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Inline Controller with PROFINET interfaces for coupling to other controllers and systems, with programming options according to IEC 61131-3, complete with plug and labeling field, GL approval

Product Description

With the ILC 370 PN 2TX-IB/M, the highly modular Inline Controller range from Phoenix Contact has been extended to include a high-performance PROFINET controller with GL approval. This controller can be used to extend the field of application of Inline Controllers through to medium-sized applications. With direct integration in the Inline automation system, the compact controller is highly modular and can be adapted to the relevant application requirements. Its integrated PROFINET interfaces enable parameterization and programming using PC WorX automation software according to IEC 61131, and it can also exchange data with OPC servers simultaneously and communicate with TCP/IP-compatible devices.

The Inline Controller range covers a wide performance range. From entry-level versions through to high-end controllers, users can find the right controller for their application. Within the product portfolio, users can choose between controllers with different computing capacities, with or without PROFINET controllers, and with or without GL approval.

Product Features

- Engineering with PC Worx (IEC 61131-3)
- Integrated Ethernet interface
- Integrated PROFINET controller and PROFINET device
- Numerous protocols supported such as: HTTP, FTP, SNTP, SNMP, SMTP, SQL, MySQL, etc.
- Integrated web server for visualization with WebVisit
- FTP server
- Complete fieldbus master (8192 I/O points)
- Flash file system
- Maritime approval



Key Commercial Data

Packing unit	1 pc
Weight per Piece (excluding packing)	820.0 g
Custom tariff number	85371091
Country of origin	Germany



Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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Dimensions

Width	182 mm
Height	140.5 mm
Depth	71.5 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C 55 °C
Ambient temperature (storage/transport)	-25 °C 85 °C
Permissible humidity (operation)	10 % 95 % (non-condensing)
Permissible humidity (storage/transport)	10 % 95 % (non-condensing)
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)
Shock	25g, Criterion 1, according to IEC 60068-2-27
Vibration (operation)	5g, accordance to IEC 60068-2-6

Control system

Programming tool	PC WORX
Diagnostics tool	DIAG+ from version 1.14

Mechanical design

Weight	440 g
Diagnostics display	No
Controller redundancy	No

Data interfaces

Interface	INTERBUS local bus (master)
Connection method	Inline data jumper
Transmission speed	500 kBaud / 2 MBaud (can be switched)
Interface	Parameterization/programming/diagnostics
Connection method	RS-232-C, 6-pos. MINI-DIN socket (PS/2), Ethernet 10/100 (RJ45)
Interface	Ethernet 10Base-T/100Base-TX
Connection method	RJ45 socket
Transmission speed	10/100 MBit/s
Interface	INTERBUS (Slave)
Connection method	D-SUB-9 female/D-SUB-9 male



Technical data

PROFINET

Device function	PROFINET-IO controller
Specification	Version 1.1
Update rate	min. 1 ms

Power supply

Typical current consumption	250 mA (no local bus device connected during idling, bus inactive)
Supply voltage	24 V DC ±5 %
Supply voltage range	20.4 V DC 30 V DC
Residual ripple	±5%
Power dissipation	max. 6 W

Fieldbus function

Amount of process data	max. 8192 Bit (INTERBUS-Master)
	max. 512 Bit (INTERBUS-Slave)
Number of supported devices	max. 512 (in total, of which 254 are remote bus devices/bus segments)
Number of local bus devices that can be connected	max. 63 (observe current consumption)
Number of devices with parameter channel	max. 62
Number of supported branch terminals with remote bus branch	max. 15

Direct I/Os

Input name	Digital inputs
Number of inputs	12
Connection method	Inline potential distributor
Description of the input	Eight fast inputs, interrupt input
Output name	Digital outputs
Number of outputs	4
Connection method	2, 3, 4-wire
Maximum output current per channel	500 mA
Without analog input	yes
Without analog output	yes
Without pulse direction output	yes
Without counter input	yes

IEC 61131 runtime system

Programming tool	PC WORX
Program memory	typ. 2 Mbyte (170 K instructions (IL))
Mass storage	4 Mbyte
Retentive mass storage	96 kByte (NVRAM)
Number of control tasks	16



Technical data

IEC 61131 runtime system

Realtime clock	Integrated (battery backup)	
General data		
Processor	PXA 255 400 MHz	
Standards and Regulations		
Shock	25g, Criterion 1, according to IEC 60068-2-27	
Vibration (storage/transport)	5g, 10 Hz 150 Hz, in accordance with IEC 60068-2-6	
Vibration (operation)	5g, accordance to IEC 60068-2-6	

Classifications

eCl@ss

eCl@ss 4.0	27250203
eCl@ss 4.1	27240601
eCl@ss 5.0	27242215
eCl@ss 5.1	27242207
eCl@ss 6.0	27242207
eCl@ss 7.0	27242207
eCl@ss 8.0	27242207
eCl@ss 9.0	27242207

ETIM

ETIM 2.0	EC000236
ETIM 3.0	EC000236
ETIM 4.0	EC000236
ETIM 5.0	EC000236

UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172018
UNSPSC 12.01	43201404
UNSPSC 13.2	43201404

Approvals

Approvals



Approvals

Approvals

LR / BV / ABS / RINA / BSH / BSH / UL Listed / cUL Listed / EAC / cULus Listed

Ex Approvals

Approvals submitted

Approval details

LR

ΒV

ABS

RINA

BSH

BSH

UL Listed 🛞

cUL Listed 🖤

EAC

cULus Listed

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Accessories

Accessories

Drivers and interfaces

Software - AX OPC SERVER - 2985945



AX OPC SERVER, communication interface for OPC-capable visualization with PC WORX-based controls.

Parameterization memory

Memory - CF FLASH 256MB - 2988780



Program and configuration memory, plug-in, 256 MB

Memory - CF FLASH 256MB APPLIC A - 2988793



Program and configuration memory, plug-in, 256 MB with license key for function block libraries, e.g., for SNMP, SQL, wireless, motion functions, etc.

Memory - CF FLASH 256MB PDPI BASIC - 2700549



Program and configuration memory, plug-in, 256 MB with license key for licensing the PDPI - BASIC function block for precise multi-channel controllers with self-optimization, additional functions: e.g., for heating and cooling functions or hydraulic movements.



Accessories

Memory - CF FLASH 256MB PDPI PRO - 2700550



Program and configuration memory, plug-in, 256 MB with license key for licensing the PDPI - PRO function block for precise multi-channel controllers with self-optimization, additional functions: e.g., for setpoint processing, for heating and cooling functions.

Memory - CF FLASH 2GB - 2701185



Program and configuration memory, plug-in, 2 Gbytes.

Memory - CF FLASH 2GB APPLIC A - 2701189



Program and configuration memory, plug-in, 2 Gbytes with license key for function block libraries, e.g., for: SNMP, SQL, wireless, motion functions, etc.

Programming

Software - PC WORX DEMO - 2985725



Software package for PC-based automation solutions, PC WORX DEMO, contains all 5 IEC languages, with MSFC compiler, max. 16 bytes input and output data

Software - PC WORX BASIC LIC - 2985275



Software package for PC-based automation solutions, PC WORX BASIC license, contains all 5 IEC languages, without MSFC compiler, max. 2048 byte input and output data, version-specific license key



Accessories

Software - PC WORX PRO LIC - 2985385



Software package for PC-based automation solutions, PC WORX PRO license, contains all 5 IEC languages, with MSFC compiler, max 128 kB input and output data, version-specific license key

Programming cable

Connecting cable - COM CAB MINI DIN - 2400127



Connecting cable, for connecting the controller to a PC (RS-232) for PC WORX with flow control, 3 m in length

Software - IPASSIGN - 2701094



IPAssign is an easy to use tool for setting the IP address of devices which rely on BOOTP. No installation or administrative rights are required to use IPAssign.

This product is free and only available from the "Downloads" tab.

Required add-on products

Memory - CF FLASH 256MB - 2988780



Program and configuration memory, plug-in, 256 MB

Memory - CF FLASH 256MB APPLIC A - 2988793



Program and configuration memory, plug-in, 256 MB with license key for function block libraries, e.g., for SNMP, SQL, wireless, motion functions, etc.



Accessories

Memory - CF FLASH 2GB - 2701185



Program and configuration memory, plug-in, 2 Gbytes.

Memory - CF FLASH 2GB APPLIC A - 2701189



Program and configuration memory, plug-in, 2 Gbytes with license key for function block libraries, e.g., for: SNMP, SQL, wireless, motion functions, etc.

Memory - CF FLASH 256MB PDPI BASIC - 2700549



Program and configuration memory, plug-in, 256 MB with license key for licensing the PDPI - BASIC function block for precise multi-channel controllers with self-optimization, additional functions: e.g., for heating and cooling functions or hydraulic movements.

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Program and configuration memory, plug-in, 256 MB with license key for licensing the PDPI - PRO function block for precise multi-channel controllers with self-optimization, additional functions: e.g., for setpoint processing, for heating and cooling functions.

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