RIC20-110/UC12V

2 pole | 20 A | 4 kW

Main circuit

Available contact materials	AgNi
Rated voltage	400 V AC
Rated current AC-1	20 A
Recommended minimum contact load	50 mA, 17 V
Inrush current	50 A, 100 ms / 180 A, 300 µs
Rated load AC-1 single-phase 230 V	4 kW
Rated load AC-3	1.3 (NO) / 0.75 (NC) kW
Rated load DC-1	see fig. 2
Mechanical endurance (cycles)	≥ 10 000 000
Electrical endurance at rated load AC-1 (cycles)	≥ 200 000
Electrical endurance at rated load AC-3 (cycles)	≥ 300 000
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	0.85 ... 1.1 U_N
Pick-up voltage	≤ 0.85 U_N
Release voltage	≥ 0.1 U_N
Pick-up time	15 ... 45 ms
Release time	20 ... 50 ms
Power consumption AC / DC	2.1 VA / 2.1 W
Frequency range	40 ... 500 Hz

Insulation

Rated insulation voltage	440 V
Rated impulse withstand voltage open contact	4 kV / 1 min
Pollution degree	3
Overvoltage category	III
Clearance of open contact	3.6 mm

Wiring

Contact type control / main circuit	Screw connection, M3 / M3.5
Conductor cross section control / main circuit	2.5 mm² / 6 mm²
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 / PZ1

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 huminity, no condensation	95 %
Ingress Protection	IP 20
Weight	130 g
Housing material	PA 6
Operation Altitude	Max. 2 000 m
Mounting	DIN rail
Dimensions	see fig. 3

Safety

MTTF - Mean time to failure, AC-1 (h)	5,000
MTTF = 1/λ = B10/(0.1 n_{op}), AC-3 (h)	7,500
$MTTF_d$ - Mean time to failure dangerous, AC-1 (h)	6,667
$MTTF_d$ = 1/λ = $B10_d$ /(0.1 n_{op})	10,000
B10 - Number of operating cycles until 10 % of devices fail, AC-1	150,000
B10 - Number of operating cycles until 10 % of devices fail, AC-3	225,000
$B10_d$ - Number of operating cycles until 10 % of device dangerous, AC-1	200,000
$B10_d$ = B10/ratio of dangerous failures, AC-3	300,000
λ - Failure rate, AC-1 (1/h)	0.0002
λ = (0.1 n_{op})/B10, AC-3 (1/h)	0.000133
λ_d - Failure rate dangerous, AC-1 (1/h)	0.00015
λ_d = (0.1n_d)/$B10_{op}$, AC-3 (1/h)	0.0001
Ratio of dangerous failures (%)	75
n_{op} - Operating cycles (operating cycles/h)	300

fig. 1. Wiring diagram

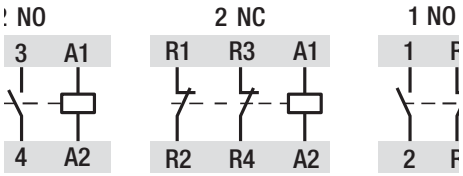


fig. 2. DC load limit curve

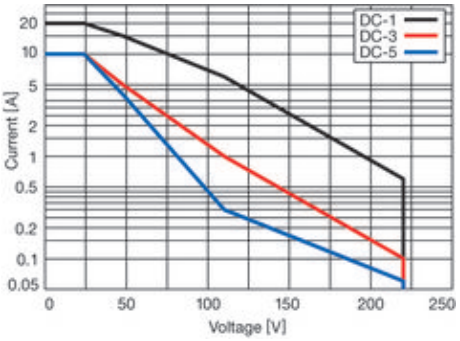
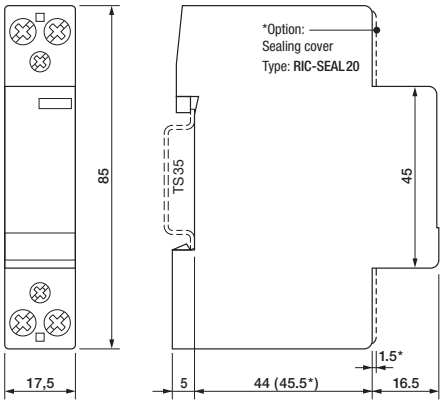


fig. 3. Dimensions (mm)



Technical approvals, conformities

Standards IEC/EN 60947; IEC/EN 61095

Approvals

RIC20-110/UC12V

2 pole | 20 A | 4 kW

Product references

Description	Type	12
1 NO + 1 NC	RIC20-110/UC...V	✓

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

Accessories

Sealing cover	RIC-SEAL20
Spacer	RIC-DIST
End covers	RIC-EK-11 (BAG 25 PCS), RIC-EK-23 (BAG 10 PCS)
Busbar	RIC-NS-1-1, RIC-PS-1-2

fig. 1. Wiring diagram

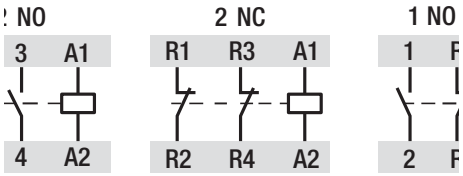


fig. 2. DC load limit curve

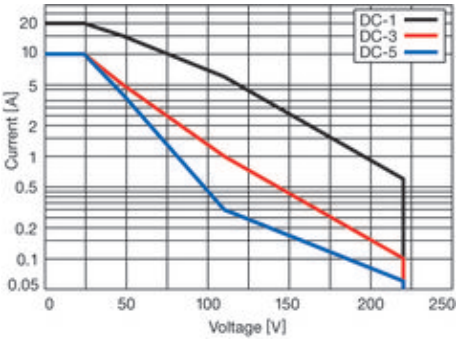
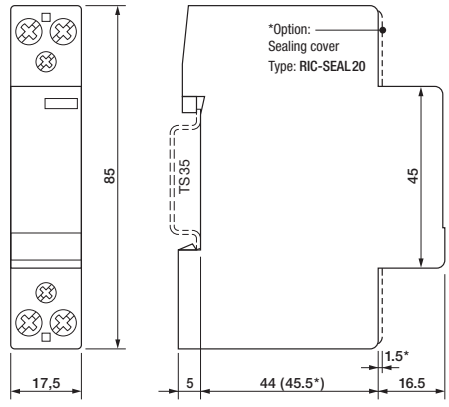


fig. 3. Dimensions (mm)



Technical approvals, conformities

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Approvals