

# FB-2SP - Device coupler

2316051

<https://www.phoenixcontact.com/us/products/2316051>

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Device coupler for Foundation Fieldbus and PROFIBUS PA expansions with terminal connections for 2 spurs connected to fieldbus end devices

## Product description

The FB-2SP has terminal blocks for two spur connections to each device coupler. The device coupler provides short-circuit protection to the fieldbus trunk. Voltage and communication are routed via the TBUS connection system to multiple installed device couplers.

## Commercial data

Item number	2316051
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	DN11
Product key	DNC144
GTIN	4046356466158
Weight per piece (including packing)	101.1 g
Weight per piece (excluding packing)	99.76 g
Customs tariff number	85369095
Country of origin	US

## Technical data

### Notes

#### Utilization restriction

CCCex note	Use in potentially explosive areas is not permitted in China.
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### Product properties

Product type	Device coupler
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### Electrical properties

#### Supply

Supply voltage range	10.3 V DC ... 32 V DC (input on trunk line side)
Typical current consumption	6 mA

### Ex data

#### Safety data

Max. voltage $U_i$	253 V AC
Inductance $L_i$	4 $\mu$ H
Capacitance $C_i$	0 $\mu$ F
Max. output voltage $U_o$	$U_i$
Max. output current $I_o$	48 mA
Max. output power $P_o$	1.536 W
IIB: Max. external inductivity $L_o$ / Max. external capacitance $C_o$	/ 100 nF 325 $\mu$ H

### Interfaces

Signal	PROFIBUS FOUNDATION Fieldbus
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#### Data: Foundation Fieldbus and PROFIBUS PA Segment

Connection method	Pluggable COMBICON screw connection for each spur
No. of channels	2
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 (per spur)
Output current	15 mA (each spur, adjustable via selector switch, -40 ... 85°C) 25 mA (each spur, adjustable via selector switch, -40...80°C) 35 mA (each spur, adjustable via selector switch, -40...75°C) 45 mA (each spur, adjustable via selector switch, -40...70°C)

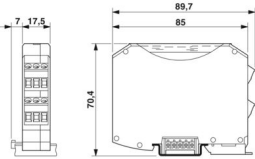
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Maximum output current	22 mA (each spur, adjustable via selector switch, -40 ... 85°C)
	33 mA (each spur, adjustable via selector switch, -40...80°C)
	45 mA (each spur, adjustable via selector switch, -40...75°C)
	57 mA (each spur, adjustable via selector switch, -40...70°C)

## Dimensions

Dimensional drawing	
Width	17.5 mm
Height	89.7 mm
Depth	70.4 mm

## Material specifications

Color	green
Housing material	PA 6.6-FR

## 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)	-40 °C ... 85 °C (depending on set rated current)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Max. permissible relative humidity (operation)	< 95 % (non-condensing)
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Shock	15g, 11 ms
Vibration (operation)	10 Hz ... 150 Hz, 1g

## Approvals

### Conformity/Approvals

Conformance	CE-compliant, additionally EN 61326
IEC	IEC 60529, IEC 61158-2
CSA, USA/Canada	Class I, Zone 2, AEx nA[nL] IIB T4 Class I, Div. 2, Groups C, D Ex nA [nL] IIB T4, FNICO/Entity Class I, Zone 2, AEx nA [nL] IIB T4, FNICO/Entity
Fieldbus Foundation	FF-846
EN	EN 61326, EN 60068-2-27, EN 60068-2-6

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NE	NAMUR NE 21
Ex data	
ATEX	Sira 08ATEX4303X: II 3(3)G Ex nA [Ic Gc] IIB T4 Gc, FISCO Ic spurs Ex nA [nL Gc] IIB T4 Gc, FNICO spurs
IECEX	IECEX SIR 08.0110X: II 3(3)G Ex nA [Ic Gc] IIB T4 Gc, FISCO Ic spurs Ex nA [nL Gc] IIB T4 Gc, FNICO spurs
CSA, USA/Canada	Class I, Div. 2, Groups C, D Ex nA [nL] IIB T4, FNICO/Entity Class I, Zone 2, AEx nA [nL] IIB T4, FNICO/Entity

## Standards and regulations

### Standards

Standards/regulations	IEC 60529, IEC 61158-2
	NE21
	EN 61326, EN 60068-2-27, EN 60068-2-6
	FF-846

### 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 DIN rail NS 35 in acc. with EN 60715

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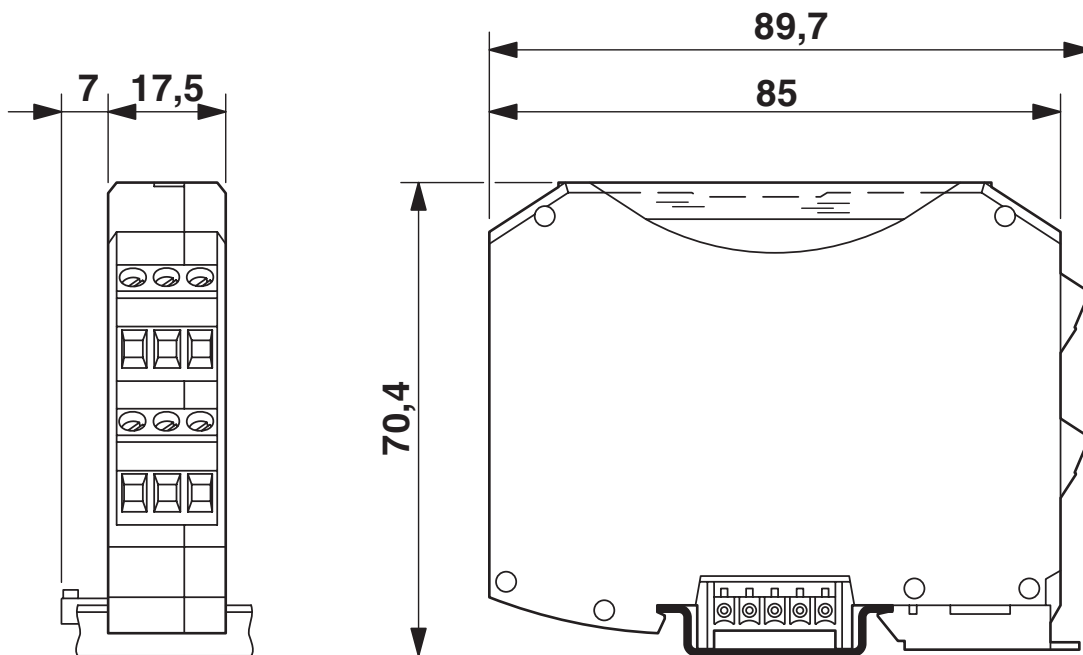
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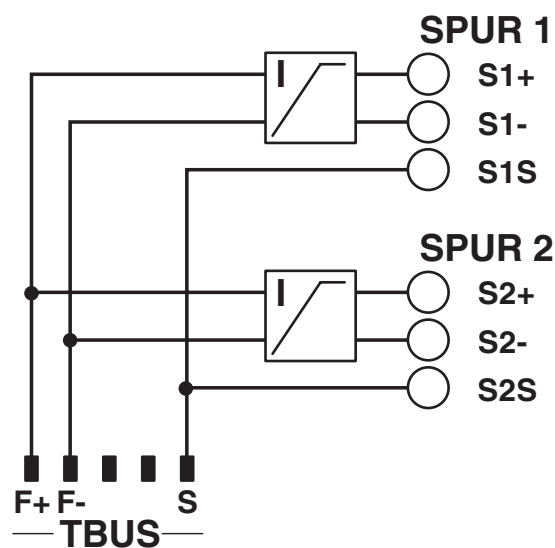


## Drawings

Dimensional drawing



Circuit diagram



Connection diagram: FB-2SP

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## Classifications

### 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)
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