

# IB IL CNT - Inline function terminal

2836337

<https://www.phoenixcontact.com/us/products/2836337>

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Inline counter terminal, without accessories, 1 counter input, 1 control input, 1 output, 24 V DC, 500 mA, 3-conductor connection technology

## Product description

The terminal is designed for use within an Inline station. The counter terminal acquires and processes fast pulse sequences from sensors. It has a counter input (source), a control input (gate), and a switching output that can be freely parameterized. The switching output is set independently of the terminal. Fast response times can therefore be achieved, which are independent of both the bus and controller. The terminal can be operated in four different operating modes: frequency measurement, event counting, time measurement, and pulse generation (pulse generator).

## Commercial data

Item number	2836337
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	NULL
Product key	DRI163
GTIN	4017918160838
Weight per piece (including packing)	154 g
Weight per piece (excluding packing)	116.61 g
Customs tariff number	85389091
Country of origin	DE

## Technical data

### Product properties

Type	modular
	Inline
Operating mode	Process data operation with 2 words
Diagnostics messages	Sensor supply short-circuit
	Sensor supply overload

### System properties

#### Module

ID code (dec.)	191
ID code (hex)	BF
Length code (hex)	02
Length code (dec)	02
Process data channel	32 bit
Input address area	4 Byte
Output address area	4 Byte
Register length	4 Byte
Required parameter data	1 Byte
Required configuration data	5 Byte

### Electrical properties

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

Supply voltage	7.5 V DC (via voltage jumper)
Current draw	max. 50 mA
	typ. 40 mA
Power consumption	max. 0.375 W (at $U_L$ )

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

Supply voltage	24 V DC (via voltage jumper)
Current draw	max. 1 A

#### Supply:

Designation	Power supply for sensors
Supply voltage	24 V DC (generated from segment supply $U_S$ )

#### 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

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## Input data

Counter:

Input name	Counter input for 24 V signals
Connection method	Spring-cage connection
Connection technology	2-, 3-conductor
Number of inputs	1 (only one counter input can be used, either for 24 V or for 5 V signals)
Operating mode	Event counting, frequency/time measurement
Input voltage	24 V DC (Nominal voltage) 30 V DC (maximum)
Input voltage range "0" signal	0 V DC ... 5 V DC
Input voltage range "1" signal	15 V DC ... 30 V DC
Input frequency	max. 100 kHz
Input current	typ. 5 mA
Input resistance	approx. 5.7 k $\Omega$

Counter:

Input name	Counter input for 5 V signals
Connection method	Spring-cage connection
Connection technology	2-conductor (shielded), external 5 V supply
Number of inputs	1 (only one counter input can be used, either for 24 V or for 5 V signals)
Operating mode	Event counting, frequency/time measurement
Input voltage	5 V DC (Nominal voltage) 8 V DC (maximum)
Input voltage range "0" signal	0 V ... 1.5 V
Input voltage range "1" signal	3.5 V ... 8 V
Input frequency	max. 100 kHz
Input current	typ. 5 mA
Input resistance	approx. 1.7 k $\Omega$

## Output data

Digital:

Output name	Switching output
Connection method	Spring-cage connection
Connection technology	2-conductor
Number of outputs	1
Protective circuit	Short-circuit protection; Yes, short-circuit-proof (automatically switched on again) Overload protection
Output voltage	24 V DC (Nominal voltage)
Output current	max. 0.5 A (Nominal current)
Nominal load, inductive	max. 12 VA (1.2 H, 48 $\Omega$ )

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Nominal load, lamp	max. 12 W
Nominal load, ohmic	max. 12 W (48 Ω)
Reverse voltage resistance to short pulses	Reverse voltage proof
Behavior in the event of ohmic overload	Auto restart after eliminating the overload
Behavior with inductive overload	Output can be destroyed
Behavior in the event of lamp overload	Auto restart after eliminating the overload
Overcurrent shut-down	min. 0.7 A

## Connection data

### 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

## Interfaces

### Inline local bus

Connection method	Inline data jumper
Transmission speed	500 kbps
Transmission physics	Copper

## Signaling

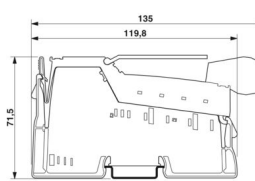
### Diagnostic messages

Diagnostics	Sensor supply short-circuit
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### Diagnostic messages

Diagnostics	Sensor supply overload
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## Dimensions

Dimensional drawing	
Width	24.4 mm
Height	119.8 mm
Depth	71.5 mm

## Material specifications

Color	green
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## Environmental and real-life conditions

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## 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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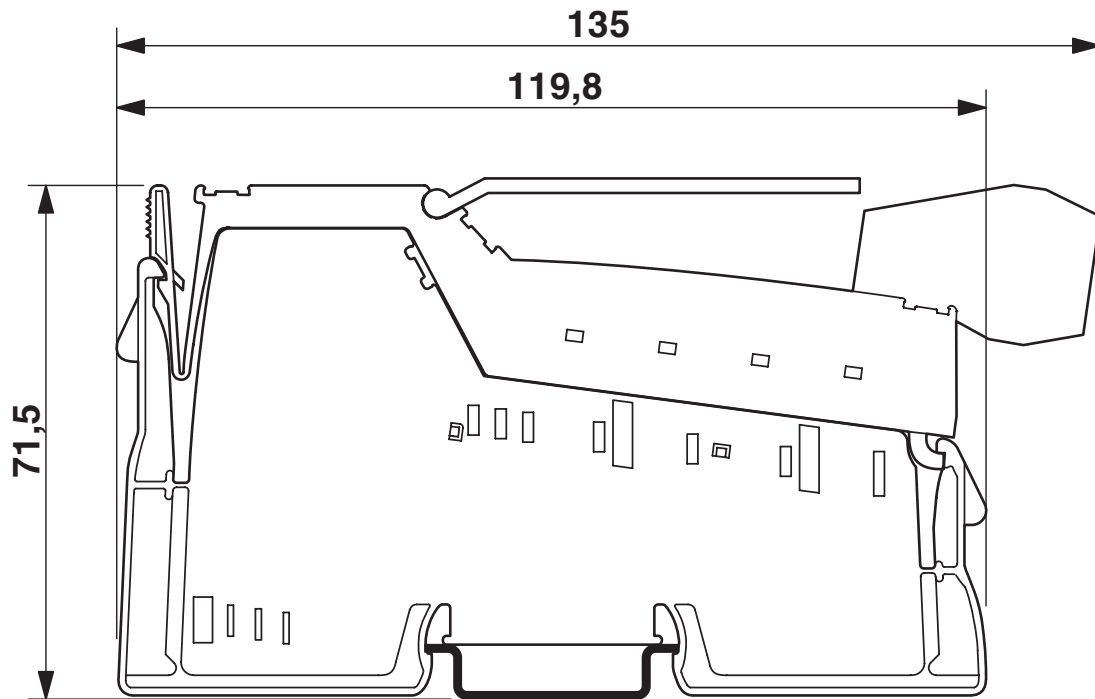
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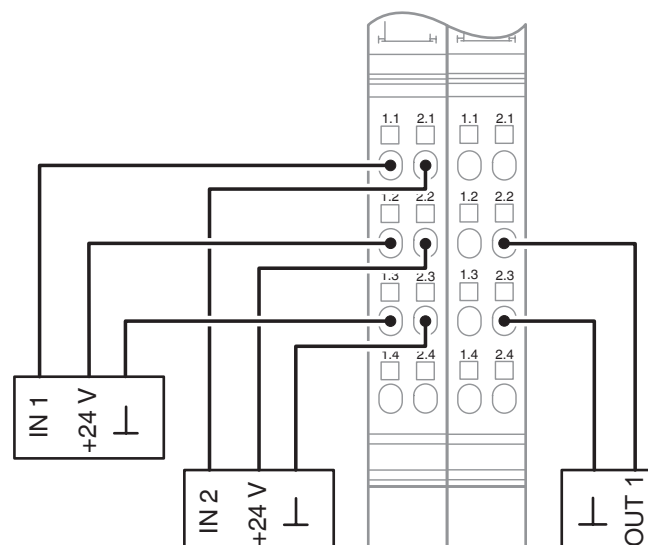
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## Drawings

Dimensional drawing



Connection diagram

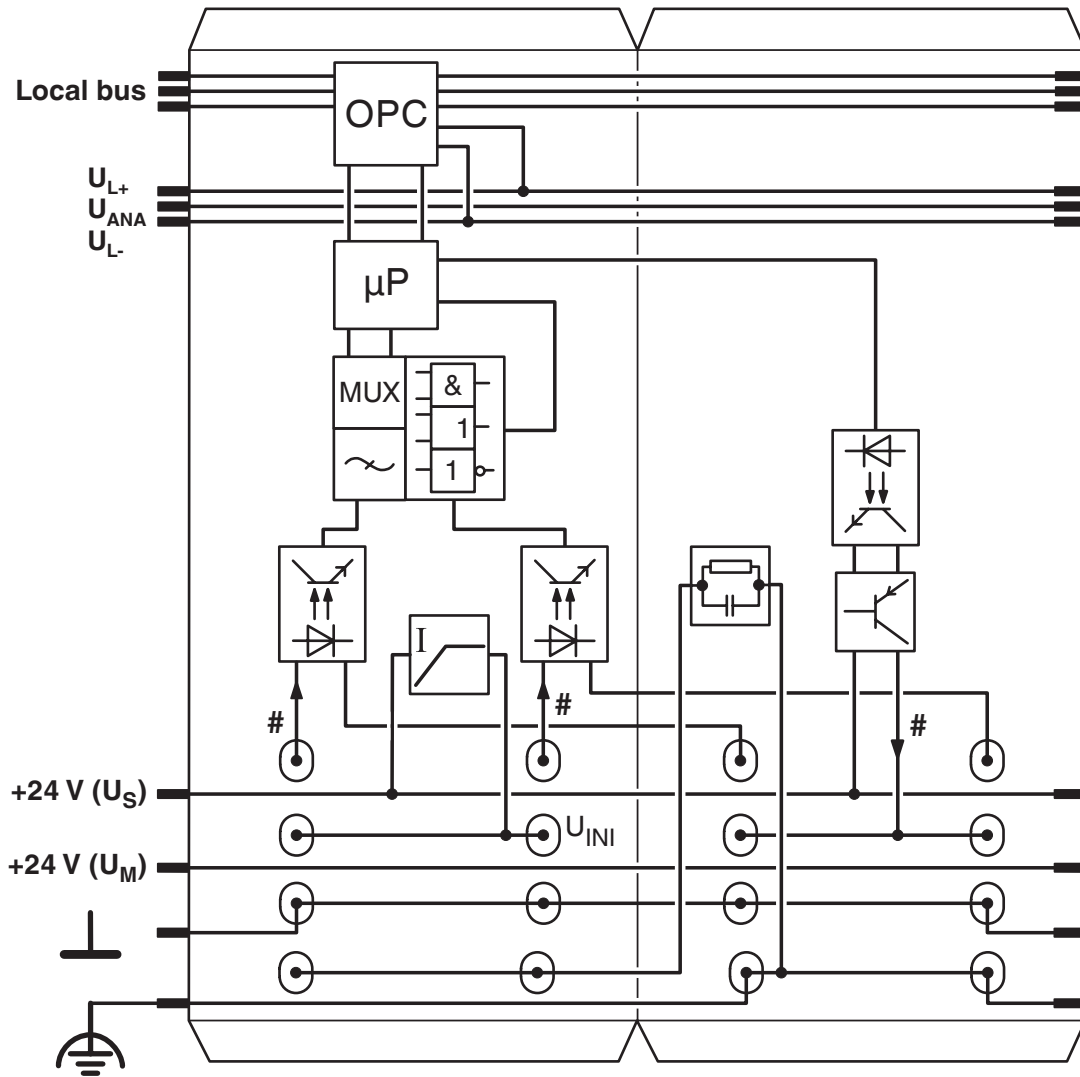


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Block diagram



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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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