

- Industrial relays
LONG LIFE ★★

- Solid-state relays

CR 5 01

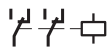
★★ ≥ 100 Mio mechanical cycles
 ≥ 700 000 cycles at full load
 (C21, C31)

CR 5		Recommended application	
10A			
6/5A			
10mA			
5mA			
1mA			
I	2	C21	C22
	3	C31	C32
2x 1		C33	C34
	3x 1		C39

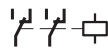
twin contacts



Power relay



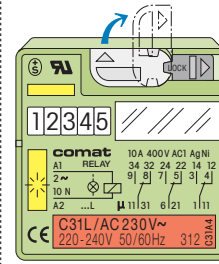
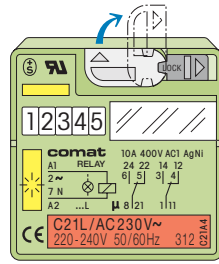
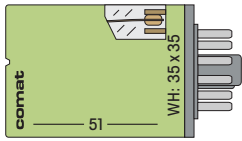
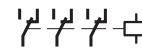
Control relay



Power relay



Control relay



2- and 3-pole industrial relays according to IEC 67-1

- lockable manual operation
- mechanical flag indicator

Test voltage: \square 2500V \int 1500V \int

T_{amb.} operation/storage: -40...+70/-40...+85°C



Connection No. on socket →

Designation according to DIN/EN 50011 →

Connection on sockets
EC-8 / EC-11, C11A, C12B

μ = contact opening < 3mm

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

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

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

Standard AC ~
50/60Hz

Standard DC ==
≤ 10%

D, DL DC ==
≤ 10%

⊗ = Type "L" (option)

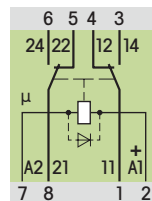
C21

Universal power relay 10A

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

10A 400V~

10mA 10V



Ag (AgCuNi)
2500VA/...300W
40A(20ms)
100x10⁹ ≥ 7x10⁵

0,8...1,2/0,8...1,25Un
2,5VA/1,2W
15/≐8, ~15ms

24, 48, 115, 230

C21 **L** / AC ... V

12, 24, 48, 110, 220

C21 / DC ... V

12, 24, 48, 110, 220

C21D **L** / DC ... V

Option **L** = with ⊗

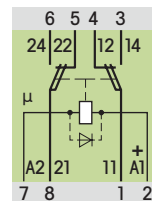
C22

Relay like ..C21, but with twin contacts 6A

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

6A 400V~

1mA 5V



Ag (AgCuNi)
1500VA/...200W
15A(20ms)
100x10⁹ ≥ 1,5x10⁵

0,8...1,2/0,8...1,25Un
2,5VA/1,2W
15/≐8, ~15ms

24, 48, 115, 230

C22 **L** / AC ... V

12, 24, 48, 110, 220

C22 / DC ... V

12, 24, 48, 110, 220

C22D **L** / DC ... V

Option **L** = with ⊗

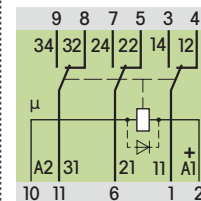
C31

Universal power relay 10A

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

10A 400V~

10mA 10V



Ag (AgCuNi)
2500VA/...300W
40A(20ms)
100x10⁹ ≥ 7x10⁵

0,8...1,2/0,8...1,25Un
2,5VA/1,2W
15/≐8, ~15ms

24, 48, 115, 230

C31 **L** / AC ... V

12, 24, 48, 110, 220

C31 **L** / DC ... V

12, 24, 48, 110, 220

C31D **L** / DC ... V

Option **L** = with ⊗

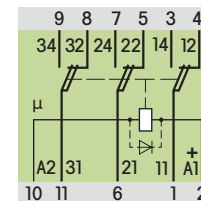
C32

Relay like ..C31, but with twin contacts 6A

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

6A 400V~

1mA 5V



Ag (AgCuNi)
1500VA/...200W
15A(20ms)
100x10⁹ ≥ 1,5x10⁵

0,8...1,2/0,8...1,25Un
2,5VA/1,2W
15/≐8, ~15ms

24, 48, 115, 230

C32 **L** / AC ... V

12, 24, 48, 110, 220

C32 / DC ... V

12, 24, 48, 110, 220

C32D **L** / DC ... V

Option **L** = with ⊗

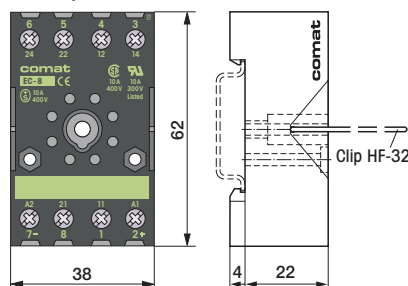
Ordering example

- Relay C21/AC230V
- Socket EC-8
- Retaining clip HF-32 (opt.)

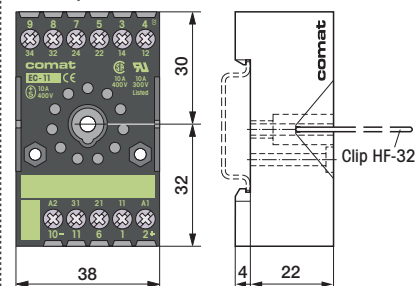
Ordering example

- Relay C31/AC230V
- Socket EC-11 or C11A
- Retaining clip HF-32 (opt.)

Economy socket EC-8



Economy socket EC-11

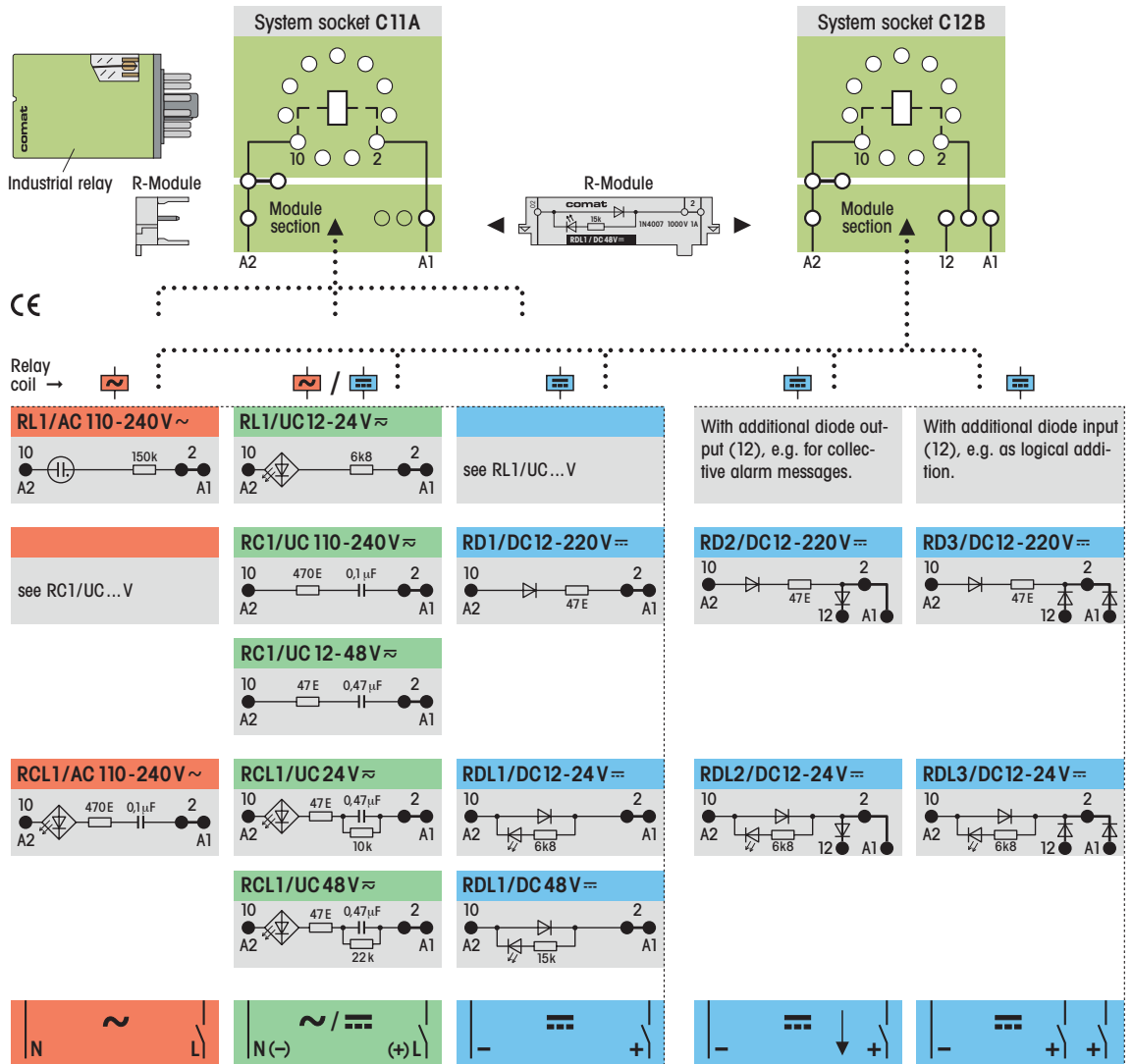




Plug-in coil wirings for 3-pole industrial relays C31, C32

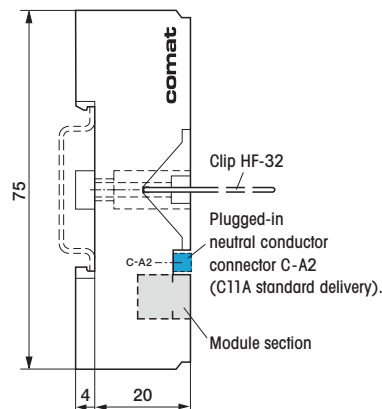
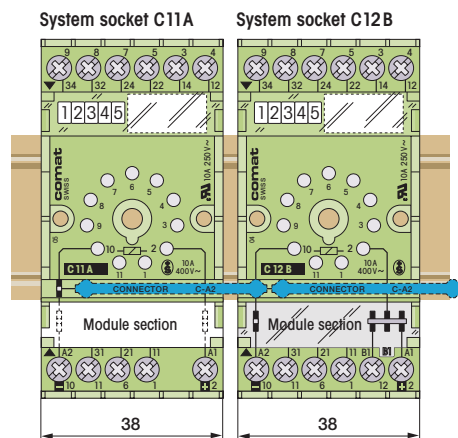
Relay modules indicate the relay's switch mode and/or help limiting cutoff voltage peaks in the control circuit by means of a diode or a RC module. The types R..2/3 are equipped with additional

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

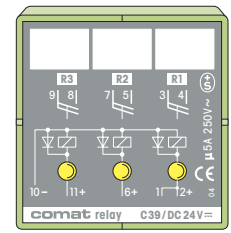
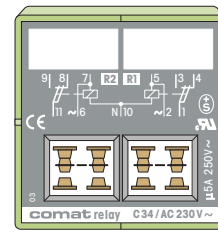
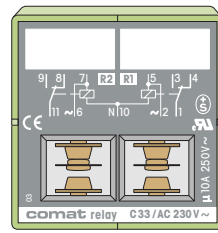
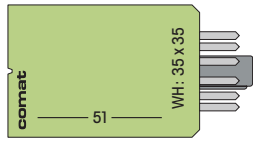


Ordering example

- Module RCL1/UC48V
- Socket C11A
- Relay, type C31/32
- Clip HF-32 (option)



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



Double and triple industrial relays

Solid-state relays (page 5)

2- and 3-channel industrial relays according to IEC 67-1

- Single or twin contacts
- Front contact inspection window or LED display (C39)

Test voltage: 2000V / 2000V /
T_{amb.} operation / storage: -25...+60/-40...+85°C



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

Connection on sockets
EC-11, C11A, C12B

μ = contact opening < 3 mm

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

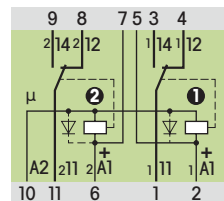
- Contact material
- Switching power AC1/DC1
- Peak inrush power
- Switching cycles mech./electr. (AC1)
- Operation voltage AC50Hz/DC
- Power consumption per channel
- Triggering delay / release time



C33

Double-channel power relay 10A
With 2x1 power changeover-contacts this is a robust relay for AC and DC circuits ranging from 10mA 12V.
Width per channel: 17,5mm.

10A 250V ~
10mA 12V



AgCdO
2500VA/...300W
40A(16ms)
20x10⁶ / ≥ 10⁵
0,8...1,15Un
1,3VA/0,55W
15/25ms

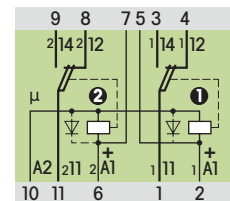
24, 48, 115, 230
C33 / AC ... V

12, 24, 48, 110
C33 / DC ... V

C34

Relay like C33, but with twin contacts 5A
The control relay with highest switching reliability for control and signal circuits ranging from 1mA 6V.
Width per channel: 17,5mm.

5A 250V ~
1mA 6V



Ag Ni
1250VA/...200W
20A(16ms)
20x10⁶ / ≥ 10⁵
0,8...1,15Un
1,3VA/0,55W
15/25ms

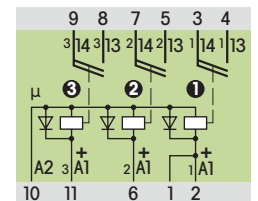
24, 48, 115, 230
C34 / AC ... V

12, 24, 48, 110
C34 / DC ... V

C39

Triple-channel twin contact relay 5A
with 3x1 No contact it is ideal for interface applications ranging from 10mA 100mV.
LED display for each channel.
Width per channel: 11,7mm.

5A 250V ~
1mA 100mV



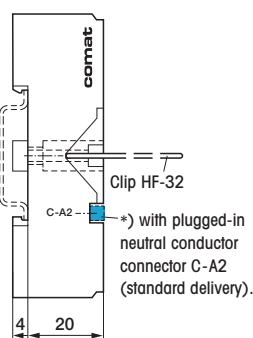
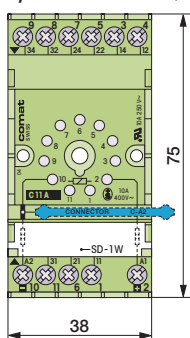
Ag-alloy
1250VA/...150W
10A(20ms)
50x10⁶ / ≥ 1,5x10⁵
0,8...1,2Un
0,25W
8/12ms

12, 24, 48
C39 / DC ... V

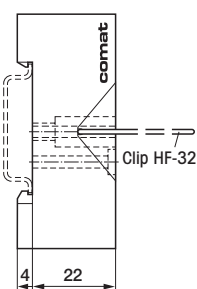
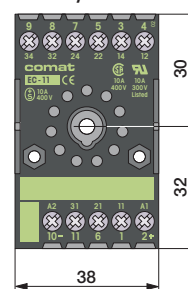
Ordering example

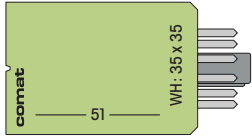
- Relay C34/AC230V
- Socket EC-11 or C11A
- Retaining clip HF-32 (opt.)

System socket C11A *)

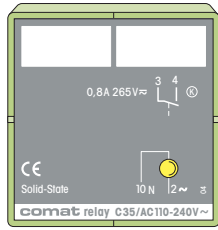


Economy socket EC-11





Solid-state relay

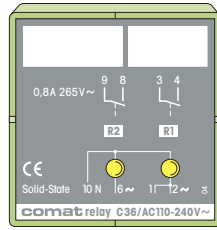


C35

Universal solid-state relay for AC or DC load

Highest switching frequency virtually limitless due to solid-state operation. No external protective wiring required.

0,8A 10...265V ≈



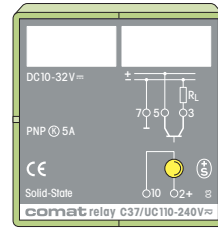
C36

AC solid-state relay double-channel

Triac output, crossover switching. Built-in RC wiring protection. Especially for bulb-loads and high switching frequencies. • Minimum load: 30mA

0,8A 20...265V ≈

Solid-state relay

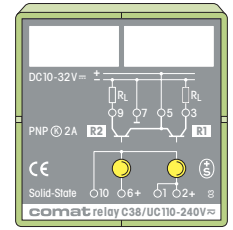
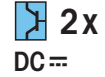


C37

DC solid-state relay single-channel

Bounce-free and non wearing for DC loads (inductive/capacitive). Short-circuit/overload proof. No external wiring protection required.

5A 10...32V ≈



C38

DC solid-state relay double-channel

Construction, characteristics and application like C37, but double-channel. 2A constant current per channel.

2A 10...32V ≈

1- and 2-channel solid-state relays according IEC67-1

- galvanically decoupled control (2kV)
- LED display for each channel

Operation voltage range 0,8...1,1U_n

Tamb. operation/storage: -25...+60/-40...+85°C



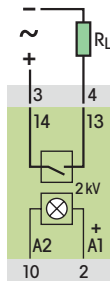
Connection No. on socket →
Designation according to DIN/EN 50011 →

Connection on sockets EC-11, C11A, C12B

Data at Tamb. = 20°C

- Peak inrush power
- Voltage drop
- Residual current
- Short-circuit proof

- Control voltage
- Frequency range
- Control current
- Triggering delay
- Off delay

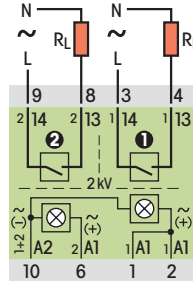


1,5A/1s
≤3V
≤100µA
≤12A/200µs

110-240V	24-48V
50...60Hz	40...400Hz
≤35mA	≤20mA
≤20ms	≤20ms
≤80ms	≤80ms

110-240
C35 / AC ... V

24-48
C35 / UC ... V

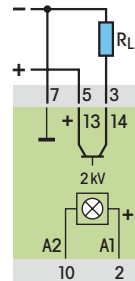


8A/20ms
≤1,5V
≤3mA

110-240V	24V
50...60Hz	50...60Hz
≤17mA	≤12mA
≤30ms	≤30ms
≤40ms	≤80ms

110-240
C36 / AC ... V

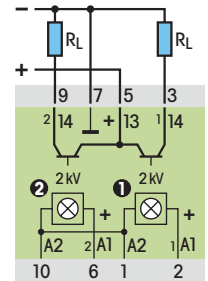
C36 / UC 24 V



15A/1s
≤0,2V
≤100µA
≤70A/150µs

110-240V	24-48V
40...60Hz	40...400Hz
≤5mA	≤6mA
≤30ms	≤20ms
≤30ms	≤30ms

24-48, 110-240
C37 / UC ... V



15A/1s
≤0,2V
≤100µA
≤70A/150µs

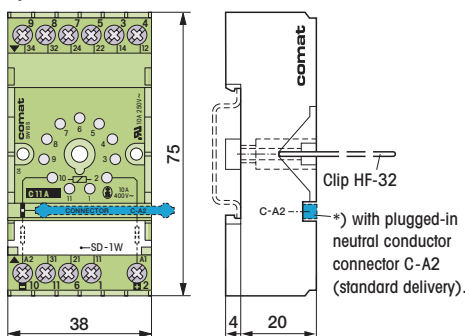
110-240V	24-48V
40...60Hz	40...400Hz
≤5mA	≤6mA
≤30ms	≤20ms
≤30ms	≤30ms

24-48, 110-240
C38 / UC ... V

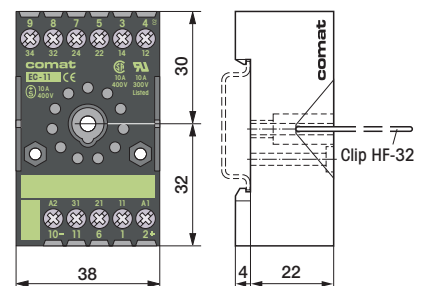
Ordering example

- Relay C37/UC110-240V
- Socket EC-11 or C11A
- Retaining clip HF-32 (opt.)

System socket C11A *)



Economy socket EC-11





Verwaltung und Vertrieb weltweit
Administration et vente mondiale
Management and worldwide distribution

Entwicklung und Fertigung
Développement et fabrication
Development and production