

# RBC20-200/AC230V

2 or 4 pole | 20 A | 4.4 kW | Step switch | Manual lever 0 - 1 - Lock



## Main circuit

Available contact materials	⚡ AgNi
Rated voltage	230 V AC
Rated current AC-1	20 A
Recommended minimum contact load	100 mA, 10 V
Inrush current	50 A, 100 ms / 180 A, 300 μs
Rated load AC-1	4.4 kW
Rated load AC-3	0.55 kW
Rated load DC-1	see fig. 2
Mechanical endurance (cycles)	≥ 1 000 000
Electrical endurance at rated load AC-1 (cycles)	≥ 100 000
Electrical endurance at rated load AC-3 (cycles)	≥ 100 000
Electrical endurance at rated load DC-1 (cycles)	≥ 100 000
Switching frequency at rated load AC-1 (cycles / h)	≤ 600
Switching frequency at rated load AC-3 (cycles / h)	≤ 600
Switching frequency at rated load DC-1 (cycles / h)	≤ 300

## Control circuit

Nominal voltage	see table product references
Operating voltage range	0.9 ... 1.1 U <sub>N</sub>
Pick-up voltage	≤ 0.75 U <sub>N</sub>
Release voltage	≥ 0.1 U <sub>N</sub>
Minimal impulse duration at rated voltage U <sub>N</sub>	50 ms
Minimal impulse duration at 0.9 U <sub>N</sub>	100 ms
Minimal pause between two impulses	150 ms
Maximal impulse duration	≤ 15 / min
Maximal number of impulses	≤ 60 / min
Pick-up time	5 ... 35 ms
Release time	5 ... 35 ms
Power consumption AC / DC	9 VA / 4 W
Frequency range	50 / 60 Hz

## Insulation

Rated insulation voltage	440 V
Rated impulse withstand voltage open contact	4 kV / 1 min
Pollution degree	3
Overtoltage category	III
Clearance of open contact	> 3 mm

## Wiring

Contact type control / main circuit	Screw connection, M3 / M4
Conductor cross section control / main circuit	4 mm <sup>2</sup> / 10 mm <sup>2</sup>
Stripping Length control / main circuit	7 mm / 9 mm
Nominal screw torque control / main circuit	0.6 Nm / 1.2 Nm
Screwdrive control / main circuit	PZ1 / PZ2
Max. wire count control / main circuit	1
Dual sleeve control / main circuit	1

## Housing and environmental conditions

Storage temperature (no ice)	-30 ... 80 °C
Ambient temperature operation 2 devices, 1 spacer	40 ... 55 °C
Ambient temperature operation 3 devices, 1 spacer	-15 ... 40 °C
Relative humidity, no condensation	95 %
Ingress Protection	IP 20
Weight	135 g
Housing material	PA 6
Operation Altitude	Max. 2 000 m
Mounting	DIN rail
Dimensions	see fig. 3
Mounting position	see installation instructions
Vibration test	3 g (Z axis)
Shock test	15 g (Z axis)

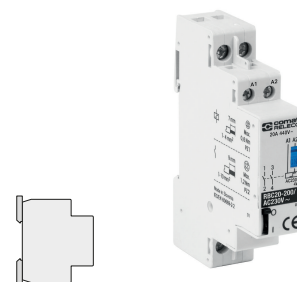


fig. 1. Wiring diagram



fig. 2. DC load limit curve

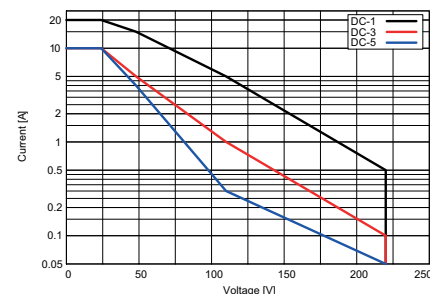
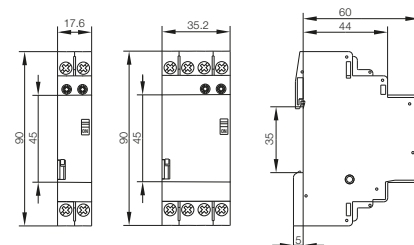


fig. 3. Dimensions (mm)



## Technical approvals, conformities

Standards IEC/EN 60947; IEC/EN 61095

Approvals

# RBC20-200/AC230V

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## Safety

MTTF - Mean time to failure, AC-1 (h)	4.166
MTTF = $1/\lambda = B10/(0.1 n_{op})$ , AC-3 (h)	4.166
MTTF <sub>d</sub> - Mean time to failure dangerous, AC-1 (h)	8.333
MTTF <sub>d</sub> = $1/\lambda = B10_d/(0.1 n_{op})$	8.333
B10 - Number of operating cycles until 10 % of devices fail, AC-1	50,000
B10 - Number of operating cycles until 10 % of devices fail, AC-3	50,000
B10 <sub>d</sub> - Number of operating cycles until 10 % of devices fail dangerous, AC-1	100,000
B10 <sub>d</sub> = B10/ratio of dangerous failures, AC-3	100,000
$\lambda$ - Failure rate, AC-1 (1/h)	0.00024
$\lambda = (0.1 n_{op})/B10$ , AC-3 (1/h)	0.00024
$\lambda_d$ - Failure rate dangerous, AC-1 (1/h)	0.00012
$\lambda_d = (0.1 n_{op})/B10_{op}$ , AC-3 (1/h)	0.00012
Ratio of dangerous failures (%)	50
$n_{op}$ - Operating cycles (operating cycles/h)	120

## Product references

Description	Type	230
2 NO	RBC20-200/AC...V	✓

Other voltages on request. Please contact support@comatreleco.com.  
«...» List control circuit voltage to complete product references.

## Accessories

Spacer	RIC-DIST
Auxiliary module for centralized control	RBC-AUX-CM
Auxiliary module for group control	RBC-AUX-GM

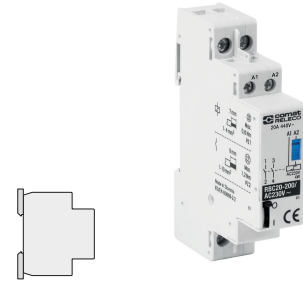


fig. 1. Wiring diagram

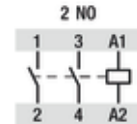


fig. 2. DC load limit curve

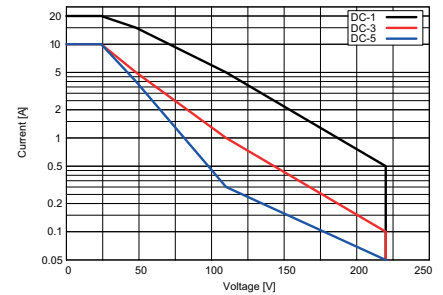
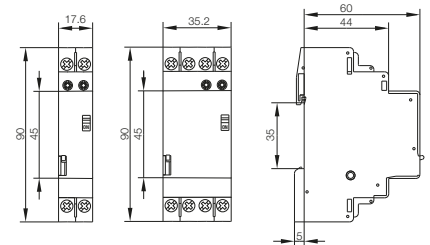


fig. 3. Dimensions (mm)



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Approvals