

## Device coupler - FB-6SP - 2316307

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

### Your advantages

- Connect up to six 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 883580
GTIN	4046356883580

### Technical data

#### Dimensions

Caption	FB-6SP dimensions
Width	148.2 mm
Height	112.5 mm
Depth	83.5 mm

#### 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)	5 % ... 95 % (non-condensing)
Altitude	2000 m
Degree of protection	IP20

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## Technical data

### General

Mounting position	On horizontal and vertical DIN rail NS 35 in acc. with EN 60715
Net weight	322.5 g
MTTF	1256 Years (25 degrees C)
Conformance	CE-compliant, additionally EN 61326
UL, USA	ANSI/UL 61010-1
Fieldbus Foundation	FF-846

### Power supply

Supply voltage range	10.5 V DC ... 32 V DC (input on trunk line side)
Typical current consumption	4.8 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	6
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)
Output current	38 mA
Inductance L <sub>i</sub>	4 μH
Max. output voltage U <sub>o</sub>	U <sub>in</sub> (spur)

### Safety data

Input voltage U <sub>i</sub>	32 V (IIB (C/D))
Max. output voltage U <sub>o</sub>	U <sub>in</sub> (spur)
Max. output current I <sub>o</sub>	56 mA (spur)
Max. output power P <sub>o</sub>	1.792 W
Group	IIC/IIB

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## Technical data

### Safety data

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
Flammability rating according to UL 94	V0
Shock	30g, 11 ms
Vibration (operation)	5g, 10 Hz ... 150 Hz
Conformance	CE-compliant, additionally EN 61326
UL, USA	ANSI/UL 61010-1
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

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## Technical data

### Standards and Regulations

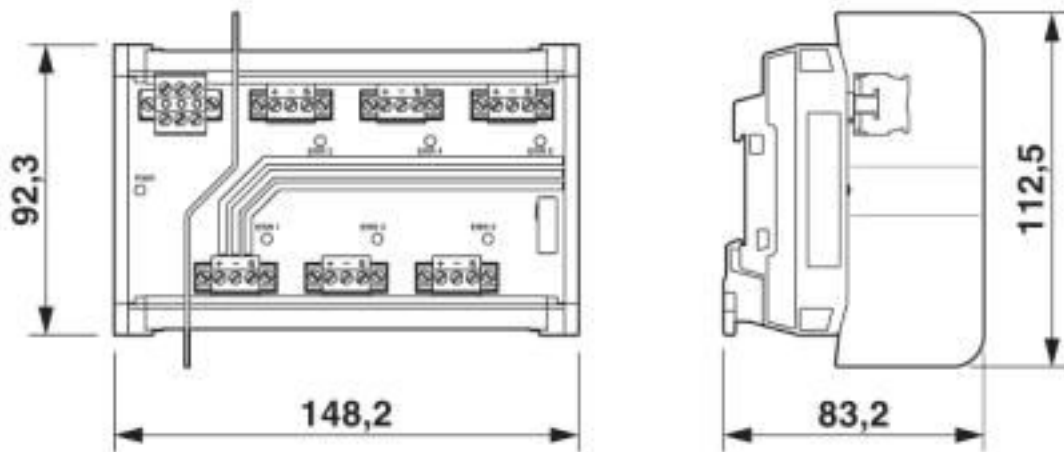
CSA, USA/Canada	Class I, Div. 2, Groups A, B, C, D; Ex nA [nL] IIC T4; Class I, Zone 2, AEx nA [nC] IIC T4
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### Environmental Product Compliance

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

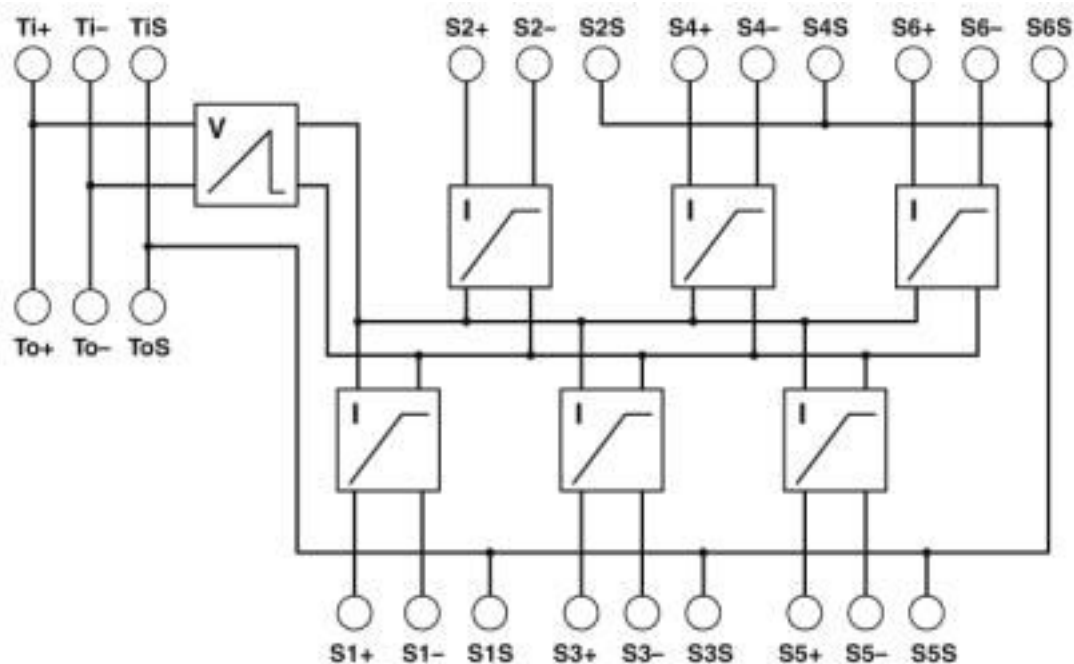
Dimensional drawing



FB-6SP dimensions

# Device coupler - FB-6SP - 2316307

Circuit diagram



Connection diagram: FB-6SP

## Classifications

### eCl@ss

eCl@ss 10.0.1	27242610
eCl@ss 4.0	27250200
eCl@ss 4.1	27250200
eCl@ss 5.0	27259200
eCl@ss 5.1	27259200
eCl@ss 6.0	27242600
eCl@ss 7.0	27242608
eCl@ss 8.0	27242610
eCl@ss 9.0	27242610

### ETIM

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

### UNSPSC

UNSPSC 6.01	30211506
UNSPSC 7.0901	39121008
UNSPSC 11	39121008

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## Classifications

### UNSPSC

UNSPSC 12.01	39121008
UNSPSC 13.2	32151602
UNSPSC 18.0	32151602
UNSPSC 19.0	32151602
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-6SP - 2316307

### Accessories

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#### Control box

Junction box - FB1-S1-6SP-S-0-10-00-0-0 - 2316446



Stainless steel field junction box with ten ports for use in hazardous locations. Includes six-spur block device coupler (FB-6SP) 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 - FB1-S1-6SP-T-0-10-00-0-0 - 2316420



Stainless steel field junction box with ten ports for use in hazardous locations. Includes six-spur block device coupler (FB-6SP) 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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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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## Device coupler - FB-6SP - 2316307

### Accessories

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

Termination resistor - FIELDBUS TERMINATOR - 2316034



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

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[2281759](#) [2906251](#) [2907808](#) [5601749](#) [5541962](#) [1776613-1](#) [GCN1-004A](#) [ADAM-3920R-AE](#) [060-6827-06](#) [2311030](#) [2287708](#) [XW2C-20G6-](#)  
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