



### Main

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

### Complementary

Reset time	<= 1500 ms for at 480 V
Maximum switching voltage	250 V AC 250 V DC
Minimum switching current	10 mA at 5 V DC
Maximum switching current	5 A AC 5 A DC
Supply voltage limits	194...528 V AC, 3 phases
Control circuit voltage limits	- 12 % + 10 % Un
Power consumption in VA	0...22 VA at 400 V AC 50 Hz
Voltage detection threshold	< 194 V
Control circuit frequency	50...60 Hz +/- 10 %
Output contacts	2 C/O
Nominal output current	5 A
Measurement voltage limits	176...528 V AC
Hysteresis	2 %
Run-up delay at power-up	<= 650 ms
Measuring cycle	<= 140 ms measurement cycle as true rms value
Threshold adjustment voltage	+2...+10 % in the range 480 V AC -12...-2 % in the range 220 V AC -20...-2 % in the range 380...480 V AC +2...+20 % in the range 220...440 V AC 2...20 % of Un selected
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	III 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

The information provided in this documentation contains general descriptions and/or technical characteristics of the performance of the products contained herein. This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications. It is the duty of any such user or integrator to perform the appropriate and complete risk analysis, evaluation and testing of the products with respect to the relevant specific application or use thereof. Neither Schneider Electric Industries SAS nor any of its affiliates or subsidiaries shall be responsible or liable for misuse of the information contained herein.

Supply frequency	50/60 Hz +/- 10 %
Operating position	Any position without
Connections - terminals	Screw terminals 1 x 0.5...1 x 4 mm <sup>2</sup> - AWG 20...AWG 11, solid cable without cable end Screw terminals 2 x 0.5...2 x 2.5 mm <sup>2</sup> - AWG 20...AWG 14, solid cable without cable end Screw terminals 1 x 0.2...1 x 2.5 mm <sup>2</sup> - AWG 24...AWG 12, flexible cable with cable end Screw terminals 2 x 0.2...2 x 1.5 mm <sup>2</sup> - AWG 24...AWG 16, flexible cable with cable end
Tightening torque	0.6...1 N.m conforming to IEC 60947-1
Housing material	Self-extinguishing plastic
Local signalling	LED green for power ON LED yellow for relay ON LED yellow for fault
Mounting support	35 mm symmetrical DIN rail conforming to EN/IEC 60715
Electrical durability	100000 cycles
Mechanical durability	<= 30000000 cycles
Operating rate	<= 360 operations/hour under 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
Product 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	GOST CSA GL UL C-Tick
Directives	73/23/EEC - low voltage directive 89/336/EEC - electromagnetic compatibility
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

Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 0701 - Schneider Electric declaration of conformity <a href="#">Schneider Electric declaration of conformity</a>
REACH	Reference not containing SVHC above the threshold
Product environmental profile	Available <a href="#">Utjecaj Proizvoda Na Okoliš</a>
Product end of life instructions	Available <a href="#">Utjecaj Proizvoda Na Okoliš</a>

## Contractual warranty

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Warranty period	18 months
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### Main

Range of product	Zelio Control
Product or component type	Modular measurement and control relays
Relay type	Multifunction control relay
Product specific application	For 3-phase supply
Relay name	RM35TF
Relay monitored parameters	Asymmetry Phase sequence Phase failure detection Undervoltage and overvoltage in window mode
Time delay type	Adjustable 0.1...10 s, +/- 10 % of the full scale value
Switching capacity in VA	1250 VA
Measurement range	194...528 V AC

### Complementary

Reset time	$\leq 1500$ ms for at 480 V
Maximum switching voltage	250 V AC 250 V DC
Minimum switching current	10 mA at 5 V DC
Maximum switching current	5 A AC 5 A DC
Supply voltage limits	194...528 V AC, 3 phases
Control circuit voltage limits	- 12 % + 10 % $U_n$
Power consumption in VA	0...22 VA at 400 V AC 50 Hz
Voltage detection threshold	< 194 V
Control circuit frequency	50...60 Hz +/- 10 %
Output contacts	2 C/O
Nominal output current	5 A
Hysteresis	2 %
Run-up delay at power-up	$\leq 650$ ms
Measuring cycle	$\leq 140$ ms measurement cycle as true rms value
Threshold adjustment voltage	2...20 % of $U_n$ selected -20...-2 % in the range 380...480 V AC -12...-2 % in the range 220 V AC +2...+10 % in the range 480 V AC +2...+20 % in the range 220...440 V AC
Voltage range	220...480 V phase to phase
Adjustment of asymmetry threshold	5...15 % of $U_n$ 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	III 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 mm <sup>2</sup> - AWG 20...AWG 11, solid cable without cable end Screw terminals 2 x 0.5...2 x 2.5 mm <sup>2</sup> - AWG 20...AWG 14, solid cable without cable end Screw terminals 1 x 0.2...1 x 2.5 mm <sup>2</sup> - AWG 24...AWG 12, flexible cable with cable end Screw terminals 2 x 0.2...2 x 1.5 mm <sup>2</sup> - AWG 24...AWG 16, flexible cable with cable end
Tightening torque	0.6...1 N.m conforming to IEC 60947-1
Housing material	Self-extinguishing plastic
Local signalling	LED greenfor power ON LED yellowfor relay ON LED yellowfor fault
Mounting support	35 mm symmetrical DIN rail conforming to EN/IEC 60715
Electrical durability	100000 cycles
Mechanical durability	<= 30000000 cycles
Operating rate	<= 360 operations/hour under 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	B10d = 360000 MTTFd = 399.5 years
Width	35 mm
Product 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 C-Tick UL GOST CSA
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 gnfor 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

Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 0652 - Schneider Electric declaration of conformity <a href="#">Schneider Electric declaration of conformity</a>
REACH	Reference not containing SVHC above the threshold
Product environmental profile	Available <a href="#">Utjecaj Proizvoda Na Okoliš</a>
Product end of life instructions	Available <a href="#">Utjecaj Proizvoda Na Okoliš</a>



### Main

Range of product	Zelio Control
Product or component type	Modular measurement and control relays
Relay type	Motor temperature control relay
Product specific application	For 3-phase supply
Relay name	RM35TM
Relay monitored parameters	Phase sequence Motor temperature via PTC probe Test/Reset button Selection (with or without memory) Phase failure detection
Time delay type	Fixed 0.3 s
Switching capacity in VA	1250 VA
Measurement range	0...20 Ohm short-circuit detection 208...480 V voltage AC

### Complementary

Reset time	10000 msfor output
Maximum switching voltage	250 V AC 250 V DC
Minimum switching current	10 mA at 5 V DC
Maximum switching current	5 A AC 5 A DC
Supply voltage limits	20.4...264 V AC 20.4...264 V DC
Power consumption in VA	0...4 VA at 24...240 V AC
Power consumption in W	<= 0.5 W DC
Control circuit frequency	50...60 Hz +/- 10 %
Resistance across terminals	602 mOhm
Output contacts	2 NO
Nominal output current	5 A
Measurement voltage limits	176...528 V AC
Run-up delay at power-up	<= 500 ms
Voltage range	176...528 V
Response time	> 50 ms input Y1 (contact Y1-T1) and push-button
[Uc] control circuit voltage	<= 3.6 V of temperature control circuit (T1-T2 terminals open)
Short-circuit current	0.007 A temperature sensing circuit (T1-T2 terminals short circuited)
Resistance	<= 1500 Ohmfor temperature sensor at 20 °C
Tripping threshold	3100 Ohm (+/- 10 %for temperature control circuit)
Reset threshold	1650 Ohm (+/- 10 %for temperature control circuit)
Marking	CE
Overvoltage category	III conforming to IEC 60664-1

Insulation resistance	> 500 MOhm at 500 V DC between supply and relay output conforming to IEC 60255-5 > 500 MOhm at 500 V DC between measurement and relay output conforming to IEC 60664-1 > 1 MOhm at 500 V DC between supply and measurement conforming to IEC 60255-5 > 500 MOhm at 500 V DC between supply and relay output conforming to IEC 60664-1 > 500 MOhm at 500 V DC between measurement and relay output conforming to IEC 60255-5 > 1 MOhm at 500 V DC between supply and measurement 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 mm <sup>2</sup> - AWG 20...AWG 11, solid cable without cable end Screw terminals 2 x 0.5...2 x 2.5 mm <sup>2</sup> - AWG 20...AWG 14, solid cable without cable end Screw terminals 1 x 0.2...1 x 2.5 mm <sup>2</sup> - AWG 24...AWG 12, flexible cable with cable end Screw terminals 2 x 0.2...2 x 1.5 mm <sup>2</sup> - AWG 24...AWG 16, flexible cable with cable end
Tightening torque	0.6...1 N.m conforming to IEC 60947-1
Housing material	Self-extinguishing plastic
Local signalling	LED green for power ON LED yellow for phase of relay (R2) LED yellow for temperature of relay (R1)
Mounting support	35 mm symmetrical DIN rail conforming to EN/IEC 60715
Electrical durability	10000 cycles
Mechanical durability	<= 30000000 cycles
Operating rate	<= 360 operations/hour under 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
Width	35 mm
Product weight	0.13 kg

## Environment

Immunity to microbreaks	20 ms at 20.4 V
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	IEC 60034-11-2 EN/IEC 60255-6
Product certifications	UL GL C-Tick CSA GOST
Directives	73/23/EEC - low voltage directive 89/336/EEC - electromagnetic compatibility
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

Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 0701 - Schneider Electric declaration of conformity <a href="#">Schneider Electric declaration of conformity</a>
REACH	Reference not containing SVHC above the threshold
Product environmental profile	Available <a href="#">Utjecaj Proizvoda Na Okoliš</a>
Product end of life instructions	Available <a href="#">Utjecaj Proizvoda Na Okoliš</a>

## Contractual warranty

Warranty period	18 months
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Reset time	10000 msfor output
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Minimum switching current	10 mA at 5 V DC
Maximum switching current	5 A AC 5 A DC
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Power consumption in W	<= 0.5 W DC
Control circuit frequency	50...60 Hz +/- 10 %
Resistance across terminals	602 mOhm
Output contacts	2 NO
Nominal output current	5 A
Measurement voltage limits	176...528 V AC
Run-up delay at power-up	<= 500 ms
Voltage range	176...528 V
Response time	> 50 ms input Y1 (contact Y1-T1) and push-button
[Uc] control circuit voltage	<= 3.6 V of temperature control circuit (T1-T2 terminals open)
Short-circuit current	0.007 A temperature sensing circuit (T1-T2 terminals short circuited)
Resistance	<= 1500 Ohmfor temperature sensor at 20 °C
Tripping threshold	3100 Ohm (+/- 10 %for temperature control circuit)
Reset threshold	1650 Ohm (+/- 10 %for temperature control circuit)
Marking	CE
Overvoltage category	III conforming to IEC 60664-1

Insulation resistance	> 500 MOhm at 500 V DC between supply and relay output conforming to IEC 60255-5 > 500 MOhm at 500 V DC between measurement and relay output conforming to IEC 60664-1 > 1 MOhm at 500 V DC between supply and measurement conforming to IEC 60255-5 > 500 MOhm at 500 V DC between supply and relay output conforming to IEC 60664-1 > 500 MOhm at 500 V DC between measurement and relay output conforming to IEC 60255-5 > 1 MOhm at 500 V DC between supply and measurement 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 mm <sup>2</sup> - AWG 20...AWG 11, solid cable without cable end Screw terminals 2 x 0.5...2 x 2.5 mm <sup>2</sup> - AWG 20...AWG 14, solid cable without cable end Screw terminals 1 x 0.2...1 x 2.5 mm <sup>2</sup> - AWG 24...AWG 12, flexible cable with cable end Screw terminals 2 x 0.2...2 x 1.5 mm <sup>2</sup> - AWG 24...AWG 16, flexible cable with cable end
Tightening torque	0.6...1 N.m conforming to IEC 60947-1
Housing material	Self-extinguishing plastic
Local signalling	LED green for power ON LED yellow for phase of relay (R2) LED yellow for temperature of relay (R1)
Mounting support	35 mm symmetrical DIN rail conforming to EN/IEC 60715
Electrical durability	10000 cycles
Mechanical durability	<= 30000000 cycles
Operating rate	<= 360 operations/hour under 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
Width	35 mm
Product weight	0.13 kg

## Environment

Immunity to microbreaks	20 ms at 20.4 V
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 60255-6 IEC 60034-11-2
Product certifications	C-Tick UL GL GOST CSA
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

Sustainable offer status	Green Premium product
RoHS (date code: YYWW)	Compliant - since 0701 - Schneider Electric declaration of conformity <a href="#">Schneider Electric declaration of conformity</a>
REACH	Reference not containing SVHC above the threshold
Product environmental profile	Available <a href="#">Utjecaj Proizvoda Na Okoliš</a>
Product end of life instructions	Available <a href="#">Utjecaj Proizvoda Na Okoliš</a>

## Contractual warranty

Warranty period	18 months
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