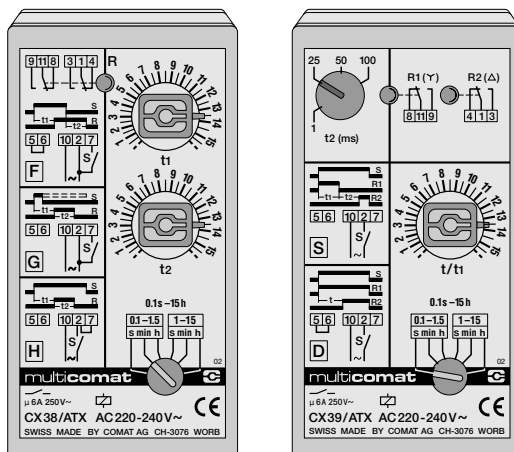


# Programmable time delay relays CX-30

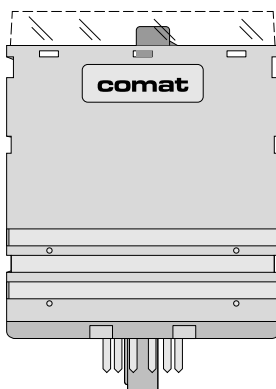


Electronic time delay relays of the series CX-30 point out the following main characteristics:

- Plug in industrial time delay relays with voltage control operation on 2 delayed change-over contacts 6A, 250V~
- 11 pin submagnal plug as specification IEC 67-1-18a
- Timing modes programmable by means of a link on the relay base
- Suitable for front panel mounting with accessory FZ-23
- Digital time circuit comprising RC oscillator and frequency divider
- LED display of the relay function



Kühn Controls AG  
 Vertriebsbüro Deutschland  
 Gräfenhäuser Str. 14  
 D-75305 Neuenbürg  
 Tel.: +49- (0)7082-940000  
 Fax: +49- (0)7082-940001  
 eMail: sales@kuehn-controls.de  
 www.multicomat.net



multiCOMAT programmable time delay relays are at work, world wide in all spheres of industry.

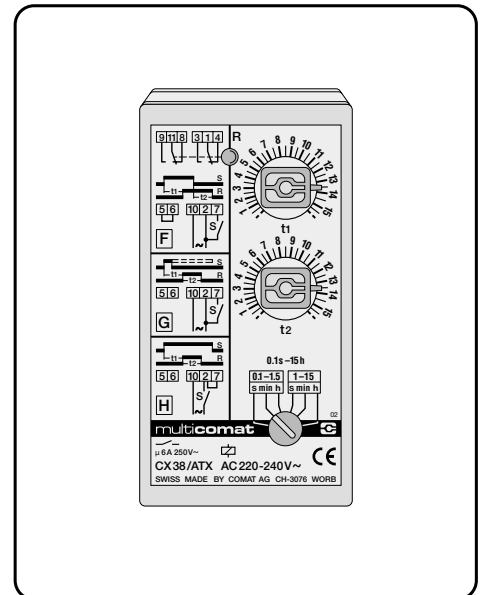
## CX 38

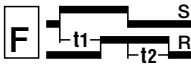
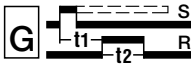
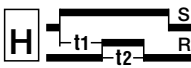

Data at  $T_{amb.} = 25^{\circ}\text{C}$  and  $V_{nom.}$

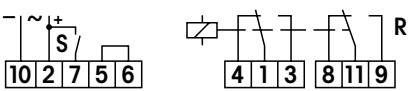
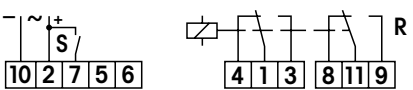
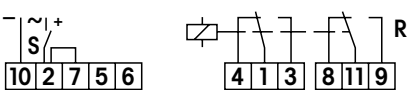
Type	Time range	Partial range		
		0,1–1,5 s	0,1–1,5 min	0,1–1,5 h
CX 38	0,1 s – 15 h	1–15 s	1–15 min	1–15 h
The partial ranges are programmable at the range switch				

Voltages		Current consumption		
Designation	Tolerances	I max. AC	I max. DC	
ATX: 220–240V~ AC 50/60 Hz	-15/+10%	20 mA		
ANP: 110–120V~ AC 50/60 Hz	-15/+15%	35 mA		
UFK: 24–48V≈ AC 40/60 Hz or DC	-20/+25%	55 mA	35 mA	
DNX: 110–240V= DC	-15/+10%		15 mA	
UCB: 12V≈ AC 40/60 Hz or DC	-20/+25%	400 mA	400 mA	

Instead of contact  $S_2$ , executions ATX and ANP can also be driven by two wire proximity switches for AC specified by a max. leakage current of 3mA and a min. load current of 5mA.



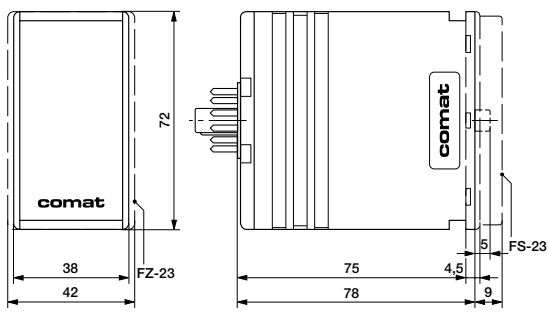
Timing modes	Code	Diagram	Description
On and off delay	F		After driving by S, R energizes according to $t_1$ and releases according to $t_2$ after switching out of S.
On delay - single shot (constant or mom. pulse)	G		After driving by S (momentary or continuous) R energizes after $t_1$ for the set time $t_2$ .
On delay - single shot (pulse limitation)	H		After driving by S, R energizes after $t_1$ for the set time $t_2$ . R falls back again when S switches out prematurely.
			S = Drive R = Output circuit

Connection scheme	
	
	
	

Technical data	General
Repeat accuracy <sup>1)</sup>	$\pm 0,5\%$ or $\pm 15\text{ms}$
Voltage stability	$\pm 0,5\%$ <sup>2)</sup>
Temperature stability	$\pm 0,1\%/^{\circ}\text{C}$
Time range tolerance t min.	$-20 \div +0\%$
Time range tolerance t max.	$-0 \div +15\%$
Duty cycle	ED=100%
Reset time during t	70ms
Reset time after time expiry	35ms
Triggering time	$\geq 100\text{ms}$
Triggering delay time	60...100ms
Operating temperature range	$-25 \dots +60^{\circ}\text{C}$
Storage temperature range	$-25 \dots +80^{\circ}\text{C}$
Testing voltage	2 kV, 50Hz, 1min
Specifications	CE, VDE 0435/0110 Gr. C
Protection/case material	IP 40/Noryl SE 1 to UL 94V-1
Weight incl. packing	approx. 170g

<sup>1)</sup> referred to the set time  
<sup>2)</sup> max. tolerance total

Technical data	Output circuit
Switching current max.	6A
Switching voltage max.	250V~AC 1
Breaking capacity	AC: 1200VA; DC: ...250W
Mechanical life	$2 \times 10^7$ operations
Contact material	Ag Ni

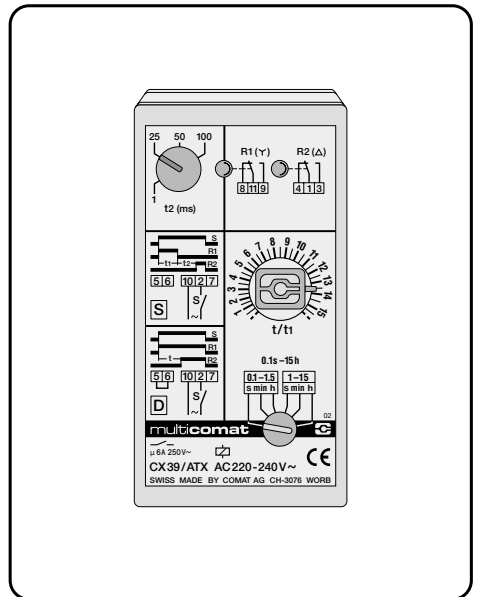
Dimensions	Case S3
	
<p>Front mounting accessory FZ-23 (front panel aperture: <math>38,5 \times 70 \pm 0,5</math> mm, front panel thickness max. 3mm). Transparent front cover FS-23 (part of the scope of delivery).</p>	

Data at Tamb. = 25°C and Vnom.

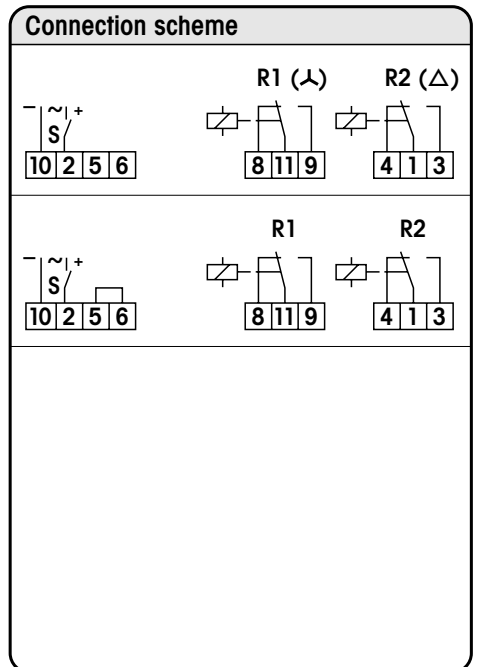
Type	Time range	Partial range			
CX 39	0,1 s – 15 h (t/t1)	0,1–1,5 s	0,1–1,5 min	0,1–1,5 h	
		1–15 s	1–15 min	1–15 h	
(Star-delta function)	1–100 ms (t2)	1 ms	25 ms	50 ms	100 ms

The partial ranges are programmable at the range switch

Voltages		Current consumption			
Designation		Tolerances	I max. AC	I max. DC	
ATX: 220–240V~	AC 50/60 Hz	-15/+10%	17 mA		
ANP: 110–120V~	AC 50/60 Hz	-15/+15%	35 mA		
UFK: 24–48V≈	AC 40/60 Hz or DC	-20/+25%	80 mA	40 mA	
DNX: 110–240V=	DC	-15/+10%		25 mA	
UCB: 12V≈	AC 40/60 Hz or DC	-20/+25%	350 mA	450 mA	



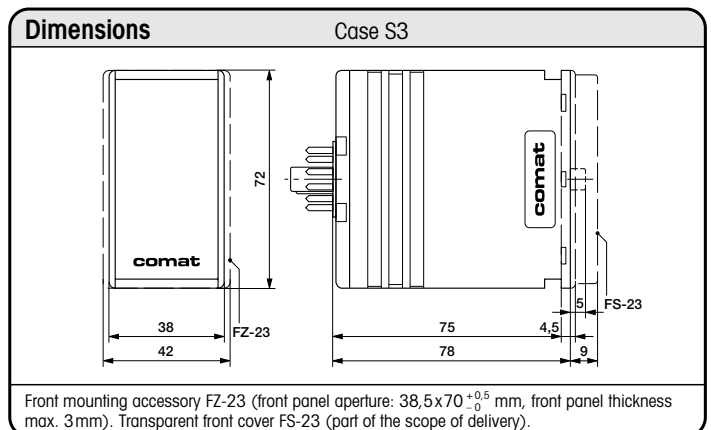
Timing modes	Code	Diagram	Description
On delay with one shot leading edge contact (Star-delta function)	S		After driving by S, R1 energizes according to t1 and R2 after t2 when R2 falls back. (Star-delta function). R1 and R2 fall back when S switches out prematurely.
On delay with instantaneous contact	D		After driving by S, R1 energizes immediately and R2 according to t. R1 and R2 fall back when S switches out prematurely.
			S = Drive R = Output circuit



Technical Data	General
Repeat accuracy <sup>1)</sup>	±0,5 % or ±15 ms
Voltage stability	±0,5 % <sup>2)</sup>
Temperature stability	±0,1 %/°C
Time range tolerance t min.	-20 ÷ +0 %
Time range tolerance t max.	-0 ÷ +15 %
Duty cycle	ED = 100 %
Reset time during t	70 ms
Reset time after time expiry	35 ms
Operating temperature range	-25 ... +60 °C
Storage temperature range	-25 ... +80 °C
Testing voltage	2 kV, 50 Hz, 1 min
Specifications	CE, VDE 0435/0110 Gr. C
Protection/case material	IP 40/Noryl SE 1 to UL 94 V-1
Weight incl. packing	approx. 230 g

<sup>1)</sup> referred to the set time  
<sup>2)</sup> max. tolerance total

Technical data	Output circuit
Switching current max.	6A
Switching voltage max.	250V~ AC1
Breaking capacity	AC: 1200VA; DC: ...250W
Mechanical life	2x10 <sup>7</sup> operations
Contact material	Ag Ni





**C11A Relay socket with screw, connections for panel or DIN mounting-snap fit**

Technical drawing of the C11A relay socket. The front view shows a 38mm wide socket with 12 terminals (6 on each side) and a central screw. Labels include '1,2,3,4,5', 'S+S, Wieland', 'LH-1', 'L-16', 'comat', 'M3 FOR M4', 'A2-CONNECTOR', 'FOR PLUG-IN MODULES', 'SC-3', and 'SD-1'. Dimensions include 38mm width, 75mm height, and a max 40mm terminal length. The side view shows a 20mm depth and a 4mm mounting flange.

**EC-11 Relay socket with screw, connections for panel or DIN mounting-snap fit**

Technical drawing of the EC-11 relay socket. The front view shows a 38mm wide socket with 12 terminals (6 on each side) and a central screw. Labels include 'comat', '10A 400V', '10A 300V Listed', 'for M4', 'for M3', and 'A2 31 21 11 A1 14 10 11 6 1 2+'. Dimensions include 38mm width, 62mm height, 24.2mm terminal length, and 8mm terminal spacing. The side view shows a 22mm depth and a 4mm mounting flange.

**CS-11 Relay socket with screw, connections for panel or DIN mounting-snap fit**

Technical drawing of the CS-11 relay socket. The front view shows a 38mm wide socket with 12 terminals (6 on each side) and a central screw. Labels include 'TEST', 'LABELS', 'comat CS-11', '3,2', '68', '29,5', 'CODING CA-11', 'LABEL SL-36', 'FOR PLUG-IN MODULES', and 'TS 35'. Dimensions include 38mm width, 68mm height, and 20mm depth. The side view shows a 4mm mounting flange.

**11 PGF Relay socket for fasten connectors (2x2,8x0,8 DIN 46247)**

Technical drawing of the 11 PGF relay socket. The front view shows a 38mm wide socket with 6 terminals and a central screw. Labels include 'comat' and 'Faston 2,8x0,8 (2x)'. Dimensions include 38mm width, 39mm height, and 15mm depth. The side view shows a 10mm depth.

**RG-23 Surface mounting case with built-in relay socket (protected connection terminals)**

Technical drawing of the RG-23 surface mounting case. The front view shows a 50mm wide case with 6 terminals and a central screw. Labels include 'comat RG-23', '38x72', '4,5', 'CS-11', and '10A 400V'. Dimensions include 50mm width, 125mm height, and 97mm depth. The side view shows a 24mm depth.

Blank technical drawing area.

**11 PGL Relay socket for chassis mounting (solder tags = 3,8x0,8 mm)**

Technical drawing of the 11 PGL relay socket. The front view shows a 38mm wide socket with 6 terminals and a central screw. Labels include 'comat' and 'Faston 3,8x0,8'. Dimensions include 38mm width, 39mm height, and 11mm depth. The side view shows a 10mm depth.

**HF-24 Retaining clip for cases S2, S3, S4, suitable for all relay sockets**

Technical drawing of the HF-24 retaining clip. Dimensions include 46mm length, 35mm width, 14mm height, and 0,6mm thickness.

**FS-23 Transparent cover (always included with the relay)**

3D perspective drawing of the FS-23 transparent cover, showing its rectangular shape and mounting points.

Blank technical drawing area.

**FZ-23 Front of panel mounting accessory comprising 2 front frame parts ① and 2 retaining clips ②**

Technical drawing of the FZ-23 front of panel mounting accessory. It shows the assembly of two front frame parts (1) and two retaining clips (2) onto a panel. Dimensions include 70mm height, 38,5mm width, and a minimum 48mm panel thickness. Labels include 'Gehäuse case, boîtier S3' and '1...3'.