

## Device coupler - FB-12SP - 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

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



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 883597
GTIN	4046356883597
Weight per Piece (excluding packing)	500.000 g
Custom tariff number	85369095
Country of origin	United States

### Technical data

#### Dimensions

Caption	FB-12SP dimensions
Width	254.1 mm
Height	112.5 mm
Depth	83.5 mm

#### Ambient conditions

# Device coupler - FB-12SP - 2316310

## Technical data

### Ambient conditions

Ambient temperature (operation)	-50 °C ... 90 °C
Ambient temperature (storage/transport)	-50 °C ... 90 °C
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	non-condensing
Altitude	2000 m
Degree of protection	IP20

### General

Mounting position	On horizontal and vertical DIN rail NS 35 in acc. with EN 60715
Net weight	502.4 g
MTTF	723 Years (25 degrees C)
Conformance	CE-compliant, additionally EN 61326
Fieldbus Foundation	FF-846

### Power supply

Supply voltage range	10.5 V DC ... 32 V DC (input on trunk line side)
Typical current consumption	6.5 mA
Conductor cross section flexible max.	0.20 mm <sup>2</sup>
Conductor cross section flexible min.	2.50 mm <sup>2</sup>
Conductor cross section solid max.	0.20 mm <sup>2</sup>
Conductor cross section solid min.	2.50 mm <sup>2</sup>
Max. AWG conductor cross section, flexible	12
Min. AWG conductor cross section, flexible	24
Conductor cross section AWG max.	12
Conductor cross section AWG min.	24

### Interfaces

Interface 1	Foundation Fieldbus and PROFIBUS PA Segment
No. of ports	12
Connection method	Pluggable COMBICON screw connection for each spur
Termination resistor	100 Ω (external removable plug)
	100 Ω, external removable plug included
Conductor cross section solid min.	0.2 mm <sup>2</sup>
Conductor cross section solid max.	2.5 mm <sup>2</sup>
Conductor cross section flexible min.	0.2 mm <sup>2</sup>
Conductor cross section flexible max.	2.5 mm <sup>2</sup>
Conductor cross section AWG min.	24
Conductor cross section AWG max.	12
Output nominal voltage	≤ 32 V (each spur)

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## Technical data

### Interfaces

Output current	38 mA
Inductance $L_i$	4 $\mu$ H
Max. output voltage $U_o$	$U_{in}$ (spur)

### Safety data

Input voltage $U_i$	32 V (IIB (C/D))
Max. output voltage $U_o$	$U_{in}$ (spur)
Max. output current $I_o$	56 mA (spur)
Max. output power $P_o$	1.792 W
Group	IIC/IIB
Max. external capacitance $C_o$	80 nF
Additional text	spur
Group	IIC/IIB
Max. external inductivity $L_o$	0.26 mH
Additional text	spur
ATEX	Sira 13ATEX4247X; # II 3(3)G Ex nA [ic] IIC T4 Gc, Entity/FISCO ic spurs Ex nA [nL] IIC T4 Gc; # II 3G Ex ic IIC T4 Gc, FISCO ic
IECEX	IECEX SIR 13.0089X; Ex nA [ic] IIC T4 Gc, Entity/FISCO ic spurs; Ex nA [nL] IIC T4 Gc; Ex ic IIC T4 Gc, FISCO ic
UL, USA	Class I, Zone 2; AEx nA[ic] IIC T4, Entity/FISCO spurs Class I, Div. 2, Groups A, B, C, D; T4
CSA, USA/Canada	Class I, Div. 2, Groups A, B, C, D; Ex nA [nL] IIC T4; Class I, Zone 2, AEx nA [nC] IIC T4

### Standards and Regulations

Type of test	Corrosive resistance in acc. to ANSI-ISA 71.04-1985 - Severity level G3
Designation	Standards/regulations
Standards/regulations	Ring wave noise immunity in acc. with IEC 61000-4-12
Designation	Standards/regulations
Standards/regulations	Dry heat in acc. with IEC 61131-2
Designation	Standards/regulations
Standards/regulations	Damp heat in acc. with IEC 61131-2
Designation	Standards/regulations
Standards/regulations	Shock and vibration in acc. with EN 61131-2 and EN 50178
	IEC 61158-2
	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

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## Technical data

### Standards and Regulations

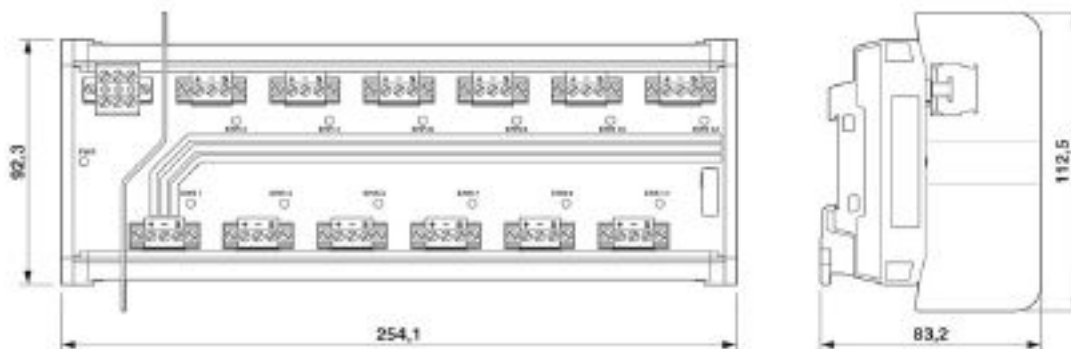
Flammability rating according to UL 94	V0
Shock	30g, 11 ms
Vibration (operation)	5g, 10 Hz ... 150 Hz
Conformance	CE-compliant, additionally EN 61326
Fieldbus Foundation	FF-846
Group	IIC/IIB
	IIC/IIB
ATEX	Sira 13ATEX4247X; # II 3(3)G Ex nA [ic] IIC T4 Gc, Entity/FISCO ic spurs Ex nA [nL] IIC T4 Gc; # II 3G Ex ic IIC T4 Gc, FISCO ic
IECEX	IECEX SIR 13.0089X; Ex nA [ic] IIC T4 Gc, Entity/FISCO ic spurs; Ex nA [nL] IIC T4 Gc; Ex ic IIC T4 Gc, FISCO ic
UL, USA	Class I, Zone 2; AEx nA[ic] IIC T4, Entity/FISCO spurs Class I, Div. 2, Groups A, B, C, D; T4
CSA, USA/Canada	Class I, Div. 2, Groups A, B, C, D; Ex nA [nL] IIC T4; Class I, Zone 2, AEx nA [nC] IIC T4

### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

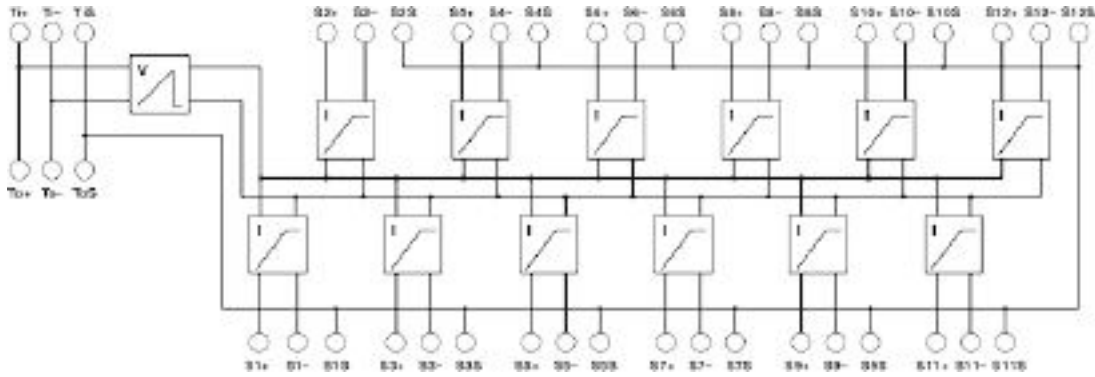
Dimensional drawing



FB-12SP dimensions

# Device coupler - FB-12SP - 2316310

Circuit diagram



Connection diagram: FB-12SP

## Classifications

eCl@ss

eCl@ss 10.0.1	27242610
eCl@ss 4.0	27240400
eCl@ss 4.1	27240400
eCl@ss 5.0	27242200
eCl@ss 5.1	27242200
eCl@ss 6.0	27242600
eCl@ss 7.0	27242608
eCl@ss 8.0	27242610
eCl@ss 9.0	27242610

ETIM

ETIM 4.0	EC001423
ETIM 5.0	EC001600
ETIM 6.0	EC001600
ETIM 7.0	EC001600

UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008
UNSPSC 12.01	39121008
UNSPSC 13.2	32151602
UNSPSC 18.0	32151602
UNSPSC 19.0	32151602

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## Classifications

### UNSPSC

UNSPSC 20.0	32151602
UNSPSC 21.0	32151602

## Approvals

### Approvals

#### Approvals

UL Listed / cUL Listed / cULus Listed

#### Ex Approvals

IECEx / ATEX / UL Listed / cUL Listed / CSA / CSAus / cULus Listed / cCSAus

### Approval details

UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 330267
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cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 330267
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cULus Listed			
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## Accessories

### Accessories

#### Base element

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

## Device coupler - FB-12SP - 2316310

### Accessories

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#### Control box

Junction box - FB2-S1-12SP-S-0-16-00-0-0 - 2316433



Stainless steel field junction box with 16 ports for use in hazardous locations. Includes 12-spur block device coupler (FB-12SP) for Foundation Fieldbus or PROFIBUS PA, trunk cable (+, -, S) is connected to a Plugtrab surge base (PT 4+F-BE).

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Junction box - FB2-S1-12SP-T-0-16-00-0-0 - 2316417



Stainless steel field junction box with 16 ports for use in hazardous locations. Includes 12-spur block device coupler (FB-12SP) for Foundation Fieldbus or PROFIBUS PA, three terminal blocks for trunk cable connection (+, -, S).

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#### Device coupler

Power supply unit - FB-PS-MB-25DSUB/EX - 2316146



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

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Power supply unit - FB-PS-MB-Y/EX - 2316148



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

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## Device coupler - FB-12SP - 2316310

### Accessories

Power supply unit - FB-PS-MB-I/EX - 2316149



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

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Power distributor - FB-PS-BASE/EX - 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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### Power supply

Power module - FB-PS-PLUG-24DC/28DC/0.5/EX - 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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### Surge protection for information technology

Surge protection plug - PT 2X2-FF-ST - 2800755



PLUGTRAB, plug-in surge protection for Foundation Fieldbus

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### Terminal resistor



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### Accessories

Termination resistor - FIELDBUS TERMINATOR - 2316034



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

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[2906249](#) [2907808](#) [TB ML 3P ST D5.08](#) [5604442](#) [XW2B-40G5-T](#) [5606629](#) [XW2B-20G5-D](#) [2903870](#) [5541988](#) [5541962](#) [1776613-1](#) [XW2B-](#)  
[34G4](#) [XW2B-60G5](#) [XW2R-E34G-C1](#) [XW2R-E34G-C3](#) [XW2R-J40G-T](#) [XW2R-P34G-C4](#) [XW2B-50G5](#) [XW2R-E40G-T](#) [XW2R-E34G-C2](#)  
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