

## Device coupler - FB-8SP ISO - 2316311

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Zone 1 installed device coupler for Foundation Fieldbus and PROFIBUS PA with terminal connections for eight spurs connected to fieldbus end devices.

### Your advantages

- ✓ Connect up to eight Foundation Fieldbus or PROFIBUS PA field devices located in Zone 0/1
- ✓ Terminator preinstalled
- ✓ Provides current limiting short-circuit protection per spur
- ✓ Two isolation zones; Spurs 1-4 and 5-8
- ✓ Single-sided plug configuration eliminates cable bend radius issues



### Key Commercial Data

|              |                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------|
| Packing unit | 1 pc                                                                                                    |
| GTIN         | <br>4 055626 306803 |
| GTIN         | 4055626306803                                                                                           |

### Technical data

#### Note

|                         |                                                                           |
|-------------------------|---------------------------------------------------------------------------|
| Utilization restriction | EMC: class A product, see manufacturer's declaration in the download area |
|-------------------------|---------------------------------------------------------------------------|

#### Dimensions

|        |        |
|--------|--------|
| Width  | 279 mm |
| Height | 142 mm |
| Depth  | 66 mm  |

#### Ambient conditions

|                                         |                       |
|-----------------------------------------|-----------------------|
| Ambient temperature (operation)         | -40 °C ... 80 °C      |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C      |
| Permissible humidity (operation)        | 95 % (non-condensing) |

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## Technical data

### Ambient conditions

|                      |         |
|----------------------|---------|
| Degree of protection | IP20    |
|                      | IP30 () |

### General

|                      |                                                                 |
|----------------------|-----------------------------------------------------------------|
| Mounting position    | On horizontal and vertical DIN rail NS 35 in acc. with EN 60715 |
| Net weight           | 1190 g                                                          |
| Degree of pollution  | 2                                                               |
| Overvoltage category | II                                                              |
| Conformance          | EMC 2014/30/EU                                                  |
|                      | ATEX 2014/34/EU                                                 |
| Fieldbus Foundation  | FF-846                                                          |

### Power supply

|                                            |                                                |
|--------------------------------------------|------------------------------------------------|
| Supply voltage range                       | 16 V DC ... 32 V DC (input on trunk line side) |
| Max. current consumption                   | 35 mA (trunk, no load)                         |
|                                            | 350 mA (maximum trunk current)                 |
| 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                          | 8                                                                          |
| Connection method                     | Pluggable COMBICON screw connection for each spur                          |
| Termination resistor                  | Integrated termination, activated with bridge located in correct terminals |
| 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                | ≤ 14 V (each spur)                                                         |
| Output current                        | 35 mA (per spur)                                                           |
| Inductance L <sub>i</sub>             | 0 µH                                                                       |
| Max. output voltage U <sub>o</sub>    | 16.7 V                                                                     |

### Safety data

|                              |      |
|------------------------------|------|
| Input voltage U <sub>i</sub> | 32 V |
|------------------------------|------|

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## Technical data

### Safety data

|                                      |                                                                                                                       |
|--------------------------------------|-----------------------------------------------------------------------------------------------------------------------|
| Max. output voltage $U_o$            | 16.7 V                                                                                                                |
| Max. output current $I_o$            | 250 mA                                                                                                                |
| Max. output power $P_o$              | 1.05 W                                                                                                                |
| Group                                | IIC                                                                                                                   |
| Max. external capacitance $C_o$      | 0.39 $\mu$ F                                                                                                          |
| Group                                | IIB                                                                                                                   |
| Max. external capacitance $C_o$      | 2.33 $\mu$ F                                                                                                          |
| Group                                | IIC                                                                                                                   |
| Max. external inductivity $L_o$      | 0.56 mH                                                                                                               |
| Group                                | IIB                                                                                                                   |
| Max. external inductivity $L_o$      | 2.27 mH                                                                                                               |
| ATEX                                 | DEMKO 16ATEX 1689X<br>II 2(1) G Ex eb ib mb [ia Ga] IIC T4 Gb<br>II (1D) [Ex ia Da] IIIC<br>FISCO power supply (spur) |
| IECEX                                | IECEX UL 16.0114X<br>Ex eb ib mb [ia Ga] IIC T4 Gb<br>[Ex ia Da] IIIC<br>FISCO power supply (spur)                    |
| Safety-related maximum voltage $U_m$ | 253 V                                                                                                                 |

### 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                                                             |
| Flammability rating according to UL 94 | V0                                                                      |
| Shock                                  | 15g for 11 ms                                                           |
| Vibration (operation)                  | 2g, 10 Hz ... 150 Hz                                                    |
| Conformance                            | EMC 2014/30/EU                                                          |
|                                        | ATEX 2014/34/EU                                                         |
| Fieldbus Foundation                    | FF-846                                                                  |
| Group                                  | IIC                                                                     |
|                                        | IIB                                                                     |
|                                        | IIC                                                                     |
|                                        | IIB                                                                     |
| ATEX                                   | DEMKO 16ATEX 1689X                                                      |

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### Technical data

#### Standards and Regulations

|                |                                                                                                                                                                                                                                                                                                                                        |
|----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                | II 2(1) G Ex eb ib mb [ia Ga] IIC T4 Gb<br>II (1D) [Ex ia Da] IIIC<br>FISCO power supply (spur)                                                                                                                                                                                                                                        |
| IECEX          | IECEX UL 16.0114X<br>Ex eb ib mb [ia Ga] IIC T4 Gb<br>[Ex ia Da] IIIC<br>FISCO power supply (spur)                                                                                                                                                                                                                                     |
| UL, USA/Canada | Install in Class I, Div. 2, Groups A, B, C, D<br>Entity/FISCO spur to: Class I, Groups A, B, C, D; Class II, Groups E, F, G; Class III; Group IIIC<br>Class I, Zone 1 AEx eb ib mb [ia Ga] IIC T4 Gb<br>[AEx ia Da] IIIC<br>FISCO power supply (spur)<br>Ex eb ib mb [ia Ga] IIC T4 Gb<br>[Ex ia Da] IIIC<br>FISCO power supply (spur) |

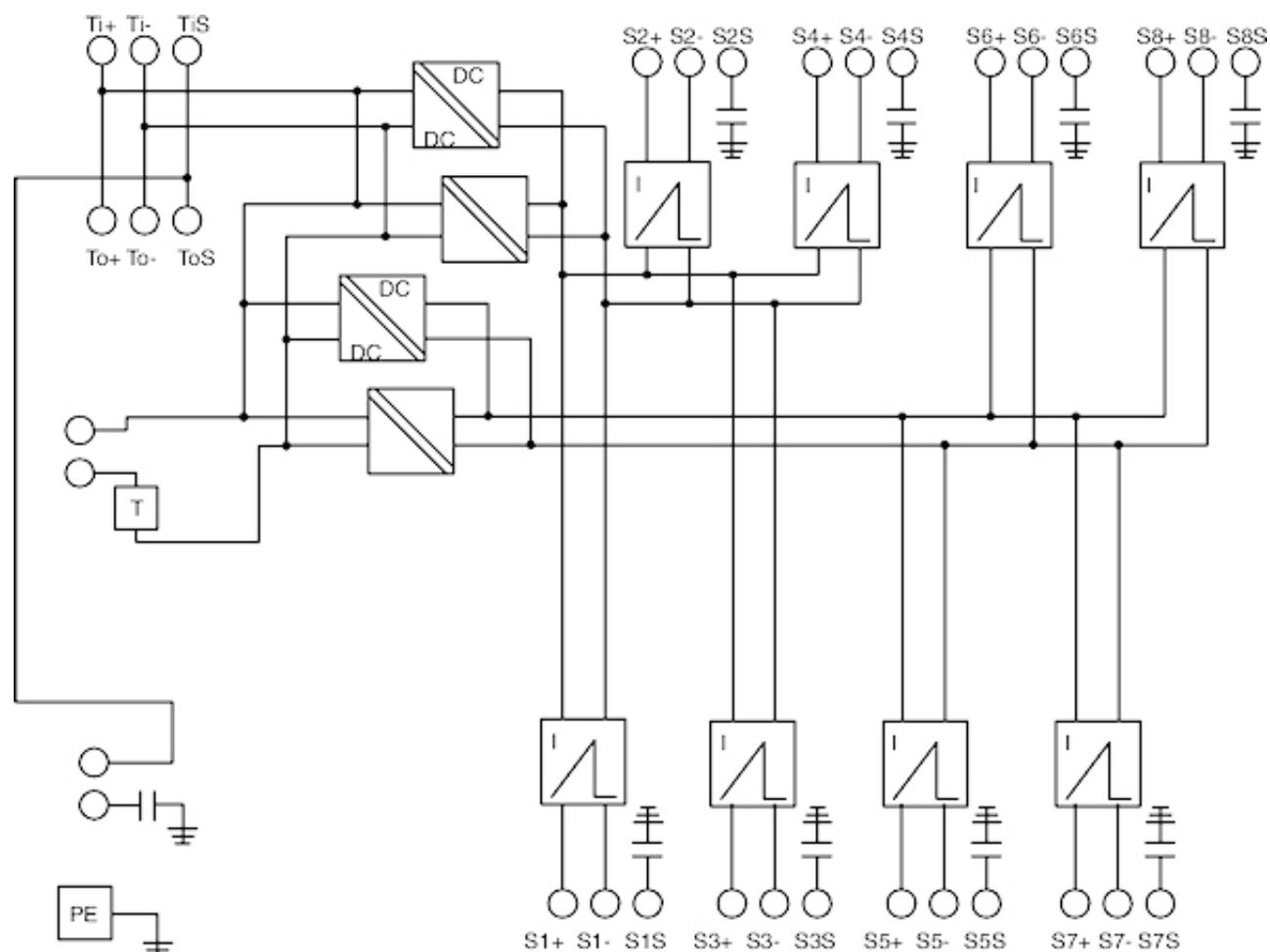
#### Environmental Product Compliance

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

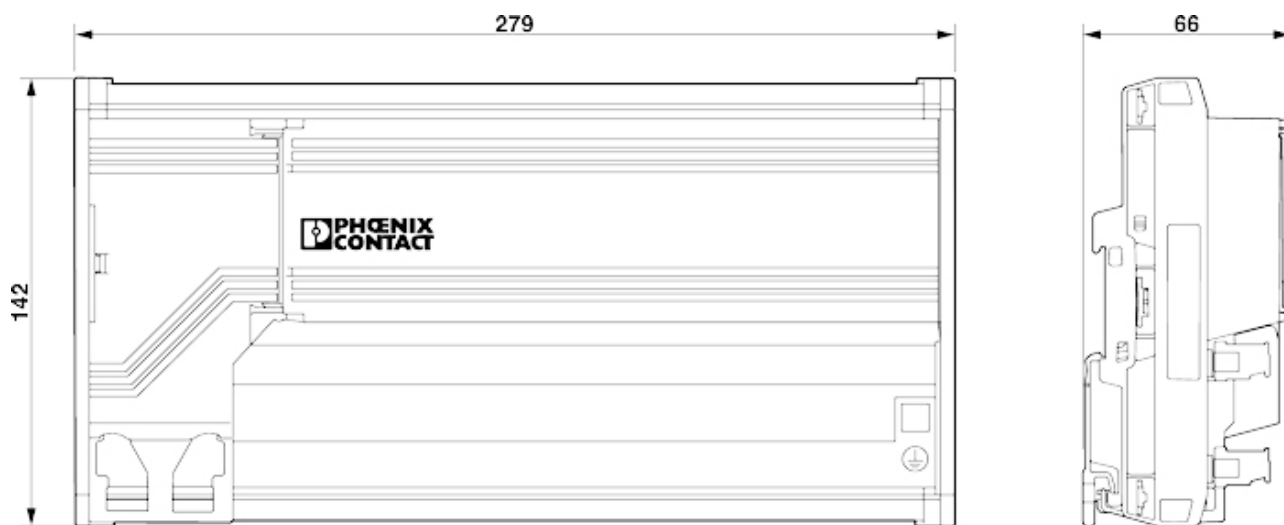
## Device coupler - FB-8SP ISO - 2316311

Block diagram



## Device coupler - FB-8SP ISO - 2316311

Dimensional drawing



### Classifications

#### eCl@ss

|               |          |
|---------------|----------|
| eCl@ss 10.0.1 | 27242610 |
| eCl@ss 4.0    | 27250203 |
| eCl@ss 4.1    | 27250203 |
| eCl@ss 5.0    | 27250203 |
| eCl@ss 5.1    | 27259205 |
| eCl@ss 6.0    | 27242600 |
| eCl@ss 7.0    | 27242610 |
| eCl@ss 8.0    | 27242610 |
| eCl@ss 9.0    | 27242610 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 2.0 | EC001423 |
| ETIM 3.0 | EC001600 |
| ETIM 4.0 | EC001600 |
| ETIM 5.0 | EC001600 |
| ETIM 6.0 | EC001600 |
| ETIM 7.0 | EC001600 |

#### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 6.01 | 30211506 |
|-------------|----------|

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### Classifications

#### UNSPSC

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

### 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

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#### Device coupler

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 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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### 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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### Neutral conductor rail

Neutral busbar - NLS-CU 3/10 SN 2000MM - 0402006



Neutral busbar, width: 10 mm, height: 3 mm, DIN VDE 0611-4: 1991-02, material: Copper, tin-plated, length: 2000 mm, color: silver

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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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### Shield connection

Shield connection - AXL SHIELD SET - 2700518



Axioline shield connection set (contains 2 shield bus holders and 2 SK 5 shield connection clamps)

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### Shield connection clamp

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### Accessories

Shield connection clamp - SK 5 - 3025338



Shield connection clamp, for shield on busbars, contact resistance < 1 mΩ

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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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