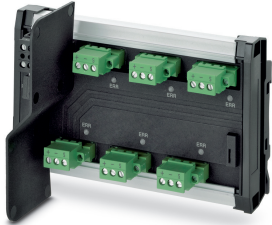


## Device coupler - FB-6SP - 2316307

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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                                 |               |
| GTIN                                 | 4046356883580 |
| Weight per Piece (excluding packing) | 320.000 g     |
| Custom tariff number                 | 85369095      |
| Country of origin                    | United States |

### Technical data

#### Dimensions

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

# Device coupler - FB-6SP - 2316307

## 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) | 5 % ... 95 % (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          | 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  |

# Device coupler - FB-6SP - 2316307

## Technical data

### Interfaces

|                           |                    |
|---------------------------|--------------------|
| Output nominal voltage    | ≤ 32 V (each spur) |
| 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<br>Ex nA [ic] IIC T4 Gc, Entity/FISCO ic spurs<br>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;<br>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<br>Class I, Div. 2, Groups A, B, C, D; T4                                       |
| CSA, USA/Canada                 | Class I, Div. 2, Groups A, B, C, D;<br>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   |

# Device coupler - FB-6SP - 2316307

## Technical data

### Standards and Regulations

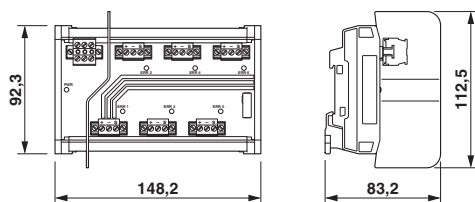
|  |  |
|--|--|
|  | IEC 60079-0:2011; IEC 60079-11:2011; IEC 60079-15:2005; IEC 60079-15:2010  |
| Flammability rating according to UL 94 | V0   |
| Shock                                  | 30g, 11 ms   |
| Vibration (operation)                  | 5g, 10 Hz ... 150 Hz   |
| Conformance                            | 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<br>Ex nA [ic] IIC T4 Gc, Entity/FISCO ic spurs<br>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;<br>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<br>Class I, Div. 2, Groups A, B, C, D; T4                                       |
| CSA, USA/Canada                        | Class I, Div. 2, Groups A, B, C, D;<br>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" |

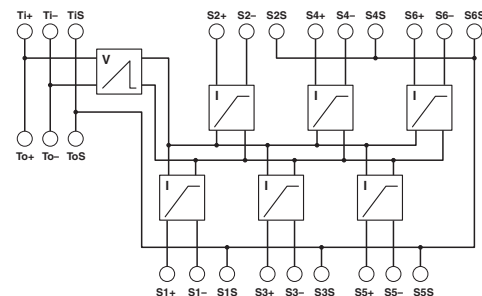
## Drawings

Dimensional drawing



FB-6SP dimensions

Circuit diagram



Connection diagram: FB-6SP

# Device coupler - FB-6SP - 2316307

## Classifications

### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27242610 |
| eCl@ss 11.0   | 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 9.0    | 27242610 |

### ETIM

|          |          |
|----------|----------|
| ETIM 4.0 | 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 |
| UNSPSC 20.0   | 32151602 |
| UNSPSC 21.0   | 32151602 |

## Approvals

### Approvals

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Approvals

UL Listed / cUL Listed / cULus Listed

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Ex Approvals

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

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### Approval details

# Device coupler - FB-6SP - 2316307

## Approvals

|           |  |   |               |
|-----------|--|---|---------------|
| UL Listed |  | <a href="http://database.ul.com/cgi-bin/XYVV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYVV/template/LISEXT/1FRAME/index.htm</a> | FILE E 330267 |
|-----------|--|---|---------------|

|            |  |   |               |
|------------|--|---|---------------|
| cUL Listed |  | <a href="http://database.ul.com/cgi-bin/XYVV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYVV/template/LISEXT/1FRAME/index.htm</a> | FILE E 330267 |
|------------|--|---|---------------|

|              |  |  |  |
|--------------|--|--|--|
| cULus Listed |  |  |  |
|--------------|--|--|--|

## 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

#### 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)

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).

## Device coupler - FB-6SP - 2316307

### Accessories

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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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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

## Device coupler - FB-6SP - 2316307

### Accessories

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.