



Product designation

RF420

Product type designation

Motor protection  
relay

### General characteristics

|                         |          |                        |
|-------------------------|----------|------------------------|
| Number of poles         | Nr.      | 3                      |
| Overvoltage category    |          | III                    |
| Pollution degree        |          | 3                      |
| Frontal IP degree       |          | IP20                   |
| Type of release         |          | Thermal                |
| Protection fuse         |          |                        |
|                         | gG (IEC) | A 630                  |
|                         | aM (IEC) | A 500                  |
|                         | K5 (UL)  | A 800                  |
| Phase failure detection |          | yes                    |
| Reset mode              |          | Manual or<br>automatic |

### Power circuit characteristics

|                                           |                         |       |
|-------------------------------------------|-------------------------|-------|
| Rated insulation voltage $U_i$ IEC/EN     | V                       | 1000  |
| Rated impulse withstand voltage $U_{imp}$ | kV                      | 6     |
| Rated operational voltage                 | V                       | 690   |
| Operational frequency                     |                         |       |
|                                           | min                     | Hz 50 |
|                                           | max                     | Hz 60 |
| Operational current $I_e$                 |                         |       |
|                                           | Operational current min | A 250 |
|                                           | Operational current max | A 420 |
| Tripping class                            |                         | 10A   |
| Test Button                               |                         | Yes   |
| Trip indicator                            |                         | yes   |

Terminals

|       |                          |
|-------|--------------------------|
| type  | screw and flat<br>washer |
| screw | M10                      |
| width | 25                       |
| tool  | Bar 18mm                 |

Tightening torque for terminals

|     |      |      |
|-----|------|------|
| min | Nm   | 35   |
| max | Nm   | 35   |
| min | lbin | 25.9 |
| max | lbin | 25.9 |

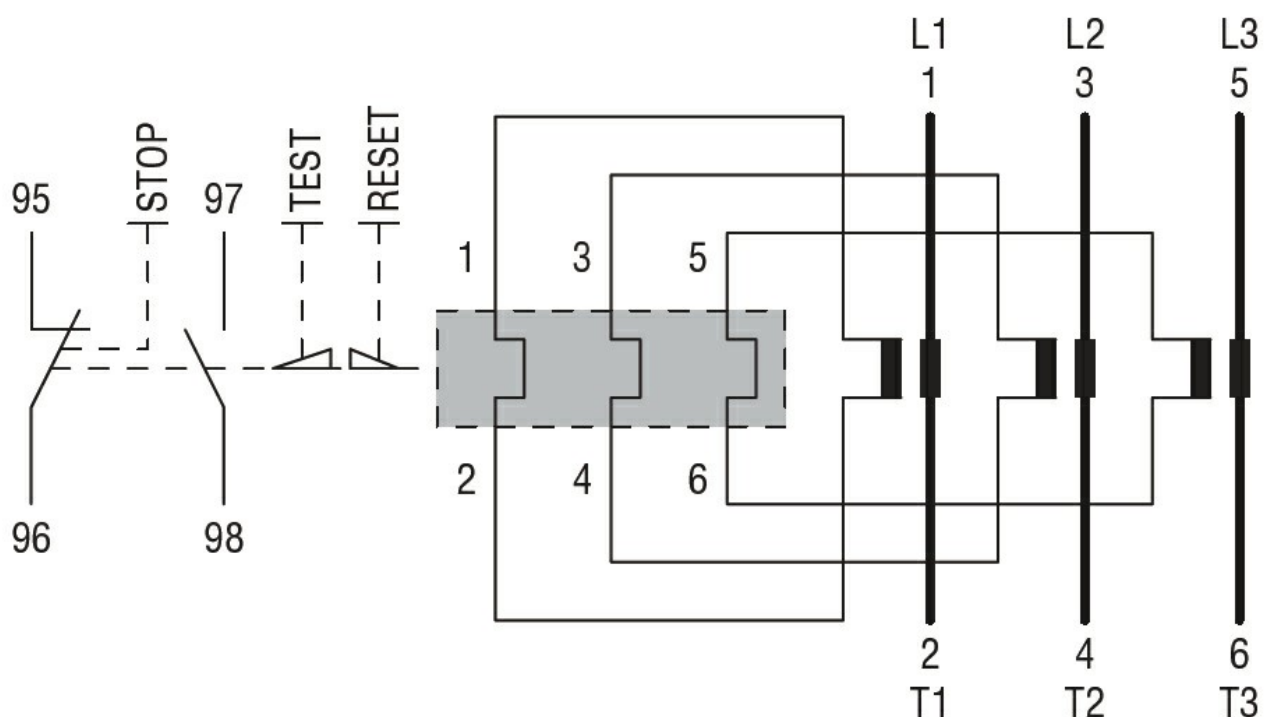
### Auxiliary circuit characteristics

Auxiliary contacts

|    |     |   |
|----|-----|---|
| NO | Nr. | 1 |
| NC | Nr. | 1 |

Auxiliary Rated insulation voltage  $U_i$  IEC/EN V 690

|                                                  |                                        |                     |
|--------------------------------------------------|----------------------------------------|---------------------|
| Auxiliary Rated impulse withstand voltage Uimp   | kV                                     | 6                   |
| Auxiliary Rated operational voltage              | V                                      | 690                 |
| Operating current AC15                           | 24V                                    | A 3                 |
|                                                  | 120V                                   | A 3                 |
|                                                  | 240V                                   | A 1.5               |
|                                                  | 380V                                   | A 0.95              |
|                                                  | 480V                                   | A 0.75              |
|                                                  | 500V                                   | A 0.72              |
|                                                  | 600V                                   | A 0.6               |
| Operating current DC13                           | 125V                                   | A 0.11              |
|                                                  | 600V                                   | A 0.22              |
| IEC Conventional free air thermal current Ith    | A                                      | 10                  |
| Terminals                                        | Auxiliary circuit type                 | screw and washer    |
|                                                  | Auxiliary circuit screw                | M3,5                |
|                                                  | Auxiliary circuit width                | mm 8                |
|                                                  | Auxiliary circuit tool                 | Phillips 2          |
| Conductor section                                | Auxiliary circuit Flexible w/o lug max | mm <sup>2</sup> 2.5 |
|                                                  | Auxiliary circuit Flexible c/w lug max | mm <sup>2</sup> 2.5 |
| Tightening torque for terminals                  | Auxiliary circuit min                  | Nm 0.8              |
|                                                  | Auxiliary circuit max                  | Nm 1                |
|                                                  | Auxiliary circuit min                  | lbin 0.59           |
|                                                  | Auxiliary circuit max                  | lbin 0.74           |
| UL/CSA and IEC/EN 60947-5-1 designation          |                                        | B600-R300           |
| <b>Ambient conditions</b>                        |                                        |                     |
| Operating temperature                            | min                                    | °C -25              |
|                                                  | max                                    | °C 60               |
| Storage temperature                              | min                                    | °C -50              |
|                                                  | max                                    | °C 70               |
| Compensation temperature                         | min                                    | °C -20              |
|                                                  | max                                    | °C 60               |
| Max altitude                                     | m                                      | 3000                |
| <b>Mechanical features</b>                       |                                        |                     |
| Operating position                               | normal allowable                       | Vertical plan ±30°  |
| Fixing                                           |                                        | Screw               |
| Weight                                           | g                                      | 2460                |
| <b>UL technical data</b>                         |                                        |                     |
| Full-load current (FLA) for three-phase AC motor | at 480V                                | A 420               |
|                                                  | at 600V                                | A 420               |
| <b>Dimensions</b>                                |                                        |                     |
| <b>Wiring diagrams</b>                           |                                        |                     |



#### Certifications and compliance

##### Compliance

CSA C22.2 n° 14

IEC/EN 60947-1

IEC/EN 60947-4-1

UL508

##### Certifications

cULus

EAC

#### ETIM classification

ETIM 8.0

EC000106 -  
Thermal overload  
relay