

# IB IL 24 DO 16-ME - Digital module



2897253

<https://www.phoenixcontact.com/us/products/2897253>

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Inline, Digital output terminal, Digital outputs: 16, 24 V DC, connection technology: 3-conductor, transmission speed in the local bus: 500 kbps, degree of protection: IP20, including Inline connectors and marking fields

## Product description

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

## Your advantages

- 16 digital outputs
- Connection of actuators in 2- and 3-conductor technology
- Nominal current per output: 500 mA
- Total current of the terminal: 8 A
- Short-circuit and overload-protected outputs
- Diagnostic and status indicators

## Commercial data

Item number	2897253
Packing unit	4 pc
Minimum order quantity	4 pc
Sales key	DR01
Product key	DRI132
Catalog page	Page 129 (C-6-2019)
GTIN	4046356148191
Weight per piece (including packing)	199.2 g
Weight per piece (excluding packing)	130 g
Customs tariff number	85389099
Country of origin	DE

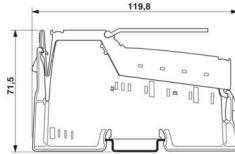
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## Technical data

### Dimensions

Dimensional drawing	
Width	48.8 mm
Height	119.8 mm
Depth	71.5 mm
Note on dimensions	Housing dimensions

### Interfaces

#### Inline local bus

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

### System properties

#### Module

ID code (dec.)	189
ID code (hex)	BD
Length code (hex)	01
Length code (dec)	01
Process data channel	16 bit
Input address area	0 Byte
Output address area	2 Byte
Register length	16 bit
Required parameter data	4 Byte
Required configuration data	4 Byte

### Output data

#### Digital

Output name	Digital outputs
Connection method	Spring-cage connection
Connection technology	3-conductor
Number of outputs	16
Protective circuit	Overload protection, short-circuit protection of outputs; electronic

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Output voltage	24 V DC ( $U_S - 1$ V)
Limitation of the voltage induced on circuit interruption	-46 V ... -15 V
Maximum inrush current	max. 1.5 A (for 20 ms)
Maximum output current per channel	500 mA
Maximum output current per module	8 A
Nominal output voltage	24 V DC (voltage difference at $I_{nom} \leq 1$ V)
Output voltage when switched off	max. 2 V
Output current when switched off	max. 300 $\mu$ A
Nominal load, inductive	12 VA (1.2 H, 50 $\Omega$ )
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
Overcurrent shut-down	min. 0.7 A
Output current with ground connection interrupt when switched off	max. 25 mA
Output name	Digital outputs
Connection method	Spring-cage connection
Connection technology	3-conductor
Number of outputs	16
Protective circuit	Overload protection, short-circuit protection of outputs; electronic
Output voltage	24 V DC ( $U_S - 1$ V)
Limitation of the voltage induced on circuit interruption	-46 V ... -15 V
Maximum inrush current	max. 1.5 A (for 20 ms)
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Output current with ground connection interrupt when switched off	max. 25 mA
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## Product properties

Type	modular
Product type	I/O component
Product family	Inline
Scope of delivery	including Inline connectors and marking fields
No. of channels	16
Operating mode	Process data mode with one word
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

Maximum power dissipation for nominal condition	18.36 W
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### Potentials: Communications power ( $U_L$ )

Supply voltage	7.5 V DC (via voltage jumper)
Current draw	max. 90 mA
Power consumption	max. 0.675 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. 8 A

### Electrical isolation/isolation of the voltage ranges

Test voltage: 7.5 V supply (bus logics)/24 V supply (I/O)	500 V AC, 50 Hz, 1 min.
Test voltage: 7.5 V supply (bus logic)/functional ground	500 V AC, 50 Hz, 1 min.
Test voltage: 24 V supply (I/O) / functional ground	500 V AC, 50 Hz, 1 min.

## Connection data

### Connection technology

Connection name	Inline connector
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### 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

### 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>

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Conductor cross section AWG	28 ... 16
Stripping length	8 mm

## Environmental and real-life conditions

### Ambient conditions

Ambient temperature (operation)	-25 °C ... 55 °C
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)	-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)

## 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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## Classifications

### ECLASS

ECLASS-11.0	27242604
ECLASS-12.0	27242604
ECLASS-13.0	27242604

### ETIM

ETIM 9.0	EC001599
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### UNSPSC

UNSPSC 21.0	32151600
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## Environmental product compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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