Level | Pressure | Flow | Temperature | Liquid Analysis | Registration | Systems Components | Services | Solutions

Technical information

RNS221

Transmitter supply
for two 2 wire sensors or transmitters

Your benefits
- Galvanic isolation between all circuits
- Sockets and built in 250 Ω resistor for HART ® communication
- Wide-range power supply 20...250 V DC/V AC, 50/60 Hz
- Top hat DIN rail mounted housing to IEC 60715

Application areas
The unit supplies two 2 wire sensors or transmitters galvanically isolated. This is only valid for non-Ex areas. Using the HART ® communication sockets bi-directional communication to SMART transmitters, (for setting up etc.).

TI081R/09/en
51002643

Endress+Hauser
People for Process Automation

Function and system design

Measurement principle

The transmitter supply has two galvanically isolated outputs for supplying voltage to sensors and transmitters. A built-in communication resistance (R = 250 Ω) enables bi-directional HART® communication with SMART sensors and transmitters.

Measurement system

2 channel transmitter supply 24 V DC, 30 mA, with LED status display for electrical supply of sensors and transmitters. All circuits are galvanically isolated from each other. The unit is constructed in a housing for 35 mm top hat DIN rail mounting.

Output values

Output signal

Two channels for transmitter power supply, open circuit voltage 24 V ± 10%, with integrated HART® communication resistance R = 250 Ω for each output.

Output current circuit

Max. 30 mA
Short circuit current: Both channels are continuous short circuit protected.

Failure signal

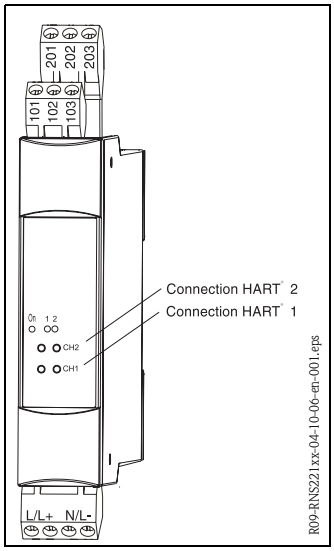
LEDs do not illuminate

Galvanic isolation

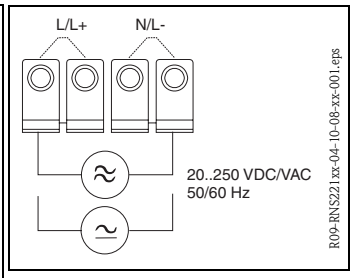
Between all circuits

Power supply

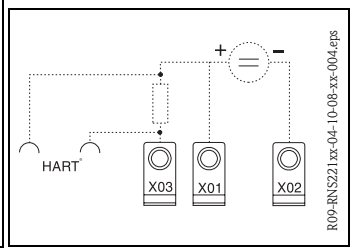
Electrical connections



RNS221 terminal layout



Main power connection



Output 1 and 2 connection

Power supply

Wide range power supply 20...250 V DC/V AC, 50/60 Hz

Power consumption

P ≤ 5 W

Input current limit

$I_{max}/I_n < 15$

Power failure

To IEC 61000-4-11

Installation conditions

Installation hints

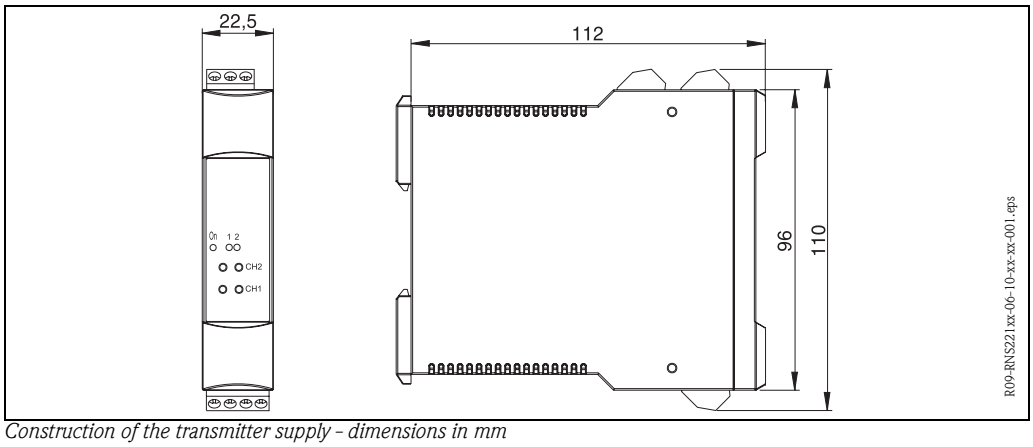
- The installation area must be vibration-free
- Keep within the permitted ambient temperature range of -20...+60 °C
- Protect the unit from external heat sources

Environmental conditions

Ambient temperature range	- 20 °C ... + 60 °C
Storage temperature range	- 30 °C ... + 70 °C
Climatic classification	To IEC 60 654-1 Class B2
Electrical safety	To IEC 61010-1: Altitude < 2000 m above sea level
Ingress protection	IP 20
EMC/immunity	To IEC 61 326, transmission Class A, Immunity to IEC 61 326 industrial environment
Over voltage protection	To IEC 61 010-1, Category II, Installation protection fuse ≤ 10 A

Mechanical construction

Design/dimensions



Construction of the transmitter supply - dimensions in mm

Housing for top hat rail mounting according to IEC 60715

Weight	Approx. 140 g
Materials	Housing: – Plastic PC/ABS, UL 94V0
Terminals	Power and signal connections: – Keyed plug-on screw terminal, core range 1.5 mm² solid, 1.0 mm² standed with ferrule Communication connection: – Communication sockets (2 mm) on the front of the unit

Human interface

Display elements

- 2 yellow illuminated LEDs with connected outputs
- 1 green illuminated LED with main power connection

Certificates & approvals

CE-Mark

The device meets the legal requirements of the EC directives. Endress+Hauser confirms that the device has been successfully tested by applying the CE mark.

Ship building approval

GL (Germanischer Lloyd)

UL

Recognized component to UL 3111-1

Ordering information

Product structure

Transmitter supply RNS221			
	Approval:		
	A		Non-hazardous area
		Power supply:	
		K	North American region, 20...250 V DC/AC, 50/60 Hz
		1	20...250 V DC/AC
RNS221-	**A**		⇐ **Ordercode**

Accessories

- Field housing
  51002468

Further documentation

- Brief operating manual KA110R/09/c4

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