

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. |
|------------|---|

Product properties

| | |
|--------------|----------------|
| Product type | Device coupler |
|--------------|----------------|

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 μ H |
| Capacitance C_i | 0 μ 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 μ H |

Interfaces

| | |
|--------|---------------------|
| Signal | PROFIBUS |
| | FOUNDATION Fieldbus |

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 ² |
| Conductor cross-section flexible min. | 0.2 mm ² |
| Conductor cross-section, rigid max. | 2.5 mm ² |
| Conductor cross-section, rigid min. | 0.2 mm ² |
| 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) |

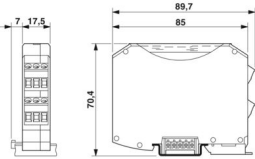
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| | |
|------------------------|---|
| Maximum output current | 22 mA (each spur, adjustable via selector switch, -40 ... 85°C) |
| | 33 mA (each spur, adjustable via selector switch, -40...80°C) |
| | 45 mA (each spur, adjustable via selector switch,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

Dimensions

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| Dimensional drawing |  |
| Width | 17.5 mm |
| Height | 89.7 mm |
| Depth | 70.4 mm |

Material specifications

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|------------------|-----------|
| Color | green |
| Housing material | PA 6.6-FR |

Mechanical tests

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|---|---|
| Corrosive resistance in accordance with ANSI-ISA 71.04-1985 - Severity level G3 | : |
|---|---|

Environmental and real-life conditions

Ambient conditions

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|--|---|
| 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 |
|-----------------------|--|

Standards/regulations

| | |
|-----------------------|-----------------------------------|
| Standards/regulations | Dry heat in acc. with IEC 61131-2 |
|-----------------------|-----------------------------------|

Standards/regulations

| | |
|-----------------------|------------------------------------|
| Standards/regulations | Damp heat in acc. with IEC 61131-2 |
|-----------------------|------------------------------------|

Standards/regulations

| | |
|-----------------------|--|
| Standards/regulations | Shock and vibration in acc. with EN 61131-2 and EN 50178 |
| Standards/regulations | IEC 61158-2 |

Mounting

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|-------------------|--|
| Mounting type | DIN rail mounting |
| Mounting position | on horizontal DIN rail NS 35 in acc. with EN 60715 |

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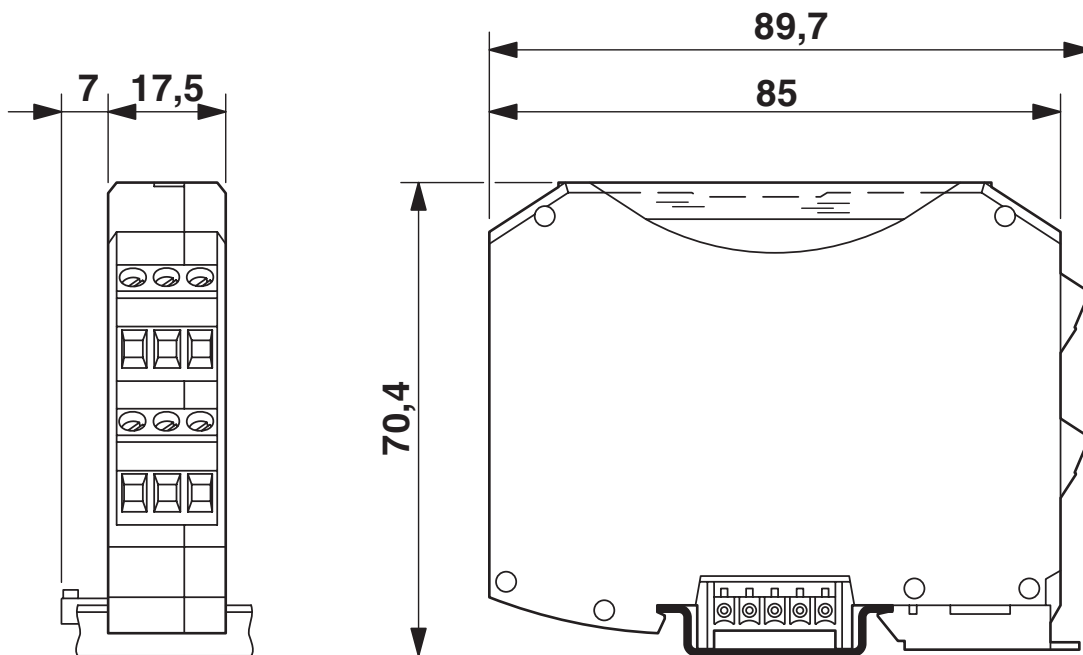
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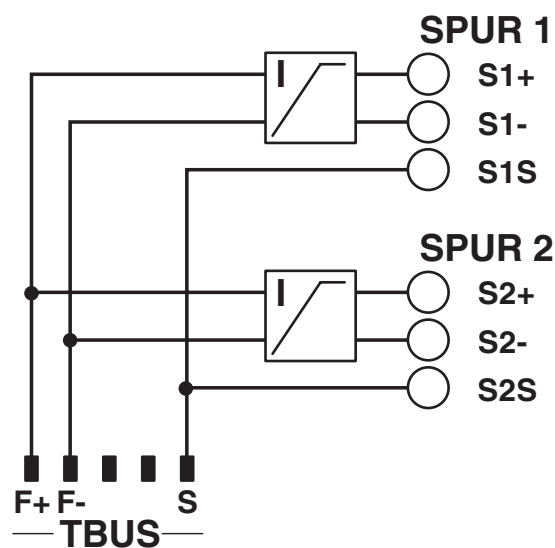


Drawings

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

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|--|---|
| 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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