

PSI-SC-DNET CAN - Segment coupler



2313449

<https://www.phoenixcontact.com/us/products/2313449>

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Modular segment coupler for electrical isolation and increasing the range for DeviceNet/SDS/CANopen, data rate of up to 1 Mbps. Different data rates at the interfaces can be configured via software. High-quality electrical isolation between the interfaces, DIN-rail mountable, 24 V DC supply.

Your advantages

- Data rates of up to 1 Mbps
- All connections can be plugged in using a COMBICON screw terminal block
- Can be combined with PSI-MOS FO converters in a modular way thanks to DIN rail connectors
- Approved for use in zone 2
- High-quality 4-way isolation between all interfaces

Commercial data

| | |
|--------------------------------------|--------------------------------|
| Item number | 2313449 |
| Packing unit | 1 pc |
| Note | Made to order (non-returnable) |
| Sales key | DN05 |
| Product key | DNC133 |
| GTIN | 4046356451857 |
| Weight per piece (including packing) | 234.7 g |
| Weight per piece (excluding packing) | 234.7 g |
| Customs tariff number | 85176200 |
| Country of origin | DE |

Technical data

Notes

Utilization restriction

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

Product properties

| | |
|--------------|--|
| Product type | Interface converter |
| MTTF | 949 Years (SN 29500 standard, temperature 25°C, operating cycle 21%) |
| | 443 Years (SN 29500 standard, temperature 40°C, operating cycle 34.25%) |
| | 181 Years (SN 29500 standard, temperature 40°C, operating cycle 100%) |
| MTBF | 743 Years (Telcordia standard, 25°C temperature, 21% operating cycle (5 days a week, 8 hours a day)) |
| | 163 Years (Telcordia standard, 40°C temperature, 34.25% operating cycle (5 days a week, 12 hours a day)) |

Electrical properties

| | |
|---|---------------------------------------|
| Electrical isolation | in accordance with EN 60950 |
| | VCC // CAN A // CAN B |
| Maximum power dissipation for nominal condition | 1.32 W |
| Test voltage data interface/power supply | 1.5 kV _{rms} (50 Hz, 1 min.) |

Supply

| | |
|-----------------------------|--|
| Supply voltage range | 10 V DC ... 30 V DC (via pluggable COMBICON screw terminal block) |
| Nominal supply voltage | 24 V DC |
| Typical current consumption | 55 mA (24 V DC) |
| Max. current consumption | 80 mA |
| | ≤ 2 A (For operation in a joining station, via the DIN rail connector) |

Function

| | |
|----------------------------------|---|
| Status and diagnostic indicators | LEDs: VCC (supply voltage), NET A (Mod/Net status port A), NET B (Mod/Net status port B), ACT (activity/data traffic) |
|----------------------------------|---|

Output data

Switching

| | |
|---------------------------|--------------|
| Output name | Relay output |
| Number of outputs | 1 |
| Contact switching type | N/O contact |
| Minimum switching voltage | 10 V DC |
| Maximum switching voltage | 30 V DC |

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| | |
|-----------------------------|--------|
| Limiting continuous current | 500 mA |
|-----------------------------|--------|

Connection data

| | |
|-------------------|---------------------|
| Supply | |
| Tightening torque | 0.56 Nm ... 0.79 Nm |

Interfaces

| | |
|------------------------|------------|
| Bit distortion, input | ± 35 % |
| Bit distortion, output | < 6.25 % |
| Signal | CAN |
| | CANopen® |
| | DeviceNet™ |

Data: CAN interface, in accordance with ISO/IS 11898 for DeviceNet™, CAN, CANopen®

| | |
|---------------------------------------|---|
| Serial transmission speed | ≤ 1000 kbps |
| Connection method | COMBICON plug-in screw terminal block |
| No. of channels | 2 (CAN_High / CAN_Low) |
| Transmission length | ≤ 5000 m (Dependent on the data rate and the protocol used) |
| Termination resistor | 124 Ω, integrated and can be connected |
| | Integrated and ready to be switched |
| 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. | 14 |
| Conductor cross-section AWG min. | 24 |
| Transmission medium | 2-wire twisted pair, shielded |
| File format/coding | Bit stuffing, NRZ |

Data: CAN interface, in accordance with ISO/IS 11898 for DeviceNet™, CAN, CANopen®

| | |
|---------------------------|---|
| Serial transmission speed | ≤ 1000 kbps |
| Connection method | COMBICON plug-in screw terminal block |
| Transmission length | ≤ 5000 m (Dependent on the data rate and the protocol used) |
| Termination resistor | 124 Ω, integrated and can be connected |

Dimensions

| | |
|---------------------|--------|
| Dimensional drawing | |
| Width | 35 mm |
| Height | 111 mm |
| Depth | 121 mm |

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Material specifications

| | |
|--------------------|-----------|
| Color | green |
| Material (Housing) | PA 6.6-FR |

Mechanical tests

| | |
|--|---|
| Free fall in accordance with IEC 60068-2-32 | Free fall: 1 m |
| Vibration resistance in accordance with EN 60068-2-6/IEC 60068-2-6 | Vibration (operation): 5g, 10...150 Hz, 2.5 h, in XYZ direction |
| Shock in accordance with EN 60068-2-27/IEC 60068-2-27 | Shock (operation): 15g, 11 ms period, half-sine shock pulse |

Environmental and real-life conditions

Ambient conditions

| | |
|---|--------------------------------|
| Degree of protection | IP20 |
| Ambient temperature (operation) | -20 °C ... 60 °C |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C |
| Permissible humidity (operation) | 30 % ... 95 % (non-condensing) |

Approvals

CE

| | |
|-------------|--------------|
| Certificate | CE-compliant |
|-------------|--------------|

ATEX

| | |
|----------------|---|
| Identification | ⊕ II 3 G Ex nA IIC T4 Gc X |
| Note | Please follow the special installation instructions in the documentation! |

UL, USA/Canada

| | |
|----------------|------------|
| Identification | 508 Listed |
|----------------|------------|

Shipbuilding

| | |
|----------------|--------|
| Identification | DNV GL |
|----------------|--------|

Shipbuilding data

| | |
|-------------|---|
| Temperature | B |
| Humidity | A |
| Vibration | A |
| EMC | B |
| Enclosure | Required protection according to the Rules shall be provided upon installation on board |

EMC data

| | |
|-------------------------------|---|
| Electromagnetic compatibility | Conformance with EMC Directive 2014/30/EU |
| Noise immunity | EN 61000-6-2 |

Noise emission

| | |
|-----------------------|----------|
| Standards/regulations | EN 55011 |
|-----------------------|----------|

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Electrostatic discharge

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-2 |
|-----------------------|--------------|

Electrostatic discharge

| | |
|-------------------|-------------|
| Contact discharge | ± 6 kV |
| Discharge in air | ± 8 kV |
| Comments | Criterion B |

Electromagnetic HF field

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-3 |
|-----------------------|--------------|

Electromagnetic HF field

| | |
|-----------------|------------------|
| Frequency range | 80 MHz ... 3 GHz |
| Field intensity | 10 V/m |
| Comments | Criterion A |

Fast transients (burst)

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-4 |
|-----------------------|--------------|

Fast transients (burst)

| | |
|----------|-------------|
| Input | ± 2 kV |
| Signal | ± 2 kV |
| Comments | Criterion B |

Surge current load (surge)

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-5 |
|-----------------------|--------------|

Surge current load (surge)

| | |
|----------|-------------|
| Input | ± 0.5 kV |
| Signal | ± 1 kV |
| Comments | Criterion B |

Conducted interference

| | |
|-----------------------|--------------|
| Standards/regulations | EN 61000-4-6 |
|-----------------------|--------------|

Conducted interference

| | |
|----------|-------------|
| Comments | Criterion A |
| Voltage | 10 V |

Emitted interference

| | |
|-----------------------|----------------------------------|
| Standards/regulations | EN 55011 |
| Comments | Class A, industrial applications |

Standards and regulations

| | |
|---|--|
| Free from substances that could impair the application of coating | in accordance with VW-AUDI-Seat central standard P-VW 3.10.7 57 65 0 |
| Electrical isolation | in accordance with EN 60950 |

Air clearances and creepage distances

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| | |
|-----------------------|----------------------------|
| Standards/regulations | DIN EN 50178, DIN EN 60950 |
|-----------------------|----------------------------|

Mounting

| | |
|---------------|-------------------|
| Mounting type | DIN rail mounting |
|---------------|-------------------|

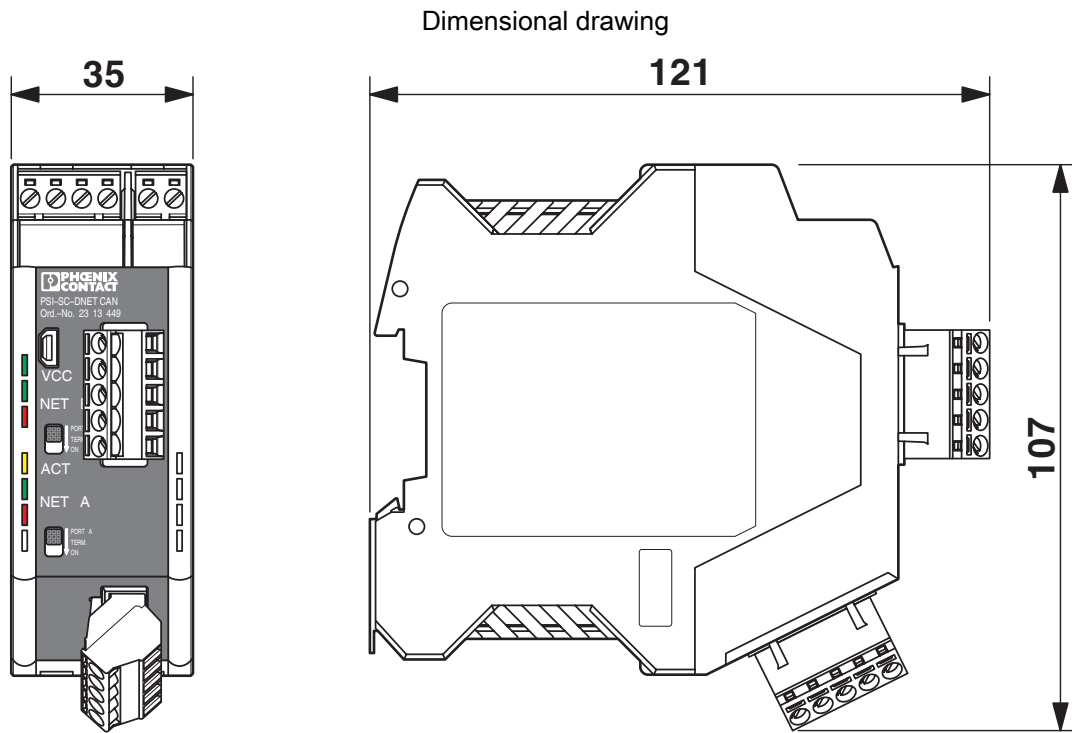
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Drawings

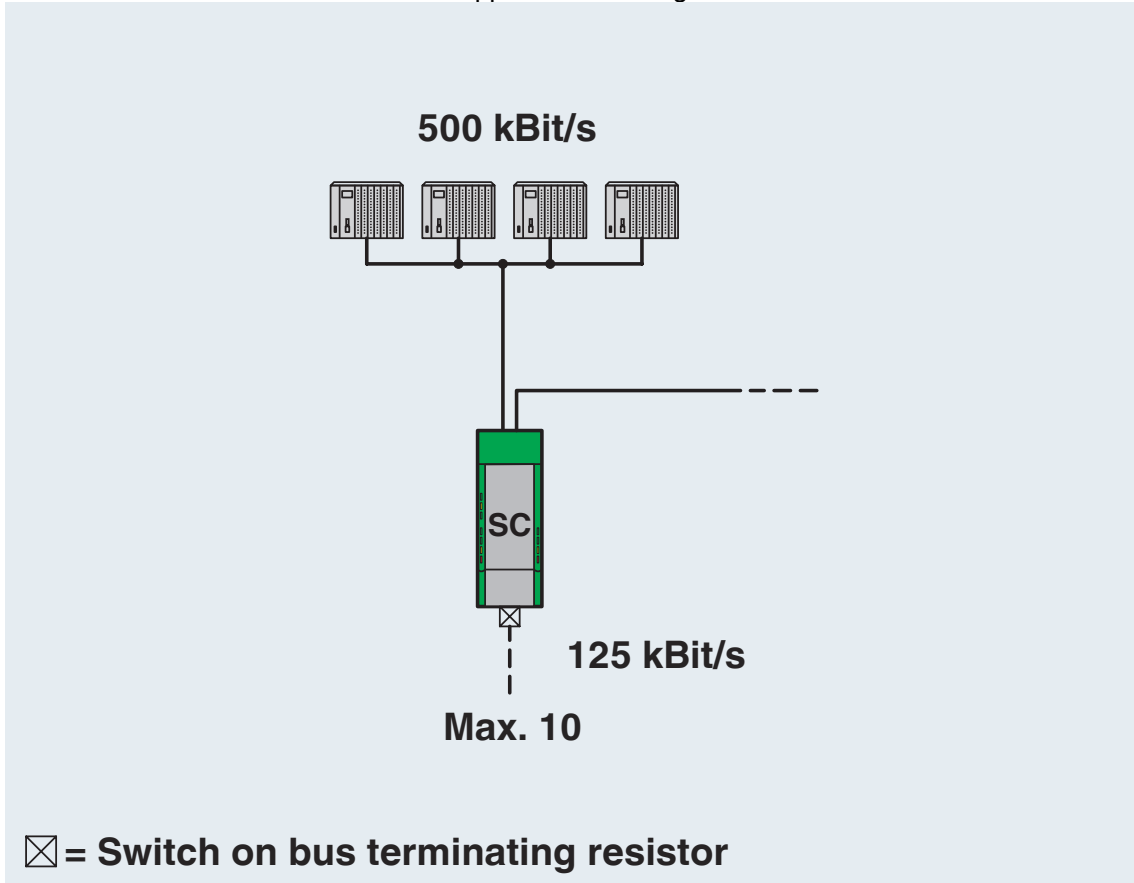


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Application drawing



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Environmental product compliance

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.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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