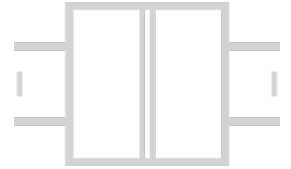


Passive Transmitter Repeater DC 58

Powering and Isolation of 2-wire transmitters



The Passive Transmitter Repeater DC 58 is used for powering of 2-wire transmitters and isolation of 4 ... 20 mA standard signals.

The 24 V power from the control system is transferred to the 2-wire transmitter with low voltage drop. The transmitter loop current is available galvanic isolated on output of the DC58. Additionally the measuring input accepts active 4 ... 20 mA signals from 4-wire transmitters.

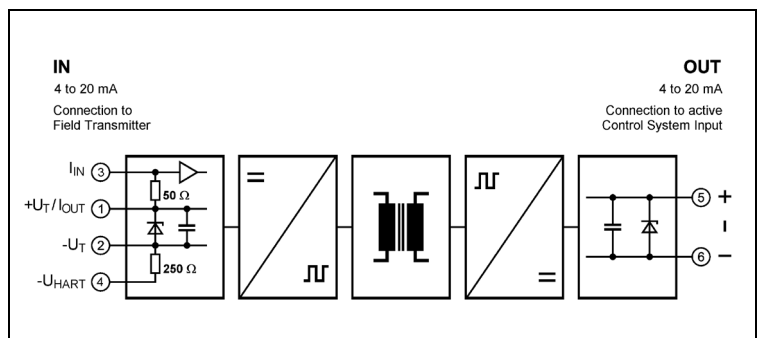
For communication with HART-Transmitters the internal 250 Ohm resistor on terminal 4 can be used. The slim housing with 11.2 mm wide saves significant space on the DIN-rail. To protect both maintenance personnel as well as downstream equipment against impermissibly high voltages, the DC 58 offers Protective Separation in according to EN 61140.

The DC 58 requires no additional power supply since the auxiliary power is obtained from the current loop without distorting it. This not only saves costs during installation, but also increases reliability.

- **Cost optimized design**
Economical solution for standard applications
- **Only 60 mm installation depth, 11.2 mm wide**
Can be installed in economical standard terminal boxes
- **Galvanic isolation across input and output**
Protection against erroneous measurements due to parasitic voltages or ground loops
- **Protective Separation acc. to EN 61140**
Protects service personnel and downstream devices against impermissibly high voltage
- **No power supply required**
Saving costs since wiring is reduced and line influences are omitted
- **5 Years Warranty**
Defects occurring within 5 years from delivery date shall be remedied free of charge at our plant (carriage and insurance paid by sender)



Block diagram





Technical Data

Input	
Input signal	4 ... 20 mA
Operating current range	2 ... 23 mA
Transmitter Repeater operating	
Transmitter voltage drop	Approx. 4.7 V (Approx. 9.7 V with HART resistor, terminal 4)
Short circuit current	< 35 mA
Isolator operating	
Input resistor	50 Ω
Max. Input current	≤ 50 mA
Output	
Output signal	4 ... 20 mA
Supply voltage	15 ... 30 V DC
Residual ripple	< 10 mV _{rms}
General Data	
Transmission error	< 0.1 % full scale
Supply voltage influence	< 0.01 % FS / V (deviation from 24 V)
Temperature coefficient ¹⁾	< 0.01 %/K
Cut-off frequency -3 dB	500 Hz
Response time T ₉₉	2 ms
Test voltage	3 kV AC, 50 Hz, 1 min. input against output
Working voltage (Basic Insulation) ²⁾	600 V AC/DC for overvoltage category II and pollution degree 2 acc. to EN 61010 -1
Protection against electrical shock ²⁾	Protective separation according to EN 61140 by reinforced insulation in accordance with EN 61010 -1 up to 300 V AC/DC for overvoltage category II and pollution degree 2
Ambient temperature	Operation - 20 to + 60 °C (- 4 to + 140 °F) Transport and storage - 35 to + 85 °C (- 31 to + 185 °F)
EMC ³⁾	EN 61326 -1
Construction	11.2 mm (0.44") housing, protection class: IP 20, mounting on 35 mm DIN rail acc. to EN 60715
Weight	Approx. 50 g

1) Average TC related to full scale value in specified operating temperature range, reference temperature 23 °C

2) For applications with high working voltages, ensure there is sufficient spacing or isolation from neighboring devices and protection against electric shocks.

3) Minor deviations possible during interference

Dimensions

Terminal assignments	
Input	
Transmitter Repeater	1+ 2-
HART Repeater	1+ 4-
Isolation Amplifier	3+ 1-
Output	
	5+ 6-
Wire cross-section max. 2.5 mm ²	

Subject to change!

Product line

Device	Order No.
Transmitter Repeater DC 58 P	DC 58 P