



Main

| | |
|---------------------------------|---|
| Range of Product | Harmony Control Relays |
| Product or Component Type | Frequency control relay |
| Relay Type | Frequency control relays |
| Relay name | RM35HZ21FM |
| Relay monitored parameters | Overfrequency and underfrequency 50 or 60 Hz |
| Time delay type | Adjustable 0.1...10 s, +/- 10 % on crossing the threshold |
| Switching capacity in VA | 1250 VA |
| Minimum switching current | 10 mA 5 V DC |
| Maximum power consumption in VA | 6 VA AC |
| Measurement range | 40...70 Hz frequency |
| Utilisation category | AC-12 IEC 60947-5-1 AC-13 IEC 60947-5-1 AC-14 IEC 60947-5-1 AC-15 IEC 60947-5-1 DC-12 IEC 60947-5-1 DC-13 IEC 60947-5-1 DC-14 IEC 60947-5-1 |

Complementary

| | |
|---------------------------|---|
| Reset time | 2000 ms time delay |
| Maximum switching voltage | 250 V AC/DC |
| [Us] rated supply voltage | 120...277 V AC |
| [Us] rated supply voltage | 120...277 V AC |
| Supply voltage limits | 102...308 V AC |
| Control circuit frequency | 40...70 Hz |
| Width | 1.38 in (35 mm) |
| Output contacts | 1 C/O + 1 C/O |
| Contacts material | Cadmium free |
| Nominal output current | 5 A |
| Maximum input frequency | 70 Hz |
| Maximum measuring cycle | 200 ms measurement cycle as true rms value |
| Delay at power up | 0.5 s |
| Hysteresis | 0.3 % fixed |
| Measurement accuracy | +/- 10 % of the full scale value in input +/- 10 % of the full scale value in time delay |
| Repeat accuracy | +/- 0.5 % input and measurement circuit +/- 0.5 % time delay |
| Measurement error | +/- 0.05 %/°C with temperature variation < +/- 1 % over the whole range with voltage variation |
| Threshold setting | -2...10 Hz -10...2 Hz |
| Marking | CE : 73/23/EEC CE : EMC 89/336/EEC |
| Overvoltage category | III IEC 60664-1 |

The information provided in this documentation contains general descriptions and/or technical characteristics of the products 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.

| | |
|-------------------------------|--|
| Insulation resistance | > 500 MOhm 500 V DC between supply and relay output IEC 60255-5 > 500 MOhm 500 V DC between measurement and relay output IEC 60664-1 > 1 MOhm 500 V DC between supply and measurement IEC 60255-5 > 500 MOhm 500 V DC between supply and relay output IEC 60664-1 > 500 MOhm 500 V DC between measurement and relay output IEC 60255-5 > 1 MOhm 500 V DC between supply and measurement IEC 60664-1 |
| [Ui] rated insulation voltage | 400 V IEC 60664-1 |
| Operating voltage tolerance | - 15 % + 10 % Un |
| Supply frequency | 50/60 Hz +/- 10 % |
| Insulation | No galvanic insulation between supply and measurement |
| Operating position | Any position without derating |
| Connections - terminals | Screw terminals, 1 x 0.5...1 x 4 mm ² AWG 20...AWG 11) solid without cable end Screw terminals, 2 x 0.5...2 x 2.5 mm ² AWG 20...AWG 14) solid without cable end Screw terminals, 1 x 0.2...1 x 2.5 mm ² AWG 24...AWG 12) flexible with cable end Screw terminals, 2 x 0.2...2 x 1.5 mm ² AWG 24...AWG 16) flexible with cable end |
| Tightening torque | 5.31...8.85 lbf.in (0.6...1 N.m) IEC 60947-1 |
| Housing material | Self-extinguishing plastic |
| Local signalling | 1 LED Green power ON 1 LED Yellow correct frequency (high R1) 1 LED Yellow correct frequency (low R2) |
| 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 full load |

Environment

| | |
|---------------------------------------|--|
| Immunity to microbreaks | 10 ms |
| Electromagnetic compatibility | Emission standard for industrial environments EN/IEC 61000-6-4 Emission standard for residential, commercial and light-industrial environments EN/IEC 61000-6-3 Immunity for industrial environments NF EN/IEC 61000-6-2 |
| Standards | IEC 60255-6 NF EN 60255-6 |
| Product Certifications | GL UL CSA C-tick GOST |
| Ambient Air Temperature for Storage | -40...158 °F (-40...70 °C) |
| Ambient Air Temperature for Operation | -4...122 °F (-20...50 °C) |
| Relative humidity | 95 % 131 °F (55 °C) IEC 60068-2-30 |
| Vibration resistance | 0.35 mm 5...57.6 Hz)IEC 60068-2-6/IEC 60255-21-1 1 gn 57.6...150 Hz)IEC 60068-2-6/IEC 60255-21-1 |
| Shock resistance | 15 gn 11 ms IEC 60255-21-1 |
| IP degree of protection | IP20 IEC 60529 terminals) IP30 IEC 60529 casing) |
| Pollution degree | 3 IEC 60664-1 |
| Dielectric test voltage | 2 kV AC 50 Hz |
| Non-dissipating shock wave | 4 kV |

Ordering and shipping details

| | |
|-------------------|--------------------------------------|
| Category | 22380-RELAYS-MEASUREMENT (RM17-RM35) |
| Discount Schedule | CP2 |
| GTIN | 3389119405201 |
| Returnability | No |
| Country of origin | ID |

Packing Units

| | |
|------------------------------|-------------------------|
| Unit Type of Package 1 | PCE |
| Number of Units in Package 1 | 1 |
| Package 1 Height | 1.81 in (4.600 cm) |
| Package 1 Width | 3.15 in (8.000 cm) |
| Package 1 Length | 3.82 in (9.700 cm) |
| Package 1 Weight | 4.41 oz (125.000 g) |
| Unit Type of Package 2 | S03 |
| Number of Units in Package 2 | 48 |
| Package 2 Height | 11.81 in (30.000 cm) |
| Package 2 Width | 11.81 in (30.000 cm) |
| Package 2 Length | 15.75 in (40.000 cm) |
| Package 2 Weight | 15.08 lb(US) (6.838 kg) |

Offer Sustainability

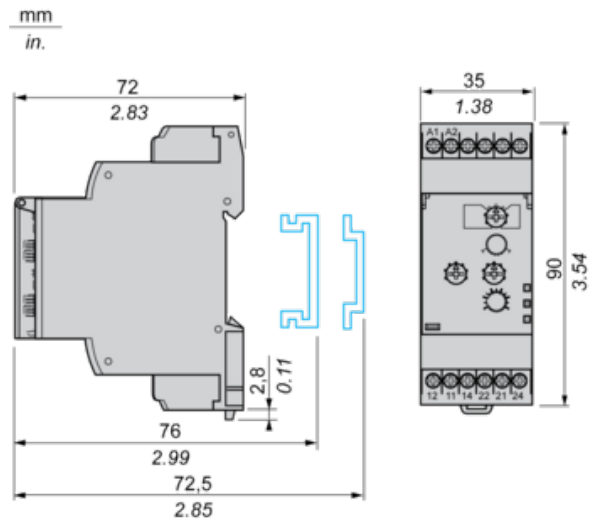
| | |
|----------------------------|---|
| Sustainable offer status | Green Premium product |
| California proposition 65 | WARNING: This product can expose you to chemicals including: Lead and lead compounds, which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov |
| REACH Regulation | REACH Declaration |
| EU RoHS Directive | Pro-active compliance (Product out of EU RoHS legal scope) EU RoHS Declaration |
| Mercury free | Yes |
| China RoHS Regulation | China RoHS Declaration |
| RoHS exemption information | Yes |
| Environmental Disclosure | Product Environmental Profile |
| Circularity Profile | End Of Life Information |

Contractual warranty

| | |
|----------|-----------|
| Warranty | 18 months |
|----------|-----------|

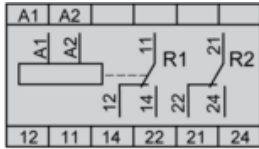
Frequency Control Relay

Dimensions and Mounting



Frequency Control Relay

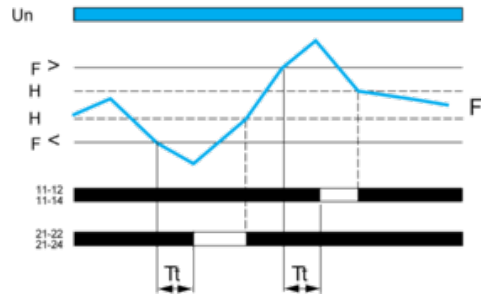
Wiring Diagram



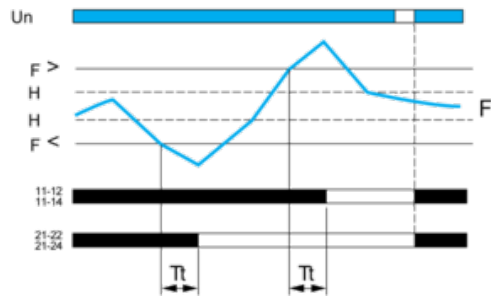
Function Diagrams

Over-Frequency and Under-Frequency Control on 50 Hz or 60 Hz Supplies

Without memory ("No Memory" mode)



With memory ("Memory" mode)



Legend

Tt Time delay after crossing of threshold from 0.1 s to 10 s

Un Supply voltage

F Monitored frequency

H Hysteresis

F> Over-frequency threshold

F< Under-frequency threshold

11-12, 11-14 R1 output relay connections

21-22, 21-24 R2 output relay connections

Relay status: black color = energized.

NOTE: In "Memory" mode, the relay opens after the time delay and stays in that position when crossing of the threshold is detected. The power supply voltage must be switched off to reset the product.