

- 2-Channel
- Control circuit EEx ia IIC
- DC 24 V supply voltage
- Reversible operating mode
- Lead breakage (LB) and short circuit (SC) monitoring can be disabled
- Override input for each of the two transistor outputs per channel
- 1 active transistor output per channel, fault indication
- 3 active transistor outputs per channel

The transformer isolated amplifier transmits digital signals from the hazardous area. Sensors per DIN 19234 (NAMUR) or mechanical contacts can serve as inputs. The control circuit can be monitored by the lead breakage and short circuit monitoring.

#### Notes on connection assignments:

##### Inputs d30; z30 (LL+)

These inputs are internally connected. Supply for transistor outputs d32, z32.

#### Lead breakage monitoring (LB)

##### d6, d8; z6, z8

Lead breakage monitoring can be disabled by bridging the above connections.

#### Mode of operation d16; z16

Logic-1: no reversal of operating mode from input to output

Logic-0: reversal of operating mode from input to output

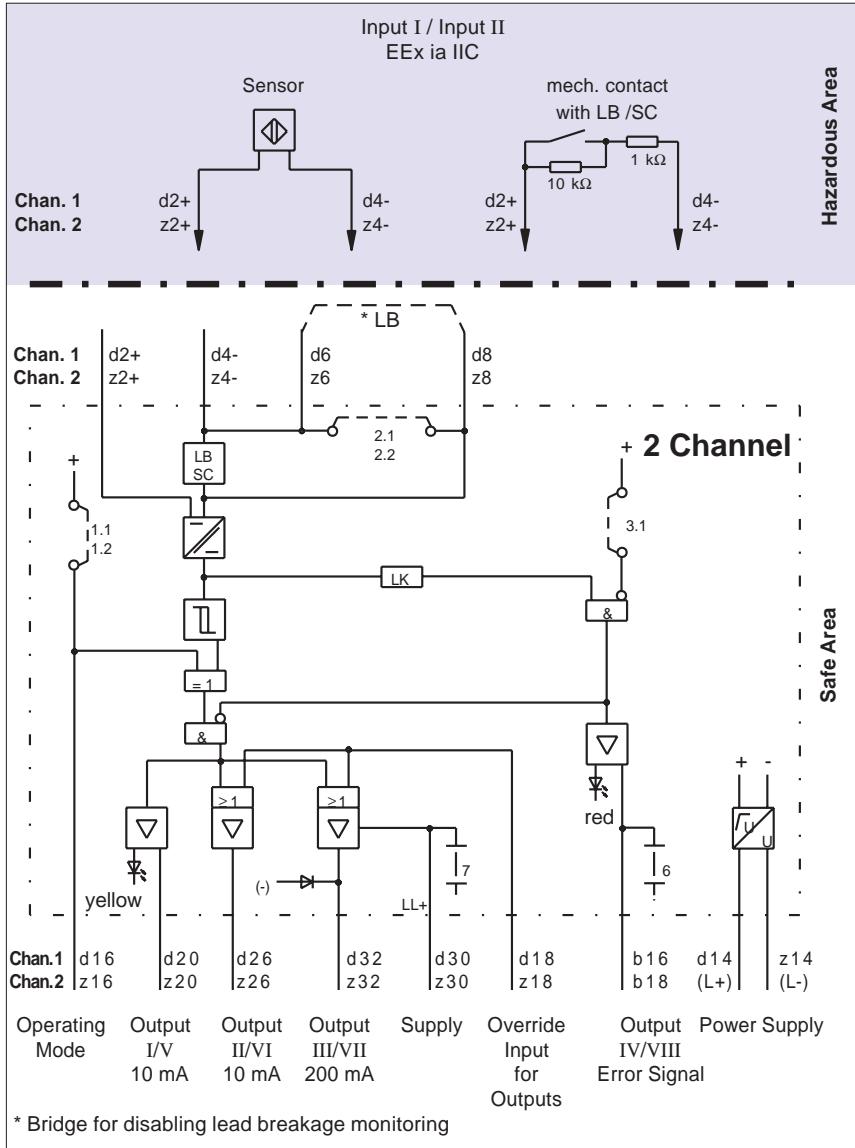
(see table of operating modes on page 25)

If necessary, the operating mode can also be selected with a factory installed jumper on the card.

#### Fault signal outputs b16; b18

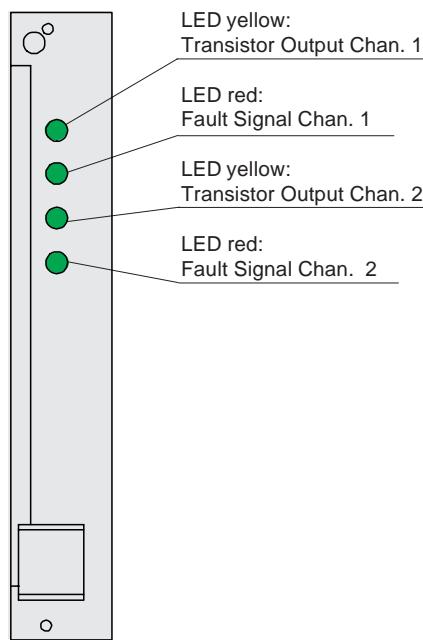
Short circuit or lead breakage monitoring (Indicator: LED red).

The fault signal outputs are combined by a circuit lead, so that only one connection is required for the fault evaluation of all channels on the card. If the evaluation of each individual channel is necessary, then the circuit lead must be breached at position 6 (see the side view of the card).

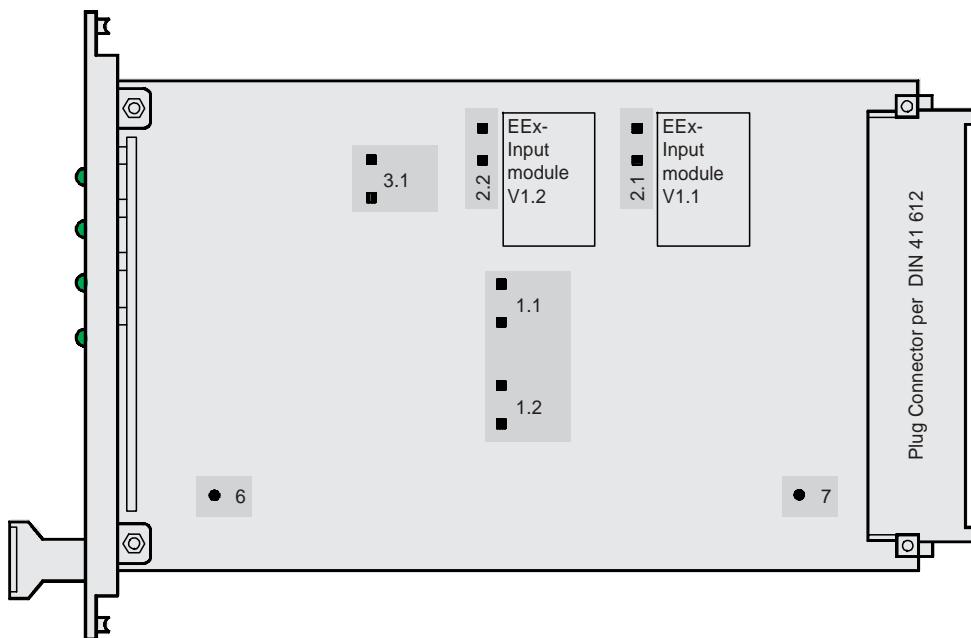


#### Front View

Type A  
(dimensions see page 16)



<b>Technical data</b>	
<b>Power supply</b>	
Nominal voltage	DC 20.4 V ... 27.6 V
Ripple	≤10 %
Nominal current	about 60 mA
Connections d14 (L+), z14 (L-)	
<b>Power supply</b>	
Nominal voltage	DC 20.4 V ... 27.6 V
Ripple	≤10 %
Nominal current	≤10 mA without output load
Connections d30, z30 (LL+)	
<b>Inputs (intrinsically safe)</b>	
<b>Input I:</b>	Connections d2+, d4-
<b>Input II:</b>	Connections z2+, z4-
Nominal values	per DIN 19 234 with respect to NAMUR
Open circuit voltage / short circuit current	about DC 8 V / about 8 mA
Switch point / switch hysteresis	1.2 mA ... 2.1 mA / about 0.2 mA
Input pulse length / pulse interval	≥ 0.5 ms / ≥ 0.5 ms
Lead monitoring	Breakage J ≤ 0.1 mA
	short circuit J ≥ 6 mA
Connections d2+, d4-	
Connections z2+, z4-	
<b>Certificate of Conformity Peak Values</b>	
Max. voltage $U_o$	PTB Nr. Ex-81/2065X other certifications see www.pepperl-fuchs.com
Max. current $I_o$	12.7 V
Max. power $P_o$	21 mA
	66 mW
<b>Allowable circuit values</b>	
<b>Ignition protective method, category</b>	
Explosion group	[EEx ia]
Max. external capacitance	IIB / IIC
Max. external inductance	1.1 µF / 0.37 µF
	5 mH / 2 mH
	[EEx ib]
	IIB / IIC
	3.9 µF / 0.8 µF
	260 mH / 70 mH
Connections d16, z16	
<b>Input (not intrinsically safe)</b>	
Signal level Logic-1	DC 15 V ... 30 V
Signal level Logic-0	DC 0 V ... 5 V or B-contact input
Input current	1 mA
Input delay	5 ms ... 20 ms (typically 10 ms)
Connections d20; d26; z20; z26	
<b>Outputs (not intrinsically safe)</b>	
<b>Output I, II, V, VI :</b>	Transistor output, active
Nominal current	10 mA, short circuit protected
Signal level Logic-1 / Logic-0	(L+) -5 V / 0.9 V or cut off output (leakage current J ≤ 10 µA)
<b>Output III, VI:</b>	Transistor output, active
Nominal current	200 mA, short circuit protected
Signal level Logic-1 / Logic-0	(LL+) -3.5 V / cut off output (leakage current J ≤ 10 µA)
Connections d32; z32	
<b>Transfer characteristics</b>	
Switch frequency	≤ 1 kHz
Safe galvanic isolation per EN 50 020, voltage peak value 375 V	
Safe galvanic isolation per EN 50 020, voltage peak value 375 V	
available	
per DIN 19234 (NAMUR)	
per DIN IEC 721	
<b>Conformity to standards</b>	
Input	
Climatic conditions	
<b>Ambient temperature</b>	-25 °C ... +70 °C (248 K ... 343 K)
<b>Connection method</b>	48-pin plug connector per DIN 41 612, Series 2, Type F; z, b and d provided
<b>Coding</b>	a3 / c3
<b>Weight</b>	about 200 g

**Side View****Programming facilities on the card****Jumpers**

Plug-in design optional

- 1.1 (open) Reverse operating mode channel 1
  - 1.2 (open) Reverse operating mode channel 2
  - 2.1 (open) Lead breakage monitoring channel 1: active
  - 2.2 (open) Lead breakage monitoring channel 2: active
- If bridge 3.1 is closed, short circuit and lead breakage monitoring for all channels are disabled

**Breach Points**

6 Separation of the error signal outputs

7 Separation of the common supply points LL+ for the transistor final power levels

**Delivery status**Jumpers  
1.1 to 3.1: open