

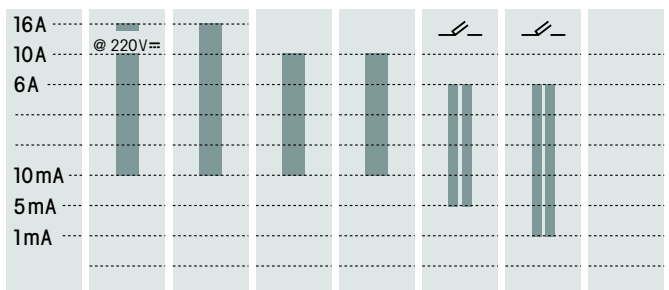
Industrial relays Standard

CR 4 01



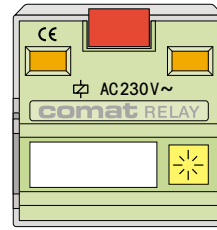
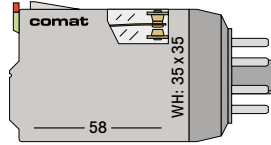
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Tel.: +49- (0)7082-940000
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eMail: sales@kuehn-controls.de
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CR 4 Recommended application



I	1	C5-M10				
	2		C2-A20	C3-R20	C2-T21	
	3		C5-A30	C3-A30		C3-T31 C3-T32
	4			C4-A40		

— twin contacts; C3-R20: remanence relay; C5-M10: with blow magnet



**Industrial relays
2-, 3- and 4-pole**

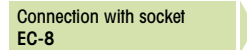
STANDARD

2-pole miniature industrial relays according to IEC 67-1

- lockable manual operation
 - mechanical flag indicator
- Test voltage: \square 2500V \downarrow 2500V \downarrow
 Tamb. operation / storage: -20 .. +60 / -40 .. +85°C



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



μ = contact opening < 3mm

Data at Tamb. = 20°C (standard coil \square)

- 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

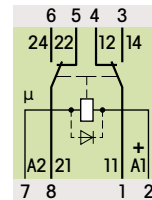


⊗ = Type "X" (option)

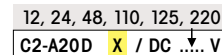
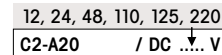
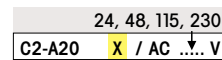
C2-A20

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

10A 250V~
 10mA 10V



- Ag Ni
- 2500VA/... 250W
- 30A(20ms)
- 20x10⁶/≥ 5x10⁵
- 0,8...1,2Un
- 2,2VA/1,3W
- 16/8ms

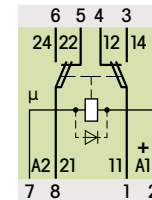


Option \square = with ⊗

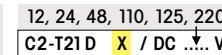
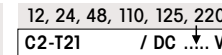
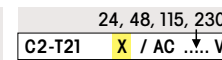
C2-T21

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

6A 250V~
 5mA 5V



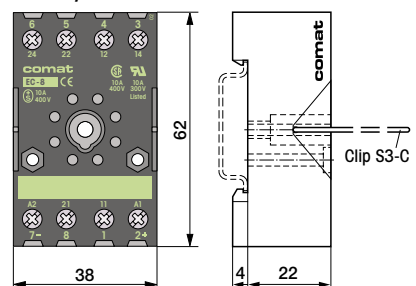
- Ag Ni + 0,2μ Au
- 1200VA/... 150W
- 15A(20ms)
- 20x10⁶/≥ 2x10⁵
- 0,8...1,2Un
- 2,2VA/1,3W
- 16/8ms



Ordering example

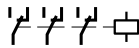
- Relay C2-A20X/AC230V
- Socket EC-8
- Retaining clip S3-C (option)

Economy socket EC-8

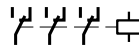




Power relay



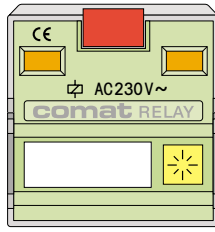
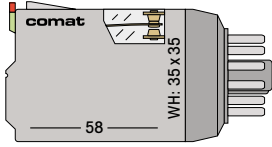
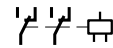
Control relay



Signal relay

10μ Au

Remanence relay



3-pole miniature industrial relays according to IEC 67-1

- lockable manual operation
- mechanical flag indicator

Test voltage: \square 2500V \downarrow 2500V \downarrow

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



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

Connection with sockets EC-11, C11A, C12B

μ = 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 AC50Hz/DC
Power consumption AC/DC
Triggering delay / release time

Standard \square AC \sim 50/60Hz

Standard \square DC \equiv \downarrow ≤ 10%

D, DX \square DC \equiv \downarrow ≤ 10%

⊗ = Type "X" (option)

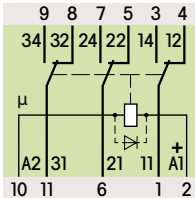
C3-A30

Universal power relay 10A

With 3 power changeover-contacts this is the robust relay for AC and DC circuits ranging from 10mA10V.

10A 250V \sim

10mA 10V



AgNi
2500VA/...250W
30A(20ms)
20x10⁹/≥ 5x10⁵

0,8...1,2Un
2,2VA/1,3W
16/8ms

24, 48, 115, 230
C3-A30 \square / AC ... V

12, 24, 48, 110, 125, 220
C3-A30 / DC ... V

12, 24, 48, 110, 125, 220
C3-A30D \square / DC ... V

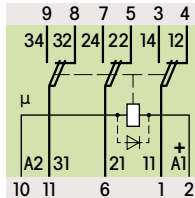
C3-T31

Relay like ..A30, but with double contacts 6A

The control relay with highest switching reliability for control and signal circuits ranging from 5mA 5V.

6A 250V \sim

5mA 5V



AgNi+0,2μ Au
1200VA/...150W
15A(20ms)
20x10⁹/≥ 2x10⁵

0,8...1,2Un
2,2VA/1,3W
16/8ms

24, 48, 115, 230
C3-T31 \square / AC ... V

12, 24, 48, 110, 125, 220
C3-T31 / DC ... V

12, 24, 48, 110, 125, 220
C3-T31D \square / DC ... V

C3-T32

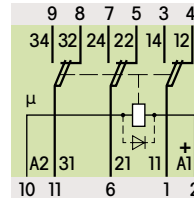
Relay like ..T31, but 10μ gold plated contacts

The twin contact relay with highest switching reliability for signal circuits ranging from 1mA 5V.

Recommend. upto 0,2A 30V.

6A 250V \sim

1mA 5V



AgNi+10μ Au
1200VA/...150W
15A(20ms)
20x10⁹/≥ 2x10⁵

0,8...1,2Un
2,2VA/1,3W
16/8ms

24, 48, 115, 230
C3-T32 \square / AC ... V

12, 24, 48, 110, 125, 220
C3-T32 / DC ... V

12, 24, 48, 110, 125, 220
C3-T32D \square / DC ... V

C3-R20

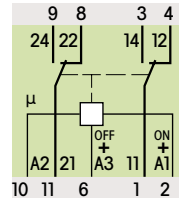
Remanence relay 10A with AC or DC coil

A1(2)=ON; A3(6)=OFF. Minim. triggering time 50ms, permanent triggering admissible.

Without option X.

10A 250V \sim

10mA 10V



AgNi
2500VA/...250W
30A(20ms)
20x10⁹/≥ 3x10⁵

0,8...1,2Un
ON/OFF 1,5/0,5 VA//W
16/10ms (τ_L > 50ms)

24, 48, 115, 230
C3-R20 / AC ... V

12, 24, 48, 110, 125
C3-R20 / DC ... V

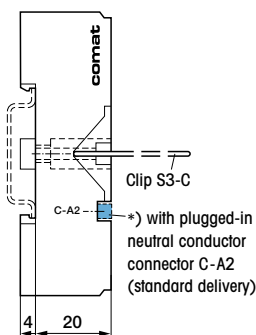
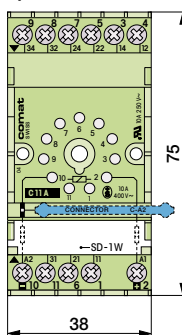
Option \square = with \square

For suitable coil wirings see "R-modules" →

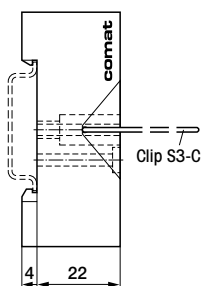
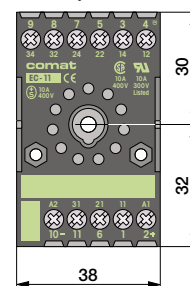
Ordering example

- Relay C3-A30X/AC230V
- Socket EC-11 or C11A
- Retaining clip S3-C (option)

System socket C11A *)



Economy socket EC-11

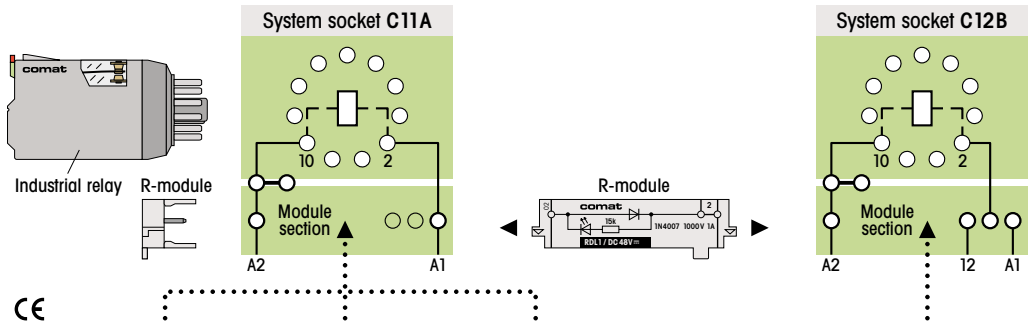




Plug-in coil wirings for 3-pole industrial relays C3

Relay modules indicate the relay's switch mode and/or help limiting cutoff voltage peaks in the control circuit by means of a diode or a RC module. The types R..2/3 are equipped with additional

diodes for signal or OR-circuits. For parallel or serial connections the relay modules are simply plugged in the sockets C11A or C12B.



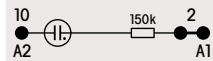
CE

Relay coil →

Illuminated displays



RL1/AC 110-240V ~



RL1/UC 12-24V ~



see RL1/UC...V

With additional diode output (12), e.g. for collective alarm messages.

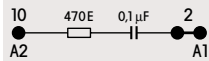
With additional diode input (12), e.g. as logical addition.

Suppressing units

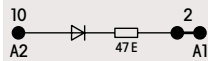


see RC1/UC...V

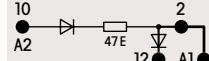
RC1/UC 110-240V ~



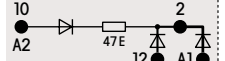
RD1/DC 12-220V ==



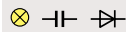
RD2/DC 12-220V ==



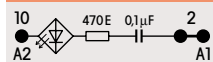
RD3/DC 12-220V ==



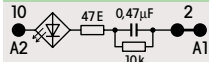
Suppressing units with illuminated displays



RCL1/AC 110-240V ~



RCL1/UC 24V ~



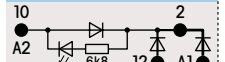
RDL1/DC 12-24V ==



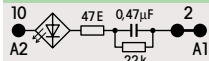
RDL2/DC 12-24V ==



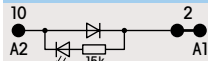
RDL3/DC 12-24V ==



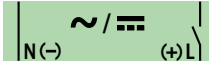
RCL1/UC 48V ~



RDL1/DC 48V ==

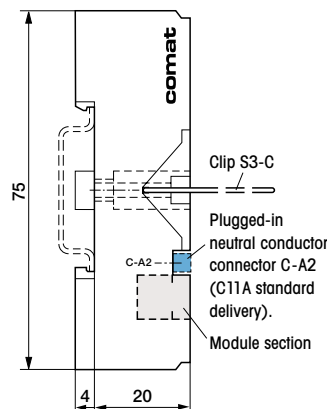
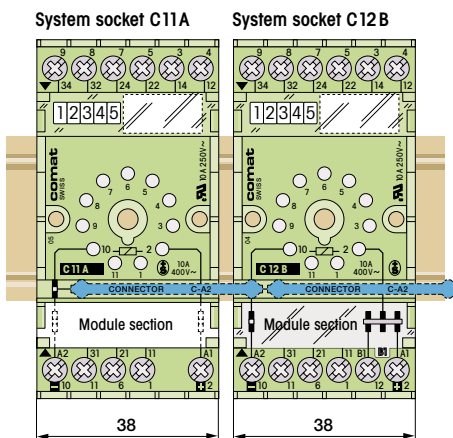


Current types
Triggering

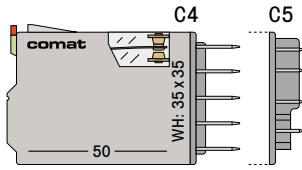
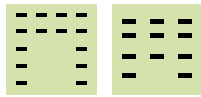


Ordering example

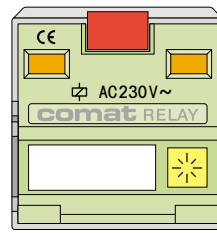
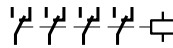
- Module RCL1/UC48V
- Socket C11A
- Relay, type C3-...
- Clip S3-C (option)



- Jack on the socket
- Plug pin on the R-module



Power relay



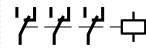
C4-A40

Universal power relay 10A

With 4 power changeover-contacts this is the robust relay for AC and DC circuits ranging from 10mA 10V.

10A 250V~
10mA 10V

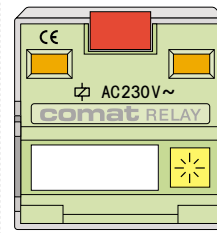
High power relay for AC and DC



16A 400V~



10A @ 220V=



C5-A30

Universal power relay 16A

With 3 power changeover-contacts this is the robust relay for AC and DC circuits ranging from 10mA 10V.

16A 400V~/6A AC15
10mA 10V

C5-M10

Highpower relay, in particular for DC loads upto 10A 220V= (DC1) With 2 contacts in series and a blow magnet for safe arc extinguishing.

16A 400V~/6A AC15
10mA 10V

Industrial relays 3- and 4-pole

3- and 4-pole industrial relays with flat blade connection

- lockable manual operation
 - mechanical flag indicator
- Test voltage C4: 2500V / 2500V /
Test voltage C5: 4000V 4000V
T_{amb.} operation/
storage: -40...+60/-40...+85°C

HIGH POWER



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

Connection with socket
1) CS-14 2) CS-15

μ = contact opening < 3mm
C5-M: > 3mm (1,7+1,7)

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

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

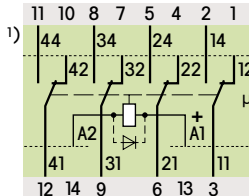
Operation voltage AC50Hz/DC
Power consumption AC/DC
Triggering delay / Release time

Standard AC ~ 50/60Hz

Standard DC = ≤10%

D, DX DC = ≤10%

⊗ = Type "X" (option)



AgNi
2000VA/...250V
30A(20ms)
20x10⁶/≥ 6x10⁵

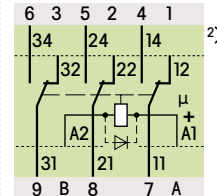
0,8...1,2UN
2,4VA/1,4W
20/8ms

24, 48, 115, 230
C4-A40 X / AC ... V

12, 24, 48, 110, 125, 220
C4-A40 / DC ... V

12, 24, 48, 110, 125, 220
C4-A40D X / DC ... V

Option X = with ⊗



AgNi
4000VA/...400W
40A(20ms)
20x10⁶/≥ 3x10⁵

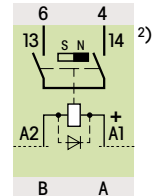
0,8...1,2UN
2,4VA/1,4W
20/10ms

24, 48, 115, 230, 400*)
C5-A30 X / AC ... V

12, 24, 48, 110, 125, 220
C5-A30 / DC ... V

12, 24, 48, 110, 125, 220
C5-A30D X / DC ... V

Option X = with ⊗



AgNi
4000VA/...880W
40A(20ms)
20x10⁶/≥ 3x10⁵

0,8...1,2UN
2,4VA/1,3W
20/10ms

24, 48, 115, 230, 400*)
C5-M10 X / AC ... V

12, 24, 48, 110, 125, 220
C5-M10 / DC ... V

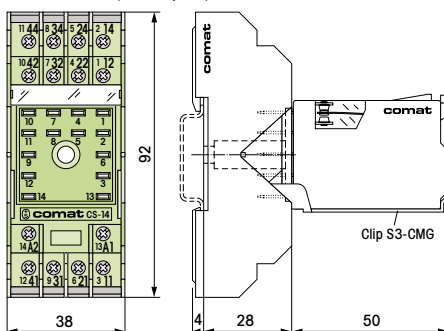
12, 24, 48, 110, 125, 220
C5-M10D X / DC ... V

*) 400V available only without LED (X)!

Ordering example

- Relay C4-A40X/AC230V
- Socket CS-14 (clip incl.)

Socket CS-14 (for relay C4)



Socket CS-15 (for relay C5)

