

# IB IL EX-IS DIO 4/NAM-PAC - Inline terminal



2869911

<https://www.phoenixcontact.com/us/products/2869911>

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Inline intrinsically safe digital I/O terminal, 4 configurable input/output channels, complete with accessories

## Your advantages

- NAMUR sensors supported (EN 60947-5-6)
- 4 configurable I/O channels
- Single-channel diagnostics
- 8.2 V sensor supply

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 2869911       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | DR01          |
| Product key                          | DRI1E4        |
| GTIN                                 | 4046356470209 |
| Weight per piece (including packing) | 305 g         |
| Weight per piece (excluding packing) | 204 g         |
| Customs tariff number                | 85389099      |
| Country of origin                    | US            |

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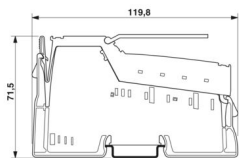


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## Technical data

### Dimensions

|                     |                                                                                    |
|---------------------|------------------------------------------------------------------------------------|
| Dimensional drawing |  |
| Width               | 48.8 mm                                                                            |
| Height              | 119.8 mm                                                                           |
| Depth               | 71.5 mm                                                                            |

### Notes

#### Utilization restriction

|            |                                                               |
|------------|---------------------------------------------------------------|
| CCCex note | Use in potentially explosive areas is not permitted in China. |
|------------|---------------------------------------------------------------|

### Material specifications

|       |      |
|-------|------|
| Color | blue |
|-------|------|

### Interfaces

#### Inline local bus

|                    |                    |
|--------------------|--------------------|
| Connection method  | Inline data jumper |
| Transmission speed | 500 kbps           |

### System properties

#### Module

|               |      |
|---------------|------|
| ID code (hex) | none |
|---------------|------|

### Input data

#### Digital:

|                          |                                       |
|--------------------------|---------------------------------------|
| Input name               | Digital inputs                        |
| Description of the input | Can be configured as input or output  |
| Number of inputs         | 4                                     |
| Connection method        | Inline connector                      |
| Connection technology    | 2-conductor                           |
| Protective circuit       | Polarity protection, surge protection |

### Output data

#### Digital:

|             |                 |
|-------------|-----------------|
| Output name | Digital outputs |
|-------------|-----------------|

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|                        |                                       |
|------------------------|---------------------------------------|
| Output description     | Digital passive output                |
| Connection method      | Inline connector                      |
| Connection technology  | 3-conductor                           |
| Number of outputs      | 4                                     |
| Protective circuit     | Polarity protection, surge protection |
| Output voltage         | 24 V                                  |
| Nominal output voltage | 24 V DC                               |

## Product properties

|                 |               |
|-----------------|---------------|
| Product type    | I/O component |
| Product family  | Inline        |
| Type            | modular       |
|                 | Inline        |
| No. of channels | 4             |

## Electrical properties

### Potentials

|                   |                     |
|-------------------|---------------------|
| Power consumption | 4.8 W (per channel) |
|-------------------|---------------------|

### Potentials: Communications power ( $U_L$ )

|                |                             |
|----------------|-----------------------------|
| Supply voltage | 5 V DC (via voltage jumper) |
| Current draw   | max. 50 mA                  |

### Potentials:

|                |             |
|----------------|-------------|
| Supply voltage | 28 V DC     |
| Current draw   | max. 190 mA |

## Connection data

### Conductor connection

|                                   |                                              |
|-----------------------------------|----------------------------------------------|
| Connection method                 | Spring-cage connection                       |
| Conductor cross-section rigid     | 0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Conductor cross-section flexible  | 0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Conductor cross-section AWG       | 28 ... 16                                    |
| Stripping length                  | 8 mm                                         |
| Connection method                 | Spring-cage connection                       |
| Conductor cross-section, rigid    | 0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Conductor cross-section, flexible | 0.08 mm <sup>2</sup> ... 1.5 mm <sup>2</sup> |
| Conductor cross-section AWG       | 28 ... 16                                    |
| Stripping length                  | 8 mm                                         |

## Environmental and real-life conditions

### Ambient conditions

|                                 |                  |
|---------------------------------|------------------|
| Degree of protection            | IP20             |
| Ambient temperature (operation) | -25 °C ... 60 °C |

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|                                         |                                                   |
|-----------------------------------------|---------------------------------------------------|
| Degree of protection                    | IP20                                              |
| Air pressure (storage/transport)        | 70 kPa ... 106 kPa (up to 3000 m above sea level) |
| Ambient temperature (storage/transport) | -25 °C ... 70 °C                                  |
| Permissible humidity (operation)        | 10 % ... 95 % (according to DIN EN 61131-2)       |

## Standards and regulations

|                  |                                       |
|------------------|---------------------------------------|
| Protection class | III (IEC 61140, EN 61140, VDE 0140-1) |
|------------------|---------------------------------------|

## Approvals

### Ex data

|                  |                                                         |
|------------------|---------------------------------------------------------|
| ATEX             | Ⓔ II 3(1)GD Ex ec [ia Ga Da] IIC T4 Gc Sira 09ATEX2339X |
| IECEX            | Ex ec [ia Ga Da] IIC T4 Gc IECEX SIR 10.0033X           |
| UL, USA / Canada | Class I, Div. 2, Groups A, B, C, D                      |

## Mounting

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

## Ex data

### Safety data

|                                                                                                            |                          |
|------------------------------------------------------------------------------------------------------------|--------------------------|
| Max. output voltage $U_o$                                                                                  | max. 28 V DC (Output)    |
|                                                                                                            | max. 11.76 V DC (Input)  |
| Max. output current $I_o$                                                                                  | max. 109 mA (Output)     |
|                                                                                                            | max. 15.3 mA (Input)     |
| Max. output power $P_o$                                                                                    | max. 757 mW (Output)     |
|                                                                                                            | max. 44.8 mW (Input)     |
| Safety-related maximum voltage $U_m$                                                                       | 28 V DC                  |
| IIC (A, B) (Output): Max. external inductivity $L_o$ / Max. external capacitance $C_o$                     | 1.015 mH / 0.083 $\mu$ F |
| IIB, [IIIC, IIIB] (C, E, F, G) (Output): Max. external inductivity $L_o$ / Max. external capacitance $C_o$ | 3.045 mH / 0.625 $\mu$ F |
| IIA (D) (Output): Max. external inductivity $L_o$ / Max. external capacitance $C_o$                        | 8.12 mH / 2.15 $\mu$ F   |
| IIC (A, B) (Input): Max. external inductivity $L_o$ / Max. external capacitance $C_o$                      | 1.52 mH / 1.5 $\mu$ F    |
| IIB, [IIIC, IIIB] (C, E, F, G) (Input): Max. external inductivity $L_o$ / Max. external capacitance $C_o$  | 4.56 mH / 9.9 $\mu$ F    |
| IIA (D) (Input): Max. external inductivity $L_o$ / Max. external capacitance $C_o$                         | 21.1 mH / 39 $\mu$ F     |

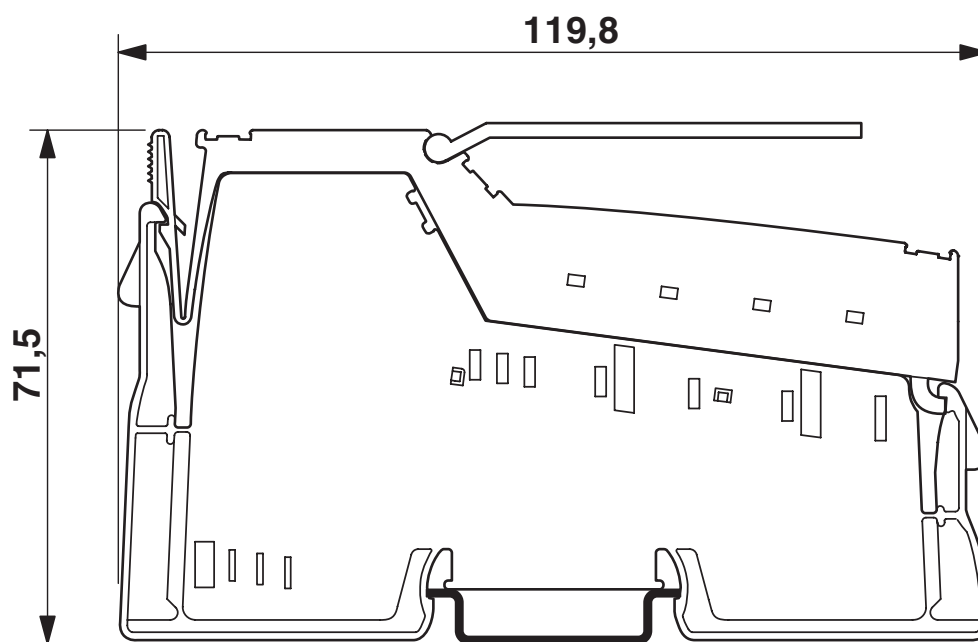
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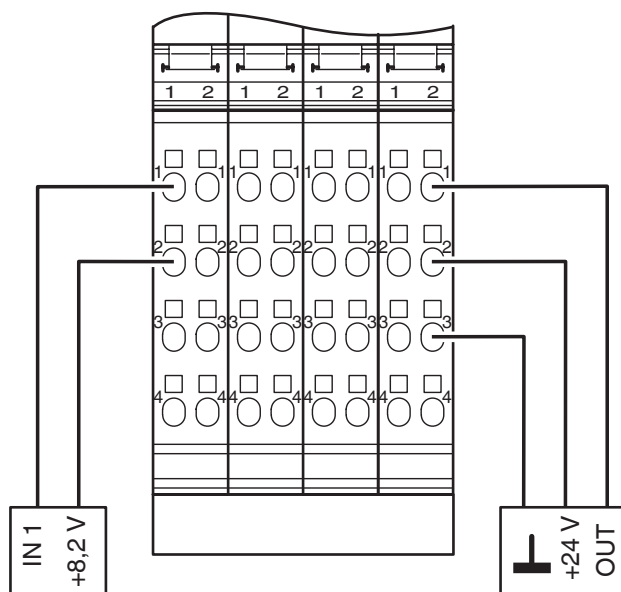
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## Drawings

Dimensional drawing



Connection diagram



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## Approvals

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**ATEX**

Approval ID: Sira 09ATEX2339X

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27242604 |
|-------------|----------|

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC001599 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 32151600 |
|-------------|----------|

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## Environmental product compliance

### China RoHS

|                                        |                                          |
|----------------------------------------|------------------------------------------|
| Environment friendly use period (EFUP) | EFUP-E                                   |
|                                        | No hazardous substances above the limits |

### EU REACH SVHC

|                                     |                            |
|-------------------------------------|----------------------------|
| REACH candidate substance (CAS No.) | No substance above 0.1 wt% |
|-------------------------------------|----------------------------|

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