

**Miniature industrial relays**

- 1-pole miniature industrial relays**
- lockable manual operation
  - mechanical flag indicator

Test voltage:  $\square$  5000V  $\downarrow$   
 T<sub>amb. operation/</sub>  
 storage: -20...+60/-20...+100°C

**Interfacer™**



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

Connection with interface socket CS-106

μ = contact opening < 3 mm

Data at T<sub>amb.</sub> = 20°C (standard coil)

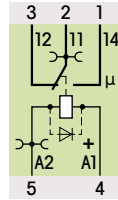
- Contact material  
Switching load AC1/DC1  
Peak inrush power  
Switching cycles mech./electr. (AC1)
- Operation voltage AC50Hz/DC  
Power consumption AC/DC  
Triggering delay / release time

<b>Standard</b>		AC ~ 50/60Hz
<b>Standard</b>		DC = ≤ 20%
<b>FX</b>		DC = ≤ 20%
<b>BX</b>		UC ~ 50-400Hz/= $\infty$

**C10-A10**

**Universal-power relays 10A**  
for AC- and DC-circuits  
ranging from 10mA 10V.

**10A 250V~**  
10mA 10V



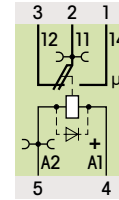
AgNi  
2500VA/...240W//3A 30V=  
30A(10ms)  
20x10<sup>6</sup>/≥10<sup>5</sup>  
0,8...1,2U<sub>n</sub>  
1,1VA/650mW  
11/8ms

	115, 230
<b>C10-A10X / AC</b>	..... V
	12, 24, 48, 110
<b>C10-A10X / DC</b>	..... V
	12, 110
<b>C10-A10FX / DC</b>	.... V
	24, 48
<b>C10-A10BX / UC</b>	..... V

**C10-T13**

**Relay like ..A10, but with double contacts 6A**  
the control relay with highest switching reliability for control and signal circuits ranging from 5mA 5V.

**6A 250V~**  
5mA 5V



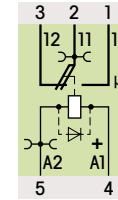
AgNi+3μAu  
1500VA/...150W//3A 30V=  
15A(5ms)  
20x10<sup>6</sup>/≥10<sup>5</sup>  
0,8...1,2U<sub>n</sub>  
1,1VA/650mW  
11/8ms

	115, 230
<b>C10-T13X / AC</b>	..... V
	12, 24, 48, 110
<b>C10-T13X / DC</b>	..... V
	12, 110
<b>C10-T13FX / DC</b>	.... V
	24, 48
<b>C10-T13BX / UC</b>	..... V

**C10-T12**

**Relay like ..T13, but with 10μ gold plated contacts**  
the double-contact relay with highest switching reliability for signal circuits ranging from 1mA 5V.  
Recommended upto 0,2A 30V.

**6A 250V~**  
1mA 5V

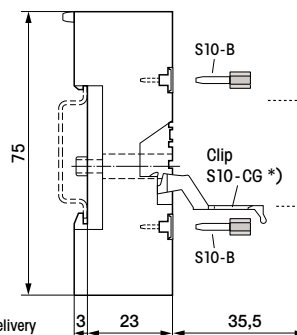
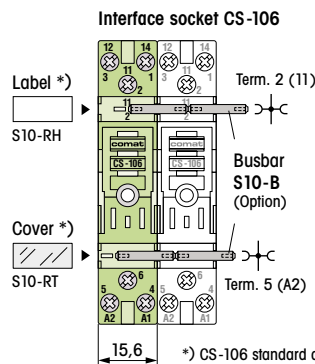


AgNi+10μAu  
1500VA/...150W  
15A(5ms)  
20x10<sup>6</sup>/≥10<sup>5</sup>  
0,8...1,2U<sub>n</sub>  
1,1VA/650mW  
11/8ms

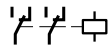
	115, 230
<b>C10-T12X / AC</b>	..... V
	12, 24, 48, 110
<b>C10-T12X / DC</b>	..... V
	12, 110
<b>C10-T12FX / DC</b>	.... V
	24, 48
<b>C10-T12BX / UC</b>	..... V

**Ordering example**

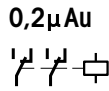
- Relay C10-A10X/DC24V
- Socket CS-106 (clip incl.)
- Connector S10-B



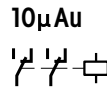
**Power relays**



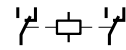
**Control relays**



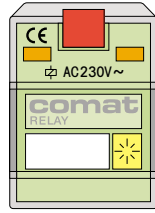
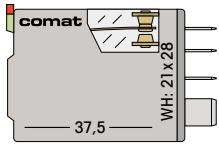
**Signal relays**



**Power relays  
Signal relays**



**High power  
Relays**



**NEW**

**2-pole miniature industrial relays**

- lockable manual operation
- mechanical flag indicator

Test voltage:  $\square$  2500V / 2500V

T<sub>amb.</sub> operation/  
storage: -20...+60/-40...+85°C



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

Connection with socket  
CS-18

μ = contact opening < 3 mm

Connection with socket  
CS-109

Data at T<sub>amb.</sub> = 20°C (standard coil)

Contact material  
Switching power AC1  
Switching power DC1  
Peak inrush power  
Switch. cycles mech./electr.(AC1)

Operation voltage AC50Hz/DC  
Power consumption AC/DC  
Triggering delay / release time

Standard AC ~  
50/60Hz

Standard DC =  
≤ 10%

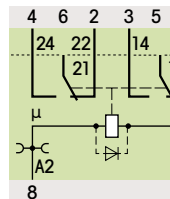
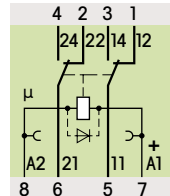
D, DX DC =  
≤ 10%

⊗ = Type X (option)

**C7-A20**

**Universal power relay 10A**  
with 2 power changeover-contacts this is a robust relay for AC and DC circuits ranging from 10mA 10V.

**10A 250V~**  
10mA 10V



AgNi  
2500VA  
...250W  
30A(20ms)  
20x10<sup>9</sup> ≥ 3x10<sup>5</sup>

0,8...1,2Un  
1,5VA/1W  
16/8ms

24, 48, 115, 230  
C7-A20 X / AC ... V

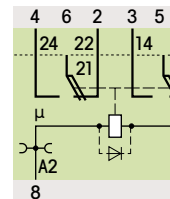
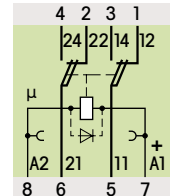
12, 24, 48, 110, 125  
C7-A20 / DC ... V

12, 24, 48, 110, 125  
C7-A20D X / DC ... V

**C7-T21**

**Relay like ...A20, but with twin contacts 6A** the control relay with highest switching reliability for control and signal circuits ranging from 5mA 5V.

**6A 250V~**  
5mA 5V



AgNi + 0,2μAu  
1200VA  
...150W  
15A(20ms)  
20x10<sup>9</sup> ≥ 2x10<sup>5</sup>

0,8...1,2Un  
1,5VA/1W  
16/8ms

24, 48, 115, 230  
C7-T21 X / AC ... V

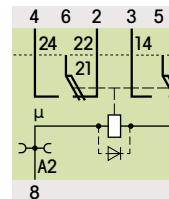
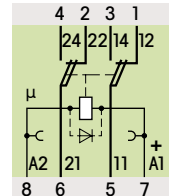
12, 24, 48, 110, 125  
C7-T21 / DC ... V

12, 24, 48, 110, 125  
C7-T21D X / DC ... V

**C7-T22**

**Relay like ...T21, but 10μ gold plated contacts** the twin contact relay with highest switching reliability for signal circuits ranging from 1mA 5V. Recommended upto 0,2A 30V.

**6A 250V~**  
1mA 5V



AgNi + 10μAu  
1200VA  
...150W  
15A(20ms)  
20x10<sup>9</sup> ≥ 2x10<sup>5</sup>

0,8...1,2Un  
1,5VA/1W  
16/8ms

24, 48, 115, 230  
C7-T22 X / AC ... V

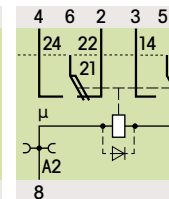
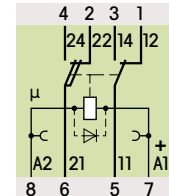
12, 24, 48, 110, 125  
C7-T22 / DC ... V

12, 24, 48, 110, 125  
C7-T22D X / DC ... V

**C7-H23**

**Power relay 10A** with supplementary twin contact 6A (3μAu) for a secondary circuit switch, i.e. to ensure reliable signal of relay switch position to the central control, SPC, distribution system.

**10/6A 250V~**  
10mA 10V // 1mA 5V



AgNi // AgNi + 3μAu  
2500VA // 1500VA  
...250W // ...180W  
30A // 15A(20ms)  
20x10<sup>9</sup> ≥ 2x10<sup>5</sup>

0,8...1,2Un  
1,4VA/1,1W  
15/8ms (30ms "DX")

230  
C7-H23X / AC ... V

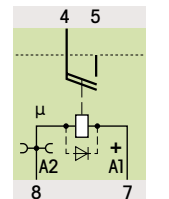
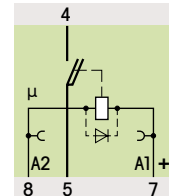
12, 24, 48, 110, 125  
C7-H23DX / DC ... V

24  
C7-H23DX / DC ... V

**C7-W10**

**High performance relay for 500A switching** with Wolfram special early make contact. Specially suitable for filament and halogen lamps, transformers, etc. No mechanical flag indicator.

**10A 250V~**  
10mA 10V



W/Ag  
2500VA  
...250W  
500A(2,5ms)  
20x10<sup>9</sup> ≥ 3x10<sup>5</sup>

0,8...1,2Un  
1,8VA/1,5W  
20/10ms

24, 48, 115, 230  
C7-W10 X / AC ... V

12, 24, 48, 110, 125  
C7-W10 / DC ... V

12, 24, 48, 110, 125  
C7-W10D X / DC ... V

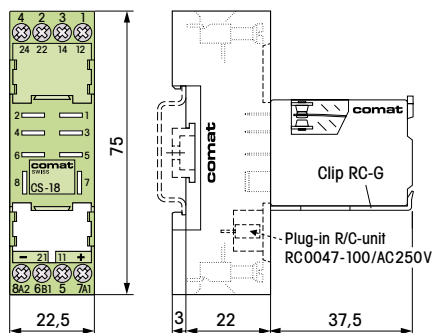
Option X = with ⊗

**Ordering example**

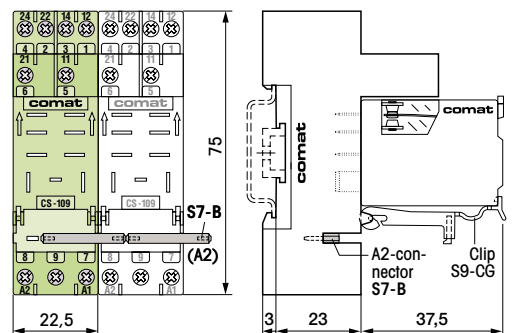
- Relay C7-A20X/AC230V
- Socket CS-18
- Retaining clip RC-G (option)
- Socket CS-109 (clip incl.)
- A2-connector S7-B (option)
- Socket S7-P (page 5\*)
- Retaining clip RC-G (option)

\* See prospectus CR2 page 5

**System socket CS-18 (connections 5 and 6 on bottom)**

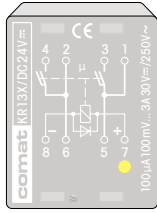
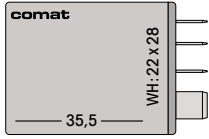
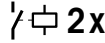


**Interface socket CS-109 (all connections on top)**

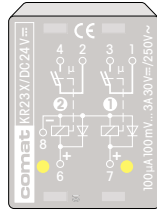




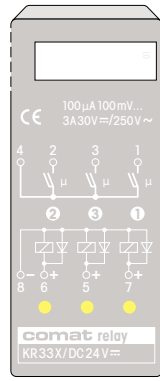
**Control and signal relays (Au)**



Case **R**



Case **R**



Case **B**

**Miniature industrial relays**

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

Test voltage:  $\square$  2000V  $\int$  1000V  $\int$   
 Tamb. operation/  
 storage: -20...+60/-40...+85°C





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

Connectio with socket **CS-18**

$\mu$  = contact opening < 3 mm

Data at Tamb. = 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

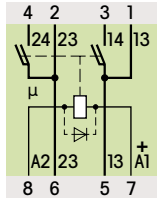
**A**  **DC**  $\equiv$   
 $\nabla \leq 20\%$

**X**  **DC**  $\equiv$   
 $\nabla \leq 20\%$

**KR13**

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

**3A 250V ~ // 110V ≐**  
 100µA 100mV



Ag-alloy + 3.5 µ Au  
 750 VA / ... 90 W // 3 A 30 V ≐  
 6 A (20 ms)  
 $20 \times 10^6 / \geq 10^5$   
 0,8...1,2 U<sub>N</sub>  
 350 mW  
 6/4 ms (X: 6 ms)

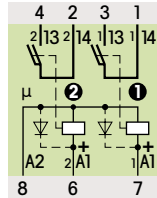
12, 24, 48  
**KR13A / DC ... V**

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 µ Au  
 750 VA / ... 90 W // 3 A 30 V ≐  
 6 A (20 ms)  
 $20 \times 10^6 / \geq 10^5$   
 0,8...1,2 U<sub>N</sub>  
 250 mW  
 6/4 ms (X: 6 ms)

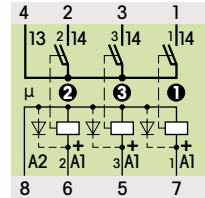
12, 24, 48  
**KR23A / DC ... V**

12, 24, 48  
**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 µ Au  
 750 VA / ... 90 W // 3 A 30 V ≐  
 6 A (20 ms)  
 $20 \times 10^6 / \geq 10^5$   
 0,8...1,2 U<sub>N</sub>  
 250 mW  
 6/4 ms (X: 6 ms)

12, 24, 48  
**KR33A / DC ... V**

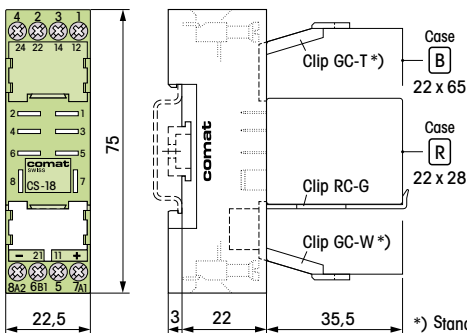
12, 24, 48  
**KR33X / DC ... V**

**Ordering example**

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

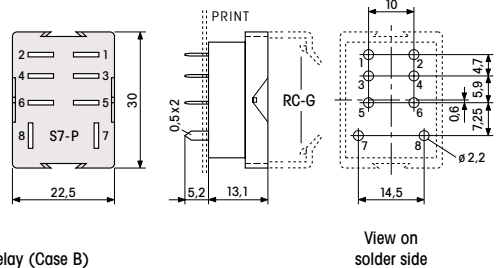
**Solid-state relays KA, KD**

**System socket CS-18**



\*) Standard delivery with relay (Case B)

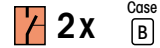
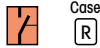
**Socket for print mounting S7-P**



View on solder side



AC ~ Solid-state relays



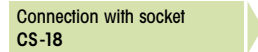
AC Solid-state relays

- 1- and 2-channel
- galvanically separated triggering (2 kV)
- crossover switching
- each channel indicated by LED

T<sub>amb.</sub> operation / storage: -25...+60 / -40...+85 °C



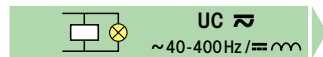
Connection No. on socket →  
Designation according to DIN/EN 50 011 →



Data at T<sub>amb.</sub> = 20 °C

- Peak inrush power
- Residual current
- Frequency range
- Voltage drop

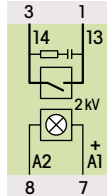
- Control voltage
- Triggering OFF
- Switching delay
- Control current



KA108

Universal AC solid-state  
1-channel, 0,8A/AC240V.  
Triac output with RC wiring protection.

0,8A 20...265V ~  
30mA



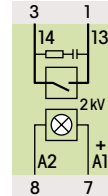
8A (20ms)  
3mA  
50/60Hz  
≤1,5V  
DC10...30V=  
UA1: ≤6V  
12ms  
10mA (24V)

KA108 / DC12-24 V

KA115

Universal AC solid-state  
1-channel, 1,5A/AC240V.  
Triac output with RC wiring protection.

1,5A 20...265V ~  
30mA



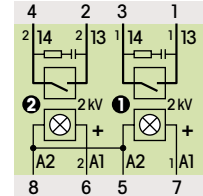
20A (20ms)  
3mA  
50/60Hz  
≤1,5V  
UC10...30V=  
UA1: ≤6V  
12ms  
10mA (24V)

KA115 / UC12-24 V

KA208

Universal AC solid-state  
2-channel, 0,8A/AC240V (2x0,5A).  
Triac outputs RC wiring protection.  
Width per channel: 11mm.

0,8A 20...265V ~  
30mA

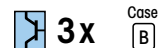
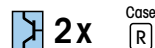
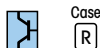


8A (20ms)  
3mA  
50/60Hz  
≤1,5V  
DC10...30V=  
UA1: ≤6V  
12ms  
10mA (24V)

KA208 / DC12-24 V



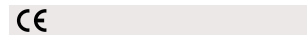
DC = Solid-state relays



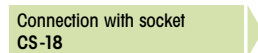
DC Solid-state relays

- 1- and 3-channel
- overload/short-circuit proof (⊗)
- limiting inductive voltage
- each channel indicated by LED

T<sub>amb.</sub> operation / storage: -25...+60 / -40...+85 °C



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



Data at T<sub>amb.</sub> = 20 °C

- Output
- Current peak
- Residual current
- ON-resistance

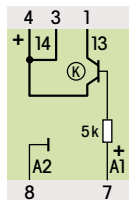
- Control voltage
- Triggering OFF
- ON-OFF-switching delay
- Control current



KD125

Universal DC solid-state  
1-channel.  
2,5A/DC24V.

2,5A 10...32V =



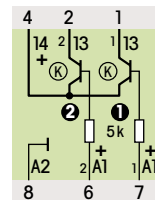
1 PNP (noc)  
15A (20ms)  
<100 μA  
50mΩ  
DC 5...18V/10...32V=  
UA1-2: ≤3V/≤6V  
2,5ms  
4mA (24V)

6-12, 12-24  
KD125 / DC ... V

KD215

Solid-state relay like KD125, but 2-channel  
2,5A/2x1,5A/DC24V.  
Width per channel: 11mm.

1,5A 10...32V =



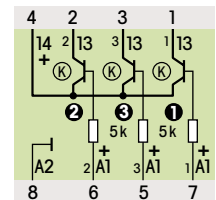
2x1 PNP (noc)  
15A (20ms)  
<100 μA  
50mΩ  
DC 10...32V=  
UA1-2: ≤3V/≤6V  
2,5ms  
4mA (24V)

KD215 / DC12-24 V

KD315

Solid-state relay like KD125, but 3-channel  
2,5A/3x1,5A/DC24V.  
Width per channel: 7,3mm.

1,5A 10...32V =



3x1 PNP (noc)  
15A (20ms)  
<100 μA  
50mΩ  
DC 10...32V=  
UA1-2: ≤3V/≤6V  
2,5ms  
4mA (24V)

KD315 / DC12-24 V

Ordering example

- Relay KD215/DC12-24V
- Socket CS-18 or S7-P
- Retaining clip RC-G (option)