



USB Intrinsic Safety Barrier SK-PC-Z1D1-UU1-10-HS

- For installation in Zone 2 environments, supplies keyboards in Zone 1/21
- 2 USB channels
- Data rates up to 480 Mbit/s
- Max. cable length 10 m (5 m before device, 5 m after device)
- Powered via USB, no separate power connection required

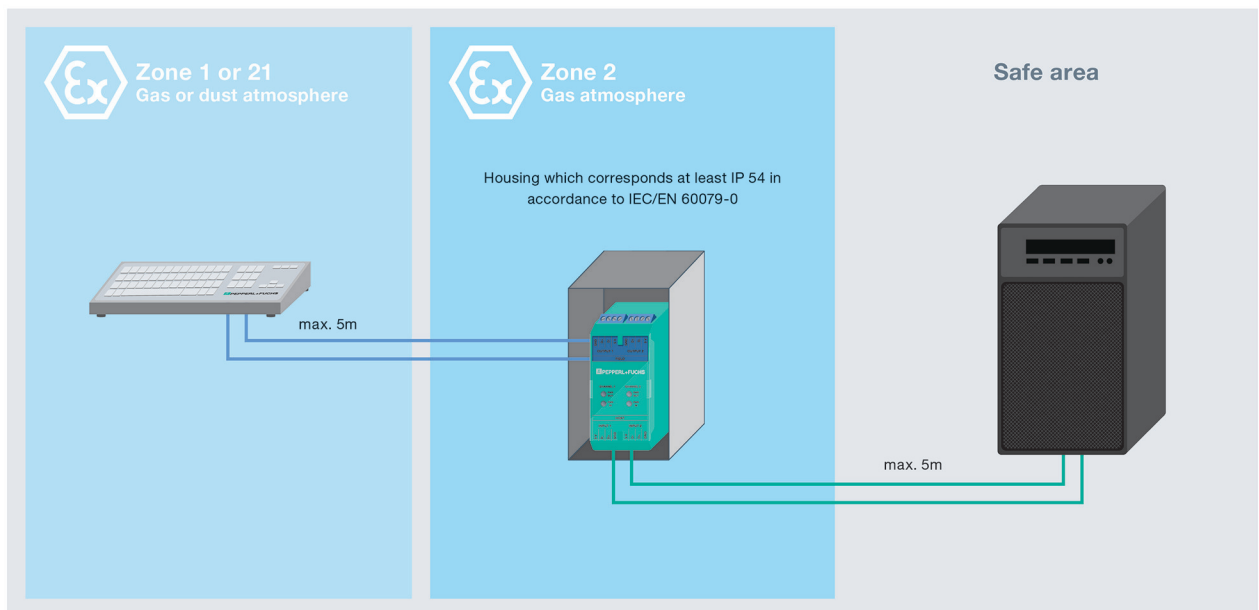
USB intrinsic safety barrier for stand-alone keyboard applications



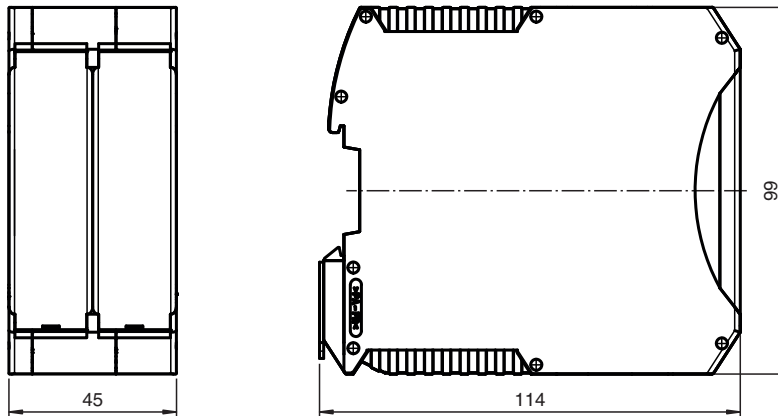
Function

The SK-PC-Z1D1-UU1-10-HS USB intrinsic safety barrier enables a host device (i.e., an industrial PC) that is in a Zone 2 environment to be connected to an EXTA2 keyboard or similar USB device in a Zone 1/21 environment.

Function Principle



Dimensions



Technical Data

Supply

Input voltage	4.75 ... 5.1 V DC (Um = 60 V SELV/PELV)
Input current	max. 200 mA
Power consumption	max. 2.7 W

Indicators/operating means

Indicators	LED PWR IN: green: input voltage OK LED PWR OUT: green: output voltage OK
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Interface

Interface type	4-screw terminal MSTBT 2.5 HC / 4-STP GY7035 USB 2.0 compatible
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Output

Output current	max. 80 mA
Output voltage	4.4 ... 5 VDC

Directive conformity

Electromagnetic compatibility	
Directive 2014/30/EU	EN 61326-1:2013 (industrial locations) , EN 61000-6-4:2007+A1:2011
RoHS	
Directive 2011/65/EU (RoHS)	EN 50581:2012-09

Ambient conditions

Operating temperature	-20 ... 60 °C (-4 ... 140 °F) -20 °C ≤ Ta ≤ 60 °C / 70 °C (depending on installation conditions)
Storage temperature	-40 ... 85 °C (-40 ... 185 °F)
Relative humidity	< 95 % non-condensing
Shock resistance	18 shocks 15 g , 11 ms all axis, IEC 60068-2-27
Vibration resistance	10 ... 150 Hz , ± 0.075 mm, 1 g, 10 cycles per axis according to EN 60068-2-6

Mechanical specifications

Degree of protection	IP20
Material	ME MAX 45 2-2 KMGY-2713706 refer to 42-3388
Cable	shielded cables must be used
Mass	approx. 220 g

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Technical Data

Dimensions	45 mm x 99 mm x 114 mm
Mounting	DIN rail mounting
Cable length	5 m before device , 5 m after device , 10 m total
Data for application in connection with hazardous areas	
EU-type examination certificate	EXA 18 ATEX 0054X
Marking	Ⓜ II 3(2) G Ex ec [ib Gb] IIC T4 Gc Ⓜ II (2) D [Ex ib Db] IIIC
Directive conformity	
Directive 2014/34/EU	EN 60079-0:2012+A11:2013 , EN 60079-7:2015 , EN 60079-11:2012
International approvals	
IECEX approval	IECEX EXA 18.0008X
Approved for	Ex ec [ib Gb] IIC T4 Gc [Ex ib Db] IIIC
Standards	IEC 60079-0:2017 , IEC 60079-7:2015 , IEC 60079-11:2011

Safety Information

Entity parameters (each USB channel)	
Voltage	U_o DC 5.4 V
Current	I_o 166 mA
Power	P_o 600 mW
For group IIC	Capacitance C_o 44 μ F Inductance L_o 1 mH Trapezoidal output The following table values of L_o and C_o can be applied combined. C_o [μ F] 30.7 25.03 24.03 19.7 L_o [μ F] 2.6 3.3 3.5 4.5
For group IIB resp. IIIC	Capacitance C_o 990 μ F Inductance L_o 6.8 mH Trapezoidal output The following table values of L_o and C_o can be applied combined. C_o [μ F] 45.8 76.8 128.8 358.8 L_o [μ F] 47.2 17.2 7.2 2.2

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