# RIC20-110/UC24V

## 2 pole | 20 A | 4 kW

### Main circuit

| | |
|---|---|
| Available contact materials | AgNi |
| Rated voltage | 230 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 |

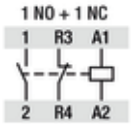
### Wiring

| | |
|---|---|
| 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 |
| Max. wire count control / main circuit | 1 |
| Dual sleeve control / main circuit | 1 |

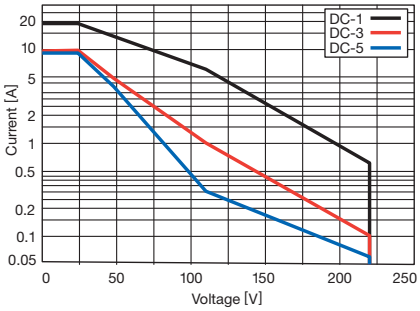
### Housing and environmental conditions

| | |
|---|---|
| Storage temperature (no ice) | -30 ... 80 °C |
| Operation temperature | -15 … 55 °C |
| Relative huminity, no condensation | 95 % relative humidity |
| Ingress Protection | IP 20 |
| Weight | 130 g |
| Housing material | PA 6 |
| Operation Altitude | Max. 2 000 m |
| Mounting | DIN rail |
| Dimensions | 17.5 x 65.5 x 85 mm |
| Vibration test | switched off: 2 g (Z and X axis) / switched on: 3 g (Z axis) and 1 g (X axis |
| Shock test | switched off: 10 g (Z and X axis) / switched on: 15 g (Z axis) and 2 g (X axis) |

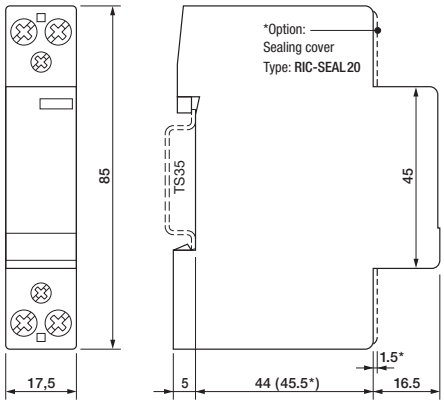
### fig. 1. Wiring diagram




### fig. 2. DC load limit curve




### fig. 3. Dimensions (mm)




### Technical approvals, conformities

Standards IEC/EN 60947; IEC/EN 61095

Approvals

# RIC20-110/UC24V

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### Safety

| | |
|---|---|
| MTTF - Mean time to failure, AC-1 (h) | 5,000 |
| MTTF = $1/\lambda$ = B10/(0.1 $n_{op}$ ), AC-3 (h) | 7,500 |
| $MTTF_d$ - Mean time to failure dangerous, AC-1 (h) | 6,667 |
| $MTTF_d = 1/\lambda = B10_d$ /(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 |
| $\lambda$ - Failure rate, AC-1 (1/h) | 0.0002 |
| $\lambda$ = (0.1 $n_{op}$)/B10, AC-3 (1/h) | 0.000133 |
| $\lambda_d$ - Failure rate dangerous, AC-1 (1/h) | 0.00015 |
| $\lambda_d = (0.1n_d)/B10_{op}$, AC-3 (1/h) | 0.0001 |
| Ratio of dangerous failures (%) | 75 |
| $n_{op}$ - Operating cycles (operating cycles/h) | 300 |

### Product references

| Description | Type | 24 |
|---|---|---|
| 1 NO + 1 NC | RIC20-110/UC...V | ✓ |

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

### Accessories

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

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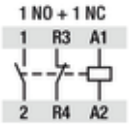


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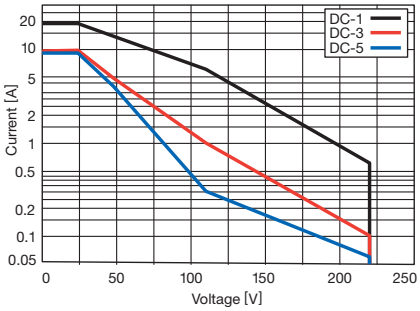


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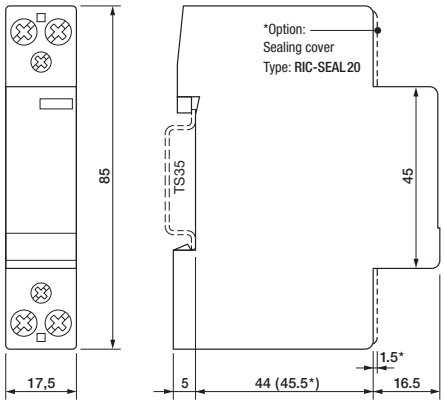


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Approvals