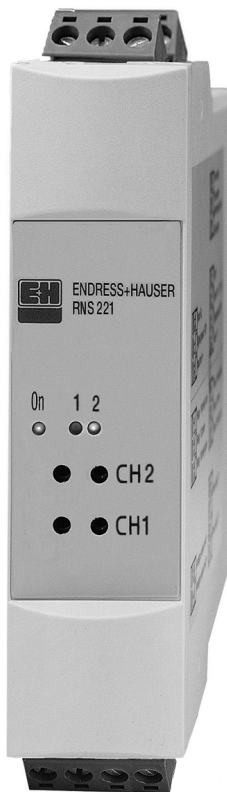


Technical information

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/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.).

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 ($R = 250 \Omega$) 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 signal	Two channels for transmitter power supply, open circuit voltage 24 V \pm 10%, with integrated HART [®] communication resistance $R = 250 \Omega$ 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

Output values

Power supply

Electrical connections

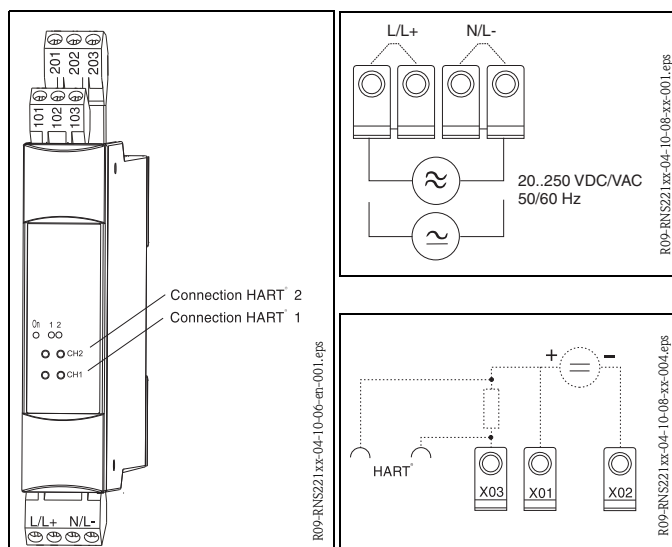


Fig. 1: RNS221 terminal layout:
Main power connection (top),
Output 1 and 2 connection (bottom)

Power supply	Wide range power supply 20...250 V _{DC/AC} , 50/60 Hz
Power consumption	$P \leq 5 \text{ W}$
Input current limit	$I_{\text{max}}/I_n < 15$
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

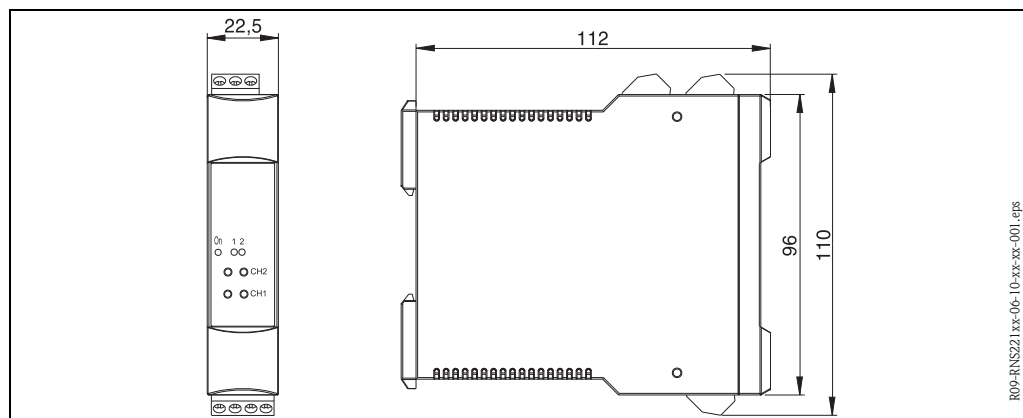


Fig. 2: Construction of the transmitter supply (dimensions in mm)

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 stranded 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)

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, order code: 51002468

Further documentation

Brief operating manual KA110R/09/c4

www.addresses.endress.com
