

## Solenoid driver - PI-EX-SD-24-48 - 2865298

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Ex i solenoid driver, pluggable. To control intrinsically safe solenoid valves, alarm modules as well as simple electric equipment installed in Ex areas. For Group IIC gases, loop-powered. Electrical isolation.

RoHS



### Key Commercial Data

|                                      |                                                                                                         |
|--------------------------------------|---------------------------------------------------------------------------------------------------------|
| Packing unit                         | 1 pc                                                                                                    |
| GTIN                                 | <br>4 046356 147101 |
| GTIN                                 | 4046356147101                                                                                           |
| Weight per Piece (excluding packing) | 89.600 g                                                                                                |
| Custom tariff number                 | 85437090                                                                                                |
| Country of origin                    | Germany                                                                                                 |

### Technical data

#### Note

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

#### Dimensions

|        |          |
|--------|----------|
| Width  | 12.4 mm  |
| Height | 79 mm    |
| Depth  | 118.4 mm |

#### Ambient conditions

|                                         |                                                   |
|-----------------------------------------|---------------------------------------------------|
| Ambient temperature (operation)         | -20 °C ... 55 °C                                  |
| Ambient temperature (storage/transport) | -40 °C ... 85 °C                                  |
| Permissible humidity (operation)        | 10 % ... 95 % (relative humidity, non-condensing) |

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## Technical data

### Output data

|                                              |                                                |
|----------------------------------------------|------------------------------------------------|
| Output characteristic curve: Output resistor | $\leq 278 \Omega$ (Internal resistance $R_i$ ) |
| Response time                                | < 30 ms                                        |

### Compatible valves

|                  |                                                                             |
|------------------|-----------------------------------------------------------------------------|
| Note             | This is an extract of possible combinations of valves and solenoid drivers. |
| Compatible valve | ASCO Coil 195                                                               |
|                  | ASCO Coil 302 (12 V)                                                        |
|                  | Bürkert Coil AC 10 standard                                                 |
|                  | Bürkert Coil AC 10 high resistance                                          |
|                  | Bürkert Coil AC 21 standard 700 mW / 65°C                                   |
|                  | Bürkert Coil AC 21 high resistance 700 mW / 65°C                            |
|                  | Bürkert Coil AC 21 standard 900 mW / 45°C                                   |
|                  | Bürkert Coil AC 21 high resistance 900 mW / 45°C                            |
|                  | Bürkert Coil AC 21 standard 900 mW / 60°C                                   |
|                  | Bürkert Coil AC 21 high resistance 900 mW / 60°C                            |
|                  | Bürkert Coil G1 642735 standard 800 mW / 40°C                               |
|                  | Bürkert Coil G1 642735 high resistance 800 mW / 40°C                        |
|                  | Bürkert Coil G1 642735 standard 1000 mW / 40°C                              |
|                  | Bürkert Coil G1 642735 high resistance 1000 mW / 40°C                       |
|                  | FESTO Coil MFH-...IA-SA-EX GBXE022AIAD03                                    |
|                  | FESTO Coil (J)MFH-...BIA-SA-EX GBXE022AIAD03                                |
|                  | Norgren Herion Coil 2050                                                    |
|                  | Norgren Herion Coil 2051                                                    |
|                  | Norgren Herion Coil 2052                                                    |
|                  | Norgren Herion Coil 2053                                                    |
|                  | Norgren Herion Coil 2080 / 2082                                             |
|                  | Norgren Herion Coil 2081 / 2083                                             |
|                  | Norgren Herion Coil 2084                                                    |
|                  | Norgren Herion Coil 3039                                                    |
|                  | Nass Coil 1259 30.1-00                                                      |
|                  | Nass Coil 1259 50.1-00                                                      |
|                  | Parker Coil VZ07 488650.01                                                  |
|                  | Parker Coil VZ33 494035.10                                                  |
|                  | Parker Coil VZ08 488660.01                                                  |
|                  | Parker Coil VZ09 488670.01                                                  |
|                  | Parker Coil VZ95 482160.01 EEx ia IIB T6                                    |
|                  | Parker Coil VZ23 482870.01                                                  |
|                  | Samson Coil 3701-12 (12 V)                                                  |

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### Technical data

#### Compatible valves

|  |                                    |
|--|------------------------------------|
|  | Samson Coil 3701-13 (24 V)         |
|  | Samson Coil 3963-12 (12 V)         |
|  | Samson Coil 3963-13 (24 V)         |
|  | Samson Coil 3964-12 (12 V)         |
|  | Samson Coil 3964-13 (24 V)         |
|  | Seitz Pilot valve PV 12F73 Ci oH   |
|  | Seitz Pilot valve PV 12F73 Xi oH   |
|  | Seitz Pilot valve PV 12F73 Xi oH-2 |
|  | Seitz Solenoid coil 11 G 52        |

#### Power supply

|                          |                      |
|--------------------------|----------------------|
| Max. current consumption | < 110 mA (at 24 V)   |
| Power dissipation        | max. 1.5 W (at 24 V) |

#### General

|                                 |                                                  |
|---------------------------------|--------------------------------------------------|
| Maximum temperature coefficient | 0.01 %/K                                         |
| Status display                  | Yellow LED (status display)                      |
|                                 | Red LED (line errors)                            |
| Housing material                | PBT and polyamide PA non-reinforced              |
| Color                           | green                                            |
| Designation                     | Input/output                                     |
| Electrical isolation            | 375 V (Peak value as per EN 50020 / EN 60079-11) |

#### Safety characteristic data

|                                                                    |                                            |
|--------------------------------------------------------------------|--------------------------------------------|
| Integrity requirement                                              | IEC 61508 - Low demand                     |
| Equipment type                                                     | Type A                                     |
| Safety Integrity Level (SIL)                                       | 3                                          |
| Safe Failure Fraction (SFF)                                        | 100 %                                      |
| $\lambda_{SU}$                                                     | $2.84 \times 10^{-7}$ (284 FIT)            |
| $\lambda_{SD}$                                                     | 0                                          |
| $\lambda_{DU}$                                                     | 0                                          |
| $\lambda_{DD}$                                                     | 0                                          |
| Probability of a hazardous failure on demand (PFD <sub>AVG</sub> ) | 0 (1 year)                                 |
|                                                                    | 0 (5 years)                                |
|                                                                    | 0 (10 years)                               |
| Diagnostic coverage (DC)                                           | DC <sub>S</sub> =0 %, DC <sub>D</sub> =0 % |

#### Safety data

|                                    |        |
|------------------------------------|--------|
| Max. output voltage U <sub>o</sub> | 27.7 V |
|------------------------------------|--------|

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### Technical data

#### Safety data

|                                      |                                                                        |
|--------------------------------------|------------------------------------------------------------------------|
| Max. output current $I_o$            | 101 mA                                                                 |
| Max. output power $P_o$              | 697 mW                                                                 |
| Group                                | IIA                                                                    |
| Max. external inductivity $L_o$      | 20 mH                                                                  |
| Max. external capacitance $C_o$      | 0.44 $\mu$ F                                                           |
| Group                                | IIB                                                                    |
| Max. external inductivity $L_o$      | 2 mH                                                                   |
| Max. external capacitance $C_o$      | 0.29 $\mu$ F                                                           |
| Group                                | IIC                                                                    |
| Max. external inductivity $L_o$      | 0.5 mH                                                                 |
| Max. external capacitance $C_o$      | 0.067 $\mu$ F                                                          |
| Max. ratio $L_o/R_o$                 | 51.1 $\mu$ H/ $\Omega$                                                 |
| Additional text                      | Please follow the technical data regarding the connecting cables used. |
| Safety-related maximum voltage $U_m$ | 250 V AC (125 V DC)                                                    |

#### Standards and Regulations

|             |                                     |
|-------------|-------------------------------------|
| Conformance | CE-compliant                        |
| ATEX        | # II (1) GD [Ex ia] IIC / IIB / IIA |
|             | # II 3 G Ex nA II T4 X              |
| Group       | IIA                                 |
|             | IIB                                 |
|             | IIC                                 |

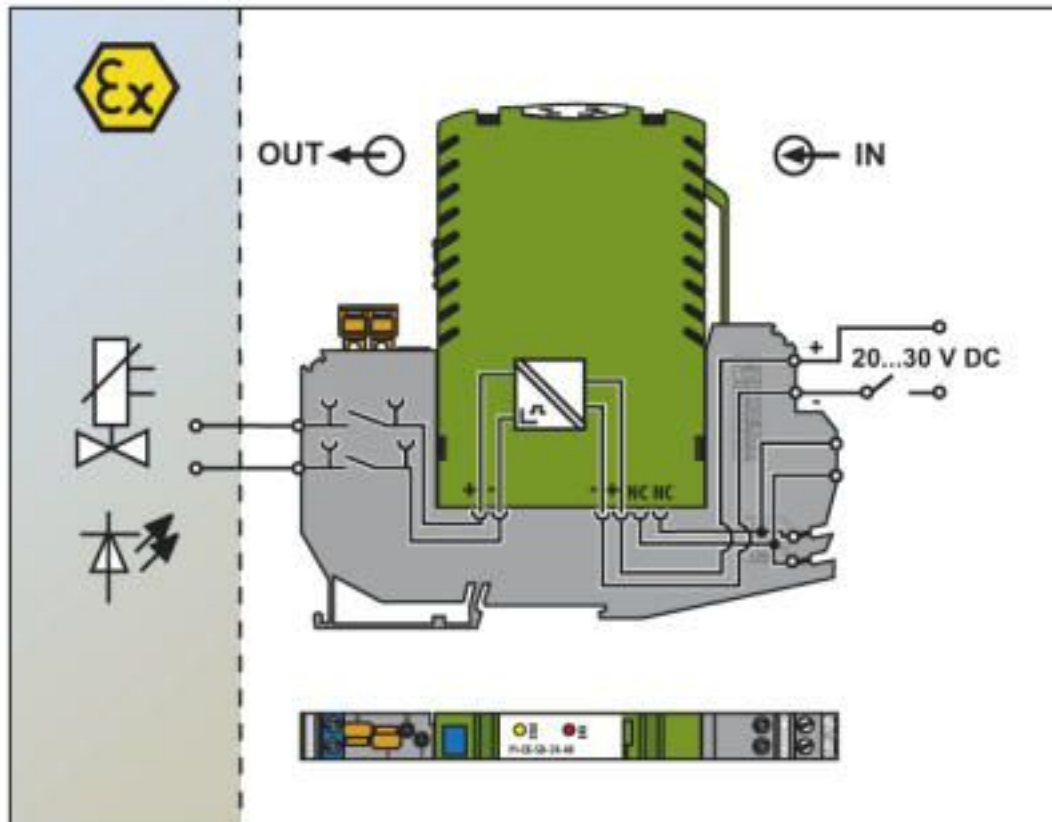
#### Environmental Product Compliance

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

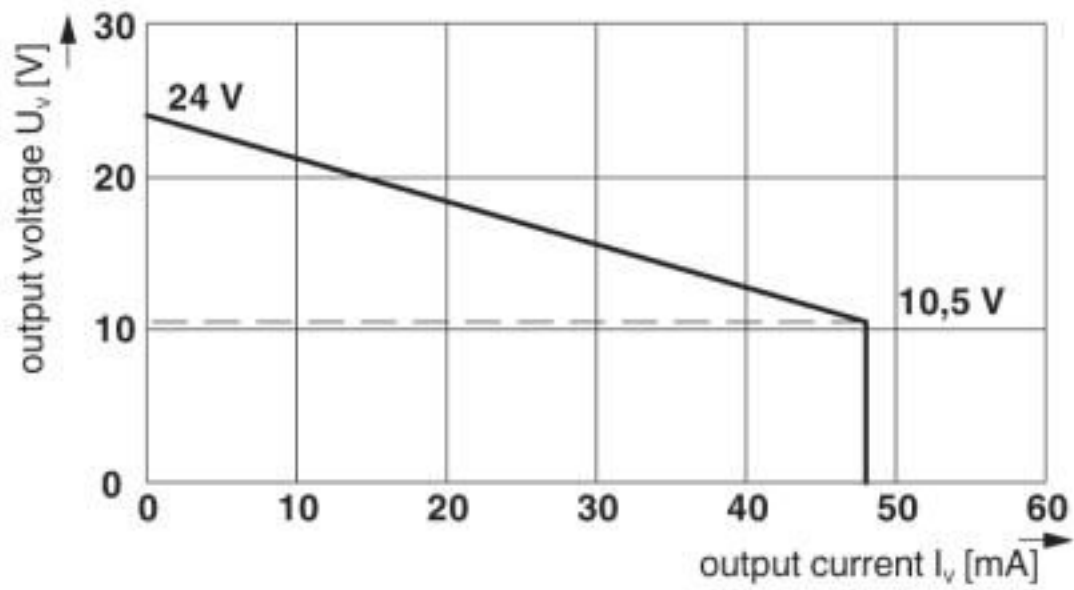
## Solenoid driver - PI-EX-SD-24-48 - 2865298

Block diagram



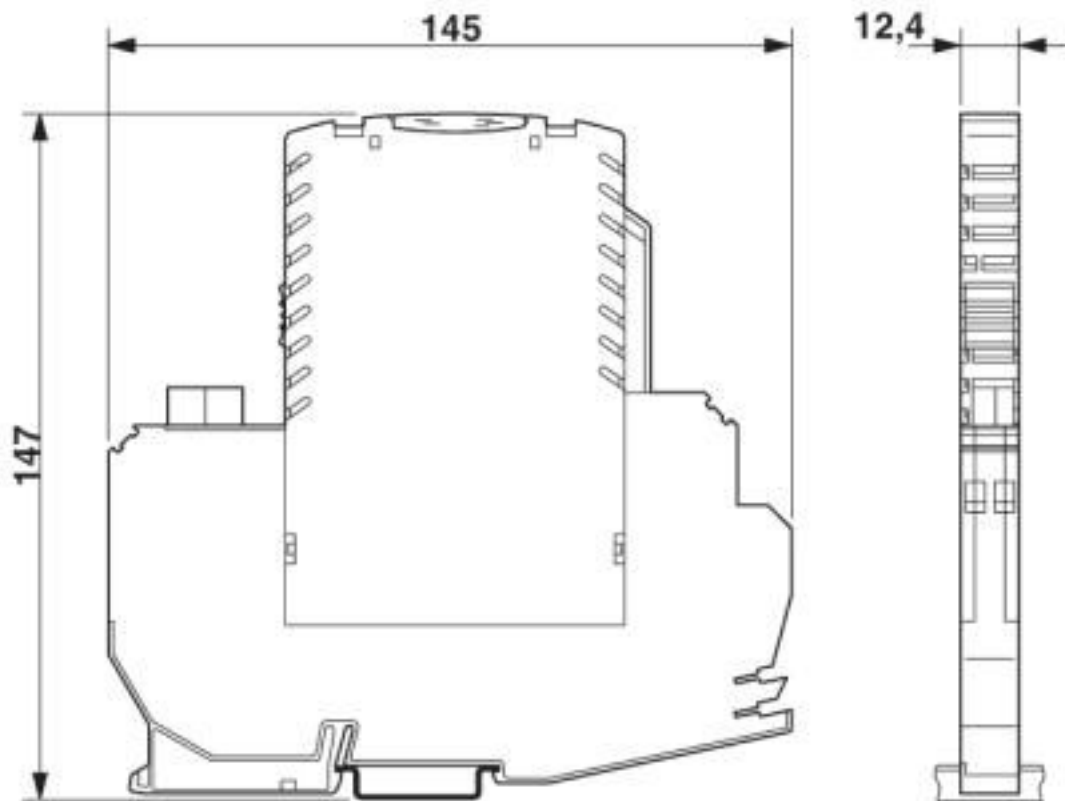
## Solenoid driver - PI-EX-SD-24-48 - 2865298

Diagram



## Solenoid driver - PI-EX-SD-24-48 - 2865298

Dimensional drawing



### Classifications

#### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 4.0 | 27210100 |
| eCl@ss 4.1 | 27210100 |
| eCl@ss 5.0 | 27210100 |
| eCl@ss 5.1 | 27210100 |
| eCl@ss 6.0 | 27210100 |
| eCl@ss 7.0 | 27210120 |
| eCl@ss 8.0 | 27210120 |
| eCl@ss 9.0 | 27210120 |

#### ETIM

|          |          |
|----------|----------|
| ETIM 4.0 | EC002653 |
| ETIM 5.0 | EC002653 |
| ETIM 6.0 | EC002653 |
| ETIM 7.0 | EC002653 |

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### Classifications

#### UNSPSC

|               |          |
|---------------|----------|
| UNSPSC 6.01   | 30211506 |
| UNSPSC 7.0901 | 39121008 |
| UNSPSC 11     | 39121008 |
| UNSPSC 12.01  | 39121008 |
| UNSPSC 13.2   | 39121008 |
| UNSPSC 18.0   | 39121008 |
| UNSPSC 19.0   | 39121008 |
| UNSPSC 20.0   | 39121008 |
| UNSPSC 21.0   | 39121008 |

### Approvals

#### Approvals

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Approvals

Functional Safety

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Ex Approvals

EAC Ex

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#### Approval details

|                   |                    |
|-------------------|--------------------|
| Functional Safety | 06/06-05 R004 V2R0 |
|-------------------|--------------------|

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