

# FB-8SP - Device coupler



1026043

<https://www.phoenixcontact.com/us/products/1026043>

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



## Your advantages

- Connect up to 8 Foundation Fieldbus or PROFIBUS PA field devices
- Terminator preinstalled
- Provides current limiting short-circuit protection per spur
- Single-sided plug configuration eliminates cable bend radius issues
- Ex nA [nL, Ex nA [ic] or FISCO ic spur connections

## Commercial data

Item number	1026043
Packing unit	1 pc
Sales key	DN11
Product key	DNC144
GTIN	4055626519111
Weight per piece (including packing)	466.3 g
Weight per piece (excluding packing)	466.3 g
Customs tariff number	85369095
Country of origin	US

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## Technical data

### Notes

#### 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	10.6 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 $U_o$	$U_{in}$ (spur)
Max. output current $I_o$	56 mA (spur)
Max. output power $P_o$	1.792 W
Current consumption	6.5 mA (Maximum, no load)
	0.46 A (maximum trunk current)
IIC/IIB (spur): Max. external inductivity $L_o$ / Max. external capacitance $C_o$	/ 80 nF
	0.26 mH

### Interfaces

Signal	FOUNDATION Fieldbus
	PROFIBUS

Data: Foundation Fieldbus and PROFIBUS PA Segment


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Connection method	Pluggable COMBICON screw connection for each spur
No. of channels	8
Termination resistor	100 $\Omega$ , external removable plug included 100 $\Omega$ (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	$\leq 32$ V (each spur)
Output current	38 mA

## Dimensions

Dimensional drawing	
Width	254.1 mm
Height	112.5 mm
Depth	83.5 mm

## Material specifications

Flammability rating according to UL 94	V0
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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)	5g, 10 Hz ... 150 Hz

## 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

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## 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

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## Mounting

Mounting position

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

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## Drawings

Dimensional drawing

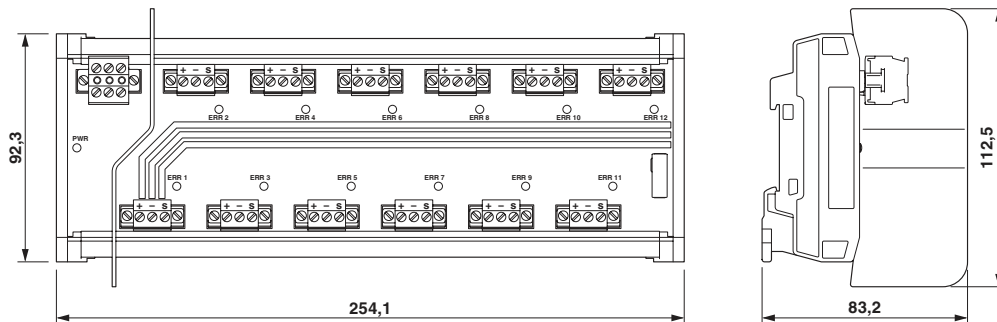
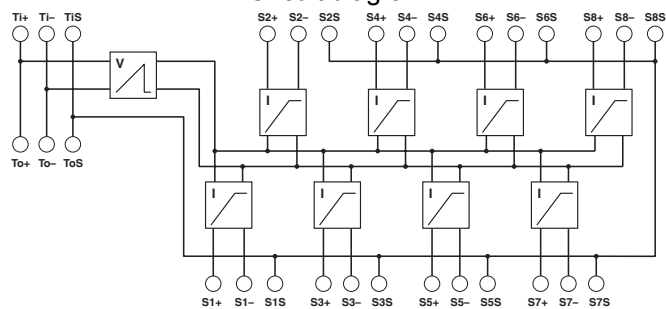


Image shows FB-12SP

Circuit diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1026043>



**UL Listed**

Approval ID: FILE E 330267



**cUL Listed**

Approval ID: FILE E 330267



**CSA**

Approval ID: 2673619



**cUL Listed**

Approval ID: FILE E 199827



**UL Listed**

Approval ID: FILE E 199827



**CSAus**

Approval ID: 2673619

**cULus Listed**

**cULus Listed**

**cCSAus**

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## Classifications

### ECLASS

ECLASS-11.0	27242610
ECLASS-12.0	27242610
ECLASS-13.0	27242610

### ETIM

ETIM 8.0	EC001600
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### UNSPSC

UNSPSC 21.0	32151600
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## Environmental product compliance

REACH SVHC

Lead 7439-92-1

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## Accessories

### 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.

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### FB-PS-MB-25DSUB/EX - Power supply unit

2316146

<https://www.phoenixcontact.com/us/products/2316146>



Four-channel, redundant fieldbus power supply base. Host connection is a D-SUB 25 socket connector.

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## FB-PS-MB-Y/EX - Power supply unit

2316148

<https://www.phoenixcontact.com/us/products/2316148>

Four-channel redundant fieldbus power supply base. Host connections are for two Yokogawa AKB336 20-pin cables.



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## FB-PS-MB-I/EX - Power supply unit

2316149

<https://www.phoenixcontact.com/us/products/2316149>

Four-channel, redundant fieldbus power supply base. Host connection is for an Invensys® D-SUB 25 cable.



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## 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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## PT 2X2-FF-ST - Surge protection plug

2800755

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



PLUGTRAB, plug-in surge protection for Foundation Fieldbus

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## 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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## FIELDBUS TERMINATOR - Termination resistor

2316034

<https://www.phoenixcontact.com/us/products/2316034>



The fieldbus terminator plug is pre-installed in the trunk out connection of device couplers.

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