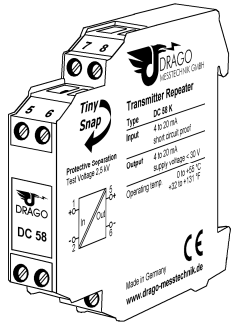


Transmitter Repeater DC 58



Read these instructions before using the product and retain for future information.

DC 58

1. Before Startup



The Transmitter Repeater should only be installed and put into operation by qualified staff. The staff must have studied the warnings in these operating instructions thoroughly.

The Transmitter Repeater may not be put into operation if the housing is open.

In applications with high operating voltages sufficient distance and isolation as well as shock protection must be ensured.

Safe and trouble-free operation of this device can only be guaranteed if transport, storage and installation are carried out correctly and operation and maintenance are carried out with care.



Appropriate safety measures against electrostatic discharge (ESD) should be taken during connection and assembly on the isolator.

2. Short description

The Transmitter Repeater is used for powering and electrical isolation of non-isolated 2-wire transmitters.

The galvanic isolation guarantees reliable decoupling of the transmitter circuit from the processing circuit and prevents linked measurement circuits from influencing each other.

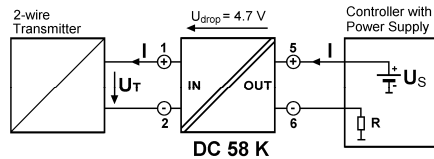
The Protective Separation with high isolation level provides protection for personnel and downstream devices against impermissibly high voltage. The Transmitter Repeater is short circuit proofed and protected against reversed polarity.

3. Functioning

The input signal is modulated and then electrically decoupled using a transformer. The isolated signal is then made available at the output, demodulated and filtered.

Ensure that the current-driving voltage of the power source U_S is sufficient for driving the minimum transmitter voltage U_T by maximum current of 20 mA over the transmitter repeater with voltage drop of $U_{drop} = 4.7 V$ and the controller load R .

$$U_T = U_S - 4.7 V - 20 mA \times R$$



4. Mounting, electrical connection

The transmitter repeater is mounted on standard 35 mm DIN rail.

Terminal assignments	
1 + Input	5 + Output
2 - Input	6 - Output

5. Order information

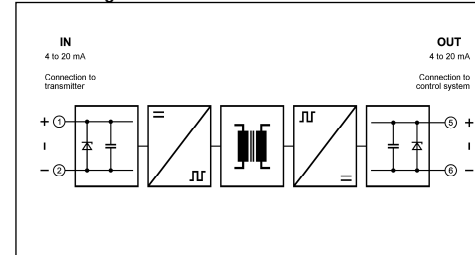
Product	Part No.
Transmitter Repeater	DC 58K

6. Technical Data

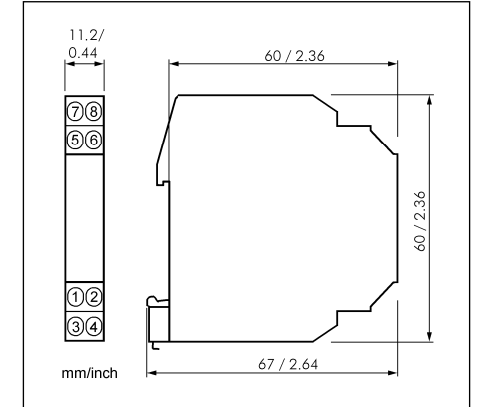
Input	
Input signal	4 - 20 mA
Operating current range	2 - 23 mA
Voltage drop	~ 4.7 V
Short circuit input current	≤ 50 mA
Output	
Output signal	4 - 20 mA
Supply voltage	15 - 30 V DC
Response time	< 10 ms (10 to 90 % of end value)
Ripple	< 10 mV _{rms}
General data	
Transmission error	< 0.1 % of end value
Supply voltage influence	< 0.01 % of end value / V (difference from 24 V)
Temperature coefficient ¹⁾	< 0.01 %/K of end value
Test voltage	2.5 kV, 50 Hz between all circuits
Working voltage ²⁾ (Basic insulation)	Up to 600 V AC/DC for overvoltage category II and contamination class 2 acc. to EN 61010 part 1
Protection against dangerous body currents ³⁾	Protective Separation according to EN 61140 by reinforced insulation in accordance to EN 61010 part 1 up to 300 V AC/DC for overvoltage category II and contamination class 2 between all circuits.
Ambient temperature	Operation 0 °C to + 55 °C (+32 to +131 °F) Transport -25 °C to + 80 °C (-13 to +176 °F) and storage
EMC ³⁾	EN 61326 -1
Construction	11,2 mm (0.44") housing, protection type: IP 20
Connection	≤ 2.5 mm ² , AWG 14
Weight	Approx. 50 g

- 1) Average TC in specified operating temperature range
- 2) As far as relevant the standards and rules mentioned above are considered by development and production of our devices. In addition relevant assembly rules are to be considered by installation of our devices in other equipments. For applications with high working voltages, take measures to prevent accidental contact and make sure that there is sufficient distance or insulation between adjacent situated devices.
- 3) Minor deviations possible during interference

7. Block diagram



8. Dimensions



LIMITED WARRANTY

DRAGO Messtechnik GmbH hereby warrants that the Product will be free from defects in materials or workmanship for a period of **five (5) years** from the date of delivery ("Limited Warranty"). This Limited Warranty is limited to repair or replacement at DRAGO's option and is effective only for the first end-user of the Product. This Limited Warranty applies only if the Product:

1. is installed according to the instructions furnished by DRAGO;
2. is connected to a proper power supply;
3. is not misused or abused; and
4. there is no evidence of tampering, mishandling, neglect, accidental damage, modification or repair without the approval of DRAGO or damage done to the Product by anyone other than DRAGO.

Delivery conditions are based upon the „GENERAL CONDITIONS FOR THE SUPPLY OF PRODUCTS AND SERVICES OF THE ELECTRICAL AND ELECTRONICS INDUSTRY“ recommended by the Zentralverband Elektrotechnik- und Elektronikindustrie (ZVEI) e.V. .

Subject to change!

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