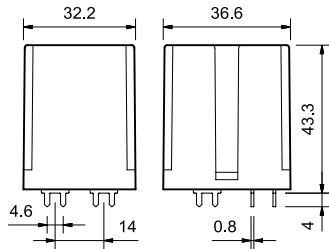


20 A Power relays
1 NO + 1 NC (SPST-NO + SPST-NC)

- 65.31 Flange mount**
Faston 250 connections
- 65.61 PCB mount**

- AC coils & DC coils
- Cadmium Free option available



65.61

* With the AgSnO₂ material the maximum peak current is 120 A - 5 ms on NO contact.

FOR UL RATINGS SEE:
"General technical information" page V

Contact specification

| | | | |
|---|-----------|-----------------------------|-----------------------------|
| Contact configuration | | 1NO + 1NC (SPST-NO+SPST-NC) | 1NO + 1NC (SPST-NO+SPST-NC) |
| Rated current/Maximum peak current | A | 20/40* | 20/40* |
| Rated voltage/ Maximum switching voltage | V AC | 250/400 | 250/400 |
| Rated load AC1 | VA | 5000 | 5000 |
| Rated load AC15 (230 V AC) | VA | 1000 | 1000 |
| Single phase motor rating (230 V AC) | kW | 1.1 | 1.1 |
| Breaking capacity DC1: 30/110/220 V | A | 20/0.8/0.5 | 20/0.8/0.5 |
| Minimum switching load | mW (V/mA) | 1000 (10/10) | 1000 (10/10) |
| Standard contact material | | AgCdO | AgCdO |

Coil specification

| | | | |
|-----------------------------------|-----------------|---|---|
| Nominal voltage (U _N) | V AC (50/60 Hz) | 6 - 12 - 24 - 48 - 60 - 110 - 120 - 230 - 240 - 400 | |
| | V DC | 6 - 12 - 24 - 48 - 60 - 110 - 125 - 220 | |
| Rated power AC/DC | VA (50 Hz)/W | 2.2/1.3 | 2.2/1.3 |
| Operating range | AC | (0.8...1.1)U _N | (0.8...1.1)U _N |
| | DC | (0.85...1.1)U _N | (0.85...1.1)U _N |
| Holding voltage | AC/DC | 0.8 U _N / 0.6 U _N | 0.8 U _N / 0.6 U _N |
| Must drop-out voltage | AC/DC | 0.2 U _N / 0.1 U _N | 0.2 U _N / 0.1 U _N |

Technical data

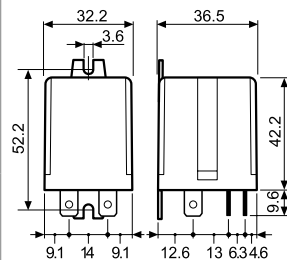
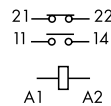
| | | | |
|--|--------|---|---|
| Mechanical life AC/DC | cycles | 10 · 10 ⁶ / 30 · 10 ⁶ | 10 · 10 ⁶ / 30 · 10 ⁶ |
| Electrical life at rated load AC1 | cycles | 80 · 10 ³ | 80 · 10 ³ |
| Operate/release time | ms | 10/12 | 10/12 |
| Insulation between coil and contacts (1.2/50 μs) | kV | 4 | 4 |
| Dielectric strength between open contacts | V AC | 1500 | 1500 |
| Ambient temperature range | °C | -40...+75 | -40...+75 |
| Environmental protection | | RT I | RT I |

Approvals (according to type)



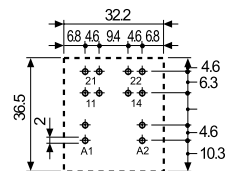
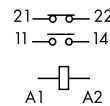
65.31

- 20 A rated contacts
- Flange mount/Faston 250 (6.3 x 0.8 mm) connection



65.61

- 20 A rated contacts
- PCB mount - bifurcated terminals



Copper side view



A

30 A Power relays

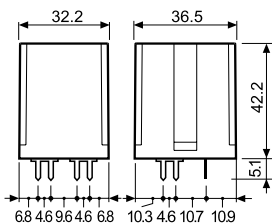
1 NO (SPST-NO)

65.31-0300 Flange mount

Faston 250 connections

65.61-0300 PCB mount

- ≥ 3 mm contact gap
- AC coils & DC coils
- Cadmium Free option available



65.61-0300

* Distance between contacts ≥ 3 mm (EN 60335-1).

** With the AgSnO₂ material the maximum peak current is 120 A - 5 ms on NO contact.

FOR UL RATINGS SEE:

"General technical information" page V

Contact specification

Contact configuration

1 NO (SPST-NO), ≥ 3 mm*

1 NO (SPST-NO), ≥ 3 mm*

Rated current/Maximum peak current

A

30/50**

30/50**

Rated voltage/

Maximum switching voltage

V AC

250/400

250/400

Rated load AC1

VA

7500

7500

Rated load AC15 (230 V AC)

VA

1250

1250

Single phase motor rating (230 V AC)

kW

1.5

1.5

Breaking capacity DC1: 30/110/220 V

A

30/1.1/0.7

30/1.1/0.7

Minimum switching load

mW (V/mA)

1000 (10/10)

1000 (10/10)

Standard contact material

AgCdO

AgCdO

Coil specification

Nominal voltage (U_N)

V AC (50/60 Hz)

6 - 12 - 24 - 48 - 60 - 110 - 120 - 230 - 240 - 400

V DC

6 - 12 - 24 - 48 - 60 - 110 - 125 - 220

Rated power AC/DC

VA (50 Hz)/W

2.2/1.3

2.2/1.3

Operating range

AC

(0.8...1.1)U_N

(0.8...1.1)U_N

DC

(0.85...1.1)U_N

(0.85...1.1)U_N

Holding voltage

AC/DC

0.8 U_N / 0.6 U_N

0.8 U_N / 0.6 U_N

Must drop-out voltage

AC/DC

0.2 U_N / 0.1 U_N

0.2 U_N / 0.1 U_N

Technical data

Mechanical life AC/DC

cycles

10 · 10⁵ / 30 · 10⁶

10 · 10⁵ / 30 · 10⁶

Electrical life at rated load AC1

cycles

50 · 10³

50 · 10³

Operate/release time

ms

15/4

15/4

Insulation between coil

and contacts (1.2/50 μs)

kV

4

4

Dielectric strength

between open contacts

V AC

2500

2500

Ambient temperature range

°C

-40...+75

-40...+75

Environmental protection

RT I

RT I

Approvals (according to type)



65.31-0300

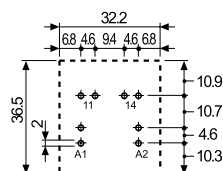
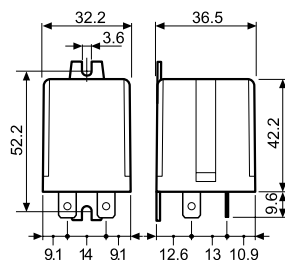
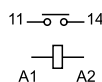
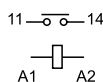


- 30 A rated contacts
- Flange mount/Faston 250 (6.3 x 0.8 mm) connection

65.61-0300



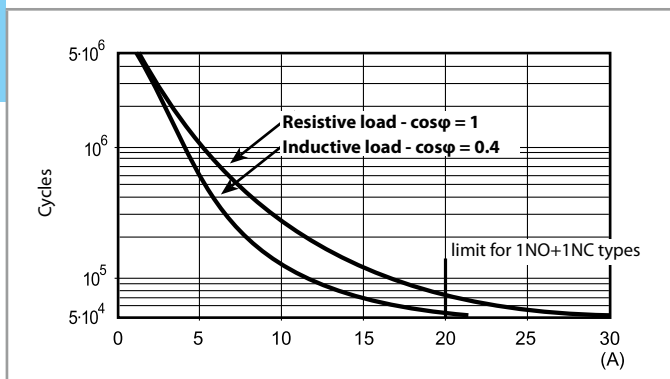
- 30 A rated contacts
- PCB mount - bifurcated terminals



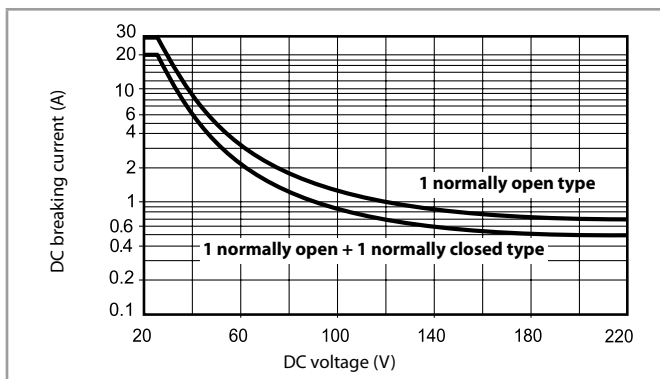
Copper side view

Contact specification

F 65 - Electrical life (AC) v contact current



H 65 - Maximum DC1 breaking capacity



- When switching a resistive load (DC1) having voltage and current values under the curve, an electrical life of $\geq 80 \cdot 10^3$ can be expected.
- In the case of DC13 loads, the connection of a diode in parallel with the load will permit a similar electrical life as for a DC1 load.
Note: the release time for the load will be increased.

Coil specifications

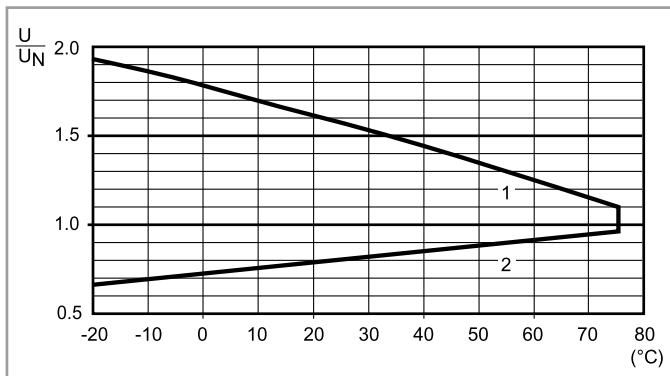
DC coil data

| Nominal voltage U_N V | Coil code | Operating range | | Resistance R Ω | Rated coil consumption I at U_N mA |
|-------------------------------|-----------|-----------------|----------------|-----------------------------|--|
| | | U_{min} V | U_{max} V | | |
| 6 | 9.006 | 5.1 | 6.6 | 28 | 214 |
| 12 | 9.012 | 10.2 | 13.2 | 110 | 109 |
| 24 | 9.024 | 20.4 | 26.4 | 445 | 54 |
| 48 | 9.048 | 40.8 | 52.8 | 1770 | 27.1 |
| 60 | 9.060 | 51 | 66 | 2760 | 21.7 |
| 110 | 9.110 | 93.5 | 121 | 9420 | 11.7 |
| 125 | 9.125 | 106 | 138 | 12000 | 10.4 |
| 220 | 9.220 | 187 | 242 | 37300 | 5.8 |

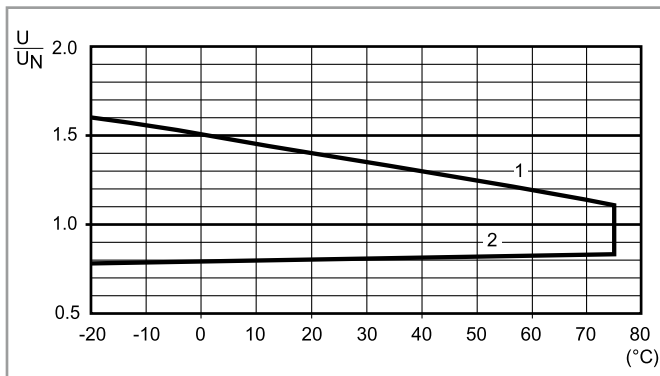
AC coil data

| Nominal voltage U_N V | Coil code | Operating range | | Resistance R Ω | Rated coil consumption I at U_N (50 Hz) mA |
|-------------------------------|-----------|-----------------|----------------|-----------------------------|--|
| | | U_{min} V | U_{max} V | | |
| 6 | 8.006 | 4.8 | 6.6 | 4.6 | 367 |
| 12 | 8.012 | 9.6 | 13.2 | 19 | 183 |
| 24 | 8.024 | 19.2 | 26.4 | 74 | 90 |
| 48 | 8.048 | 38.4 | 52.8 | 290 | 47 |
| 60 | 8.060 | 48 | 66 | 450 | 37 |
| 110 | 8.110 | 88 | 121 | 1600 | 20 |
| 120 | 8.120 | 96 | 132 | 1940 | 18.6 |
| 230 | 8.230 | 184 | 253 | 7250 | 10.5 |
| 240 | 8.240 | 192 | 264 | 8500 | 9.2 |
| 400 | 8.400 | 320 | 440 | 19800 | 6 |

R 65 - DC coil operating range v ambient temperature



R 65 - AC coil operating range v ambient temperature



- 1 - Max. permitted coil voltage.
- 2 - Min. pick-up voltage with coil at ambient temperature.

- 1 - Max. permitted coil voltage.
- 2 - Min. pick-up voltage with coil at ambient temperature.

Accessories

A



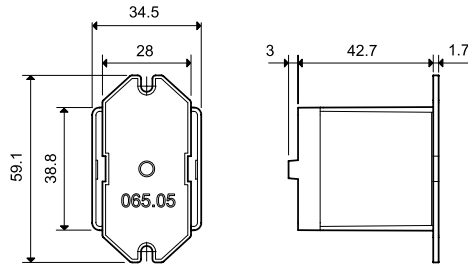
065.05



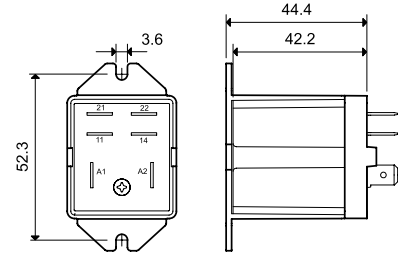
065.05 with relay

Top flange mount for types 65.31.xxxx.xxx9

065.05



065.05



065.05 with relay



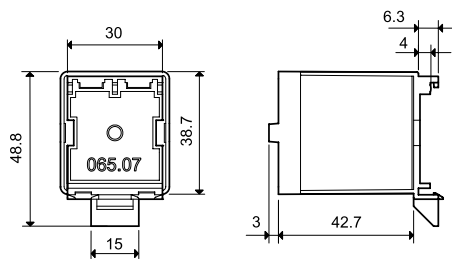
065.07



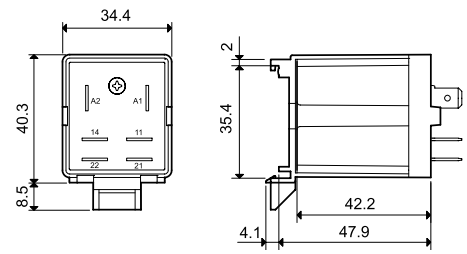
065.07 with relay

Top 35 mm rail (EN 60715) mount for types 65.31.xxxx.xxx9

065.07



065.07



065.07 with relay



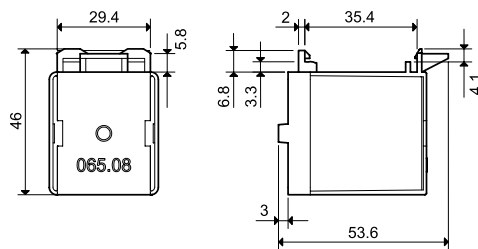
065.08



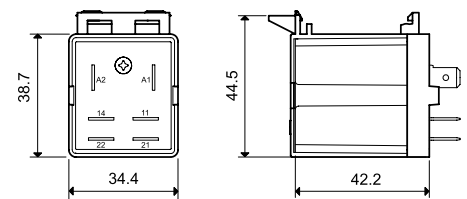
065.08 with relay

Rear 35 mm rail (EN 60715) mount for types 65.31.xxxx.xxx9

065.08



065.08



065.08 with relay

