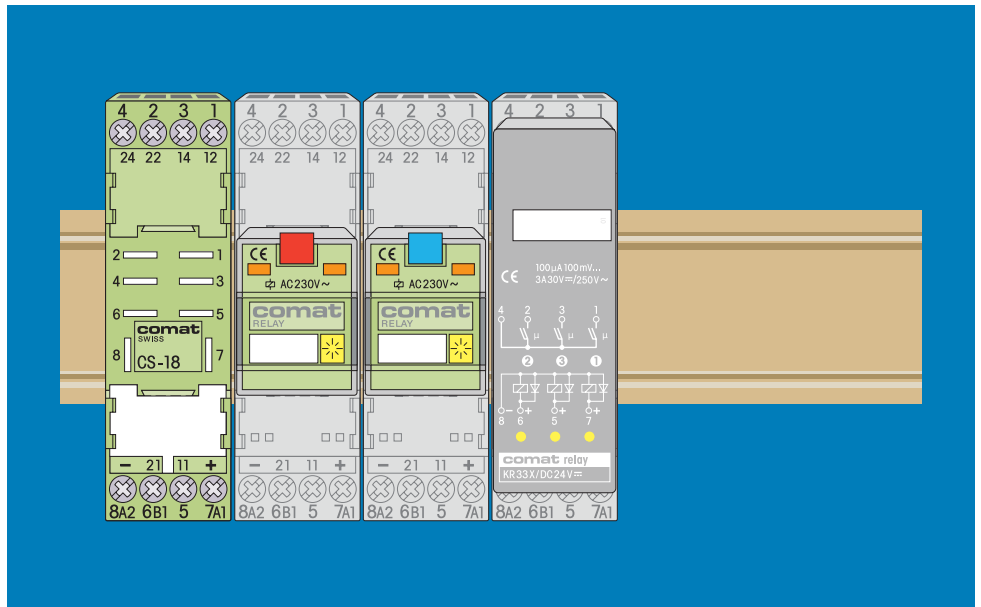


Industrial Relays

Miniature Relays



Comat products comply with different international standards and are certified accordingly.



Lloyd's

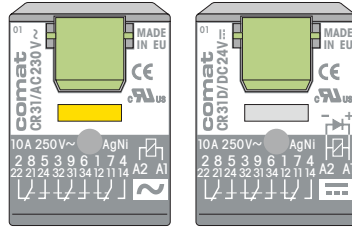
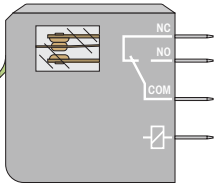
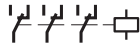
IEC 61810; EN 60974

Miniature Relays Recommended application

10A		✓	✓ 500A peak	✓	✓	✓	✓	✓	✓	✓	
6A		✓	✓	✓	✓	✓	✓	✓	✓	✓	
5A		✓	✓	✓	✓	✓	✓	✓	✓	✓	
3A		✓	✓	✓	✓	✓	✓	✓	✓	✓	
10mA		✓	✓	✓	✓	✓	✓	✓	✓	✓	
5mA		✓	✓	✓	✓	✓	✓	✓	✓	✓	
1mA		✓	✓	✓	✓	✓	✓	✓	✓	✓	
100µA		✓	✓	✓	✓	✓	✓	✓	✓	✓	
I	2	C7-A20	C7-W10		C7-T21	C7-T22					KR13
	3	CR31									
	4						C9-A41	C9-R21	C9-A42		
	1 + 1			C7-H23							
	2 x 1										KR23
	3 x 1										KR33

— twin contacts

Power Relay



3-pole Miniature Industrial Relay
 • lockable manual operation
 • mechanical flag indicator

Test voltage: \square 2500V / 2500V

T_{amb.} operation/storage:
 -40...+60/-40...+80°C

CR31

Universal Power Relay 10A

The CR31 is a 3-pole miniature industrial relay which accomplishes the highest performance with low consumption and a switching capacity of 10A at AC1.

The manual test tab, optionally lockable makes the CR31 the ideal relay for all control and automation uses.

R/C-units and LED indication are available optionally in form of plug-in modules for the socket CS-30.

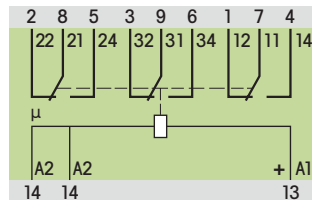


10A 250V~
 10mA 12V









Connection No. on socket →
 Designation according to DIN/EN 50011 →

Connection with socket CS-30

μ = Contact opening >0,5mm



Data at T_{amb.} = 20°C (standard coil)

-  Contact material
-  Switching power AC1/DC1
-  Peak inrush power
-  Switch.cycl. mech./electr. (AC1)
-  Operation voltage DC/AC 50Hz
-  Power consumption AC/DC
-  Trigg. delay/release time
-  Trigg. delay/release time DC →

Ag Ni 90/10
 2500VA/...250W
 20A (20ms)
 20x10⁶/≥10⁵
 0,75-1,7U_N/0,8-1,65U_N
 1,0VA/0.75W
 AC: <25/10ms; DC: 15/10ms
 15/25ms

Standard  **AC ~**
 50/60Hz

24, 115, 230
 C31 / AC ... V

Standard  **DC =**
 ⚡ ≤10%

24
 C31 / DC ... V

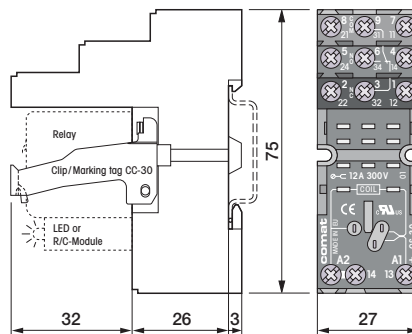
FX  **DC =**
 ⚡ ≤10%

24
 C31D / DC ... V

Ordering example

- Ind. Relay CR31/DC24V
- Socket CS-30 (clip incl.)
- LED-Mod. CMX1/UC24-60V
- Retaining clip CC-30

System socket CS-30 (connections above)



Plug-in Socket Module

R/C-Unit

 CMX1/UC110-240V
 CMX1/UC24-60V

R/C-Unit

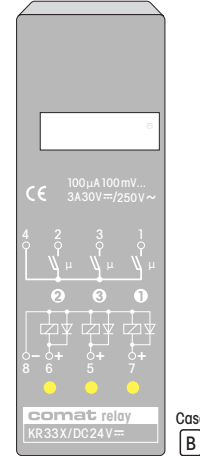
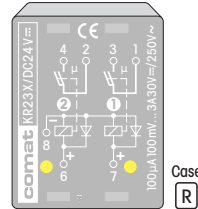
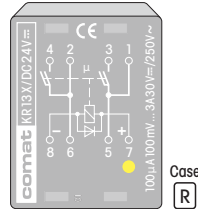
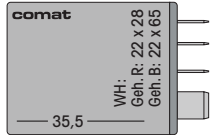
 4k7/0,01μF CMR1/UC110-240V

 470E/0,22μF CMR1/UC24-60V

Signal Relay
3,5µAu

Signal Relay
2x
3,5µAu

Signal Relay
3x
3,5µAu



Miniature Industrial Relay

- 1- to 3-channel
- for control and signal circuits
- Power consumption only 250mW per channel

Test voltage: \square 2000V / \sphericalangle 1000V \sphericalangle

T_{amb.} operation/storage: -20...+60 / -40...+85 °C



Connection No. on socket →
Designation according to DIN/EN 50 011 →

Connectio with socket
CS-18

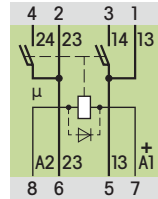
μ = contact opening < 3mm

Data at T_{amb.} = 20 °C (standard coil \square)

- Contact material
- Switching load AC1/DC1
- Peak inrush power
- Switching cycles mech./electr. (AC1)
- Operation voltage
- Power consumption per channel
- Triggering delay / release time

KR13
Universal gold plated twin contact relay
1-channel, totally encapsulated.
For highest switching reliability in control and signal circuits ranging from 100µA 100mV.

3A 250V ~ // 110V ==
100µA 100mV



Ag-alloy + 3..5 µAu
750 VA / ... 90 W // 3A 30V ==
6A (20 ms)
20 x 10⁶ / ≥ 10⁵

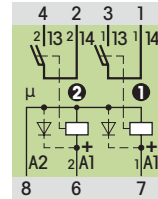
0,8...1,2 U_N
350 mW
6/4 ms (X: 6 ms)

12, 24, 48
KR13A / DC ... V

12, 24, 48
KR13X / DC ... V

KR23
Relay like KR13, but 2-channel
with a width of 11 mm per channel this relay is especially space-saving and cost-effective.

3A 250V ~ // 110V ==
100µA 100mV



Ag-alloy + 3..5 µAu
750 VA / ... 90 W // 3A 30V ==
6A (20 ms)
20 x 10⁶ / ≥ 10⁵

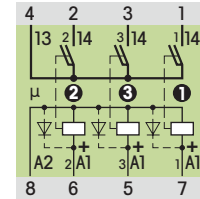
0,8...1,2 U_N
250 mW
6/4 ms (X: 6 ms)

12, 24
KR23A / DC ... V

12, 24
KR23X / DC ... V

KR33
Relay like KR13, but 3-channel
with a width of 7,3 mm per channel this relay is especially space-saving and cost-effective.

3A 250V ~ // 110V ==
100µA 100mV



Ag-alloy + 3..5 µAu
750 VA / ... 90 W // 3A 30V ==
6A (20 ms)
20 x 10⁶ / ≥ 10⁵

0,8...1,2 U_N
250 mW
6/4 ms (X: 6 ms)

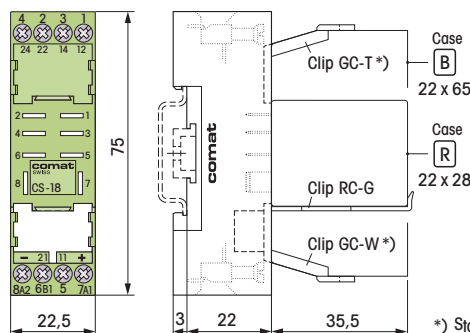
12, 24
KR33A / DC ... V

12, 24
KR33X / DC ... V

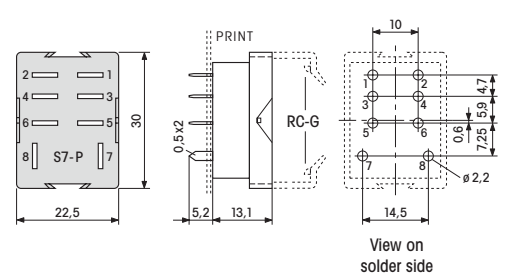
A DC == \sphericalangle ≤ 20%

X DC == \sphericalangle ≤ 20%

System socket CS-18



Socket for print mounting S7-P



Ordering example

- Relay KR23X/DC24V
- Socket CS-18 or S7-P
- Retaining clip RC-G (option)

*) Standard delivery with relay (Case B)