

IB IL 24 DO 8-2A-PAC - Digital module



2861603

<https://www.phoenixcontact.com/us/products/2861603>

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Inline, Digital output terminal, Digital outputs: 8, 24 V DC, 2 A, connection technology: 4-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

- 8 digital outputs
- Connection of actuators in 2-, 3-, and 4-conductor technology
- Nominal current per output: 2 A
- Total current of the terminal: 8 A
- Short-circuit and overload-protected outputs
- Diagnostic and status indicators
- Approved for use in a safety-related segment circuit (refer to the information in the data sheet)

Commercial data

Item number	2861603
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR01
Product key	DRI132
GTIN	4017918894450
Weight per piece (including packing)	205.7 g
Weight per piece (excluding packing)	130 g
Customs tariff number	85389099
Country of origin	DE

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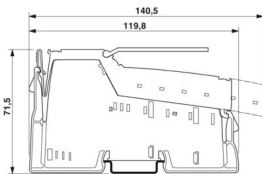


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Technical data

Dimensions

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

Notes

Note on application	
Note on application	Only for industrial use

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

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Connection technology	4-conductor
Number of outputs	8
Protective circuit	Overload protection, short-circuit protection of outputs
Output voltage	24 V DC ($U_S - 1\text{ V}$)
Output current	max. 2 A (per channel) max. 8 A (per device, at 50% simultaneity)
Maximum output current per channel	2 A
Maximum output current per module	8 A (with 50% simultaneity)
Nominal output voltage	24 V DC
Output voltage when switched off	max. 1 V (at 1 M Ω)
Output current when switched off	max. 1 μA
Nominal load, inductive	48 VA (1,2 H, 12 Ω)
Nominal load, lamp	48 W
Nominal load, ohmic	48 W
Maximum operating frequency with ohmic nominal load	500 Hz (this switching frequency is limited by the data rate selected, 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. 3 A
Output current with ground connection interrupt when switched off	max. 1 μA

Product properties

Product type	I/O component
Product family	Inline
Type	modular
Scope of supply	including Inline connectors and marking fields
No. of channels	8
Operating mode	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

Insulation characteristics

Overvoltage category	II (IEC 60664-1, EN 60664-1)
Pollution degree	2 (IEC 60664-1, EN 60664-1)

Electrical properties

Maximum power dissipation for nominal condition	2.45 W
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Potentials: Communications power (U_L)

Supply voltage	7.5 V DC (via voltage jumper)
Current draw	max. 60 mA

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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: 5 V supply, incoming remote bus/7.5 V supply (bus logics)	500 V AC, 50 Hz, 1 min
Test voltage: 5 V supply, outgoing remote bus/7.5 V supply (bus logics)	500 V AC, 50 Hz, 1 min
Test voltage: 7.5 V supply (bus logics)/24 V supply (I/O)	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 ² ... 1.5 mm ²
Conductor cross-section flexible	0.08 mm ² ... 1.5 mm ²
Conductor cross-section AWG	28 ... 16
Stripping length	8 mm

Inline connector

Connection method	Spring-cage connection
Conductor cross-section, rigid	0.08 mm ² ... 1.5 mm ²
Conductor cross-section, flexible	0.08 mm ² ... 1.5 mm ²
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

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Mounting type	DIN rail mounting
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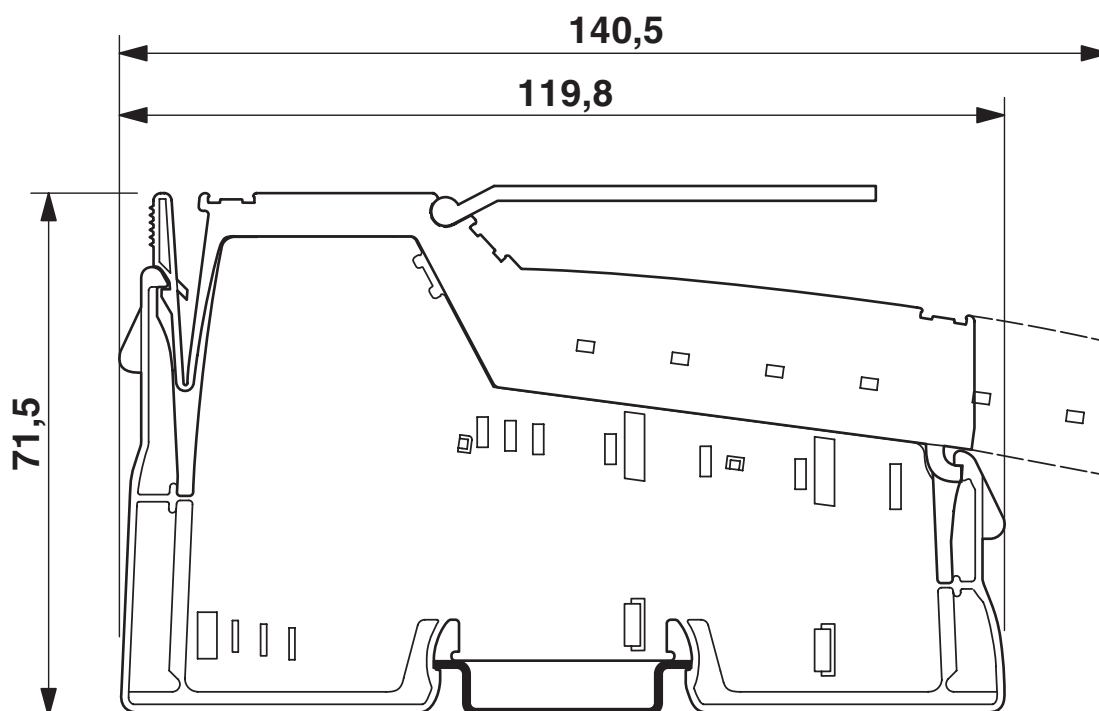
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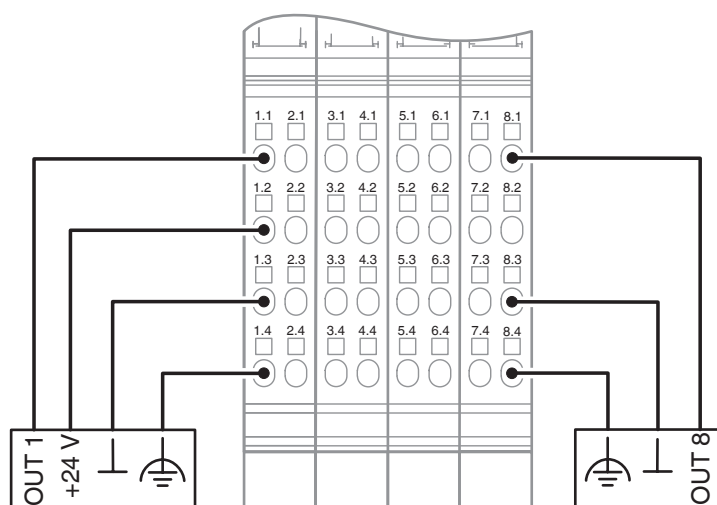


Drawings

Dimensional drawing



Connection diagram



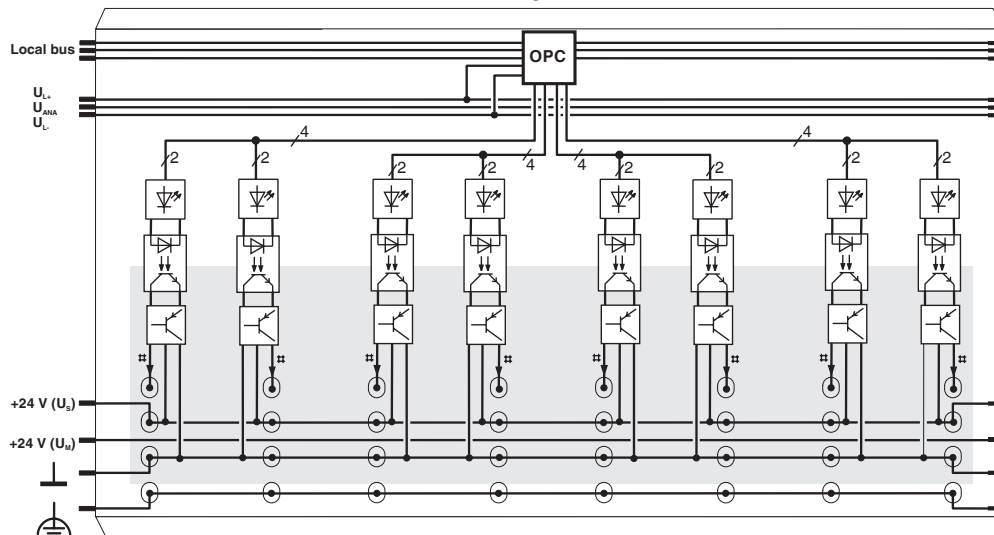
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Block diagram



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Approvals

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cULus Recognized

Approval ID: E140324



Functional Safety

Approval ID: 968/EL 711.08/23

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Classifications

ECLASS

ECLASS-13.0	27242604
ECLASS-15.0	27242604

ETIM

ETIM 9.0	EC001599
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UNSPSC

UNSPSC 21.0	32151600
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Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	ef83acd6-e60f-481c-abb8-61f0030ca2ba