

FB-12SP - Device coupler

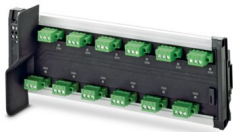


2316310

<https://www.phoenixcontact.com/us/products/2316310>

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Device coupler for Foundation Fieldbus and PROFIBUS PA with terminal connections for 12 spurs connected to fieldbus end devices.



Your advantages

- Provides current limiting short-circuit protection per spur
- Connect up to 12 Foundation Fieldbus or PROFIBUS PA field devices
- Terminator preinstalled
- Single-sided plug configuration eliminates cable bend radius issues
- Ex nA [nL, Ex nA [ic] or FISCO ic spur connections

Commercial data

Item number	2316310
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN11
Product key	DNC144
GTIN	4046356883597
Weight per piece (including packing)	502.4 g
Weight per piece (excluding packing)	502.4 g
Customs tariff number	85369095
Country of origin	US

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Technical data

Notes

Note on application

Note on application	Only for industrial use
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Utilization restriction

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

Product type	Device coupler
MTTF	723 Years (25 degrees C)

Electrical properties

Supply

Supply voltage range	10.5 V DC ... 32 V DC (input on trunk line side)
Typical current consumption	6.5 mA

Connection data

Supply

Conductor cross-section, flexible	2.50 mm ² ... 0.20 mm ²
Conductor cross-section, rigid	2.50 mm ² ... 0.20 mm ²
Conductor cross-section, flexible [AWG]	24 ... 12
Conductor cross-section AWG	24 ... 12

Ex data

Safety data

Input voltage U_i	32 V (IIB (C/D))
	24 V (IIC (A/B))
	17.5 V (FISCO)
Inductance L_i	4 μ H
Capacitance C_i	0 μ F
Max. output voltage U_o	U_{in} (Branch line)
Max. output current I_o	56 mA (Branch line)
Max. output power P_o	1.792 W
Current consumption	6.5 mA (Maximum, no load)
	0.68 A (maximum trunk current)
IIC/IIB (Branch line): Max. external inductivity L_o / Max. external capacitance C_o	/ 80 nF
	0.26 mH

Interfaces

Signal	FOUNDATION Fieldbus
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	PROFIBUS
Data: Foundation Fieldbus and PROFIBUS PA Segment	
Connection method	Pluggable COMBICON screw connection for each spur
No. of channels	12
Termination resistor	100 Ω, external removable plug included 100 Ω (external removable plug)
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	≤ 32 V (per spur)
Output current	38 mA

Dimensions

Dimensional drawing	
Width	254.1 mm
Height	112.5 mm
Depth	83.5 mm

Material specifications

Color (Housing)	black (RAL 9005)
Flammability rating according to UL 94	V0

Mechanical tests

Corrosive resistance in accordance with ANSI-ISA 71.04-1985 - Severity level G3	:
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Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-50 °C ... 90 °C
Ambient temperature (storage/transport)	-50 °C ... 90 °C
Altitude	2000 m
Max. permissible relative humidity (operation)	< 95 % (non-condensing)
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	non-condensing
Shock	30g, 11 ms
Vibration (operation)	10 Hz ... 150 Hz, 5g

Approvals

ATEX

Identification	⊕ II 3(3)G Ex nA [ic] IIC T4 Gc, Entity/FISCO ic spurs
	Ex nA [nL] IIC T4 Gc
	Ex ic IIC T4 Gc, FISCO ic
Certificate	Sira 13ATEX4247X

IECEX

Identification	Ex nA [ic] IIC T4 Gc, Entity/FISCO ic spurs
	Ex nA [nL] IIC T4 Gc
	Ex ic IIC T4 Gc, FISCO ic
Certificate	IECEX SIR 13.0089X

CSA, USA/Canada

Identification	Class I, Div. 2, Groups A, B, C, D
	Ex nA [nL] IIC T4 Gc
	Class I, Zone 2, AEx nA [nC] IIC T4 Gc

UL, USA

Identification	Class I, Zone 2
	AEx nA [ic] IIC T4, Entity/FISCO spurs
	Ex nA [ic] IIC T4 Gc
	Class I, Div. 2, Groups A, B, C, D T4

UKCA Ex (UKEX)

Identification	⊕ II 3(3)G Ex nA [ic] IIC T4 Gc, Entity/FISCO ic spurs
	Ex nA [nL] IIC T4 Gc
	Ex ic IIC T4 Gc, FISCO ic
Certificate	PxCAI22UKEx2316307X

CCC

Identification	Ex ec [ic] IIC T4 Gc
	Ex ic IIC T4 Gc

Standards and regulations

Standards

Standards/regulations	EN 60079-0:2011, EN 60079-11:2012, EN 60079-15:2005, EN 60079-15:2010
	IEC 60079-0:2011, IEC 60079-11:2011, IEC 60079-15:2005, IEC 60079-15:2010

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 and vertical DIN rail NS 35 in acc. with EN 60715

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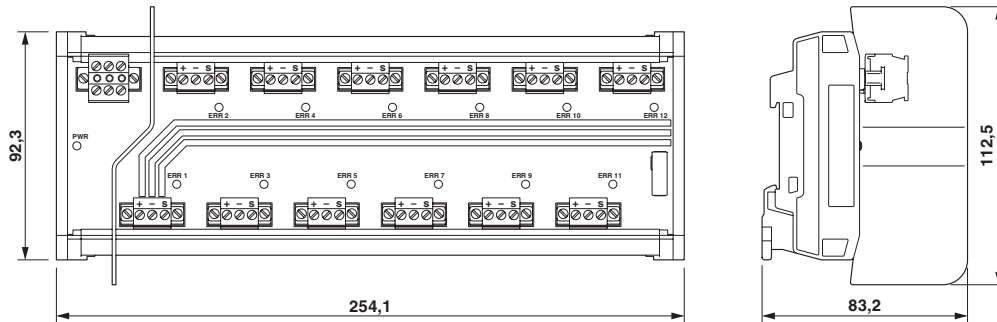


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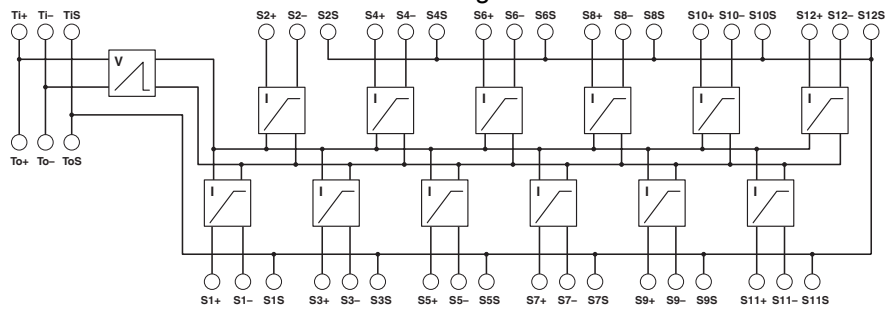
Drawings

Dimensional drawing



FB-12SP dimensions

Circuit diagram



Connection diagram: FB-12SP

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Approvals


To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2316310>


 **UL Listed**
Approval ID: E330267


 **cUL Listed**
Approval ID: E330267


 **CSA**
Approval ID: 2673619


 **cUL Listed**
Approval ID: E199827

 **UL Listed**
Approval ID: E199827

 **CSAus**
Approval ID: 2673619

 **CCC**
Approval ID: 2022122310115623

 **IECEx**
Approval ID: IECEx SIR 13.0089X

 **ATEX**
Approval ID: SIRA 13 ATEX 4247X

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Classifications

ECLASS

ECLASS-13.0	27242610
ECLASS-15.0	27242610

ETIM

ETIM 10.0	EC001600
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UNSPSC

UNSPSC 21.0	32151600
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	ea1fd8da-be19-4342-aa1d-2c4e15770913

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