



Brief Operating Instructions RNF22

Power and error message module for single and redundant 24 V_{DC} power supply to the T-connector with fault monitoring

These Brief Operating Instructions are not a substitute for the Operating Instructions. For further information on the product, see:

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



Manufacturer: Endress+Hauser Wetzer GmbH + Co. KG, Obere Wank 1, D-87484 Nesselwang or www.endress.com

Basic safety instructions

Requirements for the personnel

The operating personnel must fulfill the following requirements:

- ▶ They must be trained, qualified specialists
- ▶ Before starting work, they must have read and understood the information in the Operating Instructions and certificates.

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

NOTICE

Damage to the device!

- ▶ 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.

Product safety

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

It meets general safety standards and legal requirements. It also complies with the EU directives listed in the device-specific EU declaration of conformity. The manufacturer confirms this by affixing the CE mark.

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 protection rating in accordance with IEC 60529.
- The device fulfills the EMC regulations for the industrial sector.

Installation

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

Installing the DIN rail bus connector

-  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.

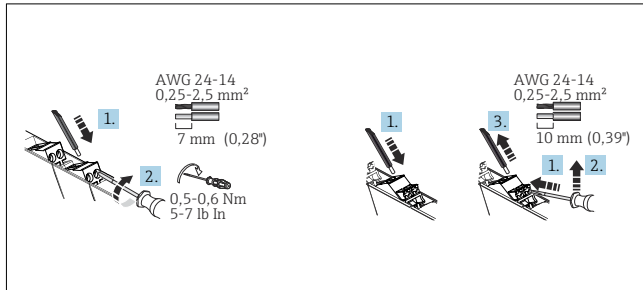
Installing a DIN rail device

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.

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 ($I \leq 16 \text{ A}$) 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_m : 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

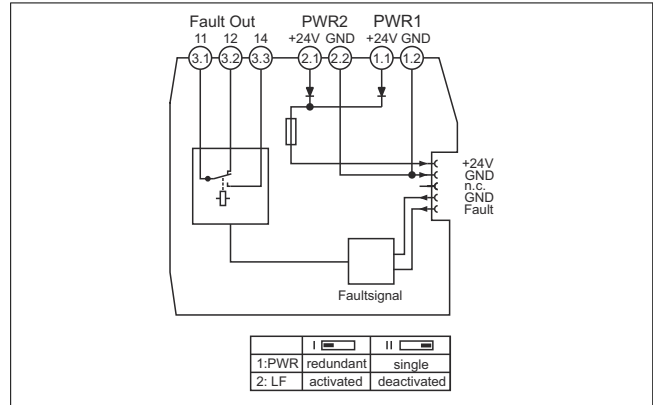
Relay output data

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

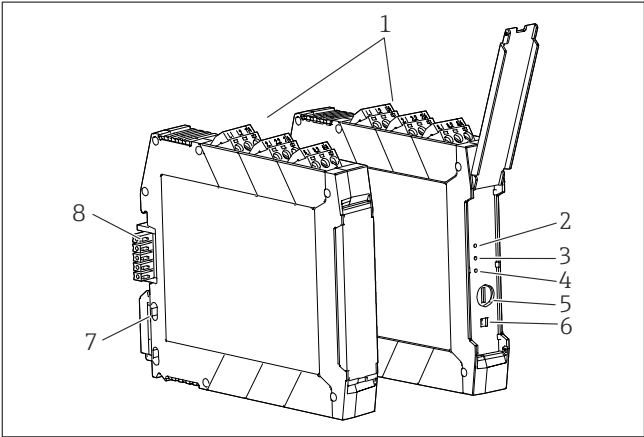
The tapping of energy from the DIN rail bus connector for further distribution is not permitted.

- 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

i 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

Maintenance work

The device does not require specific maintenance work.

Cleaning of surfaces not in contact with the medium

- Recommendation: Use a lint-free cloth that is either dry or slightly dampened using water.

- Do not use any sharp objects or aggressive cleaning agents that corrode the surfaces (e.g. displays, housing) and seals.
- Do not use high-pressure steam.
- Observe the degree of protection of the device.

i The cleaning agent used must be compatible with the materials of the device configuration. Do not use cleaning agents with concentrated mineral acids, bases or organic solvents.
