

RBC20-400/AC24V

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 (17.5 mm)	400 V AC (35 mm)
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 _N
Pick-up voltage	≤ 0.75 U _N
Release voltage	≥ 0.1 U _N
Minimal impulse duration at rated voltage U _N	50 ms
Minimal impulse duration at 0.9 U _N	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 ² / 10 mm ²
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

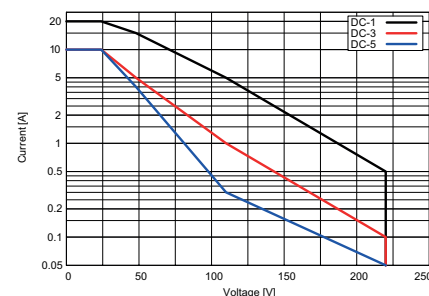
Storage temperature (no ice)	-30 ... 80 °C
Ambient temperature operation 2 devices, 1 spacer	40 ... 55 °C
Ambient temperature operation 3 devices, 1 spacer	-15 ... 40 °C
Relative humidity, no condensation	95 %
Ingress Protection	IP 20
Weight	135 g
Housing material	PA 6
Operation Altitude	Max. 2 000 m
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



Technical approvals, conformities

Standards IEC/EN 60947; IEC/EN 61095

Approvals

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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 _d - Mean time to failure dangerous, AC-1 (h)	8.333
MTTF _d = $1/\lambda = B10_d/(0.1 n_{op})$	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 _d - Number of operating cycles until 10 % of devices dangerous, AC-1	100,000
B10 _d = B10/ratio of dangerous failures, AC-3	100,000
λ - Failure rate, AC-1 (1/h)	0.00024
$\lambda = (0.1 n_{op})/B10$, AC-3 (1/h)	0.00024
λ_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	24
4 NO	RBC20-400/AC...V	✓

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

Accessories

Auxiliary contact	RBC-AUX11, RBC-AUX20
Spacer	RIC-DIST
Auxiliary module for centralized control	RBC-AUX-CM
Auxiliary module for group control	RBC-AUX-GM



fig. 1. Wiring diagram

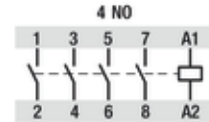
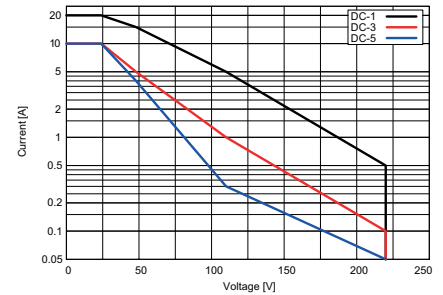


fig. 2. DC load limit curve



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