Div. 2 / Zone 2 Ex-rated barrier

SK-PC-D2-UU1-10-HS

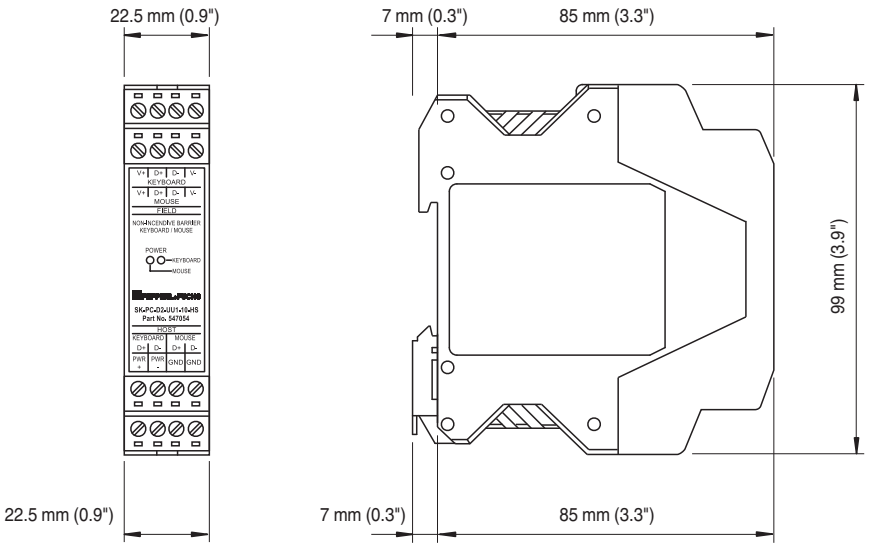
- 1- or 2-channel Division 2 non-incendive barrier
- Div 2/Zone 2 mountable
- USB or PS2 interface for Ex-rated keyboard or mouse

Div. 2 / Zone 2 Ex-rated barrier

Function

The SK-PC-D2-UU1-10-HS device may be mounted in Class I, Div. 2, Groups A-D and Zone 2 IIC locations and provides Non-incendive outputs for Class I, Div 2, Groups A-D, Class II, Div 2, Groups F-G, Class III, Div 2, Zone 2 IIC, and Zone 22 IIIB areas based on the entity parameter concept.
The barrier is for providing protected USB 1.1 or PS2 power and data signals to Ex-rated mouse/keyboard in the field.

Dimensions



Technical Data

Supply		
Rated voltage	U_r	9 ... 30 VDC (Um = 30 V SELV)
Input current		120 mA nominal 500 mA max
Indicators/operating means		

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Technical Data

LED ON		power - keyboard power - Mouse
Interface		
Interface type		USB 1.1 or PS2
Output		
Output current		89 mA
Output voltage		4.8 VDC
Directive conformity		
Electromagnetic compatibility		
Directive 2014/30/EU		EN 61326-1:2013 (industrial locations) #224258
RoHS		
Directive 2011/65/EU (RoHS)		EN 50581:2012-09
Conformity		
Degree of protection		IEC 60529
Protection against electrical shock		IEC 61140
Ambient conditions		
Ambient temperature		-40 ... 60 °C (-40 ... 140 °F)
Relative humidity		0 ... 95% (noncondensing)
Vibration resistance		5 G, 58 ... 150 Hz
Impact resistance		15 g, 11 ms
Mechanical specifications		
Connection type		Terminal Block
Degree of protection		IP20
Connection		Supply: terminals 13+, 14- Input: terminals 9+, 10-; 11+, 12- Output: terminals 1+, 2+, 3-, 4-; 5+, 6+, 7-, 8- (field terminal) Ground: terminals 15, 16
Mass		120 g
Dimensions		99 mm x 85 mm x 22.5 mm
Cable length		Max. 4.6 m (15'): barrier to keyboard/mouse Max. 4.6 m (15'): host pc to keyboard/mouse Max. 6.1 m (20'): total length, host PC to keyboard/mouse
Data for application in connection with hazardous areas		
EU-type examination certificate		DEMKO 14ATEX1269806X
Marking		⟨Ex⟩ II 3 G Ex nA [ic] IIC T6 Gc ⟨Ex⟩ II 3 G Ex nA [ic IIIB] IIC T6 Gc
Directive conformity		
Directive 2014/34/EU		EN 60079-0:2012+A11:2013 , EN 60079-11:2012 , EN 60079-15:2010
International approvals		
UL approval		cULus (E106378)
Control drawing		116-0337
Approved for		Mountable in Class I, Division 2, Groups A, B, C, D Providing non-incendive field wiring at field terminals to Class I, Division 2, Groups A, B, C, D Class II, Division 2, Groups F, G Class III, Division 2 Temperature Class T6 Mountable in Class I, Zone 2 Providing intrinsic safety wiring at field terminals for Class I, Zone 2, Group IIC and Group IIIB hazardous locations USL: Class I, Zone 2 AEx nA [ic] IIC T6 Gc Class I, Zone 2 AEx nA [ic IIIB] IIC T6 Gc CNL: Class I, Zone 2, Ex nA [ic] IIC T6 Gc X Class I, Zone 2, Ex nA [ic IIIB] IIC T6 Gc X
IECEx approval		IECEx UL 14.0017X
Approved for		Ex nA [ic] IIC T6 Gc Ex nA [ic IIIB] IIC T6 Gc

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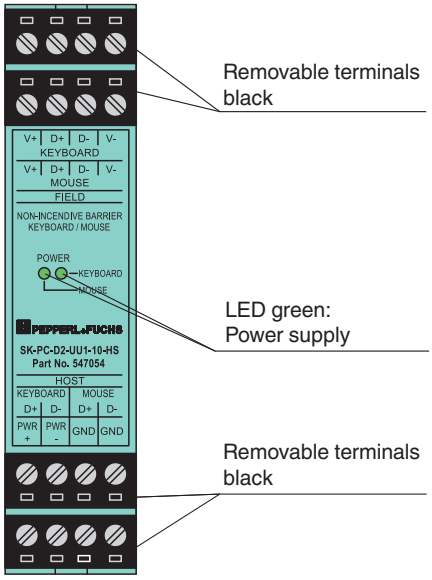
Technical Data

Standards	IEC 60079-0:2011 (6th edition) IEC 60079-11:2011 (6th edition) IEC 60079-15:2010 (4th edition)

Characteristic Curve

Front view



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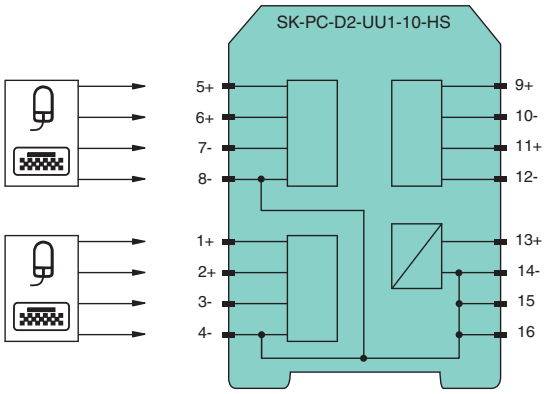
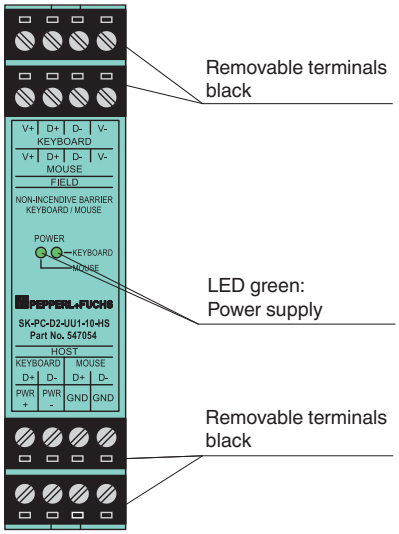
Pluggable terminal blocks	
Conductor size	0.2 mm² (24 AWG) to 2.5 mm² (12 AWG)
Conductor insulation	Must be rated 65 °C or higher
Tightening torque	0.5 Nm (4.4 in-lb) to 0.6 Nm (5.3 in-lb)

Connection

Div. 2 / Zone 2



Front view



Field terminals 1 ... 4 and 5 ... 8 are for connection to a USB or PS2 keyboard or mouse with proper matching entity parameters. Connections 9 ... 12 are the host side USB/PS2 data signal connections. These match the common named field connections (D+ D- keyboard are the datalines to the keyboard connections on the field side, etc.). 13 and 14 are for connection to a properly rated SELV supply voltage. Connections 15 and 16 are to be connected to ground. By connecting the host USB cables, the connections 4, 8, 12, 14, 15, and 16 are grounded via the host PC. The precondition for this is that the GND line of the PC USB connection is internally connected to ground. This must be ensured by measurement.

Installation

This barrier shall be installed according to all applicable standards and regulations for the location in which it is being installed. This barrier is intended to be mounted on a 35 mm DIN rail within a properly rated equipment cabinet for the application area. When installed under ATEX/IECEx, the barrier shall be in an ATEX/IECEx certified enclosure with a minimum ingress protection rating of IP54.This barrier shall be used in an environment of not more than pollution degree 2.

This device contains no user serviceable components. Replacing internal components may impair the safety of the device.

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