

# 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

## 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 <sup>2</sup> ... 0.20 mm <sup>2</sup>
Conductor cross-section, rigid	2.50 mm <sup>2</sup> ... 0.20 mm <sup>2</sup>
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 $\mu$ H
Capacitance $C_i$	0 $\mu$ 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 <sup>2</sup>
Conductor cross-section flexible min.	0.2 mm <sup>2</sup>
Conductor cross-section, rigid max.	2.5 mm <sup>2</sup>
Conductor cross-section, rigid min.	0.2 mm <sup>2</sup>
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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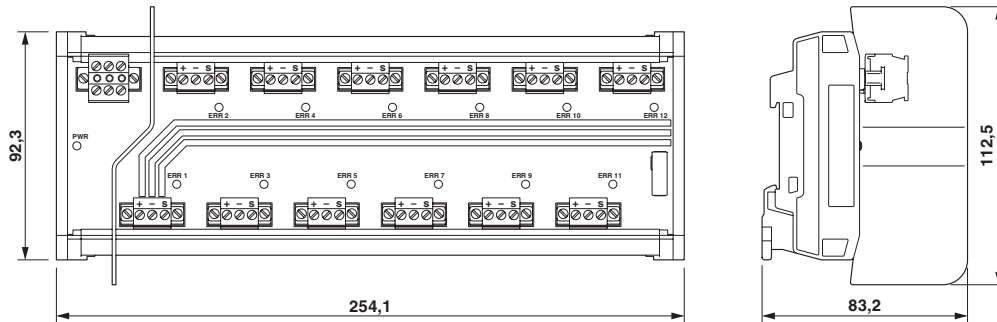


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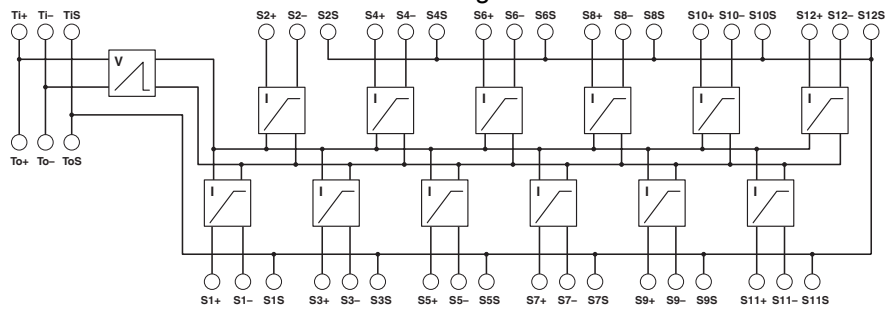
## Drawings

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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