

# FB-8SP ISO - Device coupler



2316311

<https://www.phoenixcontact.com/us/products/2316311>

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Zone 1 installed 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 located in Zone 0/1
- Terminator preinstalled
- Provides current limiting short-circuit protection per spur
- Two isolation zones; Spurs 1-4 and 5-8
- Single-sided plug configuration eliminates cable bend radius issues

## Commercial data

Item number	2316311
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DN11
Product key	DNC144
Catalog page	Page 456 (C-6-2019)
GTIN	4055626306803
Weight per piece (including packing)	1,200.5 g
Weight per piece (excluding packing)	1,190 g
Customs tariff number	85389099
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
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#### Data management status

Article revision	02
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#### Insulation characteristics

Overvoltage category	II
Degree of pollution	2

### Electrical properties

#### Supply

Supply voltage range	16 V DC ... 32 V DC (input on trunk line side)
Max. current consumption	35 mA (trunk, no load) 350 mA (maximum trunk current)

### 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 <sub>i</sub>	32 V
Inductance L <sub>i</sub>	0 µH
Capacitance C <sub>i</sub>	0 µF
Max. output voltage U <sub>o</sub>	16.7 V
Max. output current I <sub>o</sub>	250 mA
Max. output power P <sub>o</sub>	1.05 W
Safety-related maximum voltage U <sub>m</sub>	253 V
IIC: Max. external inductivity L <sub>o</sub> / Max. external capacitance C <sub>o</sub>	/ 0.39 µF

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IIB: Max. external inductivity $L_o$ / Max. external capacitance $C_o$	/ 2.33 $\mu$ F
IIC: Max. external inductivity $L_o$ / Max. external capacitance $C_o$	0.56 mH
IIB: Max. external inductivity $L_o$ / Max. external capacitance $C_o$	2.27 mH


## Interfaces

Signal	FOUNDATION Fieldbus
	PROFIBUS

Data: Foundation Fieldbus and PROFIBUS PA Segment

Connection method	Pluggable COMBICON screw connection for each spur
No. of channels	8
Termination resistor	Integrated termination, activated with bridge located in correct terminals
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	≤ 14 V (each spur)
Output current	35 mA (per spur)

## Dimensions

Dimensional drawing	
Width	279 mm
Height	142 mm
Depth	66 mm

## Material specifications

Flammability rating according to UL 94	V0
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## Cable/line

Cable impedance	Recommend Type A fieldbus cable
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## Environmental and real-life conditions

Ambient conditions

Degree of protection	IP20
	IP30 (over trunk connections)
Ambient temperature (operation)	-40 °C ... 80 °C
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	< 95 % (non-condensing)

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Permissible humidity (operation)	95 % (non-condensing)
Shock	15g for 11 ms
Vibration (operation)	2g, 10 Hz ... 150 Hz

## Approvals

### ATEX

Identification	II 2(1) G Ex eb ib mb [ia Ga] IIC T4 Gb II (1D) [Ex ia Da] IIIC FISCO power supply (spur)
Certificate	DEMKO 16ATEX 1689X

### IECEX

Identification	Ex eb ib mb [ia Ga] IIC T4 Gb [Ex ia Da] IIIC FISCO power supply (spur)
Certificate	IECEX UL 16.0114X

### UKCA Ex (UKEX)

Identification	II 2(1) G Ex eb ib mb [ia Ga] IIC T4 Gb II (1D) [Ex ia Da] IIIC FISCO power supply (spur)
Certificate	UL21UKEX2210X

### CCC Ex

Identification	Ex eb ib mb [ia Ga] IIC T4 Gb [Ex ia Da] IIIC
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### Ex data

UL, USA / Canada	Install in Class I, Div. 2, Groups A, B, C, D Entity/FISCO spur to: Class I, Groups A, B, C, D; Class II, Groups E, F, G; Class III; Group IIIC Class I, Zone 1 AEx eb ib mb [ia Ga] IIC T4 Gb [AEx ia Da] IIIC FISCO power supply (spur) Ex eb ib mb [ia Ga] IIC T4 Gb [Ex ia Da] IIIC FISCO power supply (spur)
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## Standards and regulations

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

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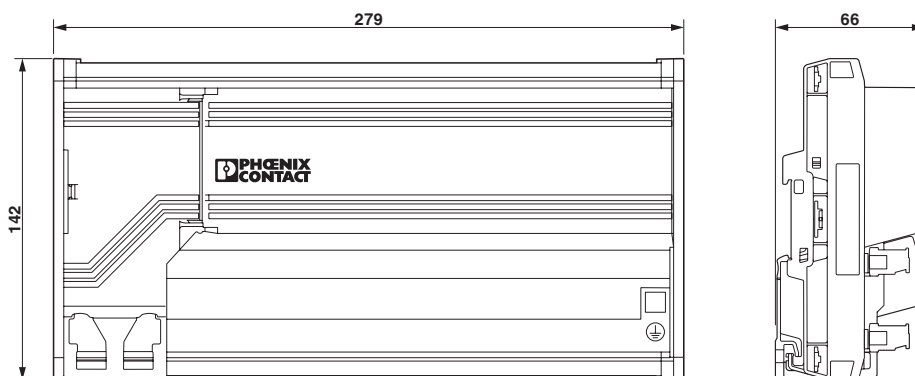
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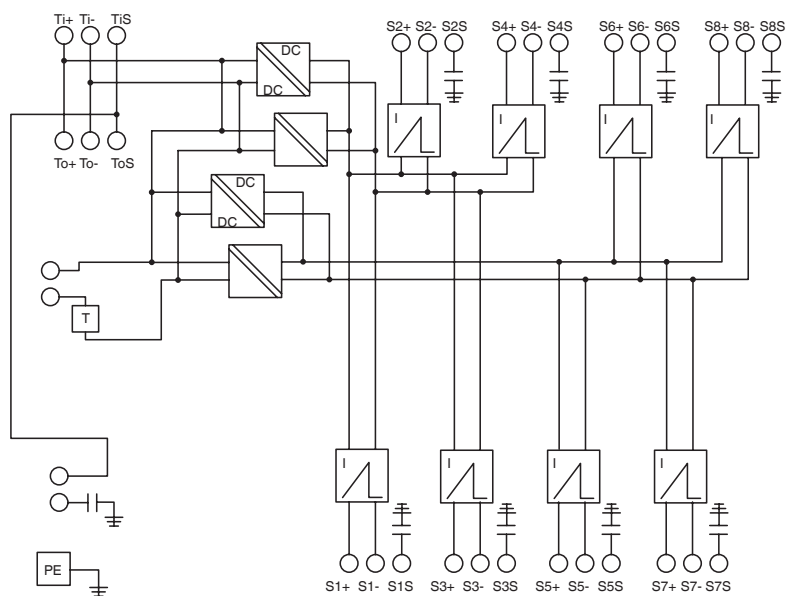


## Drawings

Dimensional drawing



Block diagram



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2316311>



**UKCA-EX**

Approval ID: UL21UKEX2210X



**IECEx**

Approval ID: IECEx UL 16.0114X



**CCC**

Approval ID: 2022122310115622



**cUL Listed**

Approval ID: E199827



**UL Listed**

Approval ID: E199827



**ATEX**

Approval ID: DEMKO 16 ATEX 1689X



**CCC**

Approval ID: 2022122310115622

**cULus Listed**

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## Classifications

### ECLASS

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

### ETIM

ETIM 9.0	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)
	2-(2H-benzotriazol-2-yl)-4-(1,1,3,3-tetramethylbutyl)phenol (UV-329)(CAS: 3147-75-9)
SCIP	6de66d99-d6e4-418e-bc21-1cda72b3fdf3