



Analogue Data Repeater MK31-114Ex0-LU/24VDC 1-channel



- **1-channel analogue data repeater**
- **Galvanic isolation of voltage signals in the millivolt range**
- **Intrinsically safe input circuits EEx ia**
- **Area of application according to ATEX: II (1) G**
- **Input circuit 0...60 mV**
- **Output circuits 0...60 mV**
- **Linearity ≤ 0.1 %**
- **Temperature drift ≤ 0.02 %/K of final value**

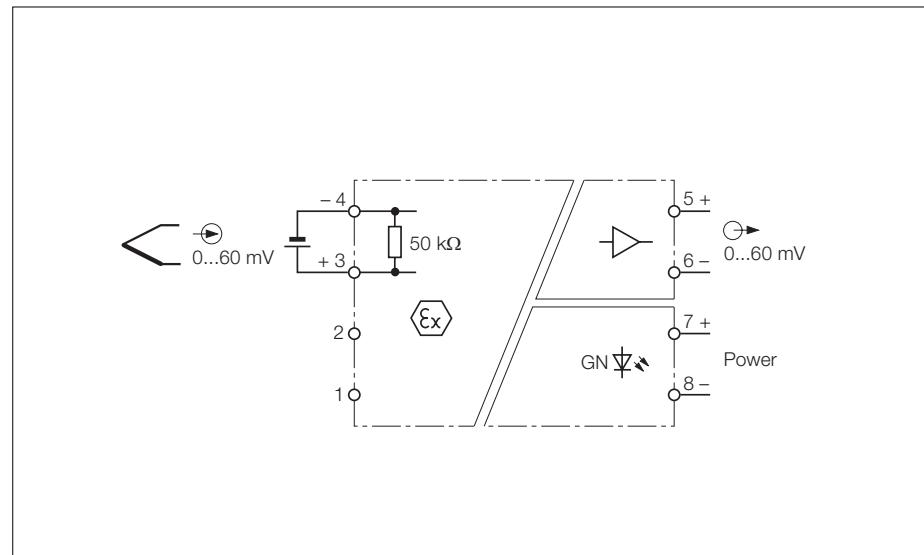
The analogue data repeaters, type MK31-114Ex0-LU/24VDC, are designed to isolate and transfer analogue signals, e. g. from thermo-elements, from the explosion hazardous area to the non-hazardous area.

The input and output circuits are suited for voltage signals of 0...60 mV.

The devices feature galvanic isolation between the input circuits, output circuits and power supply.

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Bipolar signal transmission is not possible. If negative voltages are to be transferred, the polarity of the inputs and outputs must be changed. When used in conjunction with thermo-elements this implies that either positive or negative temperature values can be transferred.

A green LED indicates that the device is powered.



Analogue Data Repeater MK31-114Ex0-LU

Type	MK31-114Ex0-LU/24VDC
Ident-no.	7506220
Supply voltage U_B	19...29 VDC ≤ 10 % approx. 50 mA between input circuit, output circuit and supply voltage for 250 V _{rms} , test voltage 2.5 kV _{rms}
Input circuits	intrinsically safe according to EN 50020
Voltage input (3 and 4)	
– Input resistance	> 50 kΩ
– Operating characteristics	0...60 mV (< 20 V)
Output circuits	voltage output, short-circuit protected
Load impedance	–
Output current	–
Load resistance	≥ 500 Ω
Output voltage	0...60 mV
Ex-approvals acc. to certificate of conformity	PTB 97 ATEX 2104
Maximum values	
– No load voltage U_0	7.2 V
– Short-circuit current I_0	1 mA
Maximum values (external sensors)	
– No load voltage U_i	40 V
– Power P_i	0.5 W
– Short-circuit current I_k	–
Max. external inductances/capacitances L_0/C_0	1000 mH/13.5 μF
– [EEx ia] IIC	II (1) G [EEx ia] IIC
Marking of devices	
Transfer characteristics	
Linearity tolerance of setpoint adjustment	≤ 0.1 % of final value
Measuring tolerance	≤ 0.2 %
Long term error	0.1 %/year
Ambient temperature sensitivity	≤ 0.02 %/K of final value
Pulse rise time	≤ 300 ms
Release time	≤ 300 ms
LED indications	
– Power	green
Housing	8-pole, 18 mm wide, Polycarbonate/ABS flammability class V-0 per UL 94 snap-on clamps for top-hat rail (DIN 50022) or screw terminals for panel mounting via flat terminals with self-lifting pressure plates ≤ 2 x 2.5 mm ² or 2 x 1.5 mm ² with wire sleeves
Mounting	
Connection	
Connection profile	
Degree of protection (IEC 60529/EN 60529)	IP20
Temperature range	-25...+60 °C

