

Product data sheet

Specifications



frequency control relay, Harmony Control Relays, 5A, 1CO+1CO, 120...277V AC

RM35HZ21FM

Product availability: Non-Stock - Not normally stocked in distribution facility

Main

| | |
|---------------------------------|---|
| Range of Product | Harmony Control Relays |
| Relay Type | Frequency control relays |
| Product or Component Type | Frequency control relay |
| Relay name | RM35HZ21FM |
| Relay monitored parameters | Overfrequency and underfrequency 50 or 60 Hz |
| Time delay type | Adjustable 0.1...10 s, +/- 10 % Tt- time delay upon fault |
| 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 |
| 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 |
| [Un] rated nominal voltage | 120...277 V AC, non self-powered |
| Supply voltage limits | 102...308 V AC |
| Control circuit frequency | 40...70 Hz |
| Width | 1.4 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 |

Price is "List Price" and may be subject to a trade discount – check with your local distributor or retailer for actual price.

| | |
|--------------------------------------|--|
| 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 conforming to IEC 60664-1 |
| 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 | 5.3...8.9 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 IEC 60715 |
| Electrical durability | 100000 cycles |
| Mechanical durability | 30000000 cycles |
| Operating rate | <= 360 operations/hour full load |
| Control Type | Without test button |

Environment

| | |
|--|--|
| Immunity to microbreaks | 10 ms |
| Electromagnetic compatibility | Emission standard for industrial environments IEC 61000-6-4 Emission standard for residential, commercial and light-industrial environments 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 (f= 5...57.6 Hz) conforming to IEC 60068-2-6/IEC 60255-21-1 1 gn (f= 57.6...150 Hz) conforming to 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 | US10CP222380 |
| Discount Schedule | 0CP2 |
| GTIN | 3389119405201 |
| Returnability | Yes |
| Country of origin | ID |

Packing Units

| | |
|------------------------------|--------------------------|
| Unit Type of Package 1 | PCE |
| Nbr. of units in pkg. | 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 weight(Lbs) | 4.444 oz (126.000 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 | 15.075 lb(US) (6.838 kg) |

Contractual warranty

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



Schneider Electric aims to achieve Net Zero status by 2050 through supply chain partnerships, lower impact materials, and circularity via our ongoing “Use Better, Use Longer, Use Again” campaign to extend product lifetimes and recyclability.

[Environmental Data explained >](#)

[How we assess product sustainability >](#)

Environmental footprint

Carbon footprint (kg CO2 eq, Total Life cycle) **36**

Environmental Disclosure [Product Environmental Profile](#)

Use Better

Materials and Substances

Packaging made with recycled cardboard **Yes**

Packaging without single use plastic **Yes**

[EU RoHS Directive](#) **Pro-active compliance (Product out of EU RoHS legal scope)**

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](#)**

Use Again

Repack and remanufacture

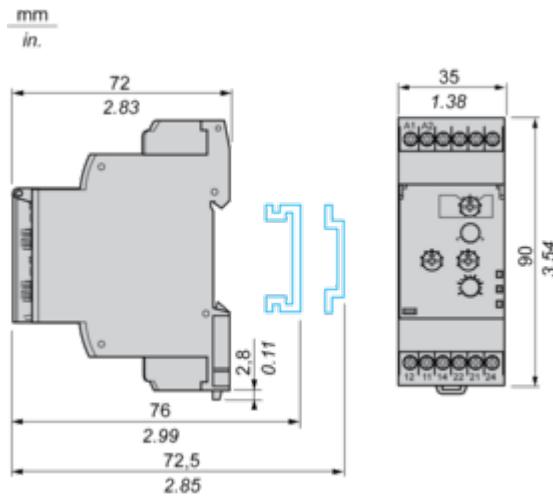
Circularity Profile [End of Life Information](#)

Take-back **No**

Dimensions Drawings

Frequency Control Relay

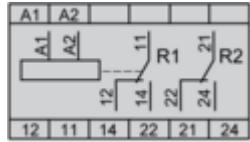
Dimensions and Mounting



Connections and Schema

Frequency Control Relay

Wiring Diagram

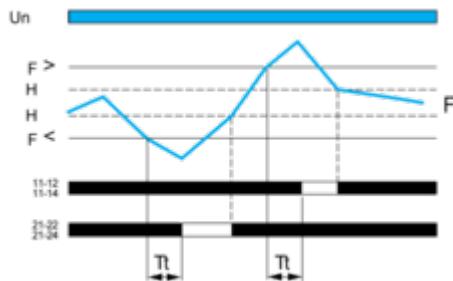


Technical Description

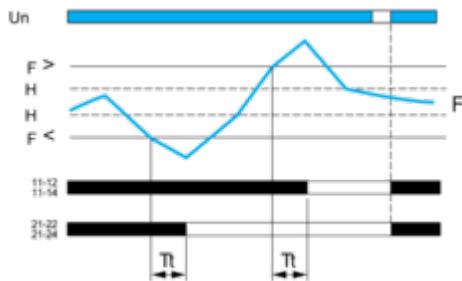
Function Diagrams

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

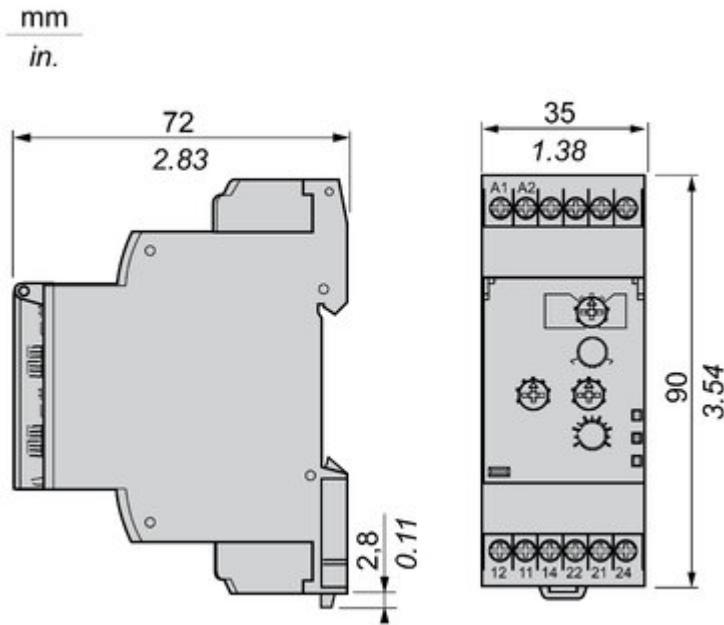
21-22, 21-24 R2 output relay connections

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.

Technical Illustration

Dimensions



Offer Marketing Illustration

Product benefits / Features

Features

Harmony Control Relay



Wide monitoring parameters (phase, current, voltage, liquid level, frequency, speed, temperature, and pump control) to meet your application needs.

True RMS measurement that minimizes the possibility of unexpected trips from highly polluted networks (except RM17TG and RM22TG)

Experience unprecedented accuracy, predictive maintenance, and superior security.

Green Premium labelled products, promising compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO₂ product

Compatible with a wide range of applications, such as hoisting, packaging, lifts, textile, pumping, and water.

Offer Marketing Illustration

Product benefits / Features

Technical Benefits

Harmony Control Relay

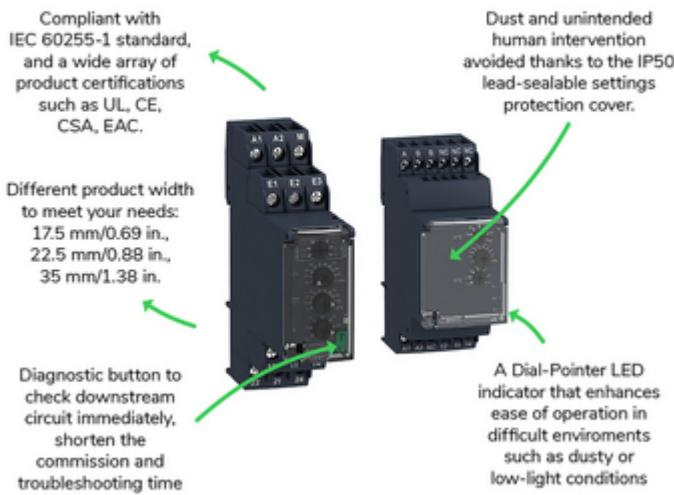


Image of product / Alternate images

Alternative





