



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

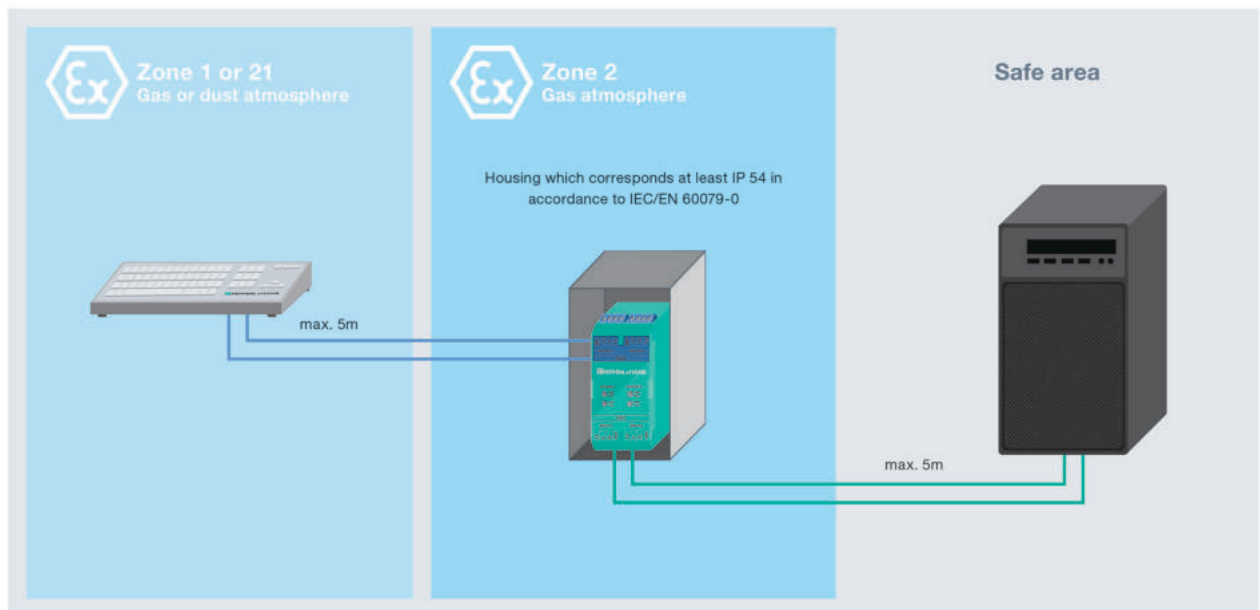
USB intrinsic safety barrier for stand-alone keyboard applications



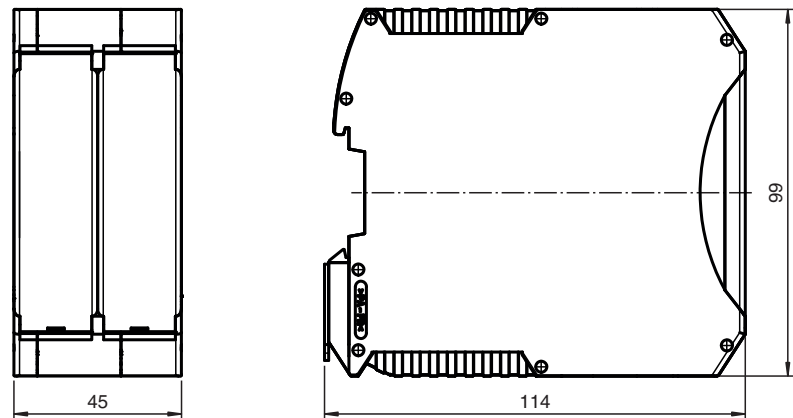
Function

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

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

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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 µF Inductance L _o 1 mH Trapezoidal output The following table values of L _o and C _o can be applied combined. C _o [µF] 30.7 25.03 24.03 19.7 L _o [µF] 2.6 3.3 3.5 4.5
For group IIB resp. IIIC	Capacitance C _o 990 µF Inductance L _o 6.8 mH Trapezoidal output The following table values of L _o and C _o can be applied combined. C _o [µF] 45.8 76.8 128.8 358.8 L _o [µF] 47.2 17.2 7.2 2.2

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