

CPF11

Versatile time relay with DC solid state output,
3 time functions for pulse shaping applications, 5 ... 600 ms
DIN Rail mounting according to DIN 43 880

Type: CPF11/DC24V R

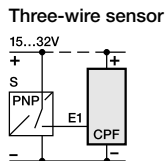
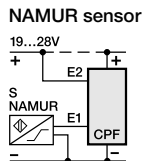
Pulse shaper. DC solid state output, short circuit proof. DC 24 V operating voltage.
Very suitable as PLC-interface for contact- and sensor signals (NAMUR, 3 – wire)
but also for inductive- or lamp loads. Selectable free wheeling diode built in.
Adjustable input filter time. LED state indicators for output and control input.
Also suitable for panel mounting 2 x M4

Maximum output load

2 A / 32 V

Time functions and related connection diagrams (Function diagrams: refer to page 130)

K L A



Logical input setting E, \bar{E} : With \bar{E} the output becomes high when the input is low.

When set the shortest time and function A, the device can be used as a switching amplifier.

Time data

2 partial time ranges, t_{max} (DIP switch)	60 , 600 ms
Fine adjustment range (rotary knob)	$t_{min} \dots t_{max}$, 0.5 ... 6
Time range tolerance	t_{min} : -30 % ... +0 % / t_{max} : -0 % ... +30 %
Repetition accuracy	$\pm 0.5 \%$ or 2 ms
Min. trigger pulse width on input B1	1 ms / 5 ms selectable
Reset time B1	$\leq 5 \text{ ms} / \leq 25 \text{ ms}$

Output

Type: Power MOS FET	High side switch
Rated operational current, $T_a = 60 \text{ }^\circ\text{C}$	0.7 A 100% duty cycle
Rated operational current, $T_a = 50 \text{ }^\circ\text{C}$	0.8 A 100% duty cycle
Operational pulse current	2 A when $t_{ON} \leq t_{OFF}$, $t_{ON} \leq 5 \text{ s}$
Short circuit current	$\leq 7 \text{ A}$
Max. switching voltage	32 V
Leakage current (without free wheeling diode)	$\leq 1 \mu\text{A}$
Inductive switch-off voltage protection	Selectable free wheeling diode

Power supply and control input

Nominal voltage	DC 24 V
Operating voltage range normal operation	15 ... 32 V
Operating voltage range NAMUR operation (DIN 19234)	19 ... 28 V
Power consumption	$\leq 0.6 \text{ W}$
Trigger threshold voltage E1	$\leq 10 \text{ V}$
Trigger threshold voltage E2	$\leq 15 \text{ V}$

General Specifications

Ambient temperature storage /operation	-40 ... 80 $^\circ\text{C}$ / -25 ...60 $^\circ\text{C}$
Conductor cross section	Stranded wire 2.5 mm ² , 2 x 1 mm ²
Ingress Protection degree	Housing: IP 40, terminals: IP 20
Max. Screw torque	0.4 Nm
Housing material / Weight	Lexan / 60 g

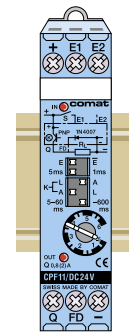
Standard types

CPF11/DC24V R

Accessories

Label plate: (replacement)

BZS-DIN 17.5



Connection diagram

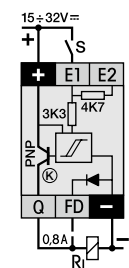


Fig. 1 Derating Curve

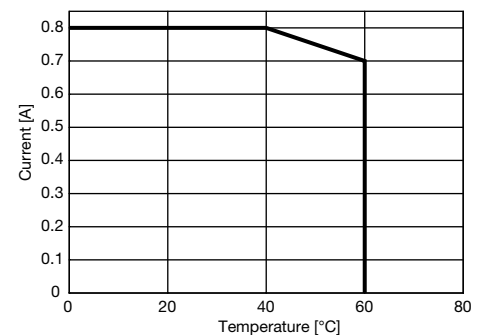
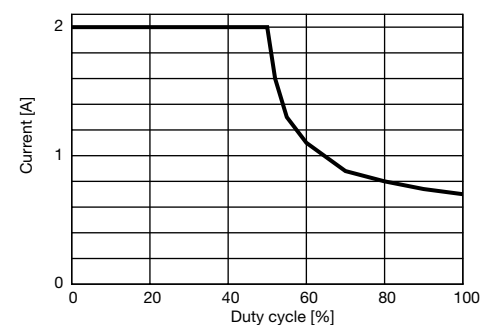
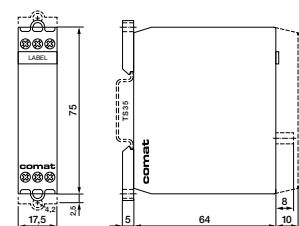


Fig. 2 Current vs. duty cycle



Dimensions [mm]



Technical approvals, conformities

