

# PI-EX-ME-RPSS-I/I - Signal isolator



2835422

<https://www.phoenixcontact.com/us/products/2835422>

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Repeater power supply, SMART, (analog IN), input: intrinsically safe, input signal: 0(4) ... 20 mA, output signal: 0(4) ... 20 mA

## Commercial data

|                                      |                                |
|--------------------------------------|--------------------------------|
| Item number                          | 2835422                        |
| Packing unit                         | 1 pc                           |
| Note                                 | Made to order (non-returnable) |
| Sales key                            | C430                           |
| Product key                          | DK1XXX                         |
| GTIN                                 | 4017918181154                  |
| Weight per piece (including packing) | 187.8 g                        |
| Weight per piece (excluding packing) | 187.3 g                        |
| Customs tariff number                | 85438995                       |
| Country of origin                    | DE                             |

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## Technical data

### Product properties

|                 |                    |
|-----------------|--------------------|
| Product type    | Signal conditioner |
| Application     | Analog IN          |
| No. of channels | 1                  |

### Electrical properties

|                                 |                          |
|---------------------------------|--------------------------|
| Test voltage input/output       | 1.5 kV AC (50 Hz, 60 s)  |
| Step response (10-90%)          | 2.2 ms                   |
| Maximum temperature coefficient | < 0.01 %/K               |
| Maximum transmission error      | ≤ 0.1 % (of final value) |

### Electrical isolation Input/output/power supply

|                      |   |
|----------------------|---|
| Electrical isolation | 375 V (Peak value, in acc. with EN 50020) |
|----------------------|---|

### Supply

|                          |                            |
|--------------------------|----------------------------|
| Supply voltage range     | 20 V DC ... 30 V DC        |
| Max. current consumption | < 90 mA (at 24 V DC/20 mA) |
| Power consumption        | 2.2 W                      |

### Input data

#### Signal

|                            |  |
|----------------------------|--|
| Description of the input   | Current input, intrinsically safe                    |
| Available input sources    | 2-conductor measuring transducer 4...20 mA           |
|                            | 3-conductor measuring transducer 4 ... 20 mA         |
|                            | Active, fed from the field side, 0/4...20 mA signals |
| Current input signal       | 4 mA ... 20 mA                                       |
| Transmitter supply voltage | 17 V (at 20 mA)                                      |
| Connection technology      | 2-, 3-conductor                                      |

### Output data

#### Signal

|                                 |                          |
|---------------------------------|--------------------------|
| Output description              | Current output           |
| Current output signal           | 0 mA ... 20 mA           |
|                                 | 4 mA ... 20 mA           |
| Load/output load current output | 800 Ω (550 Ω with SMART) |

### Connection data

|                                  |   |
|----------------------------------|---|
| Connection method                | Pluggable screw connection                  |
| Stripping length                 | 8 mm  |
| Screw thread                     | M3  |
| Conductor cross-section rigid    | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross-section flexible | 0.2 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |

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|                             |                   |
|-----------------------------|-------------------|
| Conductor cross-section AWG | 24 ... 14         |
| Tightening torque           | 0.5 Nm ... 0.6 Nm |

## Ex data

### Safety data

|  |                |
|--|----------------|
| Max. output voltage $U_o$  | 28 V           |
| Max. output current $I_o$  | 93 mA          |
| Max. output power $P_o$  | 650 mW         |
| Safety-related maximum voltage $U_m$                                   | 250 V          |
| IIB: Max. external inductivity $L_o$ / Max. external capacitance $C_o$ | 14 mH / 650 nF |
| IIC: Max. external inductivity $L_o$ / Max. external capacitance $C_o$ | 2 mH / 83 nF   |

## Interfaces

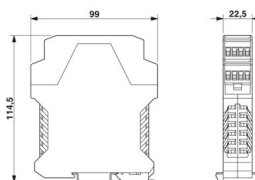
### Data communication (bypass)

|                           |  |
|---------------------------|--|
| HART function             | yes, parallel to the load or through sockets on the front plate. |
| Protocols supported       | HART, Foxboro, Yokogawa Brain, further types on request          |
| Frequency measuring range | 0 Hz ... 12 kHz (signal band width for data communication)       |

## Signaling

|                |                            |
|----------------|----------------------------|
| Status display | Green LED (supply voltage) |
|----------------|----------------------------|

## Dimensions

|                     |  |
|---------------------|--|
| Dimensional drawing |  |
| Width               | 22.5 mm  |
| Height              | 99 mm  |
| Depth               | 114.5 mm   |

## Material specifications

|  |                             |
|--|-----------------------------|
| Color                                  | green (RAL 6021)            |
| Flammability rating according to UL 94 | V0                          |
| Housing material                       | Polyamide PA non-reinforced |

## Environmental and real-life conditions

### Ambient conditions

|   |                         |
|---|-------------------------|
| Ambient temperature (operation)         | -20 °C ... 60 °C        |
| Ambient temperature (storage/transport) | -25 °C ... 80 °C        |
| Permissible humidity (operation)        | ≤ 75 % (annual average) |

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|  |                                       |
|--|---------------------------------------|
|  | ≤ 95 % (30 days/year, non-condensing) |
|--|---------------------------------------|

## Approvals

### CE

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

### ATEX

|                |                  |
|----------------|------------------|
| Identification | ⊕ II (1)GD       |
|                | [EEx ia] IIC     |
| Certificate    | TÜV 00 ATEX 1522 |

### UL, USA/Canada

|                |       |
|----------------|-------|
| Identification | cULus |
|----------------|-------|

## Standards and regulations

### Standards

|                       |                            |
|-----------------------|----------------------------|
| Standards/regulations | NAMUR recommendation NE 21 |
|-----------------------|----------------------------|

# PI-EX-ME-RPSS-I/I - Signal isolator

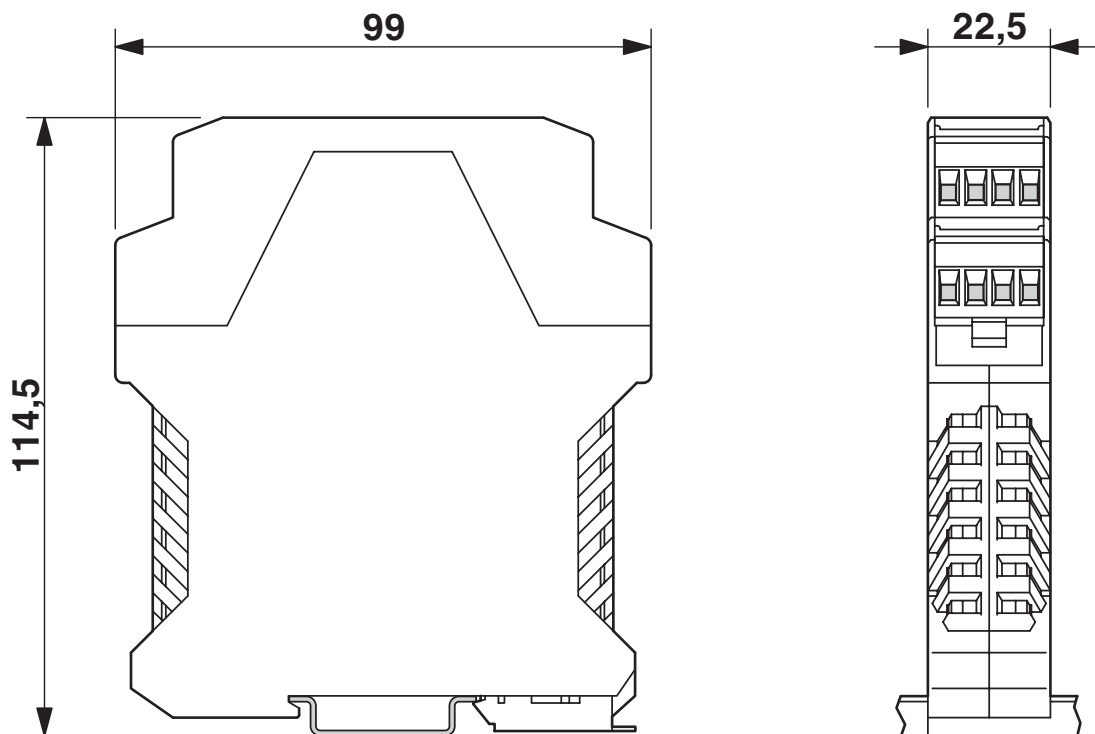
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## Drawings

Dimensional drawing

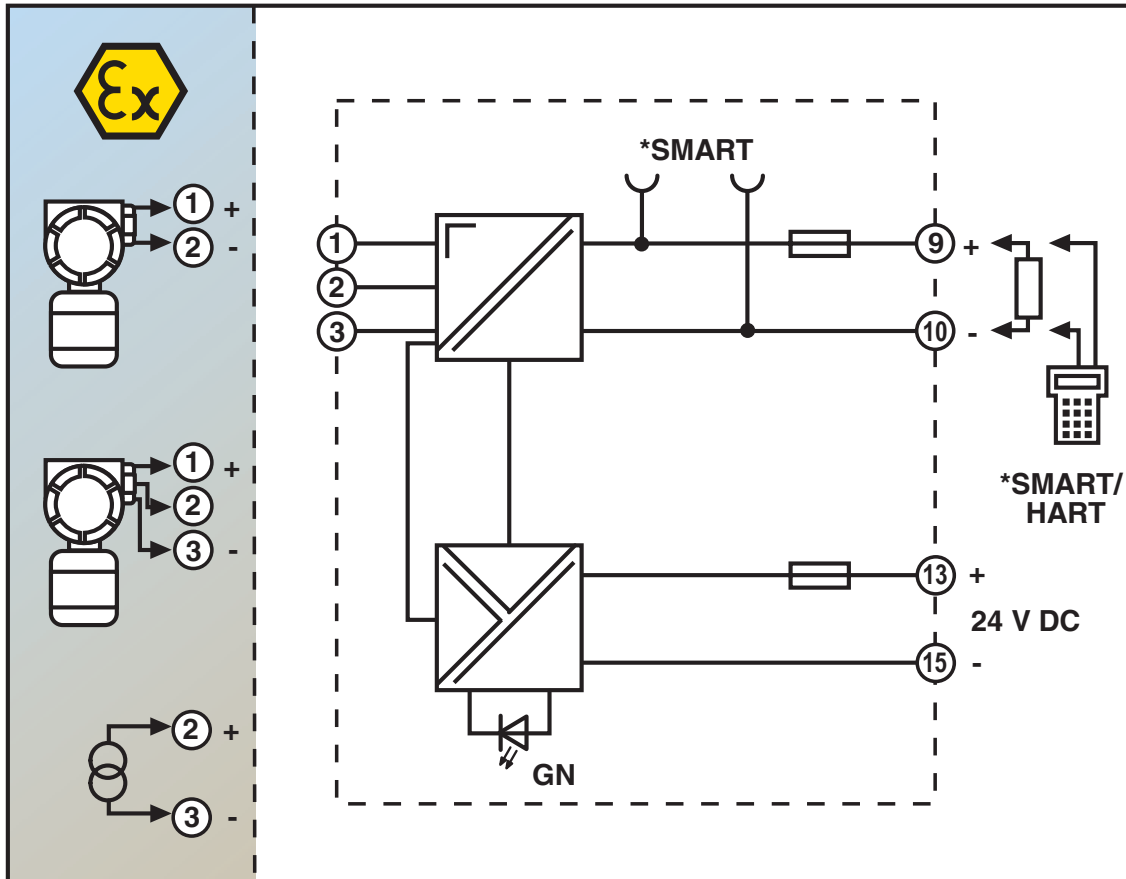


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Block diagram



Block diagram: PI-EX-ME-RPSS-I/I

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## Environmental product compliance

EU REACH SVHC

| REACH candidate substance (CAS No.) |  |
|-------------------------------------|--|
|-------------------------------------|--|

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

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