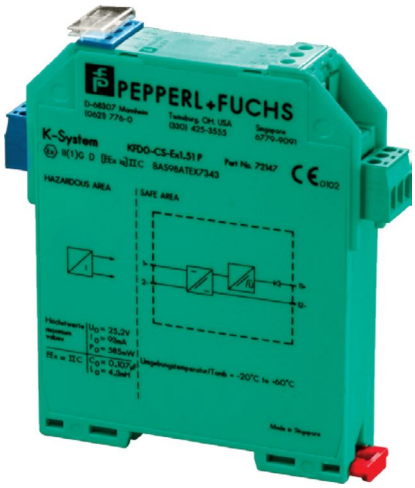
Conventional

Galvanic Barrier

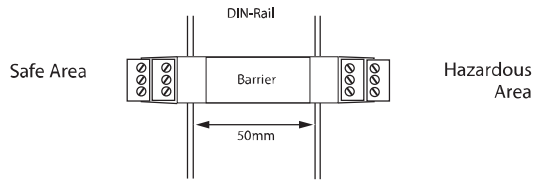


29600-378
Conventional Galvanic Barrier

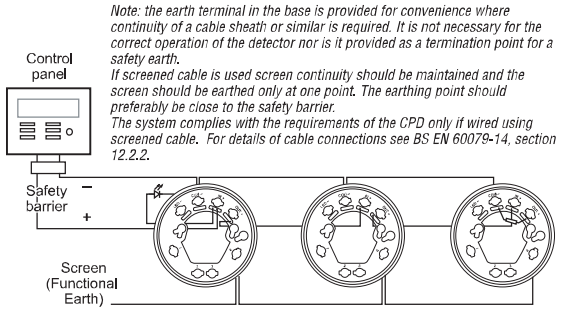
The Conventional Galvanic Barrier is installed in the safe area and ensures system integrity.

- Enables compliance with the ATEX directive

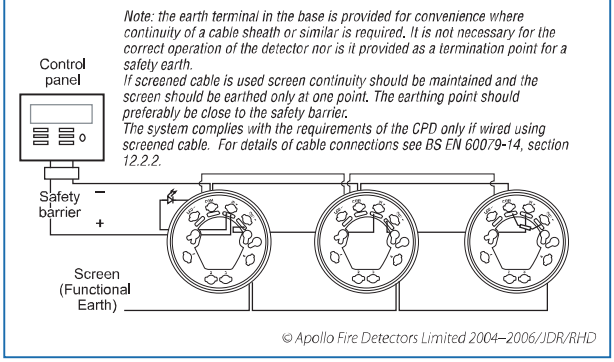
Conventional IS Configuration



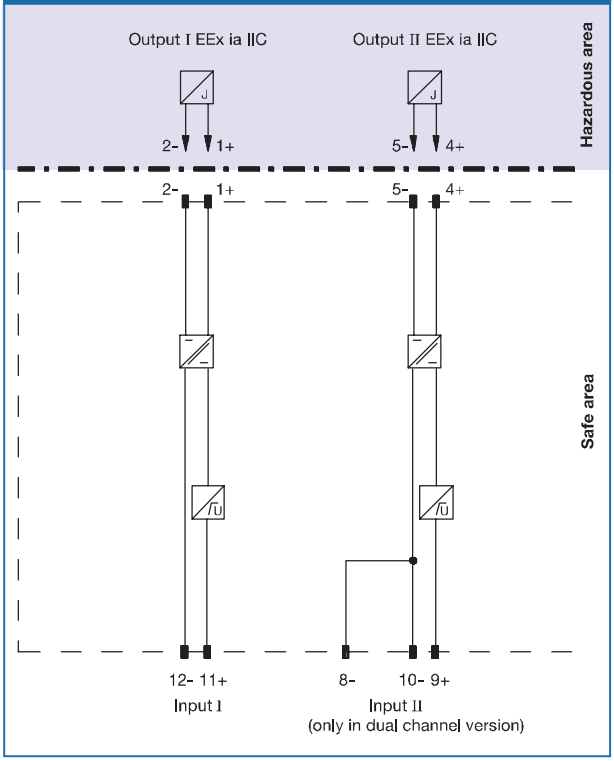
Base Wiring Diagram (Fig 2)



3 Bases Wired with a Common LED (Fig 3)

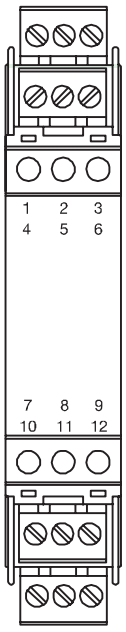


Internal Systematic Diagram



Housing Type A4

Front View



Technical Data

Inputs (Not intrinsically safe)	Terminals 12-, 11+; 8-, 10-, 9+		
Nominal voltage	DC 4 V ... 35 V		
Max. current consumption	0 mA ... 40 mA		
Max. power dissipation at 40 mA and U_F < 23.7 V at 40 mA and U_L > 23.7 V	< 700 mW per channel < 1.2 W per channel		
Fail-safe maximum voltage	Um 250 V		
Field circuit (Intrinsically safe)	Terminals 1+, 2-; 4+, 5-		
Min. output voltage for 3 V < U_L < 23.7 V for U_L > 23.7 V	U_L - (0.4 x current in mA) - 0.7 23 V - (0.4 x current in mA)		
Max. short-circuit current at U_F > 23.7 V	≤ 65 mA		
Max. transfer current	≤ 40 mA		
Details of Certificate of Conformity	BASEEFA No. Ex-88.B.2331 Other international approvals		
Voltage U_o	28 V		
Current I_o	93 mA		
Power P_o	0.65 W		
Permissible circuit values ignition protection class, category	[EEx ia]		
Explosion group	IIA IIB IIC		
Max. external capacitance	1.04 µF 0.39 µF 0.13 µF		
Max. external inductance	33.6 mH 12.6 mH 4.2 mH		
Fail-safe maximum voltage U_m			
Power supply	250 V		
Entity parameters	FM No. 1Z2A1.AX		
	Terminals 1+, 2-; 4+, 5-		
Voltage V_{OC}	26.71 V		
Current I_{SC}	88.8 mA		
Voltage V_t	- V		
Explosion group	A&B	C&E	D, F&G
Max. external capacitance	0.16 µF	0.48 µF	1.28 µF
Max. external inductance	4.60 mH	18.32 mH	37.55 mH
	CSA No. LR65756-13		
Safety parameters	Terminals 1+, 2-; 4+, 5-		
KFD0-CS-Ex1.51			
Voltage V_{OC}	28.0 V		
Current I_{SC}	93.3 mA		
Explosion group	A&B	C&E	D, F&G
Max. external capacitance (C_a)	0.14 µF	0.42 µF	0.42 µF
Max. external inductance (L_e)	3.1 mH	16.8 mH	16.8 mH
Transfer characteristics			
Calibrated accuracy at 20 °C (68 0F)	≤ ± 200 µA inclusive calibration, linearity, hysteresis and load fluctuations at the output up to 1 kOhm load		
Temperature drift	≤ 2 µA / K (273 K ... 323 K) ≤ 5 µA / K (253 K ... 333 K)		
Rise time	≤ 20 ms at 20 ms and 250 Ohm load		
Conformity to standard			
Isolation co-ordination	to EN 50 178		
Galvanic isolation	to EN 50 178		
Climatical condition	to IEC 721		
EMC	to EN 50 081-2, EN 50 082-2, NAMUR NE 21		
Weight	≈ 100 g (≈ 3.5 oz)		
Ambient temperature	-20 °C ... +60 °C (-4 °F ... 140 °F)		
Max. wire size	2.5 mm² (14 AWG)		