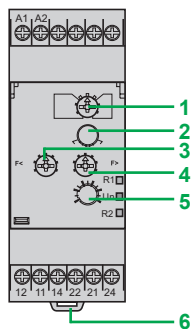




RM35HZ21FM



RM35HZ21FM

R1 Yellow LED: indicates relay status (high frequency threshold)

Un Green LED: indicates that supply to the product is on

R2 Yellow LED: indicates relay status (low frequency threshold)

Presentation

Frequency control relay RM35HZ monitors frequency variations on 50 or 60 Hz AC supplies:

Functions

Over-frequency and under-frequency 50 or 60Hz (with/without memory)

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 Function performed

 Function not performed

These control relays allow:

- Over-frequency and under-frequency with two independent relay outputs
- Selectable memory function
- Monitoring of their own supply voltage measured as a true rms value
- Clip-on mounting on a U rail

They feature:

- A sealable cover to help protect the settings
- A control status indicator LED

Applications

Monitoring of electrical power sources:

- Generating sets, wind turbines, micro-power stations, etc.

Description

RM35HZ21FM

- 1 Configuration: selection of 50/60 Hz frequency range and operating mode (with or without memory) **Memory - No Memory**
- 2 Frequency tolerance multiplication setting potentiometer **x1-x2**
- 3 Low frequency threshold setting switch **F <**
- 4 High frequency threshold setting switch **F >**
- 5 Time delay adjustment potentiometer
- 6 Spring for clip-on mounting on 35 mm/1.38 in. U rail

Operating principle

Frequency control relay RM35HZ monitors:

- ☐ Frequency variations on 50 or 60 Hz supplies
- ☐ Over-frequency and under-frequency via adjustment of two independent thresholds. (It has two relay outputs: one per threshold)
- ☐ Fault signaling is by LED

Function Diagram

-  Power supply off
-  Power supply on
-  Output 11-14, 21-24 open
-  Output 11-14, 21-24 closed

- Function selector switch:
 - ☐ Set the switch to a frequency of 50 or 60 Hz of the supply monitored, then select Memory or No memory mode.
 - ☐ The position of the switch and the operating mode is read by the product on energization.
 - ☐ If the switch is set to an unacceptable position, the product detects a fault, the output relays stay open and the LEDs flash to indicate the position error.
 - ☐ If the switch position is changed while the device is operating, all the LEDs flash but the product continues to operate normally with the function selected at the time of energization preceding the change of position.
 - ☐ If the switch is returned to the original position selected prior to the last energization, the LEDs return to their normal state.

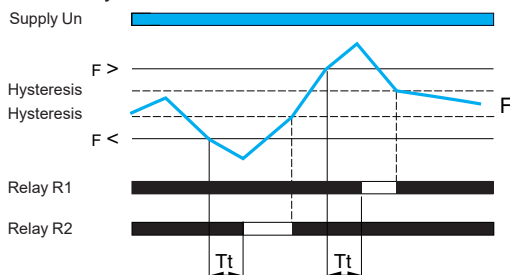
Operating principle (continued)

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The under-frequency or over-frequency threshold values are set using two graduated potentiometers indicating the variation value of the frequency to be monitored. A switch **x1/x2** allows the control scale to be doubled. Hysteresis is fixed at 0.3 Hz.

Over-frequency and under-frequency without memory

- ☐ Over-frequency and under-frequency control, without memory

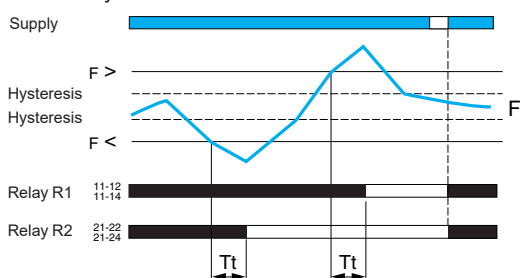


- If the frequency of the voltage controlled exceeds the over-frequency threshold setting for a time greater than that set on the front panel (0.1...10 s), the corresponding output relay opens and its LED goes off. During the time delay, this LED flashes.
- As soon as the frequency drops below the value of the threshold setting, minus the hysteresis, the relay instantly closes.
- If the frequency of the voltage controlled falls below the under-frequency threshold setting for a time greater than that set on the front panel (0.1...10 s), the corresponding output relay opens and its LED goes out. During the time delay, this LED flashes.
- As soon as the frequency rises above the value of the threshold setting, plus the hysteresis, the relay instantly closes.
- On energization of the device with a detected measured fault, the relay stays open.

Note: *Tt: time delay after crossing of the threshold (adjustable on front panel).*

Over-frequency and under-frequency with memory

- ☐ Over-frequency and under-frequency control with memory



If "Memory" mode is selected, the relay opens after the time delay and stays in that position when crossing of the threshold is detected. The power needs to be switched off to reset the product.

Note: *Tt: time delay after crossing of the threshold (adjustable on front panel).*

Reference



RM35HZ21FM

Function	Range controlled	Supply voltage	Output	Reference	Weight
		V			kg/lb
■ Over-frequency and under-frequency 50 or 60 Hz (with/without memory)	40...60 Hz (50 Hz) / 50...70 Hz (60 Hz)	120...277 ~	1 CO + 1 CO 5 A	RM35HZ21FM	0.130/ 0.287