

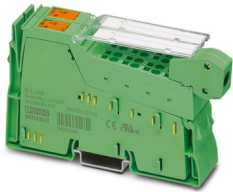
IB IL CNT-XC-PAC - Function module



2702134

<https://www.phoenixcontact.com/us/products/2702134>

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Inline, Function terminal, Counter input for 24 V signals: 1, Control input for 24 V signals: 1, Switching output: 1, 24 V DC, 0.5 A, Extreme conditions version, 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. 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). Thanks to special engineering measures and tests, the terminal can be used under extreme ambient conditions.

Your advantages

- 1 counter input
- 1 control input
- 1 freely parameterizable switching output
- Four operating modes: event counting, time or state-controlled frequency measurement, time measurement (period or pulse length), and pulse generator
- Processing of 5 V or 24 V signals
- Input frequency of up to 100 kHz
- 16-bit counter value for time measurement
- 24-bit counter value for event counting and frequency measurement
- 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	2702134
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR01
Product key	DRI163
Catalog page	Page 153 (C-6-2019)
GTIN	4046356981798
Weight per piece (including packing)	177 g
Weight per piece (excluding packing)	130 g
Customs tariff number	85389099

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Country of origin	DE
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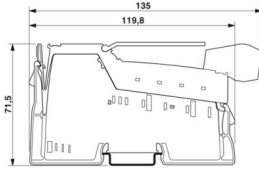
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Technical data

Dimensions

Dimensional drawing	
Width	24.4 mm
Height	135 mm
Depth	71.5 mm

Notes

Utilization restriction

EMC note	EMC: class A product, see manufacturer's declaration in the download area
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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.)	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

Input data

Counter

Input name	Counter input for 24 V signals
Connection method	Spring-cage connection

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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 Ω

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 Ω

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 Ω)
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

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Overcurrent shut-down	min. 0.7 A
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 Ω)
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

Product properties

Type	modular
Product type	I/O component
Product family	Inline
Scope of delivery	including Inline connectors and marking fields
Operating mode	Process data operation with 2 words
Special properties	Extreme conditions version
Diagnostics messages	Sensor supply short-circuit Sensor supply overload

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 min. 0 A (without connected peripherals)

Supply:

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

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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 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 (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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Classifications

ECLASS

ECLASS-11.0	27242605
ECLASS-12.0	27242605
ECLASS-13.0	27242605

ETIM

ETIM 9.0	EC001601
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UNSPSC

UNSPSC 21.0	32151600
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Environmental product compliance

REACH SVHC

Lead 7439-92-1

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