



Brief Operating Instructions RNF22

Power and error message module 24 V_{DC}

These Brief Operating Instructions are not a substitute for the Operating Instructions pertaining to the device. Detailed information is provided in the Operating Instructions and other documentation.

Available for all device versions via:

- Internet: www.endress.com/deviceviewer
- Smartphone/tablet: Endress+Hauser Operations app

Basic safety instructions

Requirements for the personnel

The personnel must fulfill the following requirements for its tasks:

- ▶ Trained, qualified specialists must have a relevant qualification for this specific function and task.
- ▶ Are authorized by the plant owner/operator.
- ▶ Are familiar with federal/national regulations.
- ▶ Before starting work, read and understand the instructions in the manual and supplementary documentation as well as the certificates (depending on the application).
- ▶ Follow instructions and comply with basic conditions.

Intended use

The power and error message module is used to provide the supply voltage to the DIN rail bus connector. The device is designed for installation on DIN rails in accordance with IEC 60715.

Product liability: The manufacturer does not accept any responsibility for damage that results from non-designated use and from failure to comply with the instructions in this manual.

Operational safety

Risk of injury!

- ▶ Operate the device only if it is in proper technical condition, free from errors and faults.
- ▶ The operator is responsible for interference-free operation of the device.

Hazardous area

To eliminate danger to persons or the facility when the device is used in the hazardous area (e.g. explosion protection):

- ▶ Check the nameplate to verify if the device ordered can be put to its intended use in the hazardous area.
- ▶ Observe the specifications in the separate supplementary documentation that is an integral part of these instructions.

Product safety

This device is designed in accordance with good engineering practice to meet state-of-the-art safety requirements, has been tested, and left the factory in a condition in which it is safe to operate.

Installation instructions

- The device's IP20 degree of protection is intended for a clean and dry environment.
- Do not expose the device to mechanical and/or thermal stress that exceeds the specified limits.
- The device is intended for installation in a cabinet or similar housing. The device may only be operated as an installed device.
- To protect against mechanical or electrical damage, the device must be installed in an appropriate housing with a suitable degree of protection according to IEC/EN 60529.
- The device fulfills the EMC regulations for the industrial sector.

Incoming acceptance and product identification

Incoming acceptance

Check the following during incoming acceptance:

- Are the order codes on the delivery note and the product sticker identical?
- Are the goods undamaged?
- Do the data on the nameplate match the ordering information on the delivery note?



If one of these conditions is not met, please contact the manufacturer's sales office.

Product identification

The following options are available for identification of the device:

- Nameplate specifications
- Extended order code with breakdown of the device features on the delivery note

Name and address of manufacturer

Name of manufacturer:	Endress+Hauser Wetzlar GmbH + Co. KG
Address of manufacturer:	Obere Wank 1, D-87484 Nesselwang
Model/type reference:	RNF22

Certificates and approvals



For certificates and approvals valid for the device: see the data on the nameplate



Approval-related data and documents: www.endress.com/deviceviewer → (enter the serial number)

Mounting

Mounting requirements

Dimensions

Width (B) x length (L) x height (H) (with terminals): 17.5 mm (0.69 in) x 116 mm (4.57 in) x 107.5 mm (4.23 in)

Mounting location

The device is designed for installation on 35 mm (1.38 in) DIN rails in accordance with IEC 60715 (TH35).

The device's housing provides basic insulation from neighboring devices for 300 Veff. If several devices are installed side by side, this must be taken into consideration and additional insulation must be provided if necessary. If the adjacent device also offers basic insulation, no additional insulation is required.

NOTICE

- ▶ When using in hazardous areas, the limit values of the certificates and approvals must be observed.

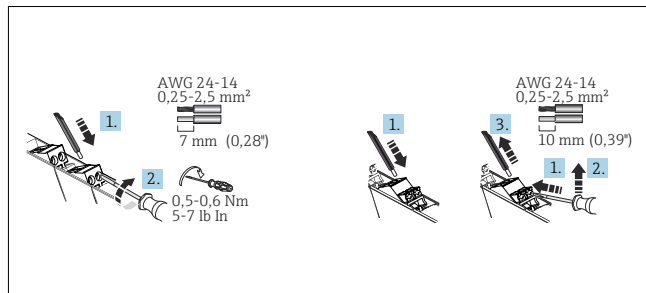
Important ambient conditions

Ambient temperature range	-20 to 60 °C (-4 to 140 °F)	Storage temperature	-40 to 80 °C (-40 to 176 °F)
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Electrical connection

Connecting requirements

A flat-blade screwdriver is required to establish an electrical connection to screw or push-in terminals.



1 Electrical connection using screw terminals (left) and push-in terminals (right)

CAUTION

Destruction of parts of the electronics

- ▶ Switch off the power supply before installing or connecting the device.

NOTICE

Destruction or malfunction of parts of the electronics

- ▶ ESD - Electrostatic discharge. Protect the terminals from electrostatic discharge.

Special connection instructions

- Disconnecting units and auxiliary circuit protective systems with suitable AC or DC values must be provided in the building installation.
- A switch/power circuit breaker must be provided close to the device and clearly marked as a disconnecting unit for this device.
- An overcurrent protection unit (I ≤ 16 A) must be provided in the installation.
- The voltages applied at the input, output and relay output are all extra-low voltages (ELV).

Important connection data

Power supply

Supply voltage	24 V _{DC} (-20% / +25%)
Supply current to the DIN rail bus connector	I _{OUT} : 3.75 A
Output voltage for I _{OUT}	U _{in} : 0.8 V for 3.75 A
Maximum current consumption	3.75 A
Protection against reverse polarity and overvoltage	Yes, decoupled via diodes
Fuse (replaceable)	5 A, slow-blow

Degree of protection	IP 20	Overvoltage category	II
Pollution degree	2	Humidity	5 to 95 % No condensation
Altitude	≤ 2 000 m (6 562 ft)		

Mounting the DIN rail bus connector

- i** If using the DIN rail bus connector to the power supply, clip it onto the DIN rail BEFORE mounting the device. It is essential that you pay attention to the orientation of the module and the DIN rail bus connector: the snap-on clip should be at the bottom and the connector piece on the left.

Installing a DIN rail device

The device can be installed in any position (horizontal or vertical) on the DIN rail without lateral clearance from neighboring devices. No tools are required for installation. The use of end brackets (type WEW "35/1" or similar) on the DIN rail is recommended as an end support for the device.

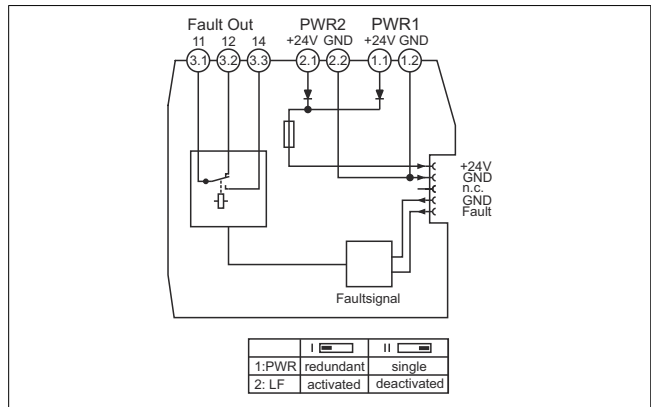
Relay output data

Contact type	1 changeover
Contact material	Gold (Au)
Maximum switching voltage	50 V _{AC} (2 A) / 30 V _{DC} (2 A) / 50 V _{DC} (0.22 A)



For detailed technical data, see the Operating Instructions

Quick wiring guide



2 RNF22 terminal assignment: power and error message module

Power supply

The power can be supplied via terminals 1.1 and 1.2 for PWR1 or 2.1 and 2.2 for PWR2.

NOTICE

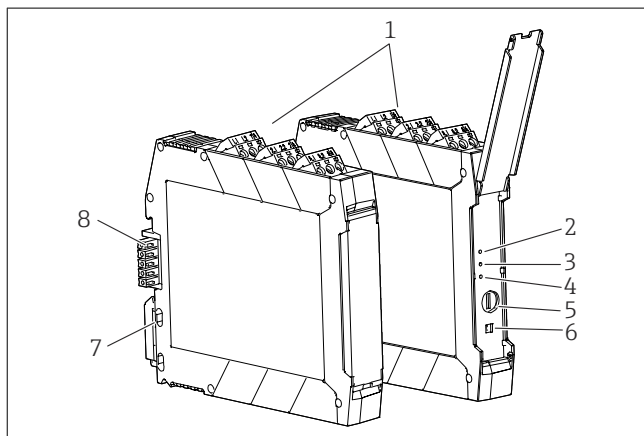
The tapping of energy from the DIN rail bus connector for further distribution is not permitted.

- ▶ The supply voltage must never be connected directly to the DIN rail bus connector!

Supply to the DIN rail bus connector via terminals

Devices installed side by side can be connected using the DIN rail bus connector supplied with the device. If used, make sure the module and DIN rail bus connector are mounted in the correct direction.

Display and operating elements




3 Display and operating elements

- 1 Plug-in screw or push-in terminal
- 2 Green LED "On1" power supply 1
- 3 Green LED "On2" power supply 2
- 4 Red LED "Err" error indication
- 5 Fuse

- 6 DIP switch
- 7 DIN rail clip for DIN rail mounting
- 8 DIN rail bus connector

Local operation

Hardware settings / configuration

 Any device settings using the DIP switch must be made when the device is de-energized.

All DIP switches are set to the "II" position when the device is delivered from the factory.

The following settings are made via the DIP switches:

- Switch off error message when RNF22 Feed-In Module is only supplied by one power supply system (DIP 1)
- Switch on/off group error detection for connected devices (DIP 2)

DIP	I	II (factory setting)
1	Redundant operation	One power supply system
2	Group error message on	Group error message off

Maintenance

No special maintenance work is required for the device.

Cleaning

A clean, dry cloth can be used to clean the device.
