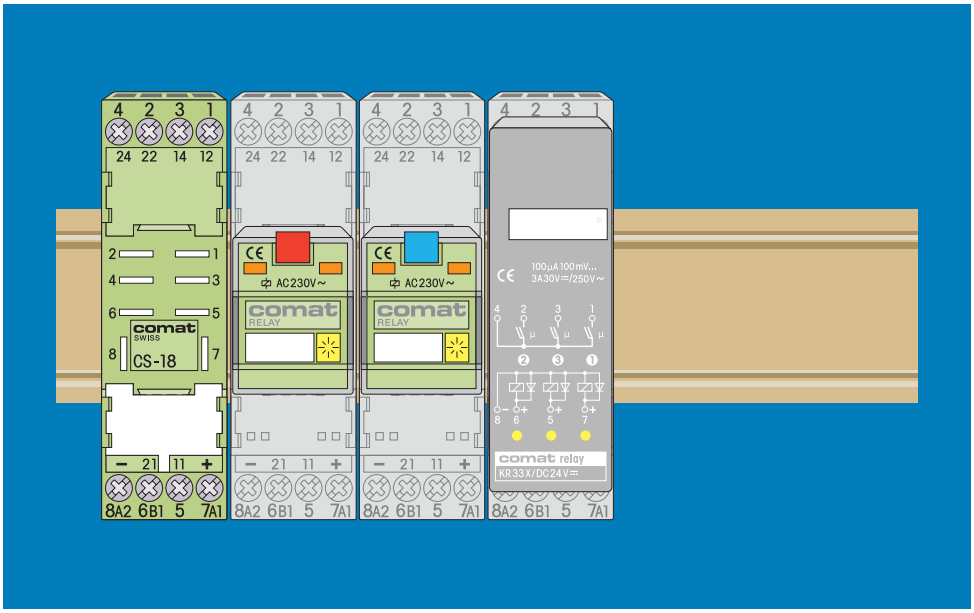
comat
INDUSTRIELLE ELEKTRONIK

Industrial Relays

Miniature Relays

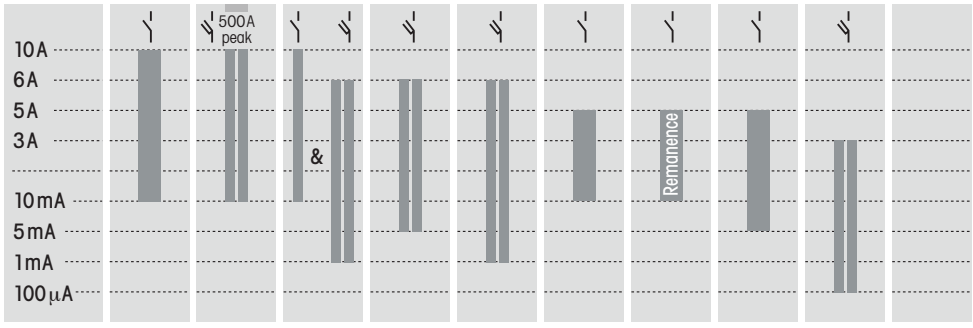


Comat products comply with different international standards and are certified accordingly.

Lloyd's

IEC 61810; EN 60974

Miniature Relays Recommended application



1	2	C7-A20	C7-W10		C7-T21	C7-T22				KR13	
	3	CR31									
	4						C9-A41	C9-R21	C9-A42		
1 + 1				C7-H23							
2x 1										KR23	
3x 1										KR33	

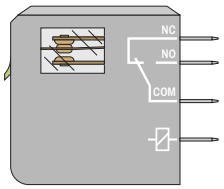
twin contacts

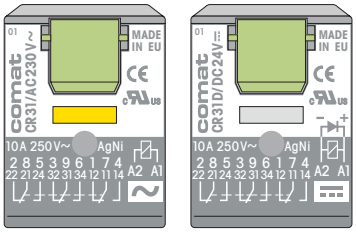
comat

CR31

Power Relay

Miniature





CR31

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

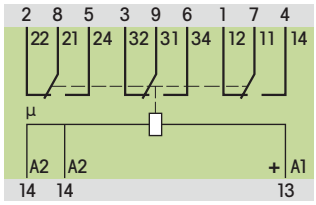
Test voltage: 2500V 2500V
$T_{amb.}$ operation/storage:
-40..+60/-40..+80°C

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.

CE UL μ MAX MIN

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)

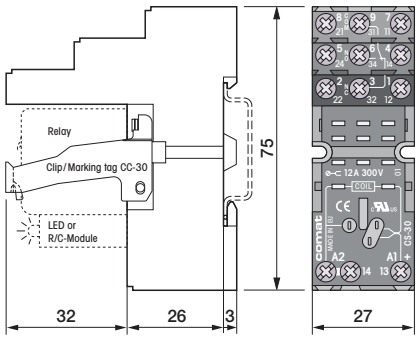
Contact material	AgNi 90/10
Switching power AC1/DC1	2500VA/...250W
Peak inrush power	20A (20ms)
Switch.cycl. mech./electr. (AC1)	$20 \times 10^6 / \geq 10^5$
Operation voltage DC/AC 50Hz	0,75-1,7 U_N/0,8-1,65 U_N
Power consumption AC/DC	1,0VA/0.75W
Trigg. delay/release time	AC: <25/10ms; DC:15/10ms
Trigg. delay/release time DC	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

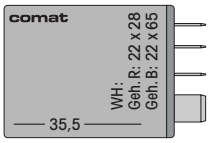
4k7/0,01μF	CMR1/UC110-240V
470E/0,22μF	CMR1/UC24-60V

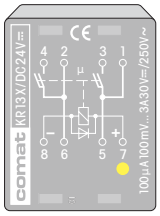
comat

KR

Miniature

Signal Relay
3,5µAu



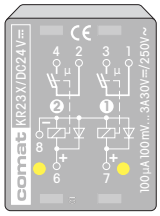


Case R

KR13

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

Signal Relay
2x
3,5µAu

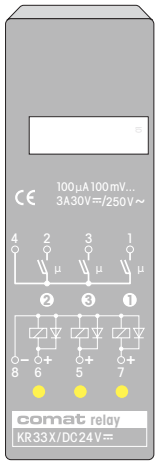


Case R

KR23

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

Signal Relay
3x
3,5µAu



Case B

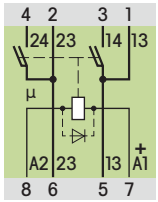
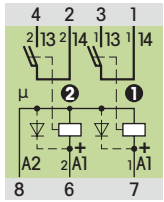
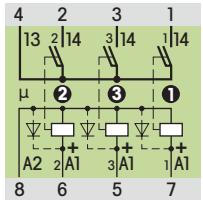
KR33

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

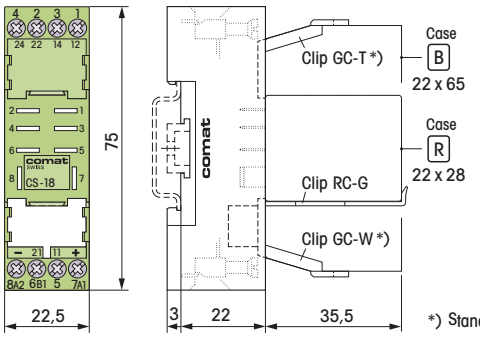
Miniature Industrial Relay
- 1- to 3-channel
- for control and signal circuits
- Power consumption only 250mW per channel

Test voltage: 2000V 1000V

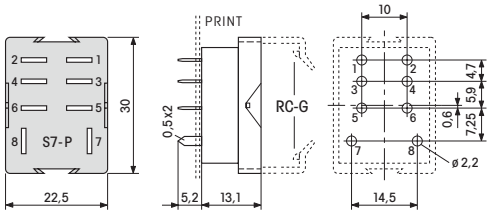
Tamb. operation/storage:
-20..+60/-40..+85°C

	KR13	KR23	KR33
	3A 250V~//110V⎓	3A 250V~//110V⎓	3A 250V~//110V⎓
	100µA 100mV	100µA 100mV	100µA 100mV
Connection No. on socket → / Designation according to DIN/EN 50011 →			
Connectio with socket CS-18			
µ = contact opening < 3mm			
Data at Tamb. =20°C (standard coil)			
Contact material	Ag-alloy+3..5µAu	Ag-alloy+3..5µAu	Ag-alloy+3..5µAu
Switching load AC1/DC1	750VA/...90W//3A 30V⎓	750VA/...90W//3A 30V⎓	750VA/...90W//3A 30V⎓
Peak inrush power	6A(20ms)	6A(20ms)	6A(20ms)
Switching cycles mech./electr. (AC1)	$20x10^6/\geq 10^5$	$20x10^6/\geq 10^5$	$20x10^6/\geq 10^5$
Operation voltage	0,8...1,2 U_N	0,8...1,2 U_N	0,8...1,2 U_N
Power consumption per channel	350mW	250mW	250mW
Triggering delay / release time	6/4ms (X: 6ms)	6/4ms (X: 6ms)	6/4ms (X: 6ms)
A — DC ⎓ ≤ 20%	12, 24, 48	12, 24	12, 24
	KR13A / DC V	KR23A / DC V	KR33A / DC V
X — DC ⎓ ≤ 20%	12, 24, 48	12, 24	12, 24
	KR13X / DC V	KR23X / DC V	KR33X / DC V

System socket CS-18



Socket for print mounting S7-P



*) Standard delivery with relay (Case B)

Ordering example

Relay **KR23X/DC24V**
Socket **CS-18** or **S7-P**

Retaining clip **RC-G** (option)

Kühn Controls AG

Notes:

You want more information about this product, please call us: tel: +49 (0)7082-940000 or send us a fax: +49 (0)7082-940001, or email: sales@kuehn-controls.de or visit our Website: www.kuehn-controls.de