

FB-2SP - Device coupler



2316051

<https://www.phoenixcontact.com/us/products/2316051>

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Device coupler for Foundation Fieldbus and PROFIBUS PA expansions with terminal connections for 2 spurs connected to fieldbus end devices

Product Description

The FB-2SP has terminal blocks for two spur connections to each device coupler. The device coupler provides short-circuit protection to the fieldbus trunk. Voltage and communication are routed via the TBUS connection system to multiple installed device couplers.

Commercial Data

Item number	2316051
Packing unit	1 pc
Minimum order quantity	1 pc
Note	Made to Order (non-returnable)
Sales Key	DN11
Product Key	DNC144
Catalog Page	Page 425 (C-8-2015)
GTIN	4046356466158
Weight per Piece (including packing)	101.1 g
Weight per Piece (excluding packing)	99.76 g
Customs tariff number	85369095
Country of origin	US

Technical Data

Notes

Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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Utilization restriction

CCCex note	Use in potentially explosive areas is not permitted in China.
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Product properties

Product type	Device coupler
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Electrical properties

Supply

Supply voltage range	10.3 V DC ... 32 V DC (input on trunk line side)
Typical current consumption	6 mA

Ex data

Safety data

Max. voltage U_i	253 V AC
Inductance L_i	4 μ H
Capacitance C_i	0 μ F
Max. output voltage U_o	U_i
Max. output current I_o	48 mA
Max. output power P_o	1.536 W
IIB: Max. external inductivity L_o / Max. external capacitance C_o	/ 100 nF 325 μ H

Interfaces

Signal	PROFIBUS FOUNDATION Fieldbus
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Data: Foundation Fieldbus and PROFIBUS PA Segment

Connection method	Pluggable COMBICON screw connection for each spur
No. of channels	2
Conductor cross section flexible max.	2.5 mm ²
Conductor cross section flexible min.	0.2 mm ²
Conductor cross section, rigid max.	2.5 mm ²
Conductor cross section, rigid min.	0.2 mm ²
Conductor cross section AWG max.	12
Conductor cross section AWG min.	24
Output nominal voltage	\leq 32 V (each spur)

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Output current	15 mA (each spur, adjustable via selector switch, -40 ... 85°C)
	25 mA (each spur, adjustable via selector switch, -40...80°C)
	35 mA (each spur, adjustable via selector switch, -40...75°C)
	45 mA (each spur, adjustable via selector switch, -40...70°C)
Maximum output current	22 mA (each spur, adjustable via selector switch, -40 ... 85°C)
	33 mA (each spur, adjustable via selector switch, -40...80°C)
	45 mA (each spur, adjustable via selector switch, -40...75°C)
	57 mA (each spur, adjustable via selector switch, -40...70°C)

Dimensions

Dimensional drawing	
Width	17.5 mm
Height	89.7 mm
Depth	70.4 mm

Material specifications

Color	green
Housing material	PA 6.6-FR

Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 85 °C (depending on set rated current)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	< 95 % (non-condensing)
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Shock	15g, 11 ms
Vibration (operation)	1g, 10 Hz ... 150 Hz

Approvals

Conformity/Approvals

Conformance	CE-compliant, additionally EN 61326
IEC	IEC 60529, IEC 61158-2
CSA, USA/Canada	Class I, Zone 2, AEx nA[nL] IIB T4
	Class I, Div. 2, Groups C, D Ex nA [nL] IIB T4, FNICO/Entity Class I, Zone 2, AEx nA [nL] IIB T4, FNICO/Entity
Fieldbus Foundation	FF-846

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EN	EN 61326, EN 60068-2-27, EN 60068-2-6
NE	NAMUR NE 21

Ex data

ATEX	Sira 08ATEX4303X: II 3(3)G Ex nA [Ic Gc] IIB T4 Gc, FISCO Ic spurs Ex nA [nL Gc] IIB T4 Gc, FNICO spurs
IECEX	IECEX SIR 08.0110X: II 3(3)G Ex nA [Ic Gc] IIB T4 Gc, FISCO Ic spurs Ex nA [nL Gc] IIB T4 Gc, FNICO spurs
CSA, USA/Canada	Class I, Div. 2, Groups C, D Ex nA [nL] IIB T4, FNICO/Entity Class I, Zone 2, AEx nA [nL] IIB T4, FNICO/Entity

Standards and regulations

Standards

Standards/regulations	IEC 60529, IEC 61158-2
	NE21
	EN 61326, EN 60068-2-27, EN 60068-2-6
	FF-846

Standards/regulations

Standards/regulations	Ring wave noise immunity in acc. with IEC 61000-4-12
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Standards/regulations

Standards/regulations	Dry heat in acc. with IEC 61131-2
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Standards/regulations

Standards/regulations	Damp heat in acc. with IEC 61131-2
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Standards/regulations

Standards/regulations	Shock and vibration in acc. with EN 61131-2 and EN 50178
Standards/regulations	IEC 61158-2

Mounting

Mounting type	DIN rail mounting
Mounting position	On horizontal DIN rail NS 35 in acc. with EN 60715

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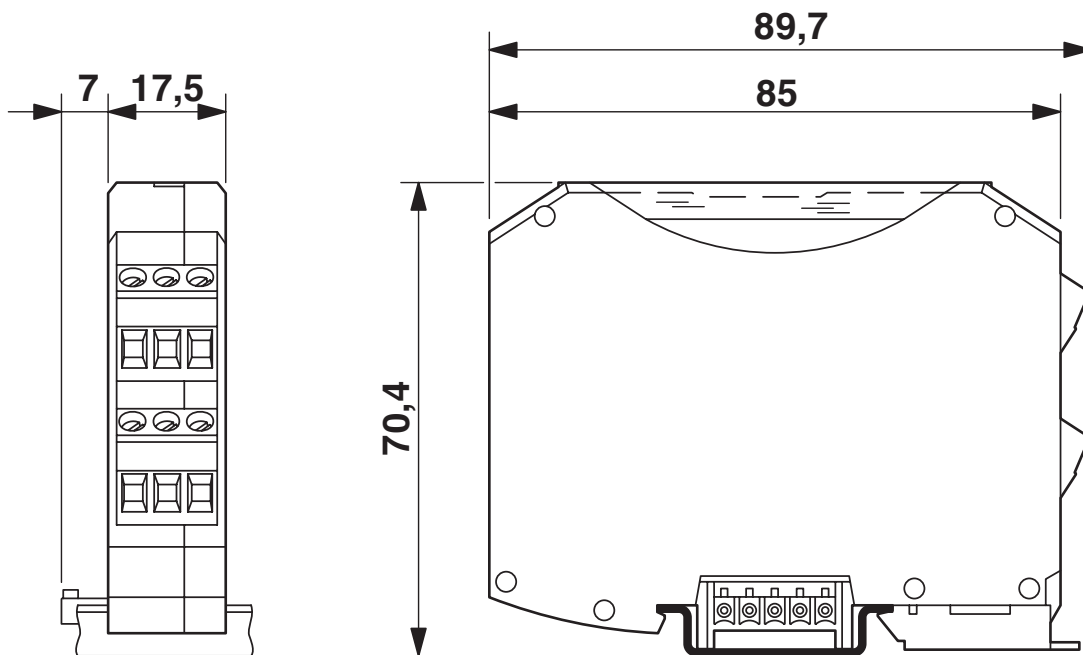
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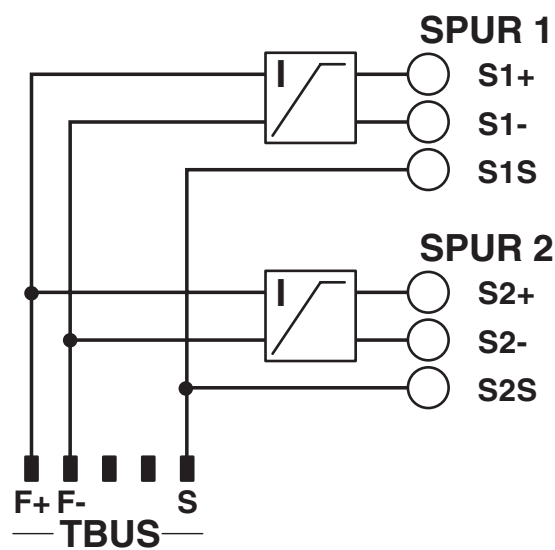


Drawings

Dimensional drawing



Circuit diagram



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2316051>



IECEX

Approval ID: IECEx SIR 08.0110X



CSA

Approval ID: 2335499 (LR108860)



CSAus

Approval ID: 2335499 (LR108860)



ATEX

Approval ID: Sira 08ATEX4303X

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Classifications

ECLASS

ECLASS-11.0

27242610

ETIM

ETIM 8.0

EC001600

UNSPSC

UNSPSC 21.0

32151600

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Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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Accessories

PT 2X2-FF-ST - Surge protection plug

2800755

<https://www.phoenixcontact.com/us/products/2800755>



PLUGTRAB, plug-in surge protection for Foundation Fieldbus

PT 4+F-BE - Surge protection base-element

2839415

<https://www.phoenixcontact.com/us/products/2839415>



Base element for protective plug PT with protective circuit for a 4-wire floating signal circuit, gas-filled surge arrester between the connections 3-4 (GND) and 9-10, for mounting on NS 35/7.5 and NS35/15, housing width: 17.5 mm

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FB-15-SS - Junction box

2316190

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Stainless steel field junction box with 15 ports for use in hazardous locations. Includes FB-ET trunk module, Plugtrab base with option for surge protection plug, and DIN rail space for up to 12 device couplers.

FB-9-SS - Junction box

2316213

<https://www.phoenixcontact.com/us/products/2316213>



Stainless steel field junction box with 9 ports for use in hazardous locations. Includes FB-ET trunk module, Plugtrab base with option for surge protection plug, and DIN rail space for up to 6 device couplers.

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FB-PS-PLUG-24DC/28DC/0.5/EX - Power module

2316132

<https://www.phoenixcontact.com/us/products/2316132>



Power supply plug for fieldbus system in hazardous locations. Provides 500 mA @ 28 V DC to couplers along the trunk.

FB-PS-BASE/EX - Power distributor

2316145

<https://www.phoenixcontact.com/us/products/2316145>



Base for fieldbus power supply plugs. Provides redundancy when 2 plugs are installed. Redundancy is maintained across multiple bases via internal power buses. Additional internal bus provides remote indication.

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FB-DIAG/FF/NC - Device coupler

2316297

<https://www.phoenixcontact.com/us/products/2316297>

Field diagnostic module, includes TBUS connector



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