

# RAC25-220/UC24V

2 pole | 25 A | 5.4 kW | Manual lever Auto - 1 - Lock



## Main circuit

|                                                     |                                   |
|-----------------------------------------------------|-----------------------------------|
| Available contact materials                         | AgNi                              |
| Rated voltage                                       | 400 V AC                          |
| Rated current AC-1                                  | 25 A                              |
| Recommended minimum contact load                    | 50 mA, 17 V                       |
| Inrush current                                      | 60 A, 100 ms / 280 A, 300 $\mu$ s |
| Rated load AC-1                                     | 5.4 kW                            |
| Rated load AC-3                                     | 1.3 kW                            |
| Rated load DC-1                                     | see fig. 2                        |
| Mechanical endurance (cycles)                       | $\geq 10\,000\,000$               |
| Electrical endurance at rated load AC-1 (cycles)    | $\geq 200\,000$                   |
| Electrical endurance at rated load AC-3 (cycles)    | $\geq 500\,000$                   |
| Electrical endurance at rated load DC-1 (cycles)    | $\geq 100\,000$                   |
| Switching frequency at rated load AC-1 (cycles / h) | $\leq 600$                        |
| Switching frequency at rated load AC-3 (cycles / h) | $\leq 600$                        |
| Switching frequency at rated load DC-1 (cycles / h) | $\leq 300$                        |

## Control circuit

|                           |                              |
|---------------------------|------------------------------|
| Nominal voltage           | see table product references |
| Operating voltage range   | 0.85 ... 1.1 $U_N$           |
| Pick-up voltage           | $\leq 0.85 U_N$              |
| Release voltage           | $\geq 0.1 U_N$               |
| Pick-up time              | 15 ... 45 ms                 |
| Release time              | 20 ... 70 ms                 |
| Power consumption AC / DC | 2.6 VA / 2.6 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 mm <sup>2</sup> / 6 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 / PZ1                               |

## Housing and environmental conditions

|                                    |                                                                                 |
|------------------------------------|---------------------------------------------------------------------------------|
| Storage temperature (no ice)       | -40 ... 80 °C                                                                   |
| Operation temperature              | -15 ... 55 °C                                                                   |
| Relative humidity, no condensation | 95 % relative humidity                                                          |
| Ingress Protection                 | IP 20                                                                           |
| Weight                             | 250 g                                                                           |
| Housing material                   | PA 6                                                                            |
| Operation Altitude                 | Max. 2 000 m                                                                    |
| Mounting                           | DIN rail                                                                        |
| Dimensions                         | 85 x 35 x 65 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) |

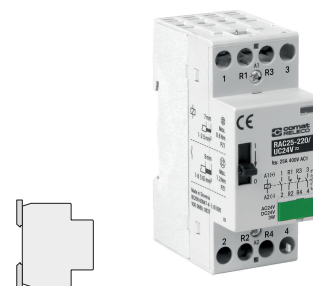


fig. 1. Wiring diagram

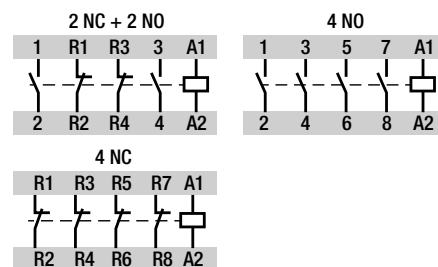


fig. 2. DC load limit curve

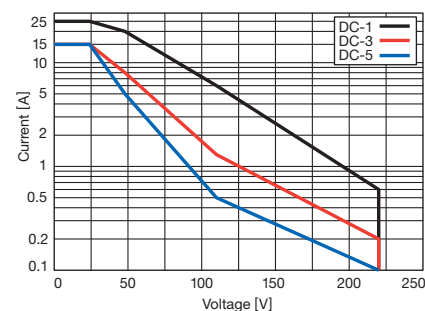
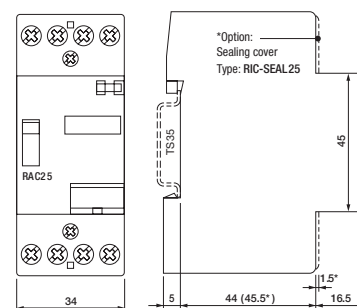


fig. 3. Dimensions (mm)



## Technical approvals, conformities

Standards IEC/EN 60947; IEC/EN 61095

Approvals

# RAC25-220/UC24V

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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)                               | 10.416   |
| MTTF <sub>d</sub> - Mean time to failure dangerous, AC-1 (h)                   | 5.555    |
| MTTF <sub>d</sub> = $1/\lambda = B10_d/(0.1 n_{op})$                           | 13.888   |
| 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              | 375,000  |
| B10 <sub>d</sub> - Number of operating cycles until 10 % of devices fail, AC-1 | 200,000  |
| B10 <sub>d</sub> = B10/ratio of dangerous failures, AC-3                       | 500,000  |
| $\lambda$ - Failure rate, AC-1 (1/h)                                           | 0.00024  |
| $\lambda = (0.1 n_{op})/B10$ , AC-3 (1/h)                                      | 0.000096 |
| $\lambda_d$ - Failure rate dangerous, AC-1 (1/h)                               | 0.00018  |
| $\lambda_d = (0.1 n_{op})/B10_{op}$ , AC-3 (1/h)                               | 0.000072 |
| Ratio of dangerous failures (%)                                                | 75       |
| $n_{op}$ - Operating cycles (operating cycles/h)                               | 360      |

## Product references

| Description | Type             | 24 |
|-------------|------------------|----|
| 2 NO + 2 NC | RAC25-220/UC...V | ✓  |

Other voltages on request. Please contact support@comatreleco.com.

«...» List control circuit voltage to complete product references.

## Accessories

|                   |                                                                        |
|-------------------|------------------------------------------------------------------------|
| Sealing cover     | RIC-SEAL25                                                             |
| Spacer            | RIC-DIST                                                               |
| Busbar            | RIC-NS-2-1, RIC-PS-2-3, RIC-PS-2-4                                     |
| End covers        | RIC-EK-11 (BAG 25 PCS), RIC-EK-23 (BAG 10 PCS), RIC-EK-40 (BAG 10 PCS) |
| Auxiliary contact | RIC-AUX02, RIC-AUX11, RIC-AUX20                                        |

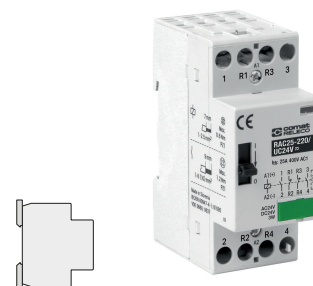


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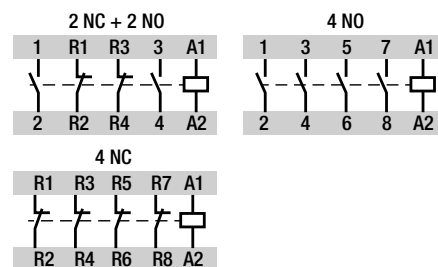


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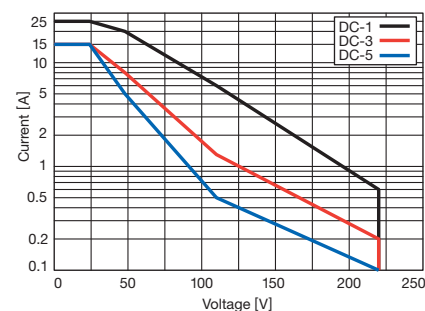
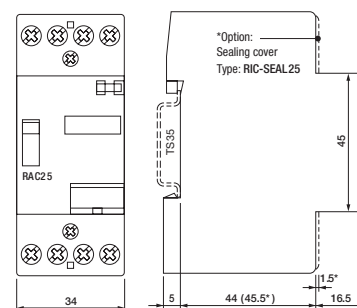


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