The analogue data transmitter MK35-11Ex-HLi is designed to isolate and transmit standard current signals from the safe to the hazardous area. The signals are transferred without attenuation (1:1 transfer).

In addition to analogue signals, digital Hart-communication signals can be transferred bidirectionally.

The device is typically used to drive I/P transducers (e.g., for valve control) or display devices in the hazardous area.

The actuator is connected to terminals 1/4. Handheld terminals [HHT] can be connected to output terminals 1/4, input terminals 8/9 or to the FSK bus terminals 7/10.

The analogue data transmitter does not require auxiliary power (loop powered) and can be connected directly to the supply inputs of control systems.

- Passive isolator without auxiliary power
- Transmission of current signals 0/4...20 mA
- Supply of intelligent actuators using the Hart communication protocol
- Intrinsically safe output circuit [EEx ib] IIC
- FSK bus connection
- Linearity error ≤ 0.1 %
- Temperature drift ≤ 0.1 %/10 K
- Galvanic isolation of output circuit from input circuit and from supply voltage
- Additional power supply not necessary

1) FSK = frequency shift keying
### Analogue Data Transmitters

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<tr>
<th>Type</th>
<th>MK35-11Ex-HLi</th>
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<td>Ident-No.</td>
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#### Galvanic isolation
Between input circuit, output circuit and power supply for 250 V<sub>rms</sub>, test voltage 2.3 kV<sub>rms</sub>.

#### Input Circuits
- **Voltage drop**: < 3.5 V (100...600 Ω load impedance)
- **Input current**: 0/4...20 mA
- **Overload**: > 23.6 mA

#### Output Circuits
- **Current output terminals 1/4**: 0/4...20 mA, 20...30 mA (input override)
- **Ripple W<sub>pp</sub>**: < 0.25 % without input interference voltage
- **Load impedance**: 0...600 Ω
- **FSK-interface terminals 7/10**: 0...30 VDC

#### Ex-Approvals acc. to Certificate of Conformity
- **PTB Ex-97.D.2153**

#### Transfer Characteristics
- **Linearity tolerance of setpoint adjustment**: ≤ 0.1 % of final value
- **Measuring tolerance**: ≤ 0.1 % at R<sub>a</sub> = 0
- **Load impedance**: ≤ 0.18 % in load range 0...R<sub>a max</sub>
- **Ambient temperature sensitivity**: ≤ 0.1 %/10 K (at < -10 °C 0.25 %/10 K)
- **Pulse rise time (10 %...90 %)**: < 50 ms
- **Release time (90 %...10 %)**: < 50 ms

#### LED Indications
- **Power “ON”**

#### Housing
- 12-pole, 27 mm wide, Polycarbonate/ABS
- Flammability class V-0 per UL 94
- Snap-on clamps for top-hat rail (DIN 50022)
- Screw terminals for panel mounting
- Connection via flat terminals with self-lifting pressure plates
- Connection profile ≤ 2 x 2.5 mm<sup>2</sup> or 2 x 1.5 mm<sup>2</sup> with wire sleeves
- Degree of protection (IEC 60529/EN 60529) IP20
- Operating temperature -25... +60 °C