

# RBC20

**20 A, AC control voltage, silent operation**  
**DIN rail mounting according to DIN 43 880**



**Type: RBC20-xxx/AC230V**

Step relay, 2 contacts, 2 NO, 1 NO-1 NC types available  
 Manually switchable

|   |  |
|---|--|
| <b>Rated operational power</b>          | <b>4 kW / 230 V AC-1, 0.5 A / 220 V DC-1</b> |
| <b>Recommended minimum contact load</b> | <b>100 mA / 10 V</b>                         |

**Contacts**

|                             |                                 |
|-----------------------------|---------------------------------|
| Material                    | AgNi                            |
| Rated operational current   | 20 A                            |
| Max. inrush current (100ms) | 50 A                            |
| Max. switching voltage      | 440 V                           |
| Max. AC load                | AC-1, AC-7a<br>AC-3             |
|                             | 4 kW / 230 V<br>0.55 kW / 230 V |
| Max. DC load                | 24 V / 220 V DC-1 (Fig. 1)      |
|                             | 480 W / 110 W                   |

**Control input V<sub>n</sub> =**

|                             |            |
|-----------------------------|------------|
| <b>AC 230 V</b>             |            |
| Operating voltage range [V] | 10 ... 440 |
| Typ. pick up voltage [V]    | 160        |
| Typ. release voltage [V]    | 70         |
| Power consumption [W]       | 4          |
| Inductive turn-off voltage  | None       |
| Surge immunity EN 6100-4-5  | 2 kV       |

**Insulation**

|                                 |       |
|---------------------------------|-------|
| Rated insulation voltage        | 440 V |
| Rated impulse withstand voltage | 4 kV  |
| Min. clearance of open contact  | 3 mm  |

**General Specifications**

|  |  |
|--|--|
| Ambient temperature storage                    | -30 ... 80 °C  |
| operation                                      | -25 ... 55 °C  |
| Pick-up time                                   | 15 ... 45 ms   |
| Release time                                   | 20 ... 50 ms   |
| Mechanical life                                | 10 <sup>6</sup> operations                           |
| AC voltage endurance at rated load AC-3, AC-7b | 10 <sup>5</sup> operations                           |
| DC voltage endurance at rated load DC-1        | 10 <sup>5</sup> operations                           |
| Operating frequency at rated load DC-1         | ≤ 900 operations / h                                 |
| Operating frequency at rated load AC-1         | ≤ 900 operations / h                                 |
| Conductor cross section coil /contacts         | Stranded wire 4 mm <sup>2</sup> / 10 mm <sup>2</sup> |
| Max. Screw torque coil /contacts               | 0.6 Nm / 1.2 Nm                                      |
| Ingress protection degree                      | IP 20  |
| Weight   | 132 g  |

**Standard types**

|   |                  |                         |
|---|------------------|-------------------------|
| <b>AC 50 / 60 Hz, 230</b>                         | <b>2NO</b>       | <b>RBC20-200/AC230V</b> |
| „...“ enter the voltage for full type designation | <b>1NO + 1NC</b> | <b>RBC20-110/AC230V</b> |

**Accessories**

Auxiliary contact bloc: **RBC-AUX..**

**Samples of lamp loads**

|   |    |
|---|----|
| <b>Number of lamps</b>                          |    |
| Incandescent lamps 230 V / 100 W                | 20 |
| Fluorescent lamps not corrected 230 V / 36 W    | 29 |
| Fluorescent lamps electronic ballast units 36 W | 38 |

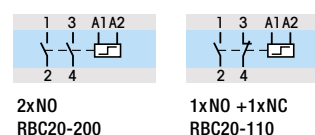
**Mounting information**

If multiple contactors are mounted side by side, spacers (RIC DIST) have to be inserted for the purpose of heat dissipation.

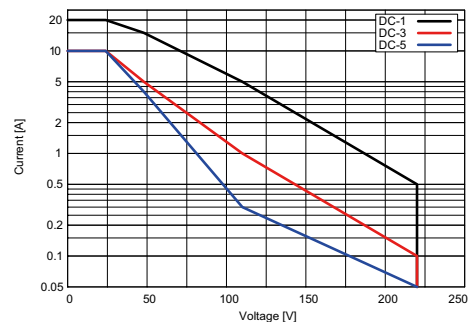
**Example:** Ambient temperature up to 40°C: 1 spacer after 3 RBC // 40...55°C: 1 spacer after 2 RBC.



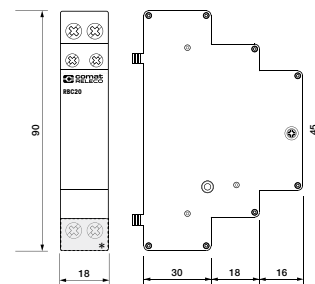
**Connection diagram**



**Fig. 1 DC load limit curve DC-1**



**Dimensions [mm]**



**Technical approvals, conformities**

IEC/EN 60947-4-1, VDE 0660  
 IEC/EN 60947-5-1  
 IEC/EN 61095, VDE 0637