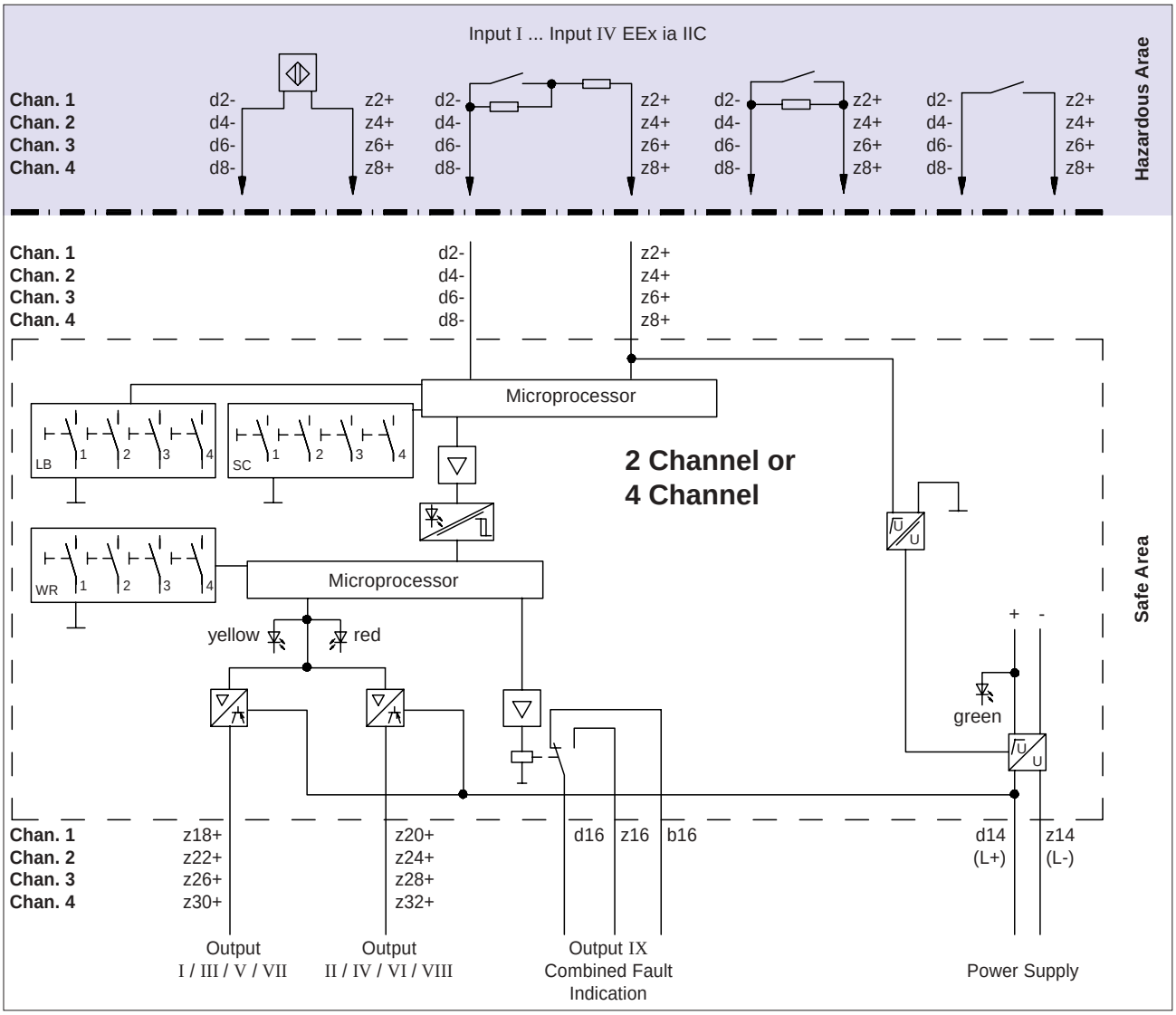
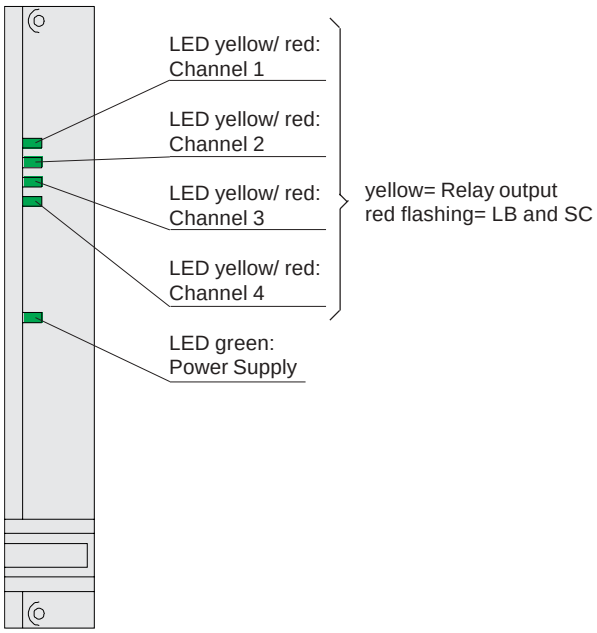


ED2-ST-Ex2
ED2-ST-Ex4

- **2-Channel Model: ED2-ST-Ex2**
- **4-Channel Model: ED2-ST-Ex4**
- **Control circuit EEx ia IIC**
- **DC 24 V supply voltage**
- **LED´s per NAMUR NE 44**
- **Reversible operating mode**
- **Lead breakage (LB) and short circuit (SC) can be disabled**
- **Active transistor outputs, signal**
- **1 Relay output: combined fault signal (optional: active transistor output)**
- **EMC per NAMUR NE 21**

Front View

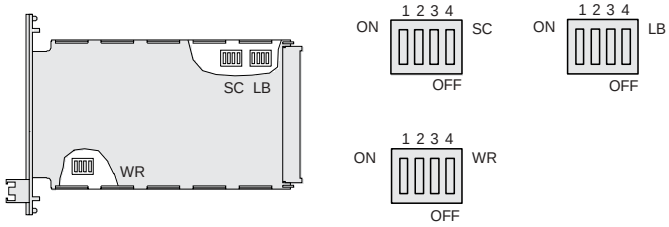
Type New Eurocard Housing (dimensions see page 17)



Issue Date 20.02.02

Technical data				
Power supply				Connections d14 (L+), z14 (L-)
Nominal voltage	DC 20 V ... 35 V			
Maxmimum voltage U_m	40 V			
Ripple	≤ 10 %			
Nominal current	≤100 mA + 8 x I_{out}			
Inputs (intrinsically safe)				
Input I :				Connections d2-; z2+
Input II :				Connections d4-; z4+
Input III :				Connections d6-; z6+
Input IV :				Connections d8-; z8+
Nominal values	IEC 60947-5-6			
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	Break J ≤0.1 mA			short circuit J > 6 mA
Certificates				
EC-type Examination Certificate	**PTB 99 ATEX 2163 X** other certifications see www.pepperl-fuchs.com			
Category, Type of protection	⟨Ex⟩ II (1) G [EEx ia] IIC			
	Declaration of conformity has to be considered			
Peak values				
Voltage U_0	9.6 V			
Current I_0	16 mA			
Power P_0	38 mW			
Allowable circuit values				
Ignition protective method, category	EEx ia, ib IIA	EEx ia, ib IIB	EEx ia, ib IIC	
Max. external inductance L_0	900 mH	530 mH	140 mH	For further values see
Max. external capacitance C_0	210 µF	26 µF	3.6 µF	EU-Type Examination Certificate
Outputs (not intrinsically safe)				
Output I, II:	Transistor output, active			Connections z18+, z20+
Output III, IV:	Transistor output, active			Connections z22+, z24+
Output V, VI:	Transistor output, active			Connections z26+, z28+
Output VII, VIII:	Transistor output, active			Connections z30+, 32+
Maximum voltage U_m	40 V			
Nominal current I_{out}	100 mA, permanent short circuit protected			
Signal level Logic-1/ Logic-0	> 16 V / < 1 V			
Output IX: combined fault signal				Connections b16, z16, d16
Contact load	AC: 50 V / 0.5 A / cos φ > 0.7; DC: 30 V / 2 A Ohm load / max. 60 W			
Mechanical life	> 10^6 switchings			
Energized-/De-energized delay	< 4 ms / < 4 ms			
Optional, Output X:	Transistor output, active			Connections d16+, z16-
Nominal current I_{out}	100 mA, permanent short circuit protected			
Transfer characteristics				
Switch frequency	1 kHz			
Galvanic isolation				
Output I ... VIII from each other	No isolation			
Output I ... VIII from power supply	No isolation			
Output I ... VIII and power supply from inputs	Safe galvanic isolation per EN 50 020, voltage peak value 375 V			
Conformity to standards				
Explosion protection	EN 50 014, EN 50 020			
Input	IEC 60 947-5-6			
Isolation co-ordination	per DIN EN 50 178			
Galvanic isolation	per DIN EN 50 178			
Climatic conditions	per DIN IEC 721			
EMC / Electromagnetic compatability	per EN 50 081-2 / EN 50 082-2, NAMUR NE 21			
Ambient temperature	-25 °C ... +65 °C (248 K ... 338 K); Ex-application -20 °C ... +65 °C (243 K ... 338 K)			
Connection method	48-pin plug connector per DIN 41 612, Series 2, Type F; z, b and d provided			
Coding	a1 / a9			
Weight	about 120 g			

Side View



DIP-Switch SC, SC1 ... SC4	Short circuit monitoring with "ON" or "OFF" switch settings.
DIP-Switch LB, LB1 ... LB4	Lead breakage monitoring with "ON" or "OFF" switch settings.
DIP-Switch WR1, WR1 ... WR4	Mode of operation is reversed with a switch setting of "ON".

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