

## Inline terminal - IB IL 24 DO 4/EF-ECO - 2702825

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Inline ECO, Digital output terminal, Digital outputs: , 24 V DC, 500 mA, connection method: 3-wire, transmission speed in the local bus: 500 kbps, degree of protection: IP20, including Inline connector

### Product Description

The terminal is designed for use within an Inline station. It is used to output digital signals.


Inline ECO terminals are approved for the temperature range from 0°C to +55°C. The electronics base and Inline connector are supplied as standard.

### Your advantages

- 4 digital outputs
- Connection of actuators in 2 and 3-wire technology
- Nominal current per output: 500 mA
- Total current of the terminal: 2 A
- Short-circuit-proof and overload-protected outputs
- Diagnostic and status indicators
- Approved for use in a safety-related segment circuit



### Key Commercial Data

|                                      |   |
|--------------------------------------|---|
| Packing unit                         | 1 pc  |
| GTIN                                 | <br>4 055626 381473 |
| GTIN                                 | 4055626381473   |
| Weight per Piece (excluding packing) | 83.850 g  |
| Custom tariff number                 | 85389099  |
| Country of origin                    | Germany   |

### Technical data

#### Note

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

## Inline terminal - IB IL 24 DO 4/EF-ECO - 2702825

### Technical data

#### Dimensions

|        |          |
|--------|----------|
| Width  | 12.2 mm  |
| Height | 119.8 mm |
| Depth  | 71.5 mm  |

#### Ambient conditions

|  |   |
|--|---|
| Ambient temperature (operation)          | 0 °C ... 55 °C                                    |
| Ambient temperature (storage/transport)  | -25 °C ... 85 °C                                  |
| Permissible humidity (operation)         | 10 % ... 95 % (according to DIN EN 61131-2)       |
| Permissible humidity (storage/transport) | 10 % ... 95 % (according to DIN EN 61131-2)       |
| Air pressure (operation)                 | 70 kPa ... 106 kPa (up to 3000 m above sea level) |
| Air pressure (storage/transport)         | 70 kPa ... 106 kPa (up to 3000 m above sea level) |
| Degree of protection                     | IP20  |

#### Connection data

|                                       |                        |
|---------------------------------------|------------------------|
| Designation                           | Inline connector       |
| Connection method                     | Spring-cage connection |
| Conductor cross section solid min.    | 0.08 mm <sup>2</sup>   |
| Conductor cross section solid max.    | 1.5 mm <sup>2</sup>    |
| Conductor cross section flexible min. | 0.08 mm <sup>2</sup>   |
| Conductor cross section flexible max. | 1.5 mm <sup>2</sup>    |
| Conductor cross section AWG min.      | 28                     |
| Conductor cross section AWG max.      | 16                     |
| Stripping length                      | 8 mm                   |

#### General

|                               |   |
|-------------------------------|---|
| Mounting type                 | DIN rail  |
| Color                         | green   |
| Net weight                    | 83.85 g   |
| Note on weight specifications | with connector  |
| Diagnostics messages          | Short-circuit / overload of the digital outputs Error message in the diagnostic code (bus) and display (2 Hz) via the LED (D) on the module |

#### Interfaces

|                    |                    |
|--------------------|--------------------|
| Designation        | Inline local bus   |
| No. of channels    | 2                  |
| Connection method  | Inline data jumper |
| Transmission speed | 500 kbps           |

#### Inline potentials

|                     |  |
|---------------------|--|
| Designation         | Communications power (U <sub>L</sub> )   |
| Supply voltage      | 7.5 V DC (via voltage jumper)            |
| Current consumption | max. 44 mA                               |
| Power consumption   | max. 0.33 W                              |
| Designation         | Segment circuit supply (U <sub>S</sub> ) |

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### Technical data

#### Inline potentials

|                      |  |
|----------------------|--|
| Supply voltage       | 24 V DC (via voltage jumper)                                       |
| Supply voltage range | 19.2 V DC ... 30 V DC (including all tolerances, including ripple) |
| Current consumption  | max. 2 A   |
|                      | 0 A  |

#### Digital outputs

|  |   |
|--|---|
| Output name                                | Digital outputs   |
| Connection method                          | Spring-cage connection  |
| Connection technology                      | 3-wire  |
| Number of outputs                          | 4   |
| Protective circuit                         | Overload protection, short-circuit protection of outputs Zener diode in output chip |
| Output voltage                             | 24 V DC ( $U_S - 1$ V)  |
| Maximum inrush current                     | max. 1.5 A (for 20 ms)  |
| Nominal output voltage                     | 24 V DC   |
| Maximum output current per channel         | 500 mA  |
| Maximum output current per module          | 2 A   |
| Nominal load, inductive                    | 12 VA (1.2 H, 50 $\Omega$ )   |
| Nominal load, lamp                         | 12 W  |
| Nominal load, ohmic                        | 12 W (48 $\Omega$ )   |
| Output voltage when switched off           | max. 2 V  |
| Output current when switched off           | max. 300 $\mu$ A  |
| Behavior with overload                     | Auto restart  |
| Behavior with inductive overload           | Output can be destroyed   |
| Reverse voltage resistance to short pulses | Reverse voltage proof   |

#### Electrical isolation

|              |   |
|--------------|---|
| Test section | 5 V supply, incoming remote bus/7.5 V supply (bus logics) 500 V AC 50 Hz 1 min. |
|              | 5 V supply, outgoing remote bus/7.5 V supply (bus logics) 500 V AC 50 Hz 1 min. |
|              | 7.5 V supply (bus logics)/24 V supply (I/O) 500 V AC 50 Hz 1 min.               |
|              | 24 V supply (I/O) / functional earth ground 500 V AC 50 Hz 1 min.               |

#### Standards and Regulations

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

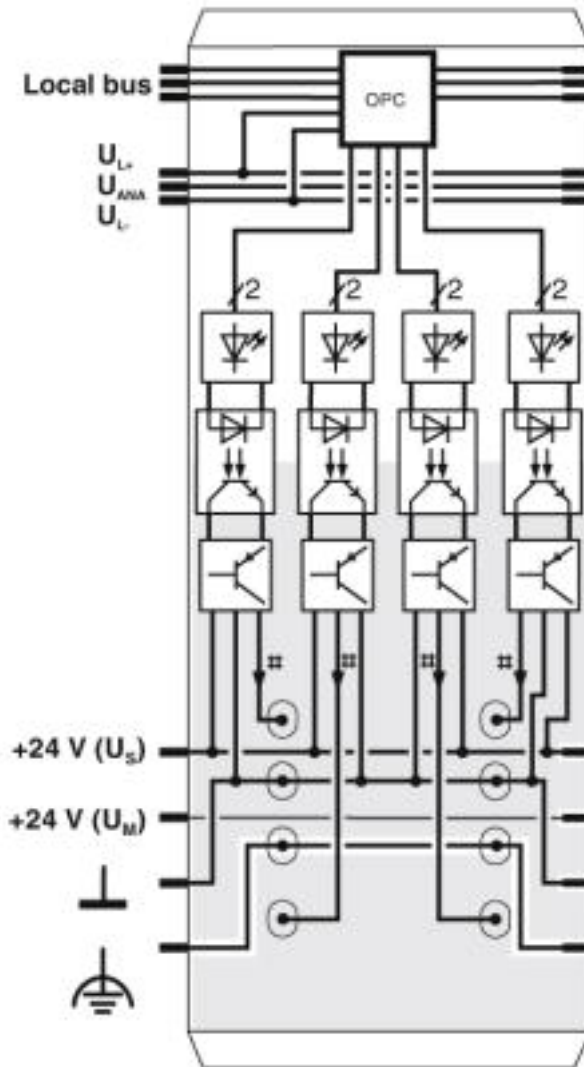
#### Environmental Product Compliance

|            |   |
|------------|---|
| REACH SVHC | Lead 7439-92-1  |
| China RoHS | Environmentally Friendly Use Period = 50  |
|            | For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration" |

### Drawings

# Inline terminal - IB IL 24 DO 4/EF-ECO - 2702825

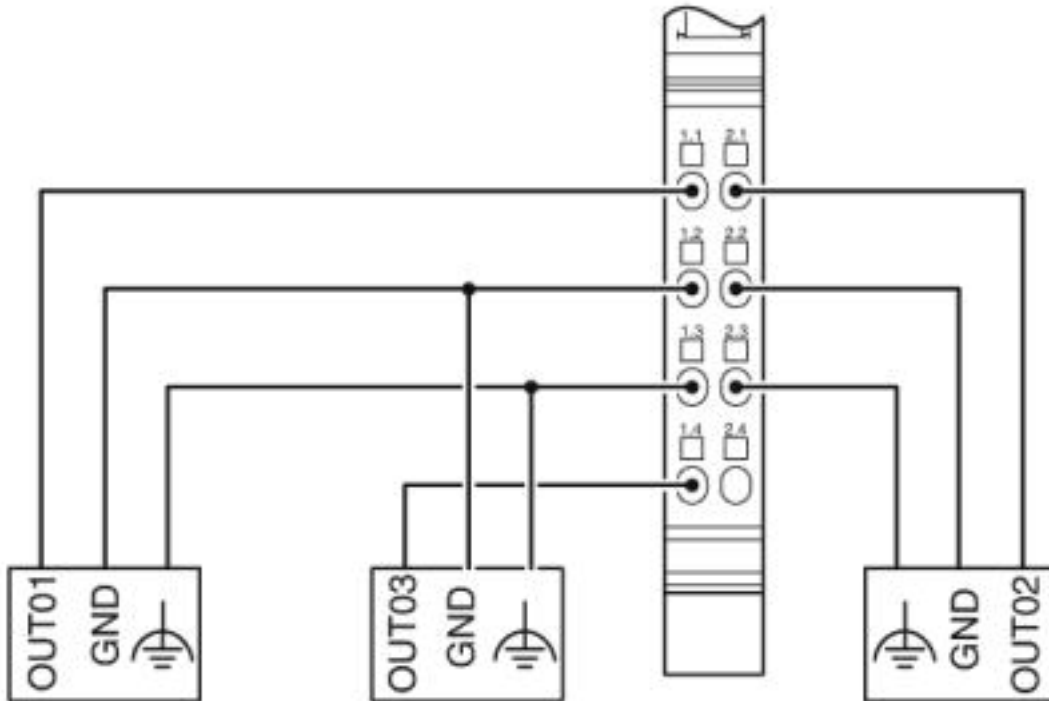
Block diagram



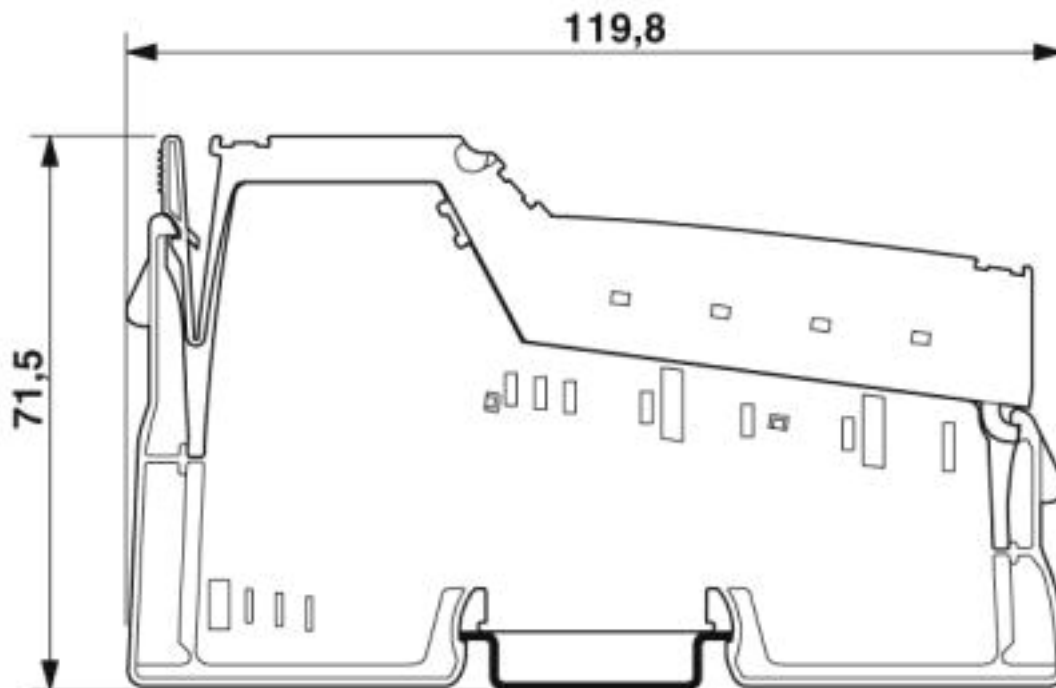
Internal wiring of the terminal points

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Connection diagram



Dimensional drawing





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## Classifications

### eCl@ss

|            |          |
|------------|----------|
| eCl@ss 5.1 | 27242604 |
| eCl@ss 6.0 | 27242600 |
| eCl@ss 7.0 | 27242604 |
| eCl@ss 8.0 | 27242604 |
| eCl@ss 9.0 | 27242604 |

### ETIM

|          |          |
|----------|----------|
| ETIM 5.0 | EC001599 |
| ETIM 6.0 | EC001599 |
| ETIM 7.0 | EC001599 |

## Approvals

### Approvals

#### Approvals

UL Listed / cUL Listed / cULus Listed

#### Ex Approvals

### Approval details

|           |  |   |               |
|-----------|--|---|---------------|
| UL Listed |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 140324 |
|-----------|--|---|---------------|

|            |  |   |               |
|------------|--|---|---------------|
| cUL Listed |  | <a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a> | FILE E 140324 |
|------------|--|---|---------------|

|              |  |  |  |
|--------------|--|--|--|
| cULus Listed |  |  |  |
|--------------|--|--|--|



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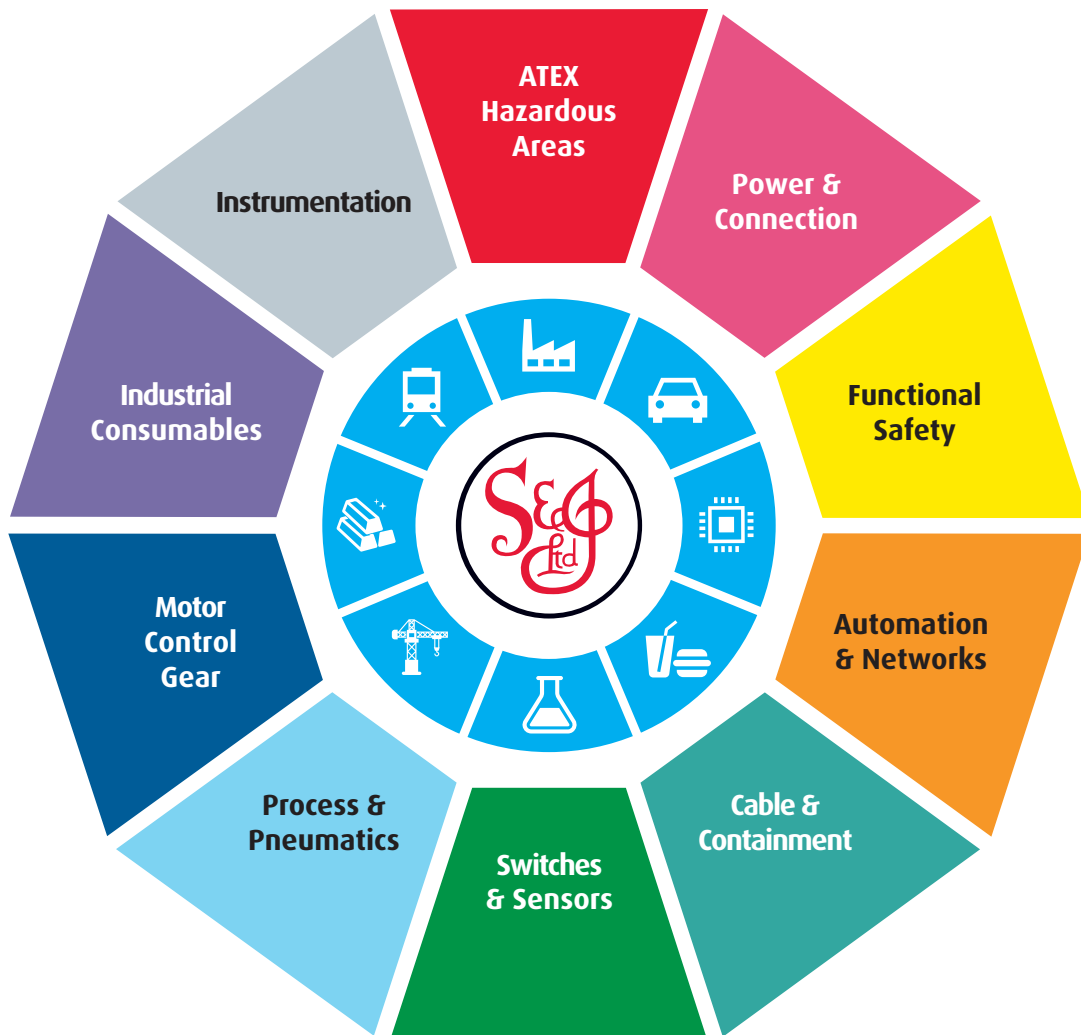
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