250V~

5A 250V~

5A 250V~

Triggering



~ AC 50/60Hz  
~ UC AC/DC  
DC  $\nabla$  10%

AC 230V  
AC 110-120V  
UC 24V

UC 110-240V  
UC 24-60V

UC 110-240V  
UC 24-60V

UC 110-240V  
UC 24-60V

Ordering no.  $\rightarrow$

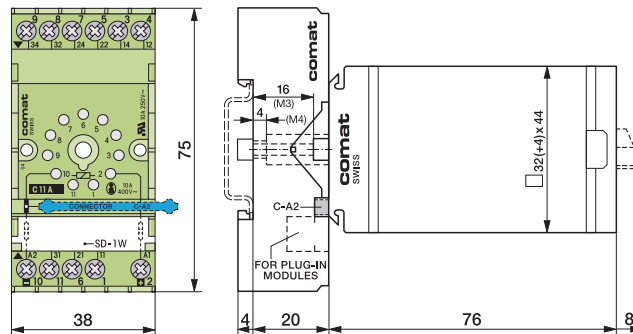
C52 / ... V

C53 / ... V

C55 / ... V

C56 / ... V

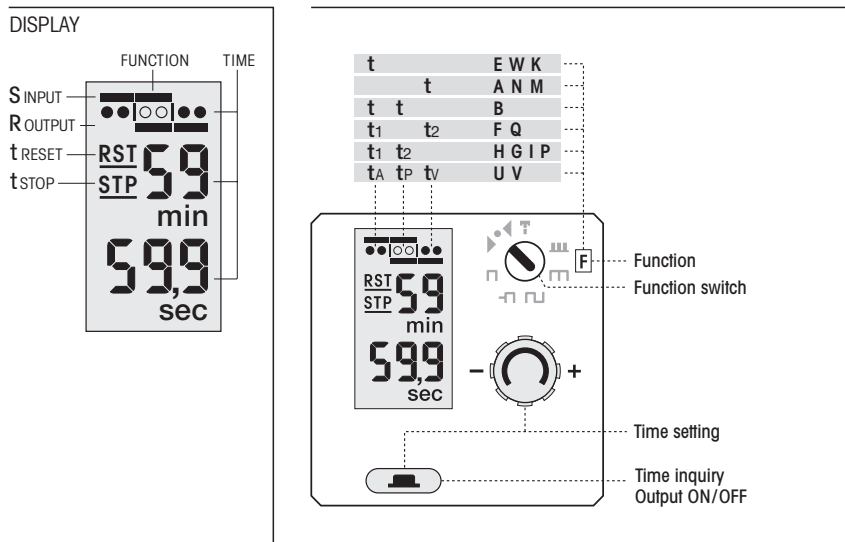
**System socket C11A**  
Figure: with plug-in neutral conductor connector C-A2 (standard delivery).



Ordering example

Timer C53/UC110-240V  
Socket C11A

\* Function Page: 52; ★ TF-60 setting: Page 53; Socket and Accessories: Page 97

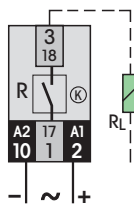


Option\*

Solid-state output for C53, C55  
(instead of contact)

**C53.3**  
**C55.3**

For AC or DC load  
0,5A 10-265V $\approx$

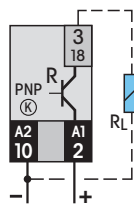


UC110-240V  
UC24-60V

C53.3 / ...V  
C55.3 / ...V

**C53.4**  
**C55.4**

For DC load  
2A 24V $\approx$



DC24V

C53.4 / ...V  
C55.4 / ...V

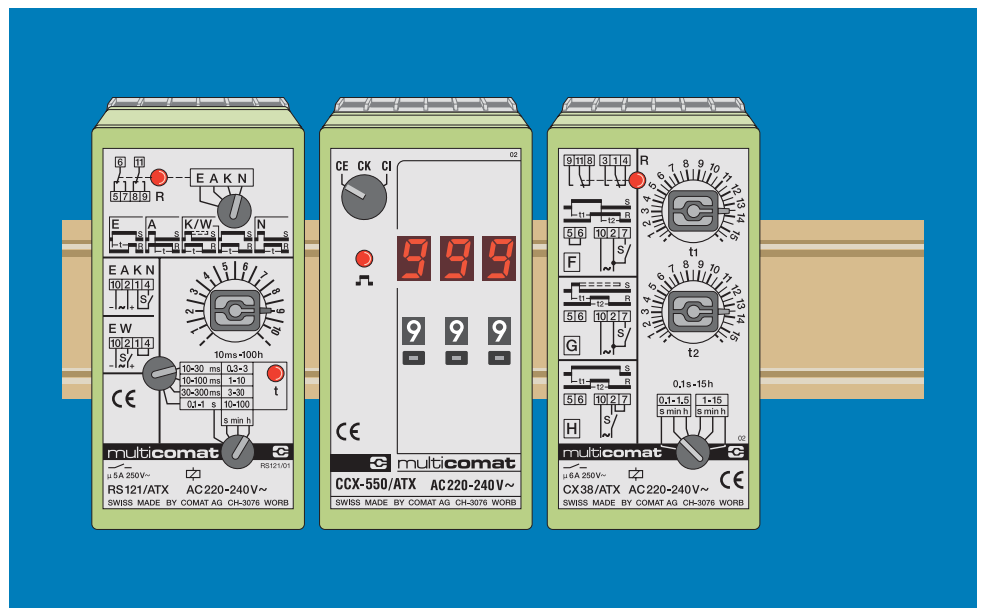
\* Function Page: 52; ★TF-60 setting: Page 53; Socket and Accessories: Page 97



*Time Delay Relays*

# Plug-in Time Delay Relays

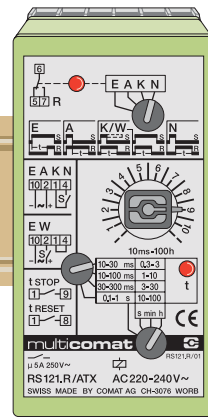
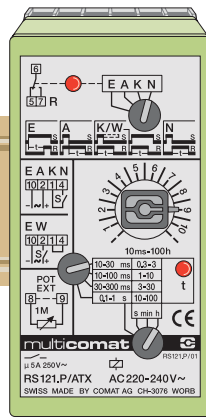
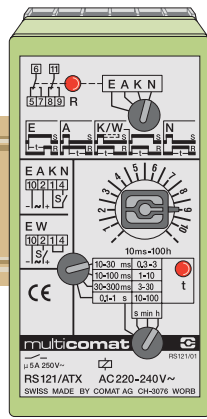
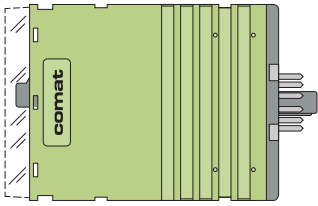
## multicomat



- RS Series
- C Series
- CX Series



# Plug-in Time Delay Relays multicomat



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www.comat.ch

### Time Delay Relays

Field proven since many years.  
The plug-in timer series from comat for highest quality requirements and unattained versatile operation.

### RS 121

#### Multifunctional Time Delay Relay

- 5 functions
- 2 change-over contacts
- potential-free triggering or sensor PNP/NPN

### RS 121.P

#### Multifunctional Time Delay Relay

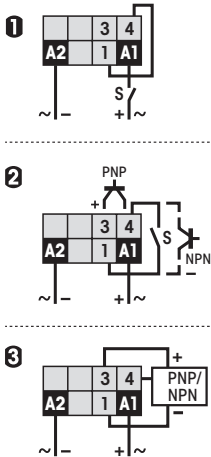
- 5 functions
- 2 change-over contacts
- potential-free triggering or sensor PNP/NPN
- with connection for remote potentiometer

### RS 121.R

#### Multifunctional Time delay Relay

- 5 functions
- with t-stop and t-reset function
- 1 change-over contact
- potential-free triggering or sensor PNP/NPN

### Triggering



### E-0 Triggering

Function (page \*)

Time range  
Partial range

μ<sup>1</sup> MAX

Diagram  
Connection  
with socket C11A

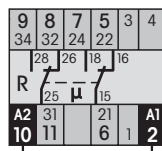
~ AC 50/60Hz	AC220-240V	ATX
	AC110-120V	ANP
~ UC AC/DC	UC24-48V	UFK
	UC12V	UCB
DC 10%	DC110-240V	DNX

Ordering no. →

E-003 W-0  
A K N-23

10ms-100h  
ms; s; min; h

5 A 250V~



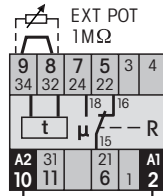
~ AC 50/60Hz	AC220-240V	ATX
	AC110-120V	ANP
~ UC AC/DC	UC24-48V	UFK
	UC12V	UCB
DC 10%	DC110-240V	DNX

Ordering no. → RS 121/ ...

E-003 W-0  
A K N-23

10ms-100h  
ms; s; min; h

5 A 250V~



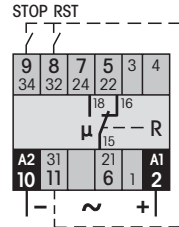
~ AC 50/60Hz	AC220-240V	ATX
	AC110-120V	ANP
~ UC AC/DC	UC24-48V	UFK

Ordering no. → RS 121.P/ ...

E-003 W-0 t-STOP  
A K N-23 t-RESET

10ms-100h  
ms; s; min; h

5 A 250V~



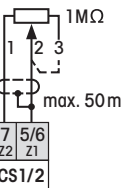
~ AC 50/60Hz	AC220-240V	ATX
	AC110-120V	ANP
~ UC AC/DC	UC24-48V	UFK

Ordering no. → RS 121.R/ ...

### EXT POT

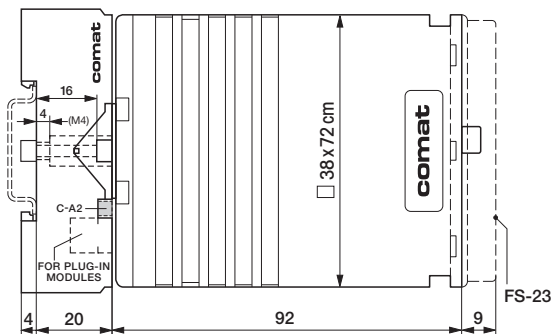
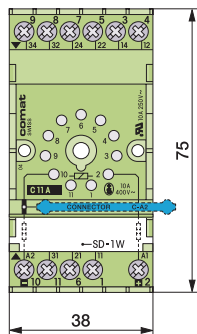


Built-in potentiometer  
SP-01/1M  
(page \*)



### System socket C11A

Figure: with plug-in neutral conductor connector C-A2 (standard delivery).



### Ordering example

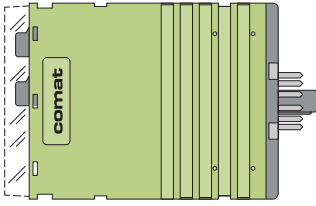
Timer RS 121/ATX  
Socket C11A

\* Function Page: 52; ★TF-60 setting: Page 53; Socket and Accessories: Page 97

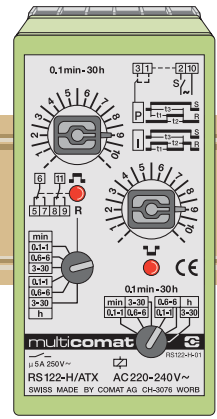
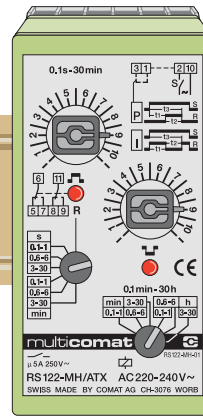
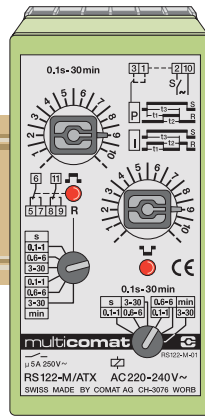




# Repeat Cycle Timer multicomat



CE and others:  
www.comat.ch



Time Delay Relays

2

**Cycle Timer**  
Field proven since many years.  
The plug-in timer series from comat for highest quality requirements and unattained versatile operation.

## RS 122-M

**Universal Cycle Timer**

- pulse or interval start
- Time range 0,1s-30min
- 2 change-over contacts

## RS 122-MH

**Universal Cycle Timer**

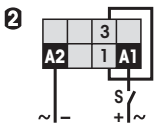
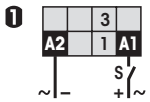
- pulse or interval start
- Time range: pulse 0,1s-30min  
interval 0,1min-30h
- 2 change-over contacts

## RS 122-H

**Universal Cycle Timer**

- pulse or interval start
- Time range 0,1min-30h
- 2 change-over contacts

### Triggering



**E-0** Triggering  
Function (page \*)

Time range

μ MAX →

Diagram  
Connection  
with socket C11A

~ AC 50/60Hz

~ UC AC/DC

≡ DC 10%

Ordering no. →

**I-0**  
**P-2**

t I: 0,1s-30min  
t P: 0,1s-30min

5 A 250V~



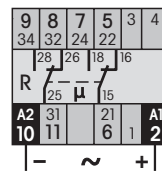
AC220-240V	ATX
AC110-120V	ANP
UC24-48V	U FK
UC12V	UCB
DC110-240V	DNX

RS 122-M/ ...

**I-0**  
**P-2**

t I: 0,1s-30min  
t P: 0,1min-30h

5 A 250V~



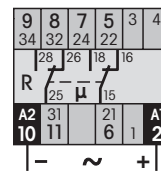
AC220-240V	ATX
AC110-120V	ANP
UC24-48V	U FK
UC12V	UCB
DC110-240V	DNX

RS 122-MH/ ...

**I-0**  
**P-2**

t I: 0,1min-30h  
t P: 0,1min-30h

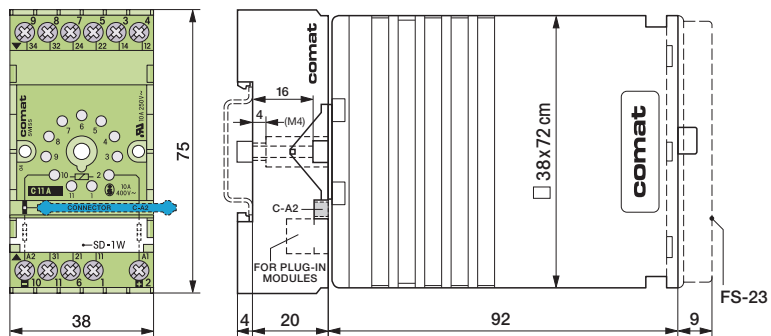
5 A 250V~



AC220-240V	ATX
AC110-120V	ANP
UC24-48V	U FK
UC12V	UCB
DC110-240V	DNX

RS 122-H/ ...

**System socket C11A**  
Figure: with plug-in neutral conductor connector C-A2 (standard delivery).



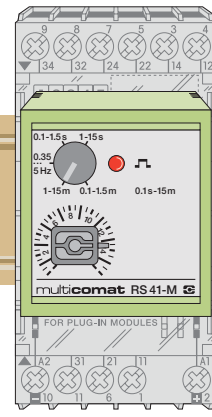
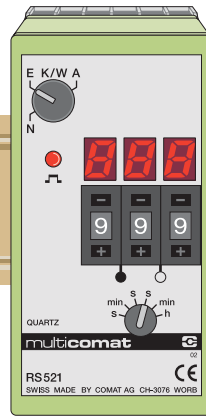
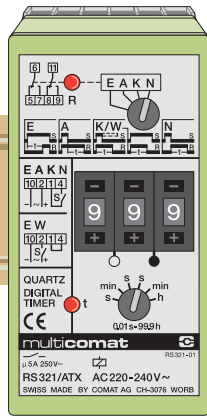
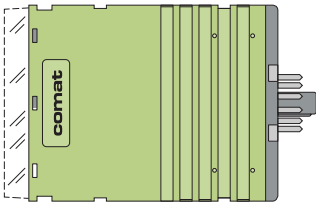
### Ordering example

Timer RS 122-M/ATX  
Socket C11A

\* Function Page: 52; \* TF-60 setting: Page 53; Socket and Accessories: Page 97



# Plug-in Time Delay Relay multicomat



CE and others: [www.comat.ch](http://www.comat.ch)

## Time Delay Relay

11-pole plug-in time relay for highest requirement in regard to quality and performance. Application-oriented, universal employment, operator friendly.

### RS 321

#### Digital Multifunction Time Delay Relay

- 5 functions
- 2 change-over contacts
- potential-free triggering

### RS 521

#### Digital Multifunction Time Delay Relay

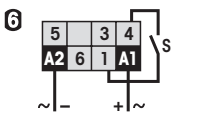
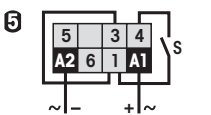
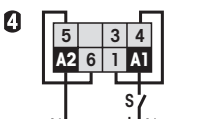
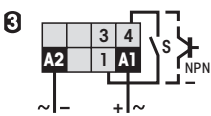
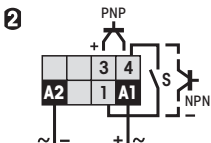
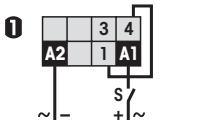
- digital time elapse display
- time stop function
- 2 change-over contacts
- potential-free triggering

### RS 41-M

#### Economy Multifunction Time Delay Relay

- 5 functions
- 1 change-over contact
- potential-free triggering
- with front cover

## Triggering

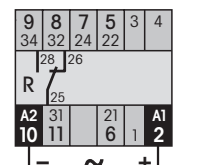
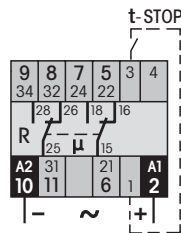
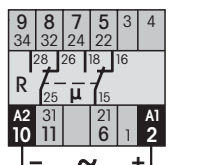


E 0 W 0  
A K N 0  
Function (page \*)

Time range  
Partial range

μ<sup>1</sup> MAX

Diagram  
Connection  
with socket C11A



~ AC 50/60Hz	AC220-240V	ATX
	AC110-120V	ANP
~ UC AC/DC	UC24-48V	UFK
	UC12V	UCB
DC 10%	DC110-240V	DNX

AC110-240V	ANX
UC24-48V	UFK
DC110-240V	DNX

AC220-240V	ATX
AC110-120V	ANP
UC24-48V	UFK

Ordering no. → RS 321/ ....

RS 521/ ....

RS 41-M/ ....

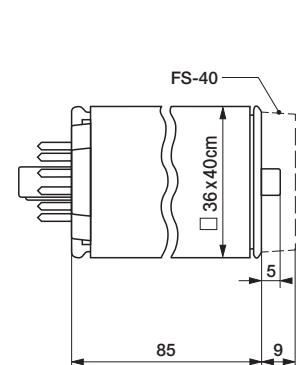
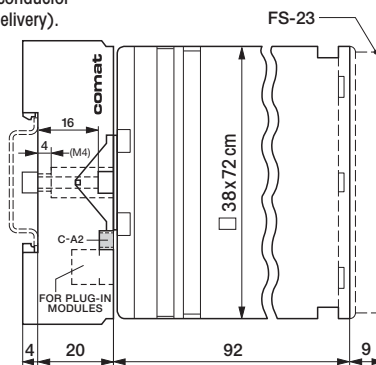
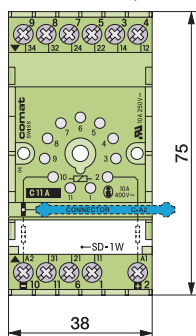
## Ordering example

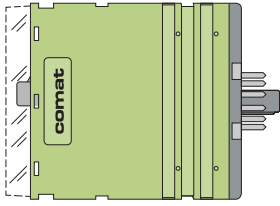
Timer RS 321/ATX  
Socket C11A

\* Function Page: 52; ★TF-60 setting: Page 53; Socket and Accessories: Page 97

## System socket C11A

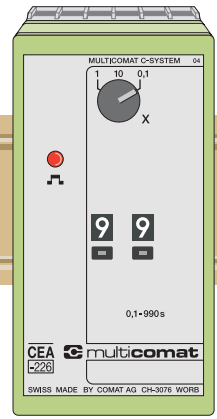
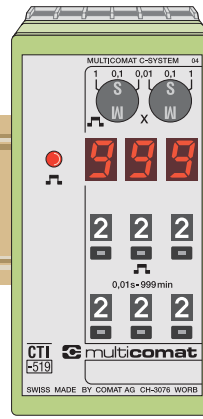
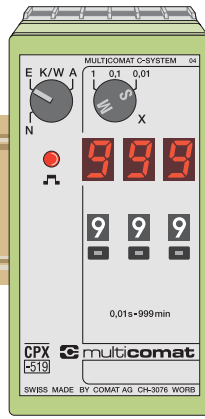
Figure: with plug-in neutral conductor connector C-A2 (standard delivery).





CE and others: [www.comat.ch](http://www.comat.ch)

# Plug-in Time Delay Relay multicomat



Time Delay Relays

2

**Time Delay Relay**  
Field proven since many years. The plug-in timer series from comat for highest quality requirements and unattained versatile operation.

## CPX-519

**Digital Multifunctional Time Delay Relay**

- with digital time elapsed display
- 5 functions
- 2 change-over contacts
- potential-free triggering

## CTI-519

**Digital Cycle Timer**

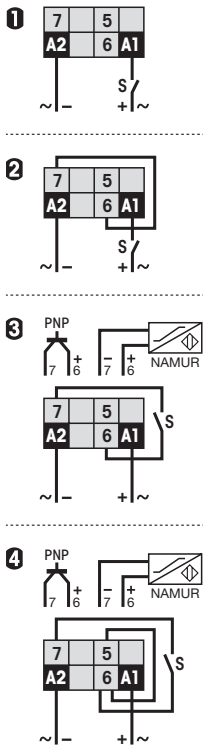
- Rest interval can be set separately
- digital time elapsed display
- 2 change-over contacts
- potential-free triggering

## CEA-226

**Time Delay Relay**

- 2 change-over contacts
- potential-free triggering

### Triggering



**E-1** Triggering  
Function (page \*)

**Time range**  
Partial range

**μs MAX**

**Diagram**  
Connection with socket C11A

**~ AC 50/60Hz**

**~ UC AC/DC**

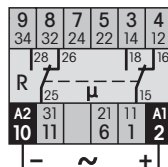
**≡ DC <math>\leq 10\%</math>**

**Ordering no.** →

**E-23 W-2**  
**A-K-N-3**

**0,01s-999 min**  
s; min

**6 A 250V~**



**AC110-240V ANX**

**UC24-48V UFK**

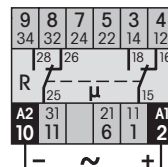
**DC110-240V DNX**

CPX-519/ ...

**I-23**

**2x 0,01s-999 min**  
s; min

**6 A 250V~**



**AC110-240V ANX**

**UC24-48V UFK**

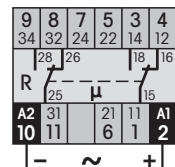
**DC110-240V DNX**

CTI-519/ ...

**E-23**  
**A-4**

**0,1s-990 s**  
s

**6 A 250V~**



**AC220-240V ATX**

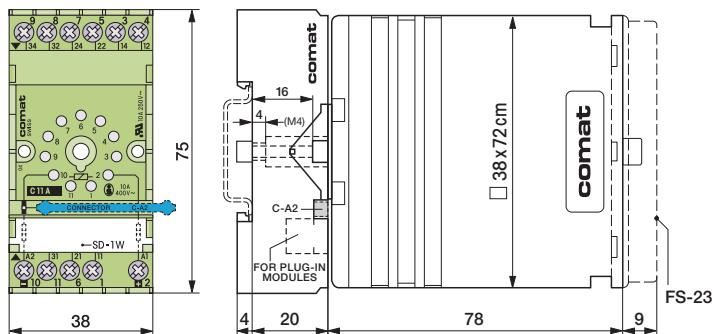
**AC110-120V ANP**

**UC24-48V UFK**

CEA-226 / ...

### System socket C11A

Figure: with plug-in neutral conductor connector C-A2 (standard delivery).



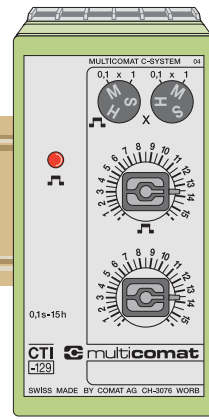
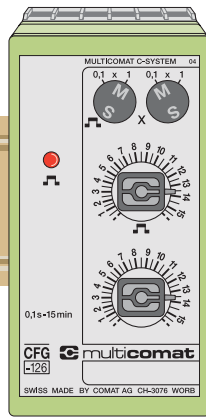
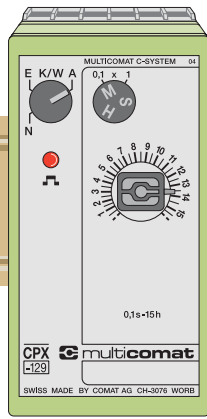
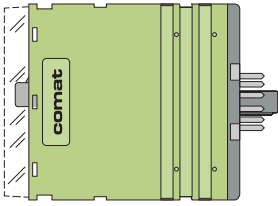
### Ordering example

Timer CPX-519/ANX  
Socket C11A

\* Function Page: 52; ★TF-60 setting: Page 53; Socket and Accessories: Page 97



# Plug-in Time Delay Relay multicomat



CE and others: [www.comat.ch](http://www.comat.ch)

### Time Delay Relay

Field proven since many years. The plug-in timer series from comat for highest quality requirements and unattained versatile operation.

### CPX-129

#### Multifunctional Time Delay Relay

- 5 functions
- 2 change-over contacts
- potential-free triggering

### CFG-126

#### Multifunctional Time Delay Relay with 3 double functions

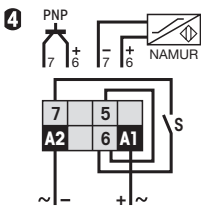
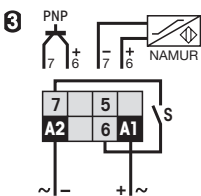
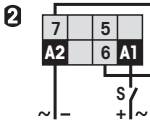
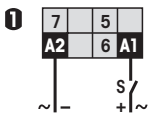
- individual setting of t1/t2
- 2 change-over contacts
- potential-free triggering

### CTI-129

#### Multifunctional Cycle Timer

- Reset interval can be set separate
- 2 change-over contacts

### Triggering



### E-0 Triggering

Function (page \*)

Time range  
Partial range

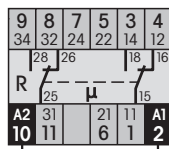
μ MAX

Diagram  
Connection  
with socket C11A

E-03 W-0  
A-K-N-0

0,1s-15h  
s; min; h

6 A 250V~



~ AC 50/60Hz	AC220-240V	ATX
	AC110-120V	ANP
~ UC AC/DC	UC24-48V	UFK
	UC12V	UCB
== DC <math>\leq 10\%</math>	DC110-240V	DNX

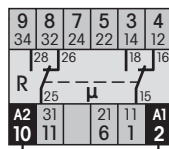
Ordering no. →

CPX-129/ ...

F-0 G-0  
H-0

2x 0,01s-15min  
s; min

6 A 250V~



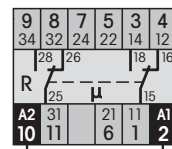
~ AC 50/60Hz	AC220-240V	ATX
	AC110-120V	ANP
~ UC AC/DC	UC24-48V	UFK
	UC12V	UCB
== DC <math>\leq 10\%</math>	DC110-240V	DNX

CFG-126/ ...

I-0

2x 0,1s-15h  
s; min; h

6 A 250V~



~ AC 50/60Hz	AC220-240V	ATX
	AC110-120V	ANP
~ UC AC/DC	UC24-48V	UFK
	UC12V	UCB
== DC <math>\leq 10\%</math>	DC110-240V	DNX

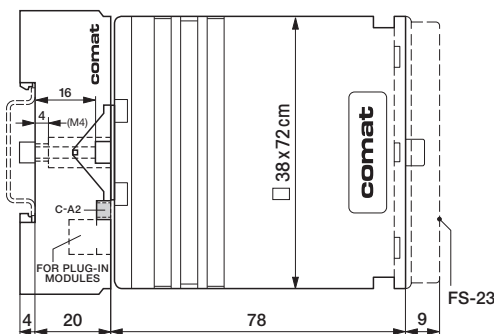
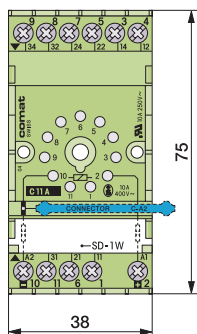
CTI-129/ ...

### Ordering example

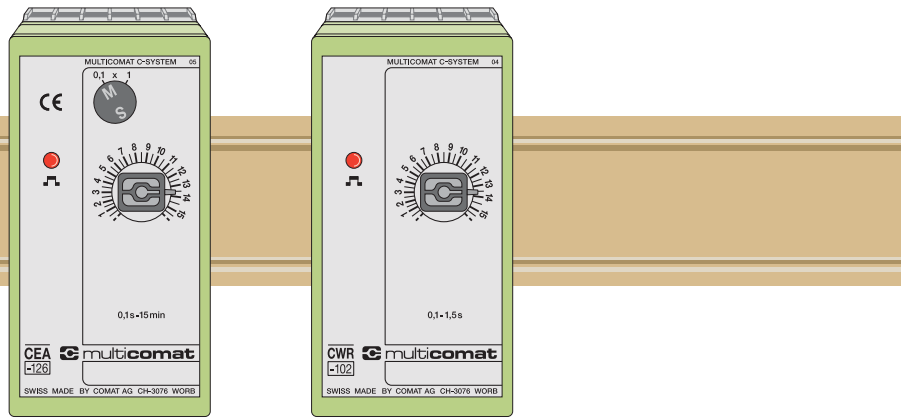
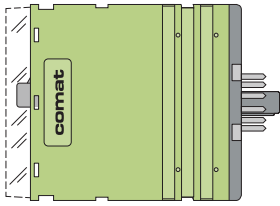
Timer CPX-129/ATX  
Socket C11A

### System socket C11A

Figure: with plug-in neutral conductor connector C-A2 (standard delivery).



\* Function Page: 52; ★TF-60 setting: Page 53; Socket and Accessories: Page 97



CE and others:  
www.comat.ch

**Time Delay Relays**

Field proven since many years.  
The plug-in timer series from comat  
for highest quality requirements and  
unattained versatile operation.

**CEA-126**

**Multifunctional Time Delay Relays**

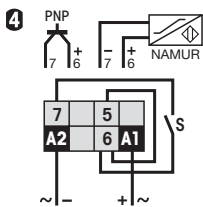
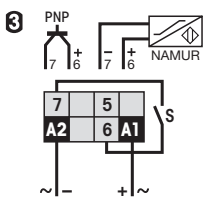
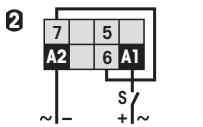
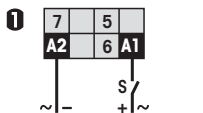
- on delay or off delay
- 2 change-over contacts
- potential-free triggering

**CWR-102**

**Single Shot Relay**

- 3 functions
- function t1 = t2
- 2 change-over contacts
- potential-free triggering

**Triggering**



**E-1 Triggering**

Function (page \*)

**Time range**  
Partial range

μ MAX

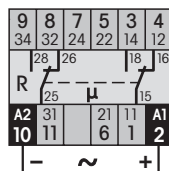
**Diagram**  
Connection  
with socket C11A

**E-2-3**

**A-4**

**0,1s-15 min**  
s; min

**6 A 250V~**

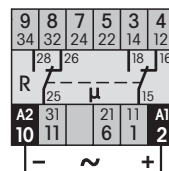


**W-2 N-4**

**Q-3**

**0,1-1,5s**

**6 A 250V~**



~ AC 50/60Hz	AC220-240V	ATX
	AC110-120V	ANP
~ UC AC/DC	UC24-48V	U FK
	UC12V	UCB
== DC <math>\leq 10\%</math>	DC110-240V	DNX

~ AC 50/60Hz	AC220-240V	ATX
	AC110-120V	ANP
~ UC AC/DC	UC24-48V	U FK
	UC12V	UCB
== DC <math>\leq 10\%</math>	DC110-240V	DNX

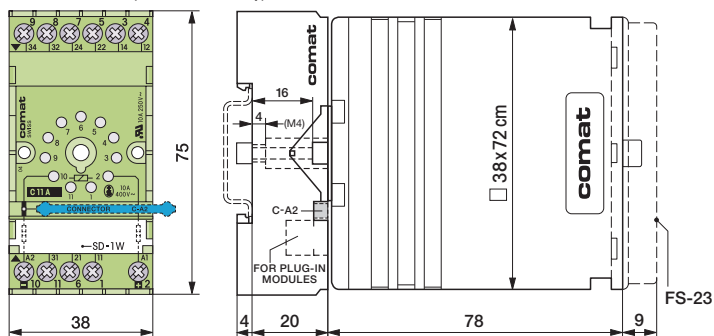
Ordering no. →

CEA-126/ ...

CWR-102/ ...

**System socket C11A**

Figure: with plug-in neutral conductor  
connector C-A2 (standard delivery).



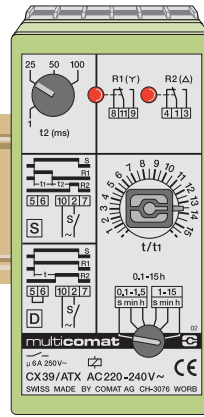
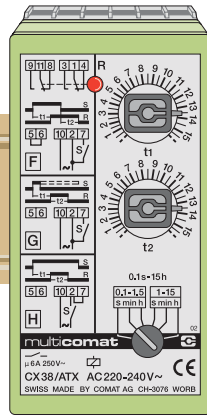
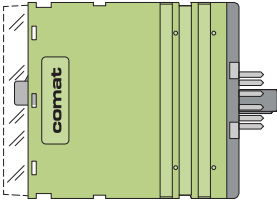
**Ordering example**

Timer CEA-126/ATX  
Socket C11A

\* Function Page: 52; ★TF-60 setting: Page 53; Socket and Accessories: Page 97



# Plug-in Time Delay Relay multicomat



CE and others: [www.comat.ch](http://www.comat.ch)

### Time Delay Relays

Electronic Timer Relay with mains triggering and 2 change-over contacts. Digital timing generated with RC-Oscillator and frequency conductor with LED indication of relay function.

### CX 38

#### Multifunctional Time Delay Relays

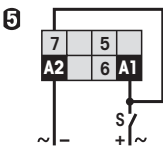
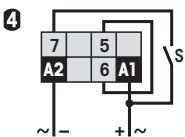
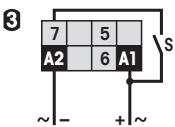
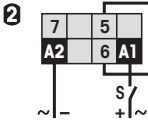
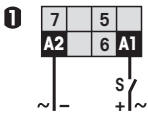
- 3 functions
- delay time ranges can be set individual
- 2 change-over contacts
- mains triggering

### CX 39

#### Star-Delta Timer

- adjustable  $\lambda$  -  $\Delta$  change-over pause.
- On delay with instantaneous contacts (R1 = immediately / R2 = t)
- 2 change-over contacts

#### Triggering



**E** **0** Triggering Function (page \*)

Time range Partial range

$\mu$  MAX

Diagram Connection with socket C11A

~ AC 50/60Hz

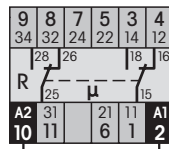
~ UC AC/DC

DC  $\nabla$  10%

Ordering no.  $\rightarrow$

**F** **4** **G** **3**  
**H** **6**

0,1s-15h  
s; min, h

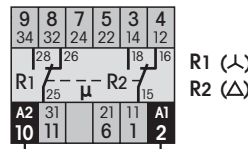


AC220-240V	ATX
AC110-120V	ANP
UC24-48V	UFK
UC12V	UCB
DC110-240V	DNX

CX 38/ ...

**Y** = **S** **0**  
**E** = **D** **2**

t  $\lambda$  0,1s-15h  
t  $\lambda$  -  $\Delta$  1-100ms



AC220-240V	ATX
AC110-120V	ANP
UC24-48V	UFK
UC12V	UCB
DC110-240V	DNX

CX 39/ ...

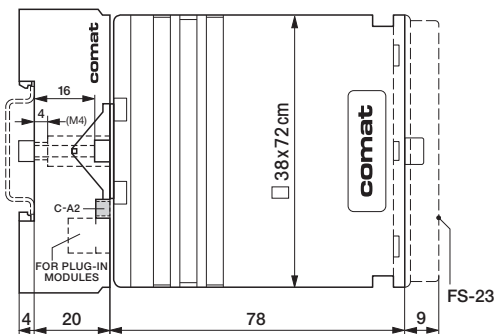
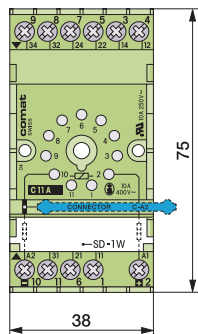
#### Ordering example

Timer CX 38/ATX  
Socket C11A

\* Function Page: 52; \* TF-60 setting: Page 53; Socket and Accessories: Page 97

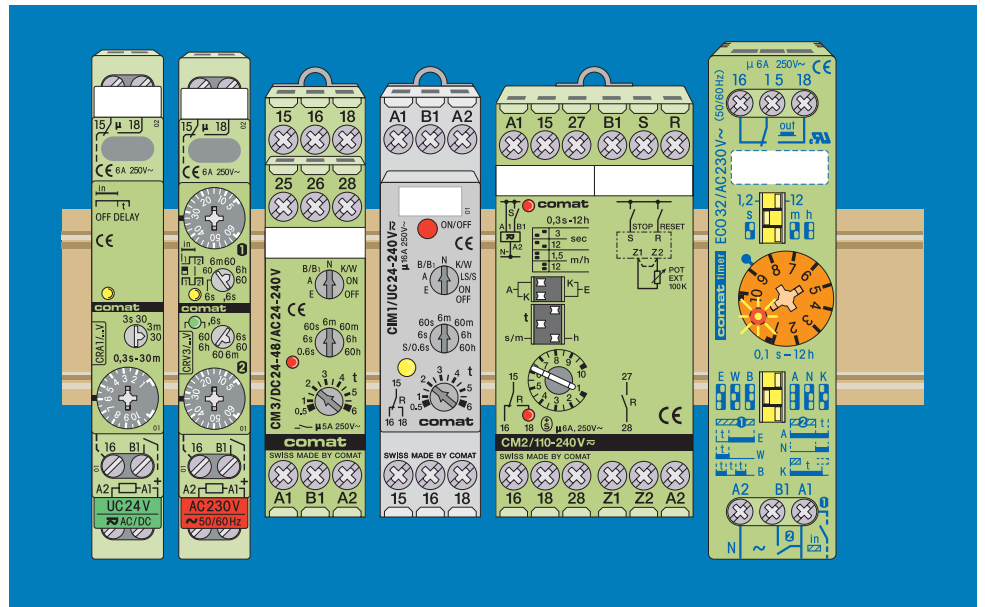
#### System socket C11A

Figure: with plug-in neutral conductor connector C-A2 (standard delivery).



Time delay Relays

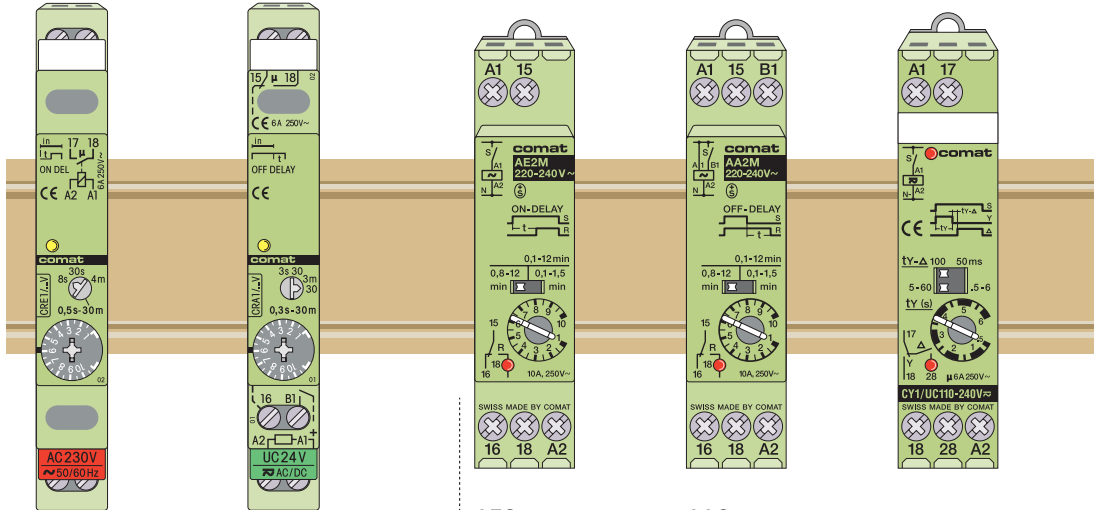
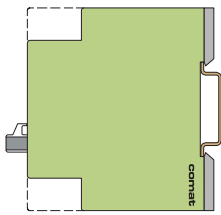
# DIN Time Delay Relays



**DIN**

- Multifunction Time Delay Relays
- Extra slim Time Delay Relays 13 mm
- DIN-A (Installation, distribution panel)
- DIN-C (Industry)
- 22,5 mm Seies

**DIN Time Delay Relays (mono-function)**



CE and others: [www.comat.ch](http://www.comat.ch)

**Economy Time Delay Relays**  
Only 13 or 17,5mm wide.  
Ideal for applications with a fixed function E, A or Y.  
For snap-on installation in accordance with DIN 43880.

**CRE1**  
**Economy time delay relay**

- on delay
- voltage controlled
- LED for R.

**CRA1**  
**Economy time delay relay**

- off delay
- voltage controlled
- LED for R

**AE2**  
**AE2M**

- Economy time delay relay**
- on delay
  - voltage controlled
  - 1 changeover contact
  - Output-LED

**AA2**  
**AA2M**

- Economy time delay relay**
- off delay
  - voltage controlled
  - 1 changeover contact
  - Output-LED

**CY1**  
**Star-delta time delay relay**

- with adjustable  $\Delta$ - $\Delta$  interval
- Safety locking of the  $\Delta$  output

**E** **Triggering**  
Function (page \*)

**E**

**A**

**E**

**A**

**Y**

**Time range**  
★ TF60 setting (page \*)

**0,5s-30min**  
s, min

**0,3s-30min.**  
s, min ★

**AE2 0,8s-1,5min**  
**AE2M 0,1-12min**

**AA2 0,8s-1,5min**  
**AA2M 0,1-12min**

**t  $\Delta$  0,5-60s**  
**t  $\Delta$ - $\Delta$  50/100ms**

$\mu$  MAX

**6A 250V~**

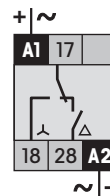
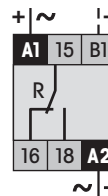
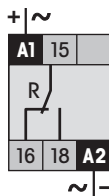
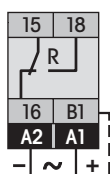
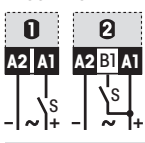
**6A 250V~**

**10A 250V~**

**10A 250V~**

**6A 250V~**

**Triggering**



**AC 50/60Hz**

**UC AC/DC**

**AC 230V**

**AC 115V**

**UC 24V**

**AC 230V**

**AC 115V**

**UC 24V**

**AC 220-240V**

**AC 110-127V**

**UC 24V**

**AC 220-240V**

**AC 110-127V**

**UC 24V**

**UC110-240V**

**UC 24-60V**

**Ordering no.**

**CRE1 / ...V**

**CRA1 / ...V**

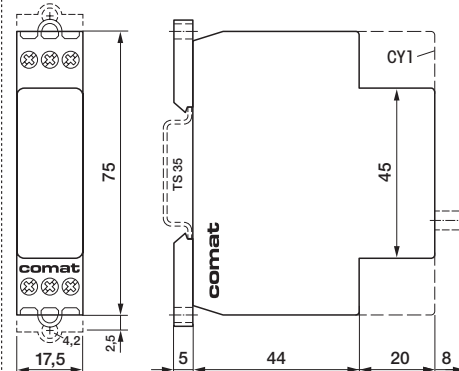
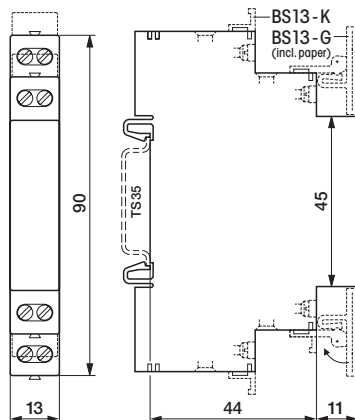
**AE2 / ...V**  
**AE2M / ...V**

**AA2 / ...V**  
**AA2M / ...V**

**CY1 / ...V**

**Ordering example**

**Timer CRE1/AC230V**

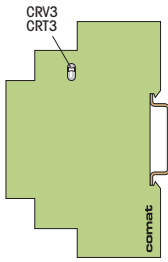


\* Function Page: 52; ★ TF-60 setting: Page 53; Socket and Accessories: Page 97

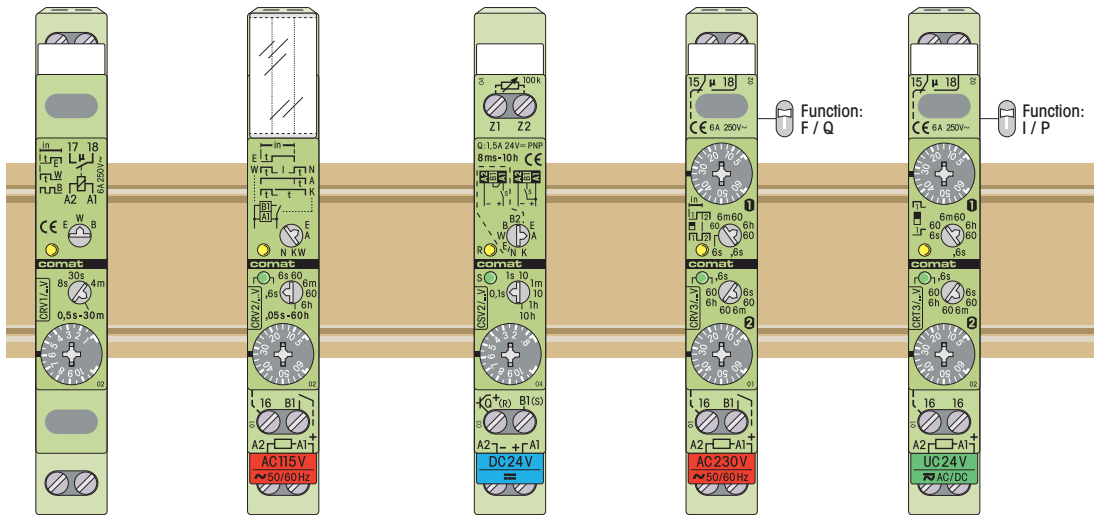


Multifunctional Time Delay Relays

13mm SLIM BUT.....



CE and others: www.comat.ch



CRV1

Economy Time Delay and Blinker Relay

- 3 functions
- voltage controlled
- LED for R

CRV2

Universal Multifunctional Time Delay Relay

- 2 delay functions
- 2 shot timing modes
- pulse shaping K
- LED for B1 and R

CSV2

Multifunctional Time Delay Relay

- like CRV2, but with solidstate output and connection for remote potentiometer.

CRV3

Double Time Delay Relay

- F (E and A) or Q (W and N)
- t1/t2 separately settable
- LED for B1 and R
- Function switch at the right side of the device

CRT3

Universal Repeat Cycle Timer

- Pulse or pause start
- t1/t2 separately settable
- LED for A1 and R
- Function switch at the right side of the device

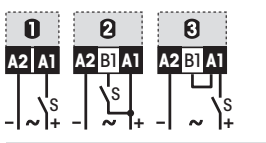
Extra slim 13mm Time Delay Relay System for all timing functions from 50ms up to 60 hours. With only 13mm fitting width especially suited for use in the industrial inter-face sector.

E 1 Triggering Function (page \*)

Time range \* TF60 setting (page \*)

μs \ MAX

Triggering



0,5s-30min s, min

6A 250V~



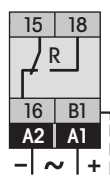
AC 230V  
AC 115V  
UC 24V

CRV1 / ... V



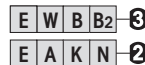
0,05s-60h s, min, h \*

6A 250V~



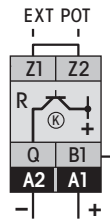
AC 230V  
AC 115V  
UC 24V

CRV2 / ... V



8ms-10h s, min, h \*

1,5A 24V=



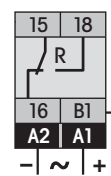
DC 24V

CSV2 / ... V



t1: 50ms-60h  
t2: 50ms-60h \*

6A 250V~



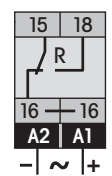
AC 230V  
AC 115V  
UC 24V

CRV3 / ... V



t1: 50ms-60h  
t2: 50ms-60h \*

6A 250V~



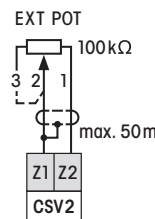
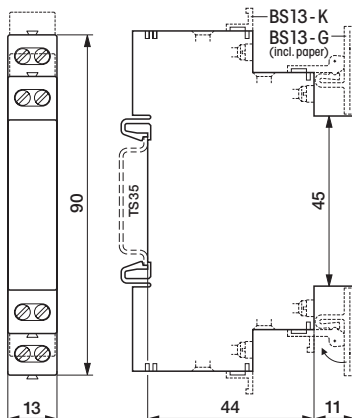
AC 230V  
AC 115V  
UC 24V

CRT3 / ... V

Ordering no. →

Ordering example

Timer CRV1/AC230V

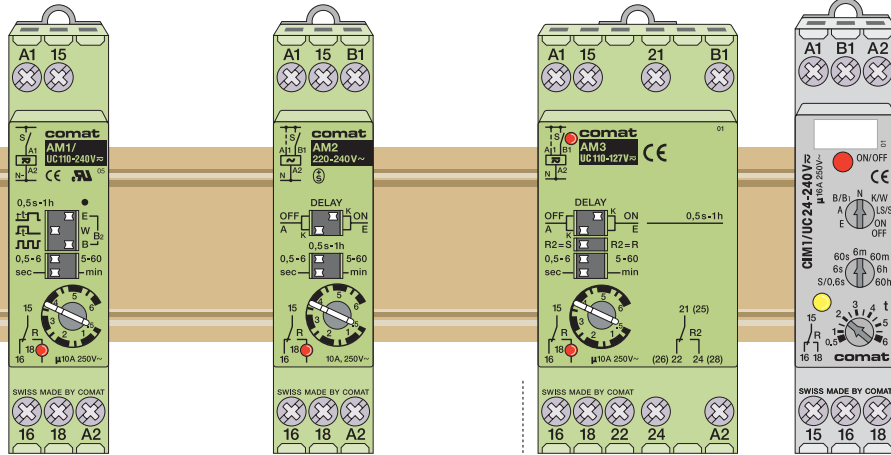
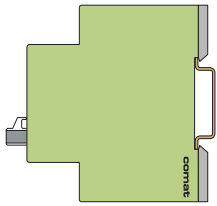


Built-in potentiometer SP-01/100k (page \*)

\* Function Page: 52; \* TF-60 setting: Page 53; Socket and Accessories: Page 97

# Multifunctional Time Delay Relays Universal Function Relay

**NEW**



CE and others:  
www.comat.ch

17,5 mm  
time delay relay system  
in compact design.

Suited for snap-on installation in  
accordance with DIN 43 880.  
CIM1 mit Treppenhauseinatomb  
Schrittschaltbr.

## AM1

### Economy Time Delay and Blinker Relay

- on delay
- one shot leading edge
- 2 blinker functions
- Output-LED

## AM2

### Universal Time Delay Relay

- on delay
- off delay
- one shot leading edge
- pulse shaping K
- voltage controlled
- Output-LED

## AM3

### Universal Time Delay Relay with instantaneous contact or both contacts delayed (programmable).

Functions like type AM2.  
Display of control input B1 (S)  
in addition to the output-LED.

## CIM1

### Universal Function Relay

- 9 functions
- stepping switch (S)
- staircase lighting timer (LS)
- 1 change-over contact
- hand function switch for  
maintenance functions  
(ON/OFF)

**E** 1 Triggbring  
Function (page \*)

**E W B B2** 1

**E** 2 3  
**A K** 2 **W** 3

**E** 2 3  
**A K** 2 **W** 3

**E** 1 **B W** 3  
**A K N B1 S LS** 2

Time range  
Partial ranges

0,5 s - 60 min  
0,5 - 6 s ... 5 - 60 min

0,5 s - 60 min  
0,5 - 6 s ... 5 - 60 min

0,5 s - 60 min  
0,5 - 6 s ... 5 - 60 min

0,6 s - 60 h  
sec, min, h

μ MAX

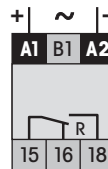
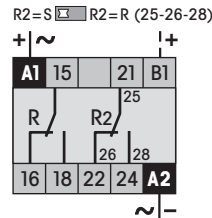
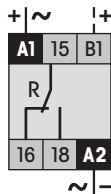
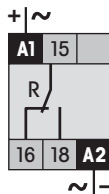
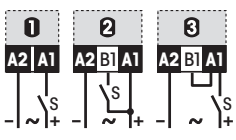
10 A 250 V ~

10 A 250 V ~

10 A 250 V ~

16 A 250 V ~

Triggbring



~ AC 50/60 Hz

~ UC AC/DC

UC110-240 V

UC24-60 V

AC220-240 V

AC110-127 V

UC24-60 V

AC220-240 V

UC110-127 V

UC24-60 V,

UC24-240 V

Ordering no. →

AM1 / ... V

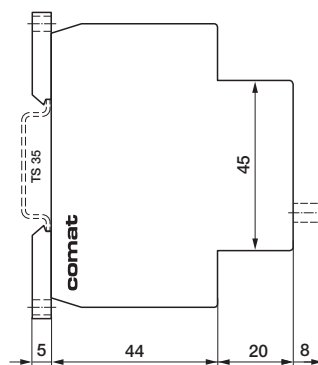
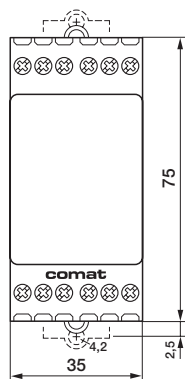
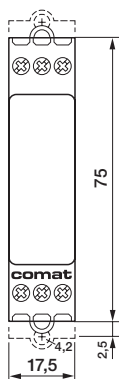
AM2 / ... V

AM3 / ... V

CIM1 / ... V

Ordering example

Universal function relay  
CIM1/UC24-240 V



\* Function Page: 52; ★ TF-60 setting: Page 53; Socket and Accessories: Page 97

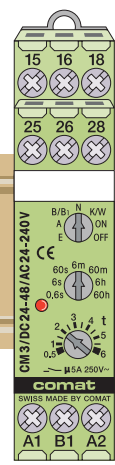
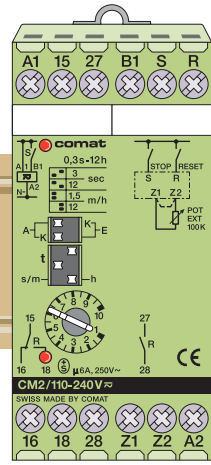
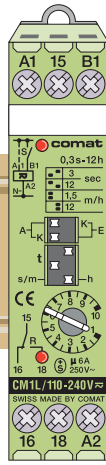
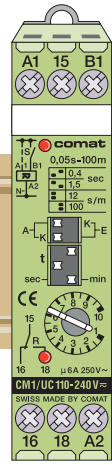
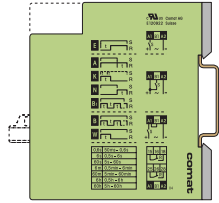
# Multifunctional Time Delay Relays

OUR BEST HORSE



Time Delay Relays

2



CE and others: www.comat.ch

## CM1

**Universal Time Delay Relay**

- on delay
- off delay
- one shot leading edge
- pulse shaping K
- voltage controlled
- LED for B1 and R

## CM1L

**Universal Time Delay Relay** like type CM1, but with extended time range.

## CM2

**Universal Time Delay Relay** like type CM1, but with time stop and reset input as well as connection for remote potentiometer 100k.

## CM3

**Universal Time Delay Relay**

- 7 functions
- Maintenance switch ON/OFF
- 2 separate change-over contacts
- supply voltages: DC12-24V or DC24-48V/AC24-240V

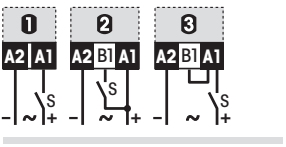
17,5 mm Time Delay Relay System in compact design. (For snap-on installation in accordance with DIN 43 880, see series DINA and C13.)

**E-1** Triggering Function (page \*)

Time range Partial ranges

μ \ MAX

Triggering



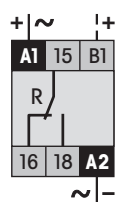
UC AC/DC DC 10%

Ordering no. →

**E-23**  
**A K-2 W-3**

50 ms-100 min  
ms, s, min

6 A 250V~



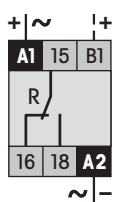
UC110-240V 16 2/3...60Hz  
UC24-60V

CM1/...V

**E-23**  
**A K-2 W-3**

0,3s-12h  
s, min, h

6 A 250V~



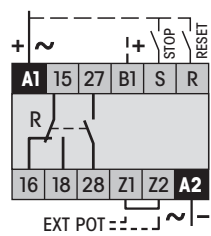
UC110-240V 16 2/3...60Hz  
UC24-60V

CM1L/...V

**E-23**  
**A K-2 W-3**

0,3s-12h  
0,3-3s...1,2-12h

6 A 250V~



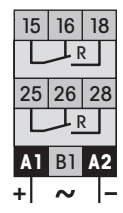
UC110-240V  
UC24-60V

CM2/...V

**E-1**  
**A K N B1-2 B W-3**

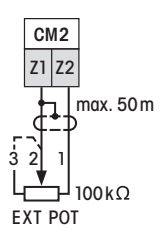
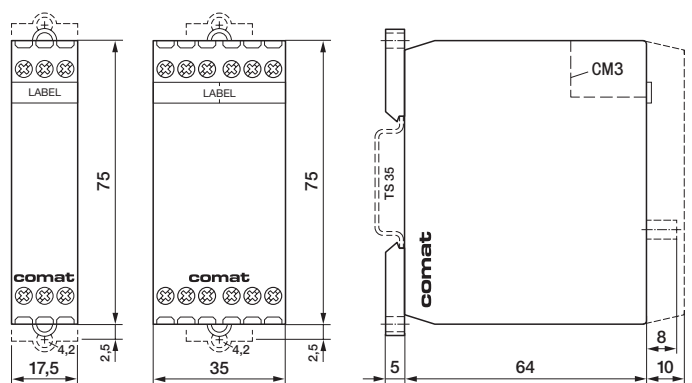
50 ms-60h  
ms, s, min, h

5 A 250V~



DC24-48V/AC24-240V  
DC12-24V

CM3/...V

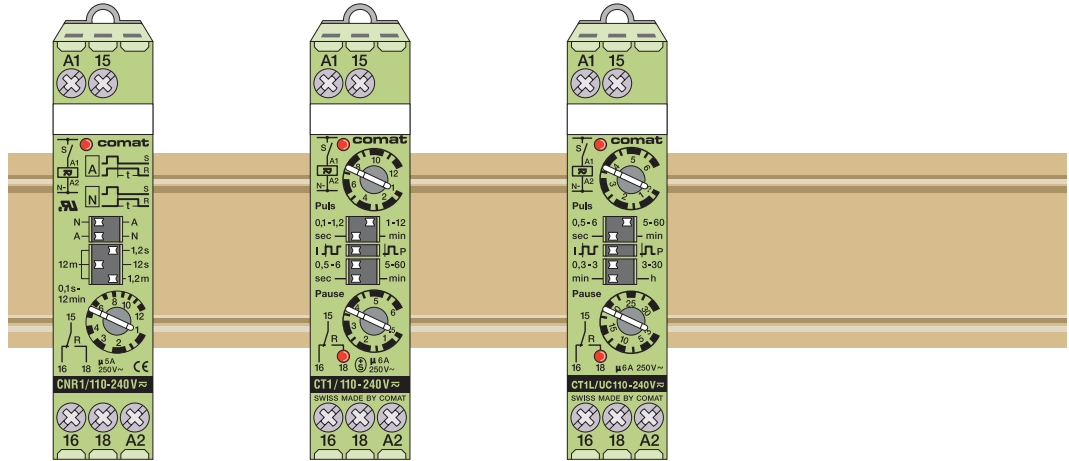
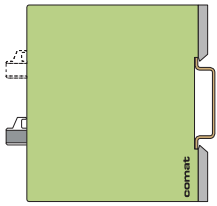


Built-in potentiometer SP-01/100k (page \*)

Ordering example  
Timer CM1/UC110-240V

\* Function Page: 52; ★TF-60 setting: Page 53; Socket and Accessories: Page 97

# Multifunctional Time Delay Relays



CE and others: [www.comat.ch](http://www.comat.ch)

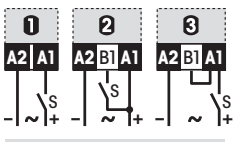
**17,5mm Time Delay Relay System** in compact design.  
(For snap-on installation in accordance with DIN 43 880.)

**E** **Triggering**  
Function (page \*)

**Time range**  
Partial ranges

$\mu$  MAX

Triggering



UC AC/DC

Ordering no.

## CNR1

**Time Delay Relay, no auxiliary voltage**

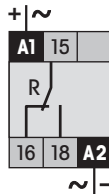
- Function runs after cut off power supply
- Minimum triggering time 150ms only

**A N**

no auxiliary voltage

**0,1s-12 min**  
sec, min

**5A 250V~**



UC110-240V  
UC24-60V

CNR1 / ... V

## CT1

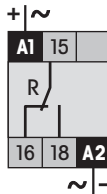
**Universal Repeat Cycle Timer**

- pulse or pause start
- t1/t2 separately settable
- LED for A1 and R

**I P**

**t1: 0,1s-12 min**  
**t2: 0,5s-60 min**

**6A 250V~**



UC110-240V  
UC24-60V

CT1 / ... V

## CT1L

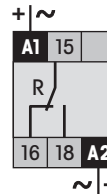
**Universal Repeat Cycle Timer**

Like CT1 both with extended time range.

**I P**

**t1: 0,5s-60 min**  
**t2: 0,3min-30h**

**6A 250V~**

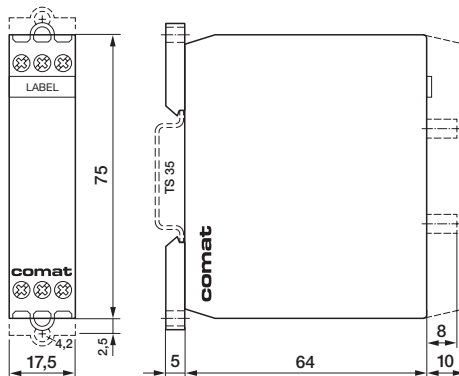


UC110-240V  
UC24-60V

CT1L / ... V

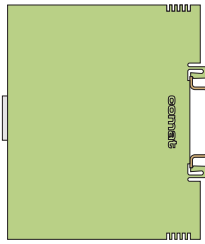
Ordering example

Timer CIM1/UC24-240V

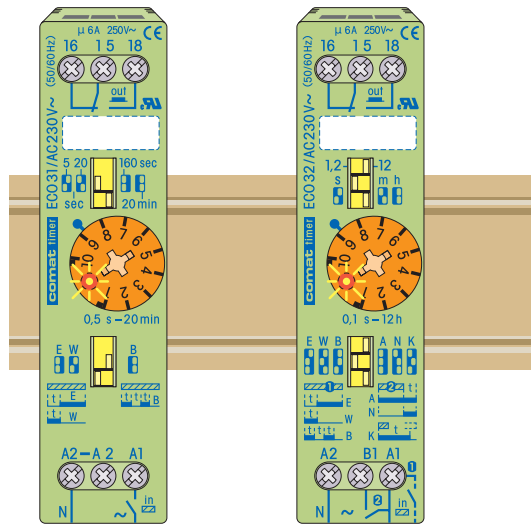


\* Function Page: 52; ★TF-60 setting: Page 53; Socket and Accessories: Page 97

Multifunctional Time Delay Relays



CE and others: [www.comat.ch](http://www.comat.ch)



ECO31

Economy Time Delay and Blinker Relay

- 3 functions
- voltage controlled
- LED for R

ECO32

Multifunctional Time Delay Relay

- 2 delay functions
- 2 shot timing modes
- blinker pulse shaping K
- LED for R

Multifunctional Time Delay Relays 22,5mm for timing functions from 0,1s up to 12 hours.

**E** **0** Triggering  
Function (page \*)

Time range  
★ TF60 setting (page \*)

**E W B** **0**

0,5s-20min  
sec, min

**E W B** **0**

**A K N** **2**

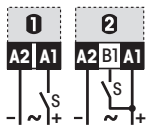
0,1s-12h ★  
sec, h

μ MAX

6A 250V~

6A 250V~

Triggering



~ AC 50/60Hz

AC 230V

AC 230V

~ UC AC/DC

AC 115V

AC 115V

UC 24V

UC 24V

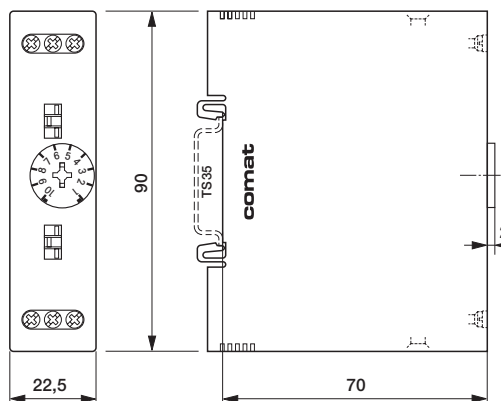
Ordering no. →

ECO31 / ... V

ECO32 / ... V

Ordering example

Timer ECO31/AC 230 V

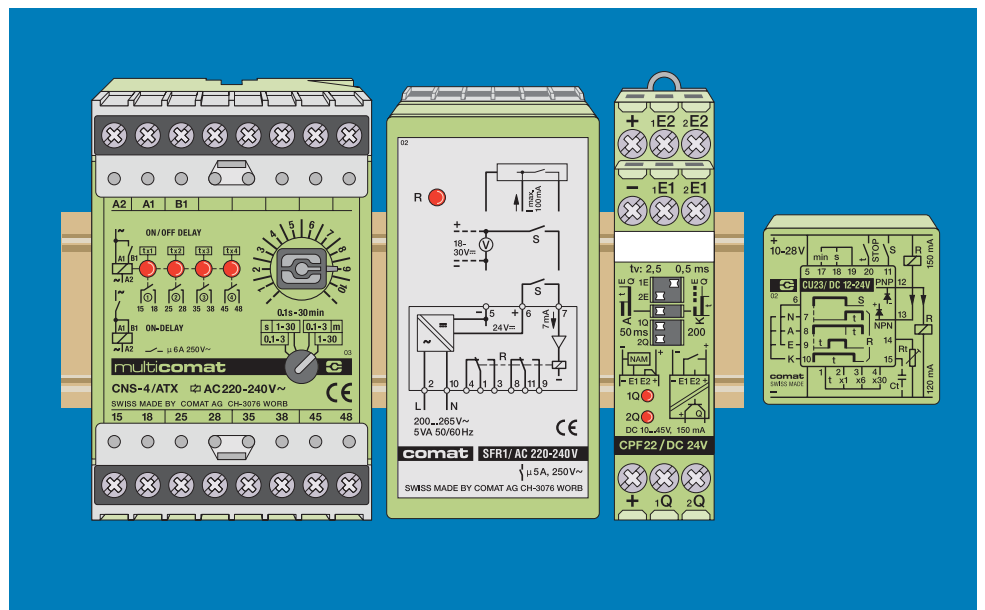


\* Function Page: 52; ★TF-60 setting: Page 53; Socket and Accessories: Page 97

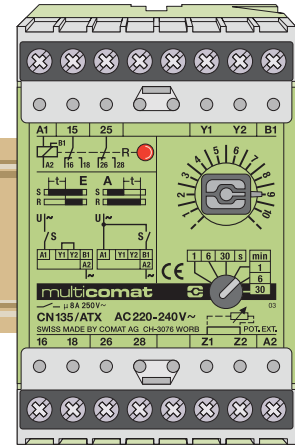
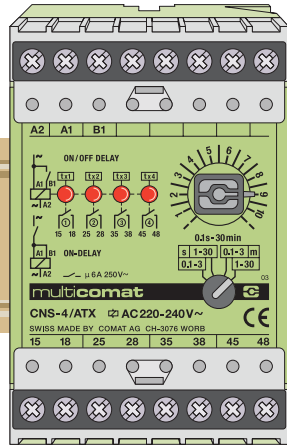
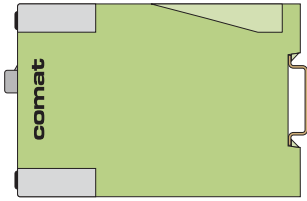


Time Delay Relays

# Specially Time Delay Relays



- CN Series Specially Time Delay Relays
- SFR Serie Amplifier Relays, Switching Amplifier
- SBV Amplifier Blinker
- CPF Pulse Shaper
- CCX Preset Counters



CE and others:  
www.comat.ch

**Industrial Time Delay Relays**  
CN135 with 2 change-over contacts.  
CNS-4 with 4 independent outputs.

**CNS-4**

**Cascade Relay**

- ON cascades
- ON/OFF cascades
- 4 outputs
- detachable terminals

**CN 135**

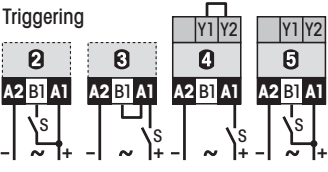
**Specially Time Delay Relays**

- 2 functions
- connections for external potentiometer 1 MΩ
- 4 outputs
- detachable terminals
- seismic approved according IEE 323 and IEE 344

**E** **1** Triggering  
Function (page \*)

**Time range**  
Partial range

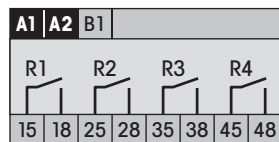
μs MAX



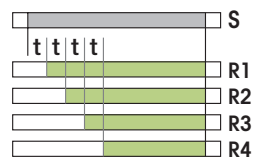
**E4** **3**  
**EA4** **2**

**0.1s-30min**  
s, min

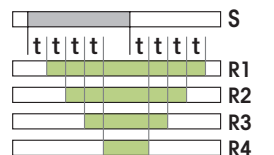
**6 A 250V~**



**E4** **On delay**



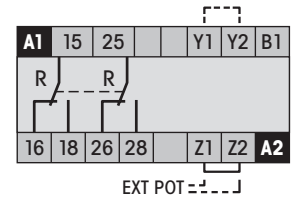
**EA4** **On delay**  
**Off delay**



**E** **4**  
**A** **5**

**0.1s-30min**  
s, min

**8 A 250V~**



**AC 220-240V** **ATX**  
**AC 110-120V** **ANP**  
**UC 24-48V** **UFK**

**CN 135 / ... V**

**AC 50/60Hz**

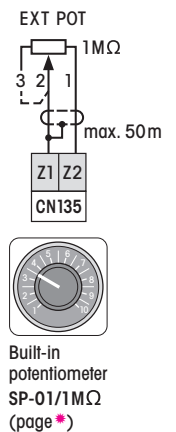
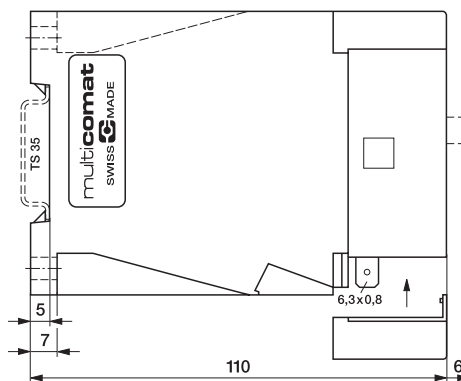
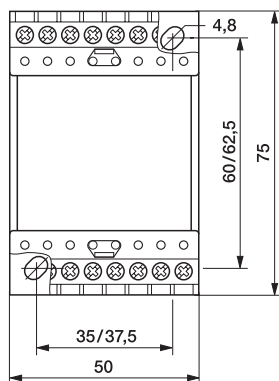
**UC AC/DC**

Ordering no. →

**CNS-4 / ... V**

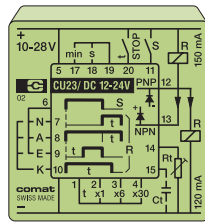
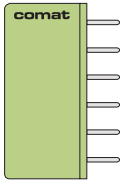
Ordering example

Cascade Relay CNS-4/ATX



\* Function Page: 52; ★TF-60 setting: Page 53; Socket and Accessories: Page 97





CE and others:  
www.comat.ch

**CU23**

**Universal Timer Module for Print Mounting**

- the time module for industrial application
- 5 functions
- t-stop
- PNP/NPN output

**Example for external wiring**

Time range	Partial range	x1	x6	x30	sec		min	
					18	19	17	19
		1	2		0,01-3s	0,05-30s	0,05-30m	1-300min
		1	3		0,01-0,1s	0,05-1s	0,05-1min	1-10min
		1	4		0,06-0,6s	0,3-6s	0,3-6min	6-60min
		1	4		0,3-3s	1,5-30s	1,5-30min	30-300min

Universal Timer Module with soldering pins for printed circuit mounting.

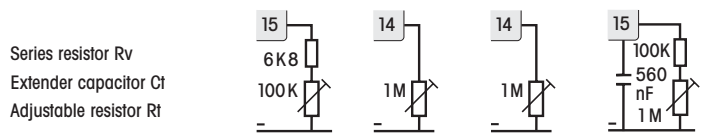
**E-0** Triggering  
Function (page \*)

**Time range**  
Partial range

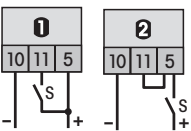
**E-02**  
**A-K-N-0-W-2**

**0.01s-300min**  
s, min

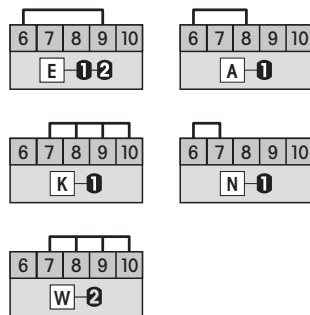
**120 mA 24V=**



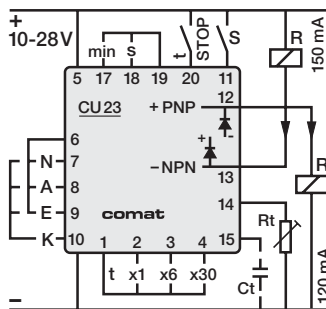
**Triggering**



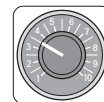
**Programming**



**Wiring (view from the back)**



Built-in potentiometer (page \*)  
SP-01/100k  
SP-01/1MΩ



**DC** 10%

**DC12-24V**

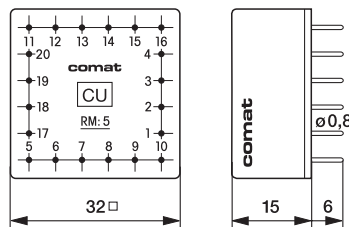
Ordering no. →

CU23/ ... V

Time stop (t-STOP) = the elapsing time is interrupted

**Ordering example**

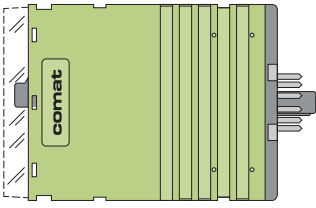
Timer module CU23/DC12-24V



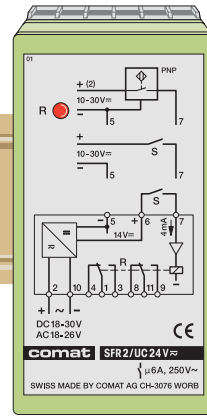
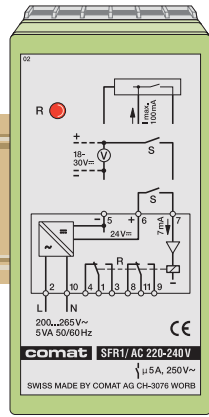
\* Function Page: 52; ★TF-60 setting: Page 53; Socket and Accessories: Page 97



# Amplifier Relays



CE and others:  
[www.comat.ch](http://www.comat.ch)



## Amplifier Relay

Supply unit with integrated switching amplifier for 3-wire PNP sensors, NAMUR as per DIN 19234 as well as for contact triggering also with external power supply. The input wiring is specifically suitable for long feed wires.

μ<sup>1</sup> MAX

### Diagram

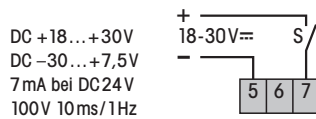
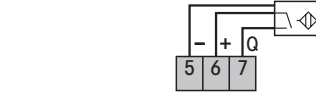
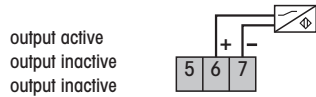
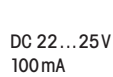
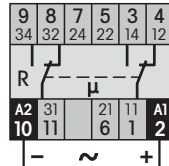
Connection with socket C11A

## SFR1

### Amplifier Relay

- switching amplifier for:
  - PNP 3 wire sensors
  - NAMUR sensors
- potential-free contact
- integrated sensor supply voltage 24 V
- The input wiring is specifically suitable for long connection lines

5 A 250 V ~



>2kV (triggering to supply and output)  
>2kV (triggering to supply and output)

AC 220-240V AC 110-120V

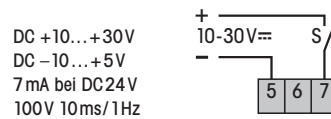
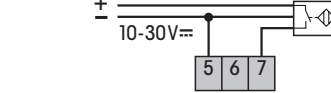
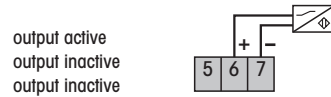
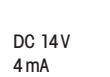
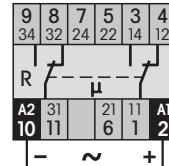
SFR1/ ...

## SFR2

### Amplifier Relay

- switching amplifier for:
  - PNP 3 wire sensors
  - NAMUR sensors
- potential-free contact
- integrated sensor supply voltage 14 V
- The input wiring is specifically suitable for long connection lines

6 A 24 V ~



>2kV (triggering to supply and output)

UC 24V

SFR2/ ...

**Output supply** DC output supply  
Output voltage  
Output current max.

**Triggering** NAMUR sensor  
Not damped  
Damped  
Wire break

PNP three-wire sensor

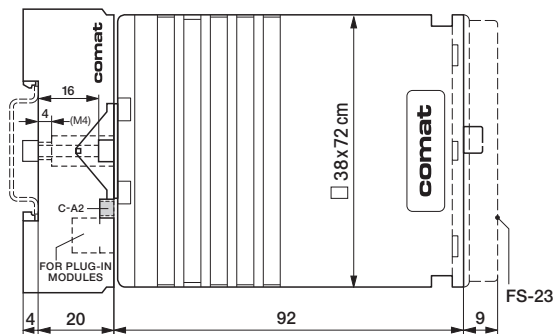
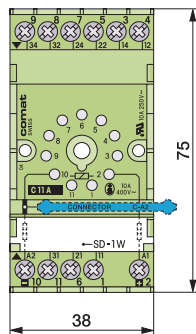
**External power supply/contact**  
On-signal  
Off-signal  
triggering current  
Parallel load energy

**Galvanic isolation**

~ AC 50/60Hz UC AC/DC

Ordering no. →

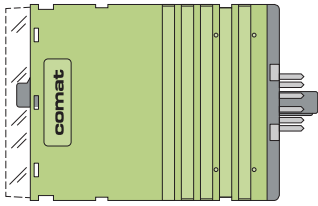
System socket C11A  
Figure: with plug-in neutral conductor connector C-A2 (standard delivery).



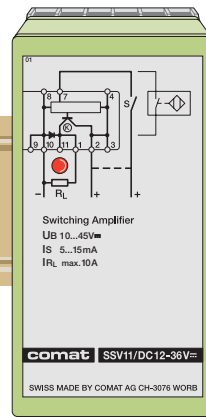
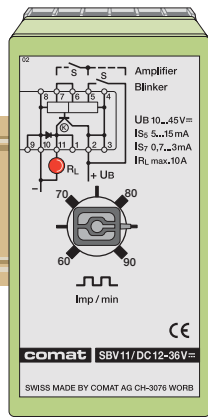
### Ordering example

Amplifier relay SFR1/AC 220-240V  
Socket C11A

\* Function Page: 52; ★TF-60 setting: Page 53; Socket and Accessories: Page 97



CE and others:  
www.comat.ch



**Blinker and Amplifier**  
Relay with solid state output specially suitable for frequent switching cycles.

**SBV11**

**Amplifier-Blinker**  
With solid state output.  
Adjustable electronic flasher for 60-90 pulses/min.  
Switching voltage 10-45V DC and switching loads up to 10A. The short circuit limiter and the overload proof design allows wear free switching of filament lamps in general but as well as all ohmic, inductive and capacitive loads.  
Triggering supply is indicated by LED.

**SSV11**

**Switching Amplifier**  
With solid state output.  
For applications in automation where high switching cycles and loads up to 10A at 10-45V DC are required. For example for solenoids, magnetic clutches and other ohmic inductive or capacitive loads. With built-in short circuit limiter and over-load protection circuit, this amplifier switches wear free and guarantees high service life. LED display for trigger signal.

Function (page\*)

Time range



Diagram  
Connection with socket CS11



DC 10%

Ordering no. →

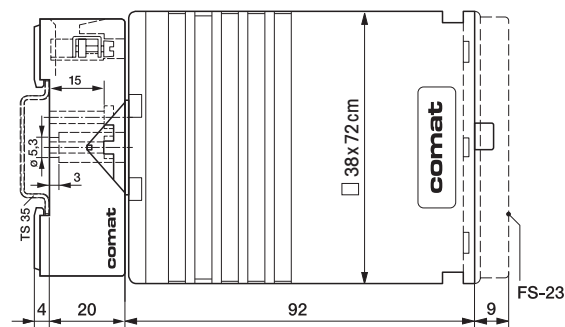
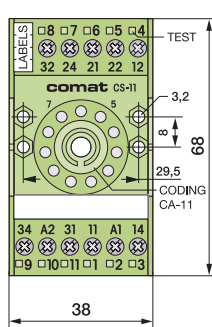
DC24-48V    DC12-36V

SBV11/ ...

DC12-36V

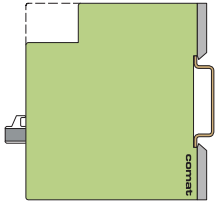
SSV11/ ...

Ordering example  
Amplifier relay SBV11/DC12-36V  
Socket CS11

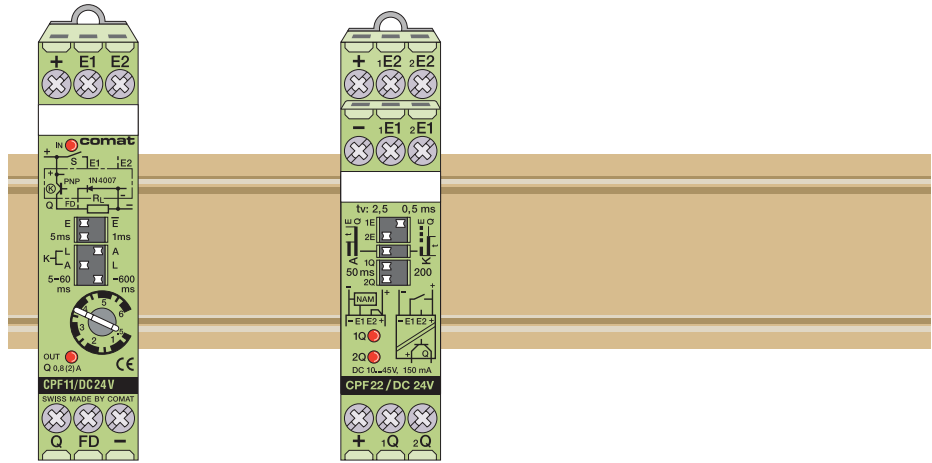


\* Function Page: 52; ★TF-60 setting: Page 53; Socket and Accessories: Page 97

# Pulse Shapers



CE and others:  
www.comat.ch



### CPF Pulse Shapers

with the timing functions K, L and A are specialist devices for the lengthening or the limitation of control pulses. In this fully electronic design with the facility for also connecting NAMUR sensors they are the ideal interface modules in modern control systems. Always there where fast processes, high rotations, i.e. the briefest pulses, are to be evaluated, the cost-effective solution is: CPF Pulse shapers.

### CPF11

#### Single Channel Pulse Shaper

- Input reversible (E-E)
- Input and output times separately settable
- 3 (6) functions to choose
- Additional free wheel diode 1A
- LED display for E and Q

### CPF22

#### Double Channel Pulse Shaper

- Input/output galvanically isolated 4kV
- Input and output times separately settable
- 2 functions to choose
- LED output display for each channel

Function (page \*)

Time range

K L A

input pulse  
≥ 1/5 ms

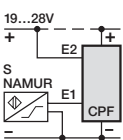
output pulse  
5 ÷ 600 ms

K A

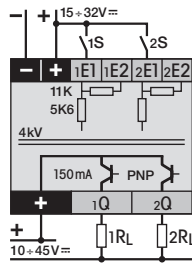
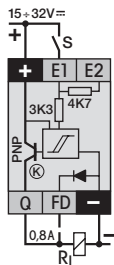
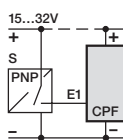
input pulse  
≥ 0,5/2,5 ms

output pulse  
50/200 ms

NAMUR sensor



Three-wire sensor



DC ±10%

Ordering no. →

DC 24V

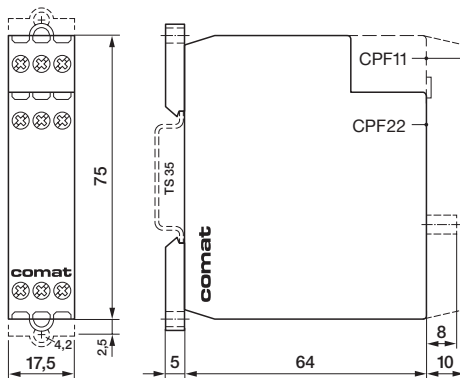
CPF11 / ... V

DC 24V

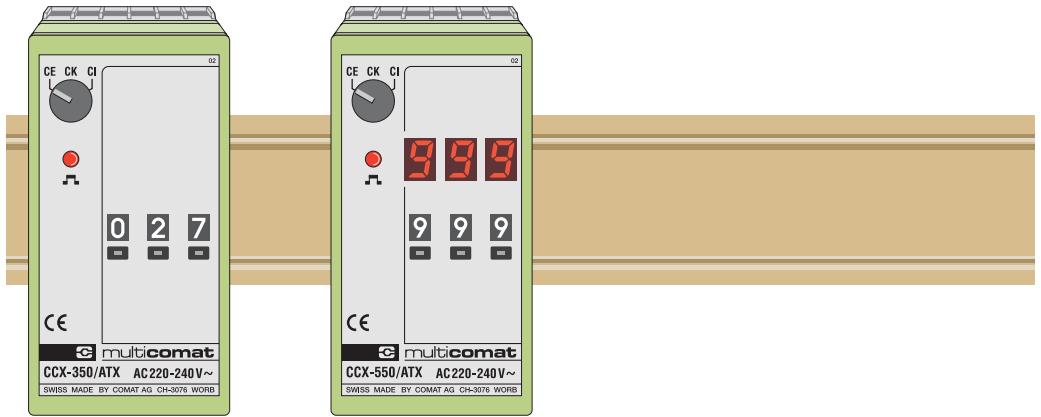
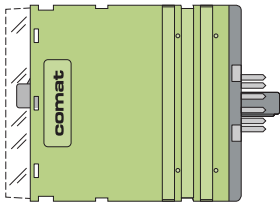
CPF22 / ... V

Ordering example

Pulse shaper CPF11/DC 24V



\* Function Page: 52; ★ TF-60 setting: Page 53; Socket and Accessories: Page 97



CE and others:  
www.comat.ch

**Preset Counters**  
Electronic pre-select counter with 2 change-over contacts. Digital value display with LED function indication. Suitable for front panel mounting.

**Function**

**Preselection**  
Count frequency

μ<sup>1</sup> MAX

**Diagram**

Connection with socket CS11

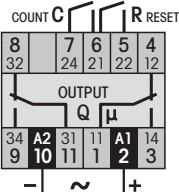
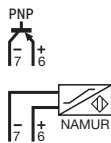
**CCX-350**

**Preset Counters**  
Switching after the preset number of pulses are reached.  
Triggering:  
• potential-free contact  
• NAMUR sensor  
• PNP

CE CK CI

0-999  
200Hz

6 A 250V~



AC220-240V ATX  
AC110-120V ANP  
UC24-48V UFK

CCX-350/ ...

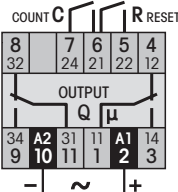
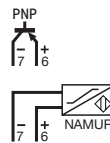
**CCX-550**

**Preset Counters with display**  
Switching after the preset number of pulses are reached.  
• 7 digit LED display  
Triggering:  
• potential-free contact  
• NAMUR sensor  
• PNP

CE CK CI

0-999  
200Hz

6 A 250V~



AC220-240V ATX  
AC110-120V ANP  
UC24-48V UFK

CCX-550/ ...

**Functions**



Q is active after reaching the preselected number of pulses. Q and C can be reset with the reset button.



Q is active during the preselected number of pulses and can only be reactivated after a reset. Q and C can be reset with the reset button.



Q is active for t<sub>75</sub>...125ms on the preselected pulse. The cycle starts again at the beginning. Q and C can be reset with the reset button.

U = Voltage  
C = Count  
R = Reset  
Q = Output relays

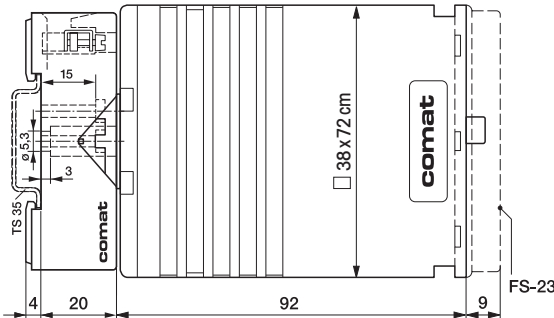
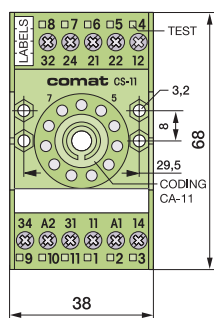
AC 50/60Hz

UC AC/DC

Ordering no. →

**Ordering example**

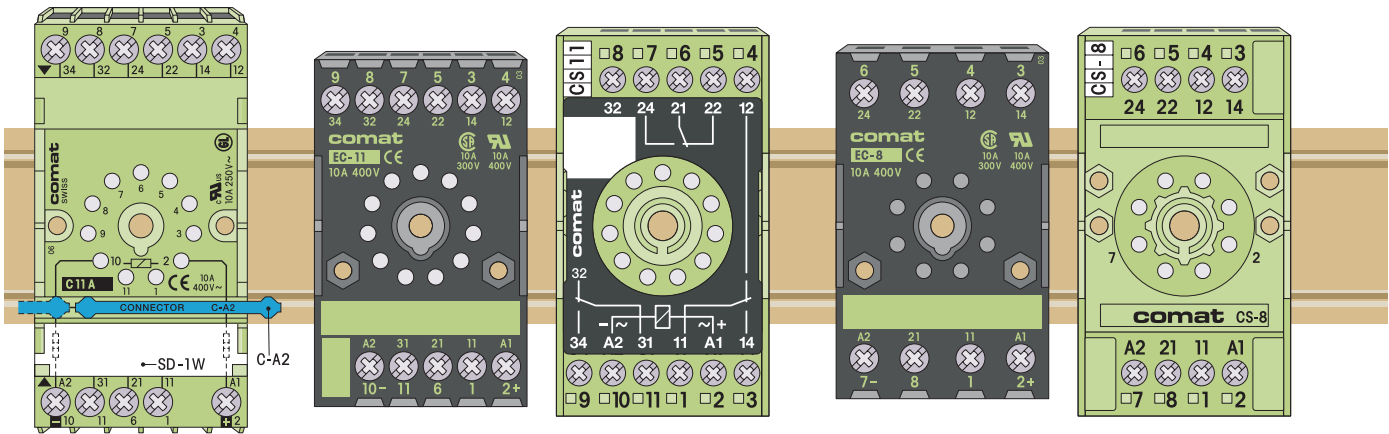
Counters CCX-350  
Socket CS11



\* Function Page: 52; ★TF-60 setting: Page 53; Socket and Accessories: Page 97







**C11A**

System socket 11-pole, with white cover and plug-in connector C-A2. (standard delivery)

**EC11**

Economy socket 11-pole

**CS11**

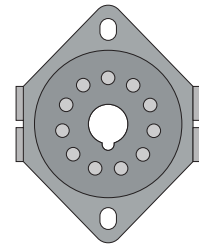
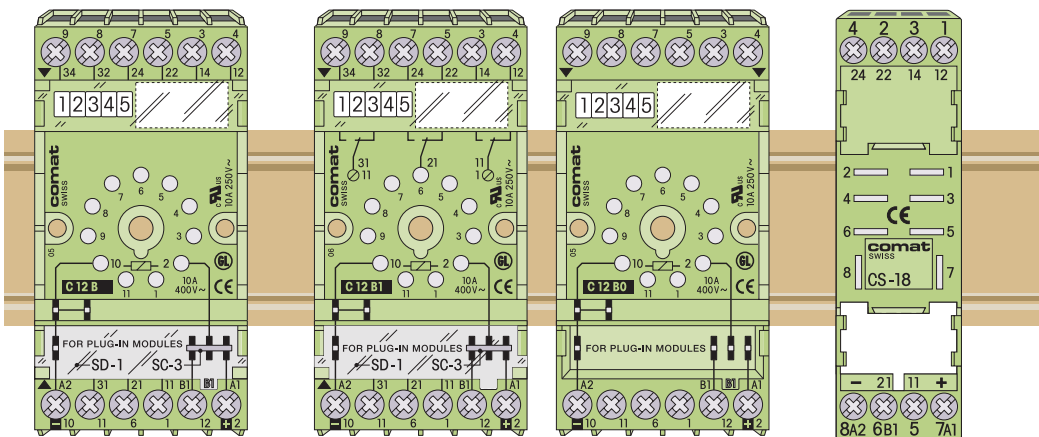
Socket 11-pole Snapped cover sheet with wiring diagram. (backside neutral white)

**EC8**

Economy socket 8-pole

**CS8**

Socket 8-pole



**C12B**

System Socket 11-pole, 12 terminals (+B1). SC-3 inserted for B1-2-A1. Cover transparent.

**C12B1**

System Socket 11-pole, like C12B, but with imprinted contact diagram for 3 pole industrial relays.

**C12B0**

System Socket 11-pole, similar to C12B. Prepared for CT system (without SC-3, SD-1).

**CS18**

Socket 8-pole for time delay relays C81...C85 series.

**11 PGL**

Socket 11-pole for chassis mounting with soldering pins.

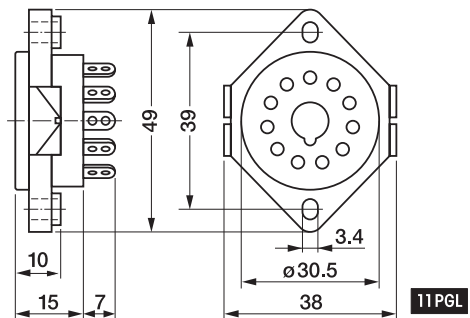
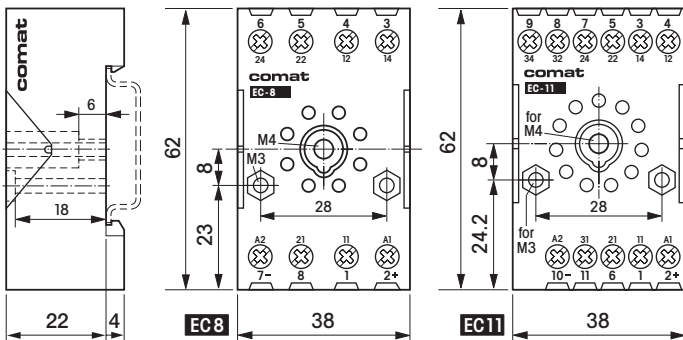
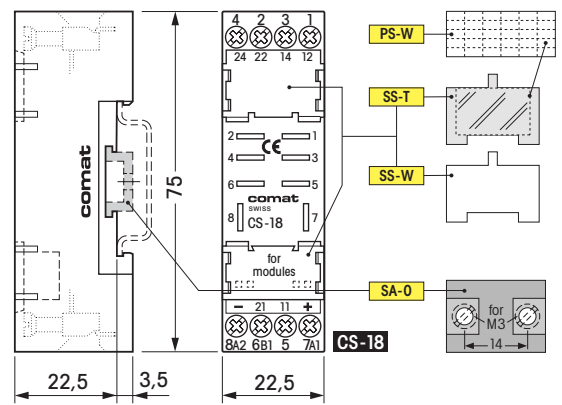
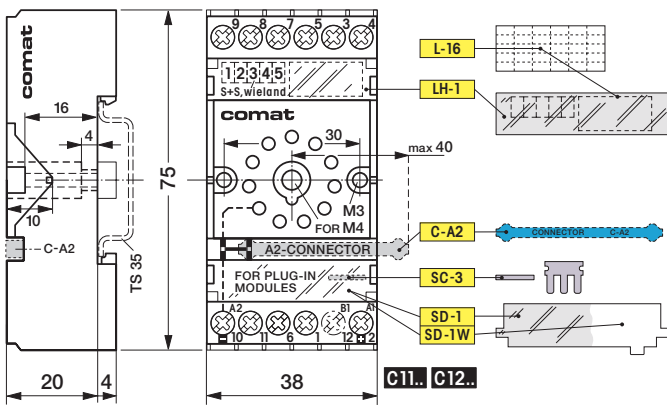
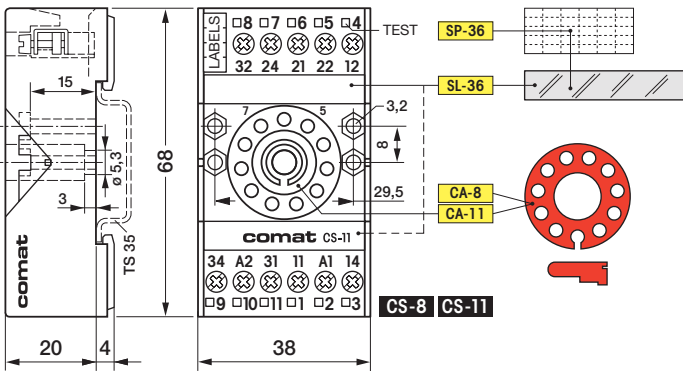
Socket types		Suitable for product families			Connection layout (from left to the right)
		CT3... CS... C50... C60... RS... C... CX... SSR... CCX...	CT30...CT36	CT2	
C11A	System-Socket	●			<p>A</p> <p>B</p>
EC-11	Economy-Socket	●			
CS-11	Socket	●			
C12B	System Socket	○	○		
C12B0	System Socket		●		
C12B1	System Socket		○		
CS-18	Socket			●	
CS-8	Socket		●		
EC-8	Economy Socket		●		
11 PGL	Chassis Socket	○			

● recommended  
○ applicable

\* Function Page: 52; ★TF-60 setting: Page 53; Socket and Accessories: Page 97

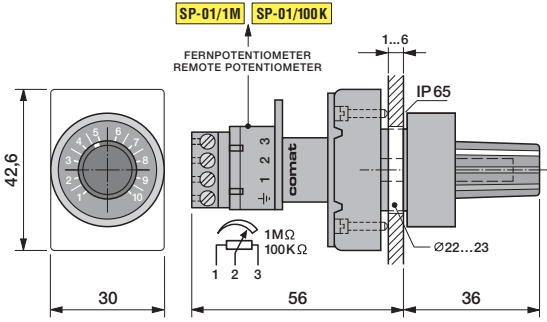


Socket accessories		Socket types								
Type	Description	C11A	EC-11	CS-11	C12B	C12B0	C12B1	EC-8	CS-8	CS-18
CA-11	Coding ring (VE 5 pieces)			●						
CA-8	Coding ring (VE 5 pieces)								●	
C-A2	Neutral connector bridge (VE 5 or 50 pieces)	●			●	●	●			
SC-3	A1-Connector (VE 10 pieces)				●	●	●			
LH-1	Marking lable holder (VE 5 pieces)	●			●	●	●			
SL-36	Marking lable holder (VE 5 pieces)			●					●	
SP-36	Marking lable strips (VE 5 pieces)			●					●	
PS-W	Marking lable strips (VE 5 pieces)									●
L-16	Marking lable strips (VE 5 pieces)	●			●	●	●			
SD-1	Cover lid transparent (VE 5 pieces)	●			●	●	●			
SD-1W	Cover lid white	●			●	●	●			
SS-T	Cover transparent									●
SS-W	Cover white									●
SA-0	Wall braket									●



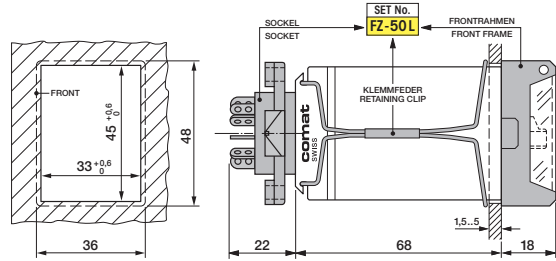
\* Function Page: 52; \* TF-60 setting: Page 53; Socket and Accessories: Page 97

**External potentiometer**



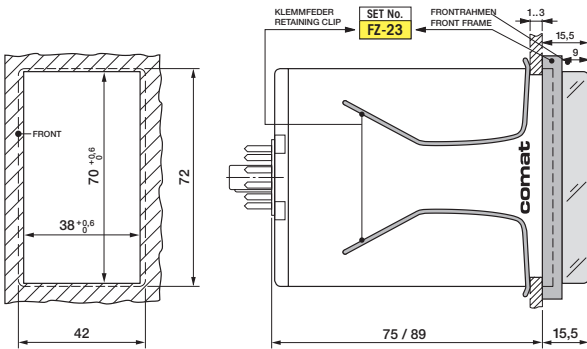
**Front panel mounting FZ-50L**

Consisting of front frame with cover, retaining clips and socket (11 PGL).



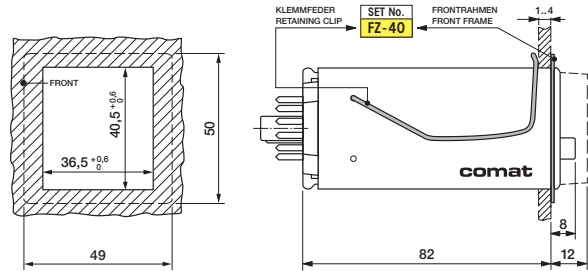
**Front panel mounting FZ-23**

Consisting of front frame with cover, retaining clips.



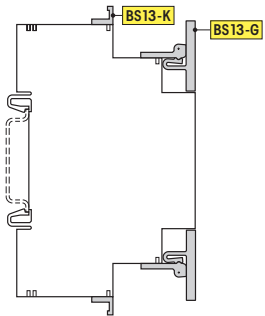
**Front panel mounting FZ-40**

Consisting of front frame with cover, retaining clips.

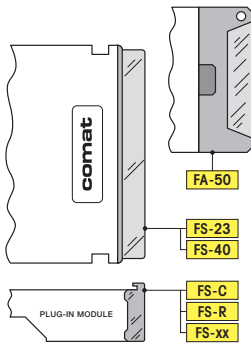


**Marking labels**

Large and small for relay system C13.

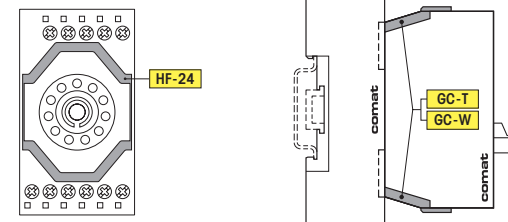


**Transparent covers**



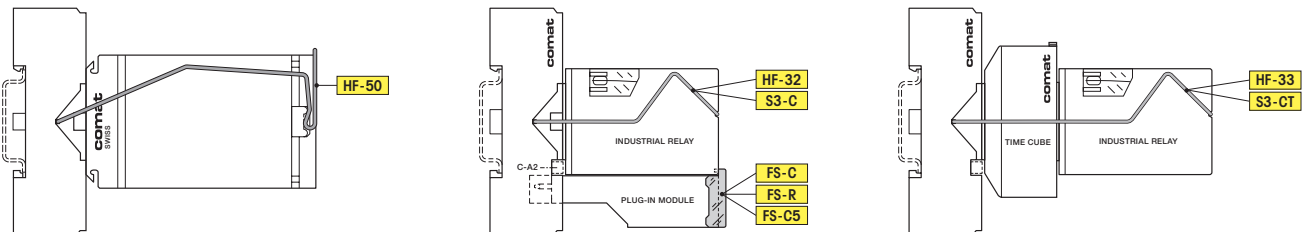
**Retaining clips**

Matching diverse cases and sockets.



**Retaining clips**

Matching diverse cases and sockets.

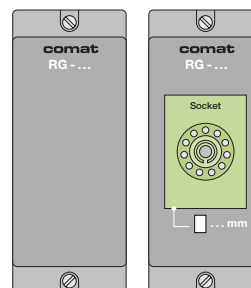
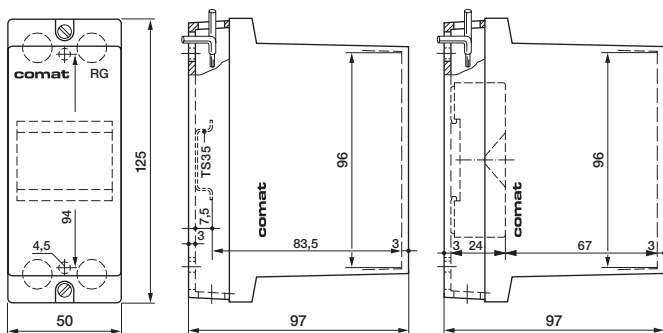


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External potentiometer				
Type	Time delay relays			
SP-01/100kΩ	CSV2	CM2		
SP-01/1MΩ	CS1	CS2	RS 121.P	CN 135

Type	Descriptions	Product families												
		RS... C... CX CCX SSR	CS... C50... C60...	CT30...	RS 40	CT2...	CT3...	C80...	C13...	DIN A	DIN B/C			
BS13-G	Marking label strip large											●		
BS13-K	Marking label strip small											●		
FA-50	Front cover		●											
FS-23	Front cover	●												
FS-40	Front cover				●									
FS-C5	Cover for relay C30			●										
FS-R	Cover for relay C3-..			●										
FS-..	Cover for relay C5-..			●										
FZ-23	Front mounting set	●												
FZ-40	Front mounting set				●									
FZ-50L	Front mounting set (incl. Socket 11PGL)			●										
GC-T	Relay retaining clip transparent										●			
GC-W	Relay retaining clip white										●			
HF-24	Retaining clip	●												
HF-32	Retaining clip for relay C30			●										
HF-33	Retaining clip for relay C20/C30							●	●					
HF-50	Retaining clip			●										
S3-C	Retaining clip for relay C3			●										
S3-CT	Retaining clip for relay C2/C3							●	●					
RG	Surface mounting case DIN rail					●					●		●	●
RG-D2	Surface mounting case DIN rail												●	
RG-C2	Surface mounting incl. Socket CS-8								●					
RG-C3	Surface mounting incl. Socket CS-11									●				
RG-50	Surface mounting incl. Socket CS-11				●									
RG-23	Surface mounting incl. Socket CS-11	●												
RG-40	Surface mounting incl. Socket CS-11						●			●				

Surface Mounting Case with built-in DIN rail or with socket (Screws touch safe)  
Gray polymer with or without window.



Type	Socket	W x H
RG	DIN	---
RG-D2	DIN	21 x 46 mm
RG-C2	CS-8	36 x 36 mm
RG-C3	CS-11	36 x 36 mm
RG-50	CS-11	36 x 50 mm
RG-23	CS-11	39 x 73 mm
RG-40	CS-11	37 x 40 mm

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