

# Digital module - IB IL 24 DO8/HD-XC-PAC



2701213

<https://www.phoenixcontact.com/pc/products/2701213>

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Inline, Digital output terminal, Digital outputs: 8, 24 V DC, connection technology: 1-conductor, Extreme conditions version, transmission speed in the local bus: 500 kbps, degree of protection: IP20, including Inline connector and labeling field

## Product Description

The terminal is designed for use within an Inline station. It is used to output digital signals. Thanks to special engineering measures and tests, the terminal can be used under extreme ambient conditions.

## Your advantages

- 8 digital outputs
- Connection of actuators in 1-conductor technology
- Nominal current per output: 500 mA
- Total current of the terminal: 4 A
- Short-circuit and overload-protected outputs
- Can be used under extreme ambient conditions
- Extended temperature range of -40 °C ... +70 °C (see "Tested successfully: use under extreme ambient conditions" in the data sheet)
- Coated PCBs

## Commercial Data

Item number	2701213
Packing unit	1 pc
Minimum order quantity	1 pc
Product Key	DRI132
Catalog Page	Page 129 (C-6-2019)
GTIN	4046356727778
Weight per Piece (including packing)	85.7 g
Weight per Piece (excluding packing)	60 g
Customs tariff number	85389091
Country of origin	DE

## Technical Data

### Dimensions

Dimensional drawing	
Width	12.2 mm
Height	119.8 mm
Depth	71.5 mm
Note on dimensions	Housing dimensions

### Material specifications

Color	green
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### Interfaces

#### Inline local bus

Number of interfaces	2
Connection method	Inline data jumper
Transmission speed	500 kbps

### System properties

#### Module

ID code (dec.)	189
ID code (hex)	BD
Length code (hex)	81
Length code (dec)	129
Process data channel	8 Bit
Input address area	0 Byte
Output address area	1 Byte
Register length	8 Bit
Required parameter data	3 Byte
Required configuration data	4 Byte

### Output data

#### Digital

Output name	Digital outputs
Connection method	Spring-cage connection
Connection technology	1-conductor

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Number of outputs	8
Protective circuit	Overload protection, short-circuit protection of outputs; electronic
Output voltage	24 V ( $U_S - 1$ V)
Maximum output current per channel	500 mA
Maximum output current per module	4 A
Nominal output voltage	24 V DC
Output voltage when switched off	max. 1 V
Output current when switched off	max. 300 $\mu$ A
Nominal load, inductive	12 VA (1.2 H, 48 $\Omega$ )
Nominal load, lamp	12 W
Nominal load, ohmic	12 W (48 $\Omega$ )
Maximum operating frequency with ohmic nominal load	max. 300 Hz (this switching frequency is limited by the number of bus devices, the structure of the bus, the software used and the control or computer system used)
Reverse voltage resistance to short pulses	Reverse voltage proof
Behavior with overload	Auto restart
Behavior with inductive overload	Output can be destroyed
Behavior at voltage switch-off	The output follows the power supply without delay

## Product properties

Type	modular
Product type	I/O component
Scope of delivery	including Inline connector and labeling field
No. of channels	8
Operating mode	Process data mode with one byte Process data mode with one byte
Diagnostics messages	Short-circuit or overload of the digital outputs Error message in the diagnostic code (bus) and display (2 Hz) via the LED (D) on the module

## Electrical properties

No. of channels	8
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### Potentials

Power consumption	max. 0.85 W (Module, complete)
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### Potentials: Communications power ( $U_L$ )

Supply voltage	7.5 V DC (via voltage jumper)
Current draw	max. 30 mA
Power consumption	max. 0.225 W

### Potentials: Segment circuit supply ( $U_S$ )

Supply voltage	24 V DC (via voltage jumper)
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	max. 4 A

## Connection data

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## Connection technology

Connection name	Inline connector
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## Conductor connection

Connection method	Spring-cage connection
Conductor cross section solid	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

## Inline connector

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

Ambient temperature (operation)	-25 °C ... 55 °C (Standard)
	-40 °C ... 70 °C (Extended, see section "Tested successfully: use under extreme ambient conditions" in the data sheet.)
Degree of protection	IP20
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)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	10 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	10 % ... 95 % (non-condensing)

## Standards and regulations

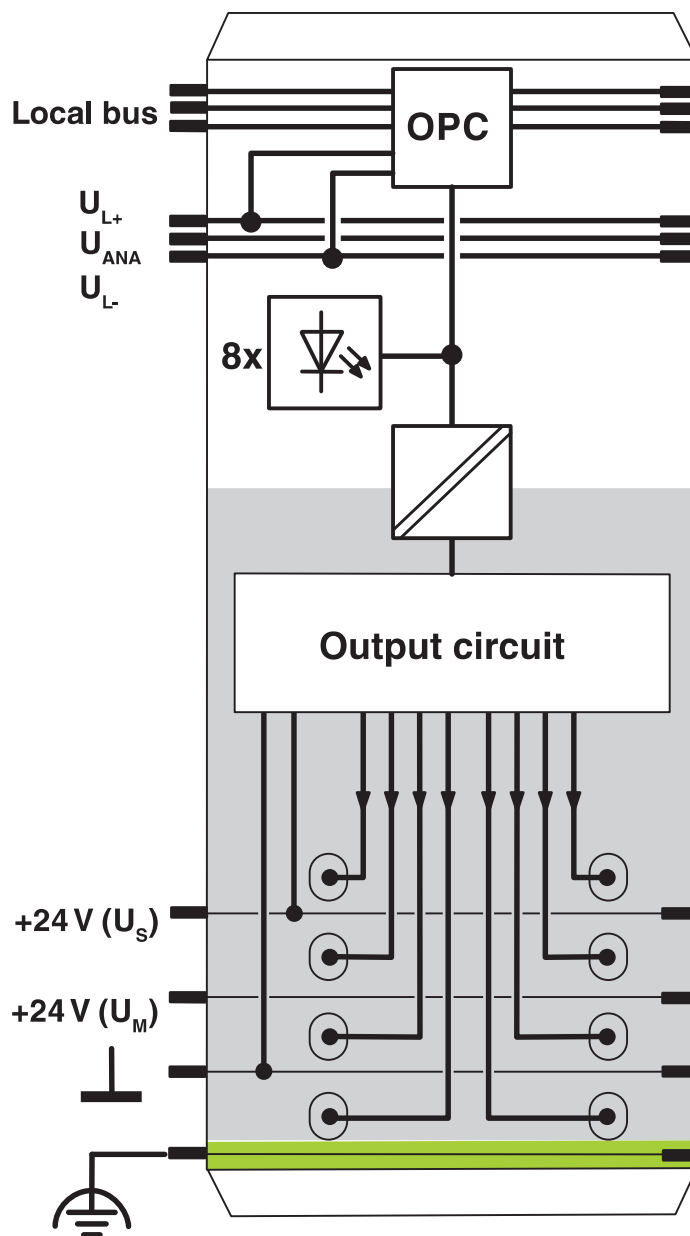
Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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## Mounting

Mounting type	DIN rail mounting
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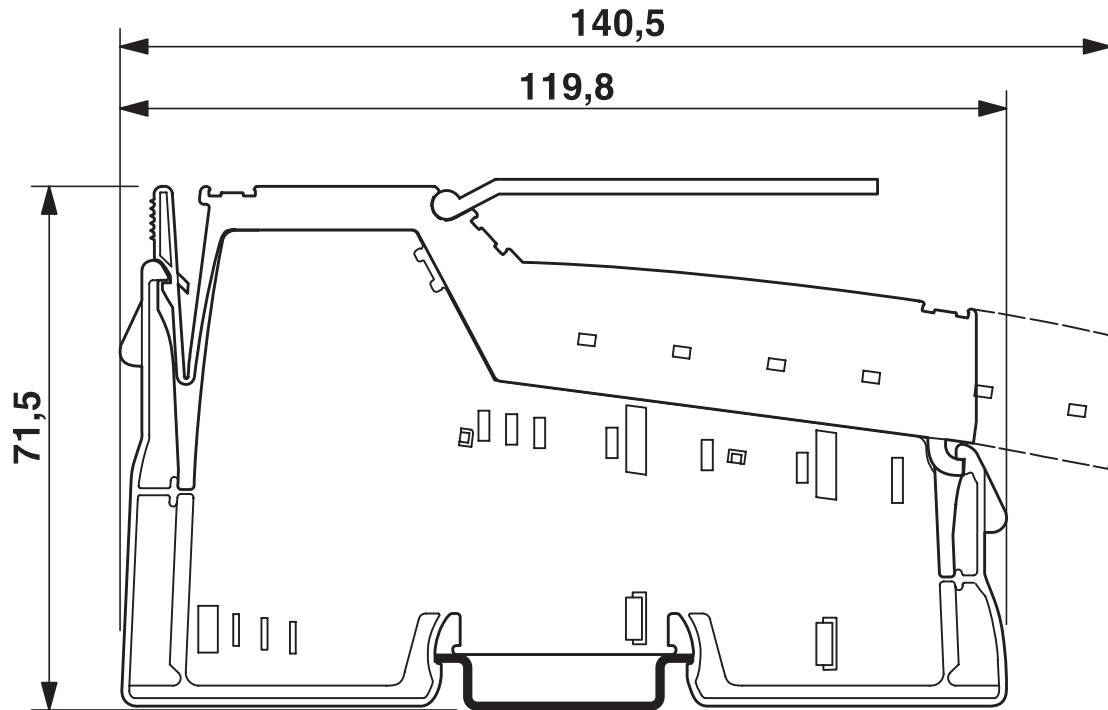
## Drawings

Block diagram

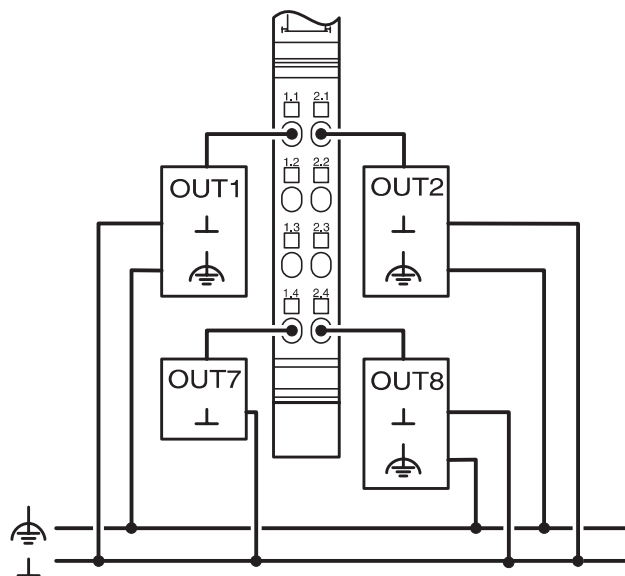


Internal wiring of the terminal points

Dimensional drawing



Connection diagram



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## Approvals



**UL Listed**

Approval ID: FILE E 140324



**cUL Listed**

Approval ID: FILE E 140324

**cULus Listed**

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## Classifications

### ECLASS

ECLASS-9.0	27242604
ECLASS-10.0.1	27242604
ECLASS-11.0	27242604

### ETIM

ETIM 8.0	EC001599
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### UNSPSC

UNSPSC 21.0	32151600
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## Environmental Product Compliance

REACH SVHC

Lead 7439-92-1