### Main

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Range of product</td>
<td>Zelio Control</td>
</tr>
<tr>
<td>Product or component type</td>
<td>Modular measurement and control relays</td>
</tr>
<tr>
<td>Relay type</td>
<td>Multifunction control relay</td>
</tr>
<tr>
<td>Product specific application</td>
<td>For 3-phase supply</td>
</tr>
<tr>
<td>Relay name</td>
<td>RM35TF</td>
</tr>
<tr>
<td>Relay monitored parameters</td>
<td>Undervoltage and overvoltage in window mode</td>
</tr>
<tr>
<td></td>
<td>Phase sequence</td>
</tr>
<tr>
<td></td>
<td>Phase failure detection</td>
</tr>
<tr>
<td></td>
<td>Asymmetry</td>
</tr>
<tr>
<td>Time delay</td>
<td>Adjustable 0.1…10 s, +/- 10 % of the full scale value</td>
</tr>
<tr>
<td>Switching capacity in VA</td>
<td>1250 VA</td>
</tr>
<tr>
<td>Measurement range</td>
<td>208…480 V voltage AC</td>
</tr>
</tbody>
</table>

### Complementary

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reset time</td>
<td>1500 ms at 480 V</td>
</tr>
<tr>
<td>Maximum switching voltage</td>
<td>250 V AC</td>
</tr>
<tr>
<td></td>
<td>250 V DC</td>
</tr>
<tr>
<td>Minimum switching current</td>
<td>10 mA at 5 V DC</td>
</tr>
<tr>
<td>Maximum switching current</td>
<td>5 A AC</td>
</tr>
<tr>
<td></td>
<td>5 A DC</td>
</tr>
<tr>
<td>Supply voltage limits</td>
<td>194…528 V AC, 3 phases</td>
</tr>
<tr>
<td>Control circuit voltage limits</td>
<td>- 12 % + 10 % Un</td>
</tr>
<tr>
<td>Power consumption in VA</td>
<td>0…22 VA at 400 V AC 50 Hz</td>
</tr>
<tr>
<td>Voltage detection threshold</td>
<td>&lt; 194 V</td>
</tr>
<tr>
<td>Control circuit frequency</td>
<td>50…60 Hz +/- 10 %</td>
</tr>
<tr>
<td>Output contacts</td>
<td>2 C/O</td>
</tr>
<tr>
<td>Nominal output current</td>
<td>5 A</td>
</tr>
<tr>
<td>Measurement voltage limits</td>
<td>176…528 V AC</td>
</tr>
<tr>
<td>Hysteresis</td>
<td>2 %</td>
</tr>
</tbody>
</table>
### Delay at power up
650 ms

### Maximum measuring cycle
140 ms measurement cycle as true rms value

### Threshold adjustment voltage
-20...-2 % in the range 380...480 V AC
2...20 % of Un selected
-12...-2 % in the range 220 V AC
+2...+20 % in the range 220...440 V AC
+2...+10 % in the range 480 V AC

### Voltage range
220...480 V phase to phase

### Adjustment of asymmetry threshold
5...15 % of Un selected

### Repeat accuracy
0.3 % for time delay
0.5 % for input and measurement circuit

### Measurement error
< 1 % over the whole range with voltage variation
0.05 %/°C with temperature variation

### Response time
< 200 ms (in the event of a fault)

### Marking
CE

### Overvoltage category
IIll conforming to IEC 60664-1

### Insulation resistance
> 500 MOhm at 500 V DC conforming to IEC 60255-5
> 500 MOhm at 500 V DC conforming to IEC 60664-1

### [Ui] rated insulation voltage
400 V conforming to IEC 60664-1

### Supply frequency
50/60 Hz +/- 10 %

### Operating position
Any position without

### Connections - terminals
Screw terminals, 1 x 0.5...1 x 4 mm² (AWG 20...AWG 11) solid without cable end
Screw terminals, 2 x 0.5...2 x 2.5 mm² (AWG 20...AWG 14) solid without cable end
Screw terminals, 1 x 0.2...1 x 2.5 mm² (AWG 24...AWG 12) flexible with cable end
Screw terminals, 2 x 0.2...2 x 1.5 mm² (AWG 24...AWG 16) flexible with cable end

### Tightening torque
0.6...1 N.m conforming to IEC 60947-1

### Housing material
Self-extinguishing plastic

### Local signalling
LED (green)power ON:
LED (yellow)relay ON:
LED (yellow)fault:

### Mounting support
35 mm symmetrical DIN rail conforming to EN/IEC 60715

### Electrical durability
100000 cycles

### Mechanical durability
3000000 cycles

### Operating rate
<= 360 operations/hour full load

### Utilisation category
AC-12 conforming to IEC 60947-5-1
AC-13 conforming to IEC 60947-5-1
AC-14 conforming to IEC 60947-5-1
AC-15 conforming to IEC 60947-5-1
DC-12 conforming to IEC 60947-5-1
DC-13 conforming to IEC 60947-5-1

### Safety reliability data
MTTFd = 399.5 years
B10d = 360000

### Width
35 mm

### Net weight
0.13 kg

---

### Environment

#### Electromagnetic compatibility
Emission standard for industrial environments conforming to EN/IEC 61000-6-4
Emission standard for residential, commercial and light-industrial environments conforming to EN/IEC 61000-6-3
Immunity for industrial environments conforming to EN/IEC 61000-6-2

#### Standards
EN/IEC 60255-1

#### Product certifications
GL
UL
CSA
GOST
C-Tick

#### Directives
89/336/EEC - electromagnetic compatibility
73/23/EEC - low voltage directive

### Ambient air temperature for storage
-40...70 °C

### Ambient air temperature for operation
-20...50 °C
### Relative humidity
95 % at 55 °C conforming to IEC 60068-2-30

### Vibration resistance
0.35 mm (f= 5…57.6 Hz) conforming to IEC 60068-2-6
1 gn (f= 57.6…150 Hz) conforming to IEC 60255-21-1

### Shock resistance
15 gn for 11 ms conforming to IEC 60255-21-1

### IP degree of protection
IP20 (terminals) conforming to IEC 60529
IP30 (casing) conforming to IEC 60529

### Pollution degree
3 conforming to IEC 60664-1

### Dielectric test voltage
2 kV, 1 min AC 50 Hz

### Non-dissipating shock wave
4 kV

### Offer Sustainability

<table>
<thead>
<tr>
<th>Sustainable offer status</th>
<th>Green Premium product</th>
</tr>
</thead>
<tbody>
<tr>
<td>REACH Regulation</td>
<td>REACH Declaration</td>
</tr>
<tr>
<td>EU RoHS Directive</td>
<td>Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration</td>
</tr>
<tr>
<td>Mercury free</td>
<td>Yes</td>
</tr>
<tr>
<td>RoHS exemption information</td>
<td>Yes</td>
</tr>
<tr>
<td>China RoHS Regulation</td>
<td>China RoHS declaration</td>
</tr>
<tr>
<td>Environmental Disclosure</td>
<td>Product Environmental Profile</td>
</tr>
<tr>
<td>Circularity Profile</td>
<td>End of Life Information</td>
</tr>
</tbody>
</table>

### WEEE
The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

### Contractual warranty

| Warranty | 18 months |
Multifunction 3-Phase Supply Control Relays

Dimensions and Mounting
Multifunction 3-Phase Supply Control Relays

Wiring Diagram
Function Diagrams

Phase Sequence Control, Phase Failure Detection (U measured < 0.7 x nominal supply voltage) and Asymmetry Detection

![Function Diagram](image)

Control of Overvoltage and Undervoltage in Window Mode

![Control Diagram](image)

Legend

- **A**: Asymmetry threshold
- **Tt**: Time delay after crossing of threshold
- **H**: Hysteresis
- **U>**: Overvoltage threshold
- **U<**: Undervoltage threshold
- **L1, L2, L3**: Phases of the supply voltage monitored
- **R**: Output relay
- **R**: Output relay
- **Relay status**: black color = energized.