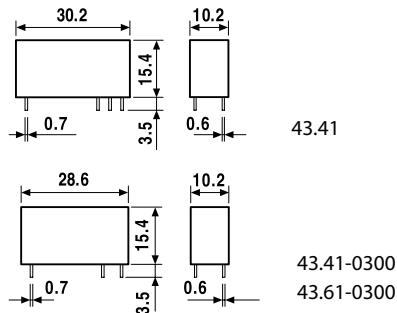


**43 Series - Low profile PCB relays 10 - 16 A**

**1 Pole - Low profile (15.4 mm height)**  
**43.41 - 1 Pole, 10 A (3.2 mm pin pitch)**  
**43.41-0300- 1 Pole NO, 10 A (5 mm pin pitch)**  
**43.61-0300- 1 Pole NO, 16 A (5 mm pin pitch)**

**PCB mount - direct or via PCB socket (43.41 version)**

- Sensitive DC coil:
  - 250 mW (10 A version)
  - 400 mW (16 A version)
- Very high coil-contact isolation 10 mm, 6 kV (1.2/50  $\mu$ s)
- Cadmium Free contacts (preferred version)
- Flux proof: RT II standard, (RT III option)



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

**Contact specification**

|                                         |           |             |                |                |
|-----------------------------------------|-----------|-------------|----------------|----------------|
| Contact configuration                   |           | 1 CO (SPDT) | 1 NO (SPST-NO) | 1 NO (SPST-NO) |
| Rated current/Maximum peak current      | A         | 10/15       | 10/15          | 16/25          |
| Rated voltage/Maximum switching voltage | V AC      | 250/400     | 250/400        | 250/400        |
| Rated load AC1                          | VA        | 2500        | 2500           | 4000           |
| Rated load AC15 (230 V AC)              | VA        | 500         | 500            | 750            |
| Single phase motor rating (230 V AC)    | kW        | —           | —              | —              |
| Breaking capacity DC1: 30/110/220 V     | A         | 10/0.3/0.12 | 10/0.3/0.12    | 16/0.3/0.12    |
| Minimum switching load                  | mW (V/mA) | 300 (5/5)   | 300 (5/5)      | 300 (5/5)      |
| Standard contact material               |           | AgNi        | AgNi           | AgNi           |

**Coil specification**

|                           |                 |                                    |                                    |                      |
|---------------------------|-----------------|------------------------------------|------------------------------------|----------------------|
| Nominal voltage ( $U_N$ ) | V AC (50/60 Hz) | —                                  | —                                  | —                    |
|                           | V DC            | 3 - 6 - 9 - 12 - 18 - 24 - 36 - 48 | 3 - 6 - 9 - 12 - 18 - 24 - 36 - 48 | 12 - 24 - 48         |
| Rated power AC/DC         | VA (50 Hz)/W    | —/0.25                             | —/0.25                             | —/0.4                |
| Operating range           | AC              | —                                  | —                                  | —                    |
|                           | DC              | $(0.7 \dots 1.5)U_N$               | $(0.7 \dots 1.5)U_N$               | $(0.7 \dots 1.2)U_N$ |
| Holding voltage           | AC/DC           | $—/0.4 U_N$                        | $—/0.4 U_N$                        | $—/0.4 U_N$          |
| Must drop-out voltage     | AC/DC           | $—/0.05 U_N$                       | $—/0.05 U_N$                       | $—/0.05 U_N$         |

**Technical data**

|                                                       |              |                   |                   |                   |
|-------------------------------------------------------|--------------|-------------------|-------------------|-------------------|
| Mechanical life AC/DC                                 | cycles       | $—/10 \cdot 10^6$ | $—/10 \cdot 10^6$ | $—/10 \cdot 10^6$ |
| Electrical life at rated load AC1                     | cycles       | $100 \cdot 10^3$  | $100 \cdot 10^3$  | $50 \cdot 10^3$   |
| Operate/release time                                  | ms           | 6/4               | 6/2               | 6/2               |
| Insulation between coil and contacts (1.2/50 $\mu$ s) | kV           | 6 (10 mm)         | 6 (10 mm)         | 6 (10 mm)         |
| Dielectric strength between open contacts             | V AC         | 1000              | 1000              | 1000              |
| Ambient temperature range                             | $^{\circ}$ C | $-40 \dots +85$   | $-40 \dots +85$   | $-40 \dots +85$   |
| Environmental protection                              |              | RT II             | RT II             | RT II             |

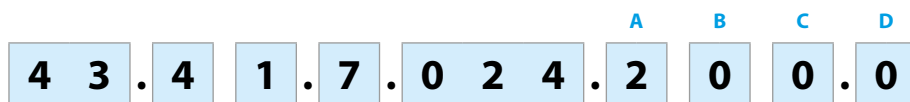
**Approvals** (according to type)



### Ordering information

Example: 43 series low-profile PCB relay, 1 CO (SPDT), 24 V DC coil.

A



**Series**  
4 = PCB - 3.2 mm pinning (CO/SPDT, 10 A)  
5 = PCB - 5 mm pinning (NO/SPST-NO, 10 A)  
6 = PCB - 5 mm pinning (NO/SPST-NO, 16 A)

**No. of poles**  
1 = 1 pole

**Coil version**  
7 = Sensitive DC (only for 43.41)  
9 = DC (only for 43.61)

**Coil voltage**  
See coil specifications

**A: Contact material**

0 = AgNi  
2 = AgCdO  
4 = AgSnO2  
5 = AgNi + Au

**B: Contact circuit**

0 = CO (SPDT) - (for 43.41 only)  
3 = NO (SPST)

**D: Special versions**

0 = Flux proof (RT II)  
1 = Wash tight (RT III)

**C: Options**

0 = None

**Selecting features and options: only combinations in the same row are possible.**  
Preferred selections for best availability are shown in **bold**.

| Type  | Coil version | A                    | B            | C        | D            |
|-------|--------------|----------------------|--------------|----------|--------------|
| 43.41 | sensitive DC | <b>0</b> - 2 - 4 - 5 | <b>0</b> - 3 | <b>0</b> | <b>0</b> - 1 |
| 43.61 | DC           | <b>0</b> - 2 - 4     | <b>0</b> - 3 | <b>0</b> | <b>0</b>     |

### Technical data

#### Insulation according to EN 61810-1

|                                  |      |         |
|----------------------------------|------|---------|
| Nominal voltage of supply system | V AC | 230/400 |
| Rated insulation voltage         | V AC | 250 400 |
| Pollution degree                 |      | 3 2     |

#### Insulation between coil and contact set

|                       |                |                    |
|-----------------------|----------------|--------------------|
| Type of insulation    |                | Reinforced (10 mm) |
| Overvoltage category  |                | III                |
| Rated impulse voltage | kV (1.2/50 μs) | 6                  |
| Dielectric strength   | V AC           | 4000               |

#### Insulation between open contacts

|                       |                     |                     |
|-----------------------|---------------------|---------------------|
| Type of disconnection |                     | Micro-disconnection |
| Dielectric strength   | V AC/kV (1.2/50 μs) | 1000/1.5            |

#### Conducted disturbance immunity

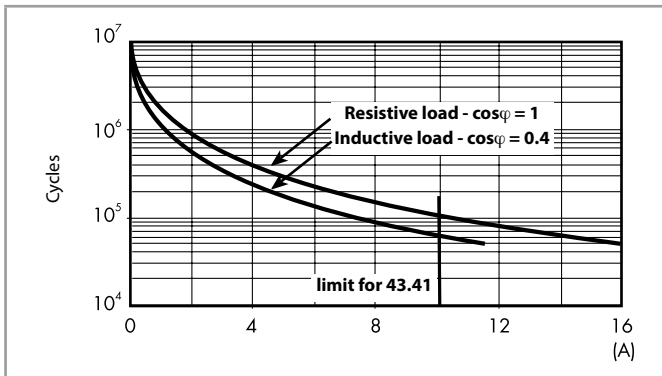
|                                                  |              |                |
|--------------------------------------------------|--------------|----------------|
| Burst (5...50)ns, 5 kHz, on A1 - A2              | EN 61000-4-4 | level 4 (4 kV) |
| Surge (1.2/50 μs) on A1 - A2 (differential mode) | EN 61000-4-5 | level 3 (2 kV) |

#### Other data

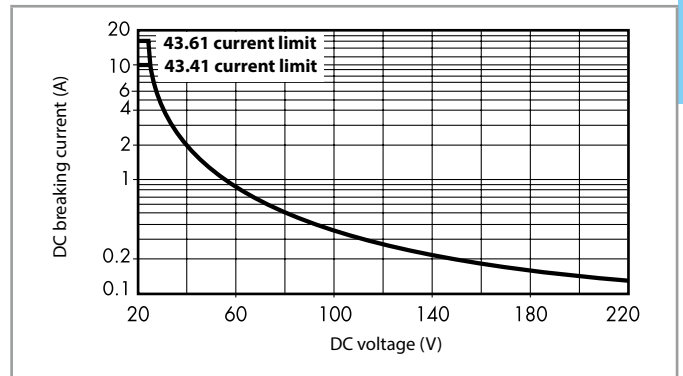
|                                                    |                         |                            |
|----------------------------------------------------|-------------------------|----------------------------|
| Bounce time: NO/NC                                 | ms                      | 3/6                        |
| Vibration resistance (5...55)Hz: NO/NC             | g                       | 15/3                       |
| Shock resistance                                   | g                       | 15                         |
| Power lost to the environment                      | without contact current | W 0.25 (43.41) 0.4 (43.61) |
|                                                    | with rated current      | W 1.3 (43.41) 2 (43.61)    |
| Recommended distance between relays mounted on PCB | mm                      | ≥ 5                        |

**Contact specification**

**F 43 - Electrical life (AC) v contact current**



**H 43 - Maximum DC1 breaking capacity**



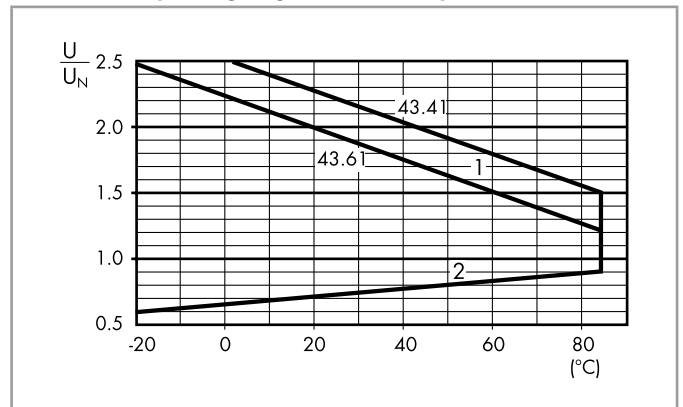
- When switching a resistive load (DC1) having voltage and current values under the curve, an electrical life of  $\geq 100 \cdot 10^3$  for 43.41 and  $\geq 50 \cdot 10^3$  for 43.61 can be expected.
- In the case of DC13 loads, the connection of a diode in parallel with the load will permit a similar electrical life as for a DC1 load.  
Note: the release time for the load will be increased.

**Coil specifications**

**DC coil data - 0.25 W sensitive (type 43.41)**

| Nominal voltage<br>$U_N$<br>V | Coil code | Operating range |                | Resistance<br>R<br>$\Omega$ | Rated coil consumption<br>I at $U_N$<br>mA |
|-------------------------------|-----------|-----------------|----------------|-----------------------------|--------------------------------------------|
|                               |           | $U_{min}$<br>V  | $U_{max}$<br>V |                             |                                            |
| 3                             | 7.003     | 2.2             | 4.5            | 36                          | 83.5                                       |
| 6                             | 7.006     | 4.2             | 9              | 150                         | 40                                         |
| 9                             | 7.009     | 6.5             | 13.5           | 324                         | 27.7                                       |
| 12                            | 7.012     | 8.4             | 18             | 580                         | 20.7                                       |
| 18                            | 7.018     | 13              | 27             | 1,300                       | 13.8                                       |
| 24                            | 7.024     | 16.8            | 36             | 2,200                       | 10.9                                       |
| 36                            | 7.036     | 25.2            | 54             | 5,200                       | 6.9                                        |
| 48                            | 7.048     | 33.6            | 72             | 9,200                       | 5.2                                        |

**R 43 - DC coil operating range v ambient temperature**



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

**DC coil data - 0.4 W standard (type 43.61)**

| Nominal voltage<br>$U_N$<br>V | Coil code | Operating range |                | Resistance<br>R<br>$\Omega$ | Rated coil consumption<br>I at $U_N$<br>mA |
|-------------------------------|-----------|-----------------|----------------|-----------------------------|--------------------------------------------|
|                               |           | $U_{min}$<br>V  | $U_{max}$<br>V |                             |                                            |
| 12                            | 9.012     | 8.4             | 14.4           | 360                         | 33.3                                       |
| 24                            | 9.024     | 16.8            | 28.8           | 1,400                       | 17.1                                       |
| 48                            | 9.048     | 33.6            | 57.6           | 5,760                       | 8.3                                        |

## 43 Series - Low profile PCB relays 10 - 16 A



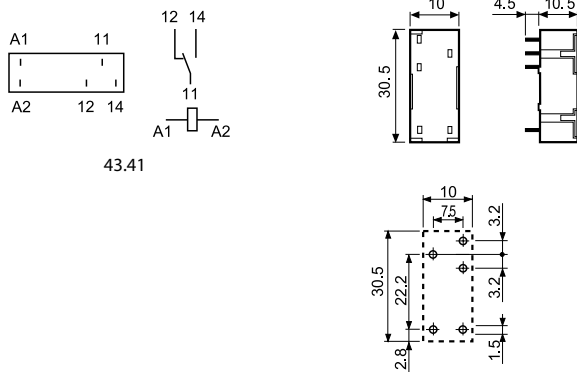
A

95.23

Approvals  
(according to type):



| PCB socket (for changeover contacts only)                           | 95.23 (blue)                               | 95.23.0 (black) |
|---------------------------------------------------------------------|--------------------------------------------|-----------------|
| For relay type                                                      | 43.41                                      | 43.41           |
| <b>Accessories</b>                                                  |                                            |                 |
| Metal retaining clip<br>(supplied with socket - packaging code SMA) |                                            | 095.43          |
| <b>Technical data</b>                                               |                                            |                 |
| Rated values                                                        | 10 A - 250 V                               |                 |
| Insulation                                                          | 6 kV (1.2/50 μs) between coil and contacts |                 |
| Protection category                                                 | IP 20                                      |                 |
| Ambient temperature                                                 | °C -40...+70                               |                 |



Copper side view

### Packaging codes

How to code and identify retaining clip and packaging options for sockets.

Example:

