

# Controller - ILC 151 ETH - 2700974

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The Inline controller offers the option of communicating via PROFINET and Modbus/TCP. Programming is carried out using PC Worx Express or PC Worx (IEC 61131-3).

## Product Description


The ILC 151 ETH modular small-scale controller for the Inline I/O system is at the heart of Easy Automation. The ILC 1X1 series is characterized by its support for the Modbus/TCP and PROFINET Ethernet-based protocols. A new feature is the support for an optional SD card.

## Your advantages

- ✓ Memory extendable by up to 2 GB via plug-in SD card
- ✓ Free engineering with PC Worx Express (IEC 61131-3)
- ✓ Complete INTERBUS master (4096 I/O points)
- ✓ PROFINET-Device
- ✓ Modbus/TCP-Client
- ✓ Integrated FTP and HTML5 web server
- ✓ Numerous protocols supported such as: HTTP, FTP, SNMP, SMTP, SQL, MySQL, etc.



## Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 665506
GTIN	4046356665506

## Technical data

### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
	Use in potentially explosive areas is not permitted in China.

### Dimensions

Width	80 mm
Height	119.8 mm

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## Technical data

### Dimensions

Depth	71.5 mm
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### 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 % (according to DIN EN 61131-2)
Permissible humidity (storage/transport)	10 % ... 95 % (according to DIN EN 61131-2)
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
Resistance to gases that may endanger the functions, in acc. with DIN 40046-36, DIN 40046-37	Sulfur dioxide (SO <sub>2</sub> ) 10 ±0.3 ppm (test duration: 10 days), hydrogen sulfide (H <sub>2</sub> S) 1 ±0.3 ppm (test duration: 4 days), both at 25 °C and with 75% humidity

### Control system

Engineering tool	PC WORX
	PC WORX EXPRESS
Programming languages supported	Programming in acc. with IEC 61131-3
Diagnostics tool	DIAG+
Configuration tool	Config+ Version 1.01 or later

### IEC 61131 runtime system

Engineering tool	PC WORX
	PC WORX EXPRESS
Program memory	256 kByte
Data storage	256 kByte
Retentive data storage	8 kByte (NVRAM)
Number of control tasks	8
Realtime clock	Yes
Battery	Integrated (rechargeable battery buffered)

### Fieldbus function

Amount of process data	max. 4096 Bit (INTERBUS)
	max. 16384 Bit (internal Modbus /TCP client)
Number of supported devices	max. 128
Number of local bus devices that can be connected	max. 63 (observe current consumption)
Number of devices with parameter channel	max. 16
Number of supported branch terminals with remote bus branch	max. 3
Program memory	256 kByte

### Data interfaces

Interface	Ethernet 10Base-T/100Base-TX
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## Technical data

### Data interfaces

Number	1
Connection method	RJ45 jack
Transmission speed	10/100 Mbps
Interface	INTERBUS local bus (master)
Number	1
Connection method	Inline data jumper
Transmission speed	500 kBaud / 2 MBaud (can be switched)
Interface	Parameterization/operation/diagnostics
Number	1
Connection method	6-pos. MINI DIN socket (PS/2)
Transmission speed	max. 115.2 kbps

### PROFINET

Device function	PROFINET device
Specification	2.2

### Direct I/Os

Input name	Digital inputs
Number of inputs	8
Connection method	Inline potential distributor
Connection technology	2-, 3-, 4-conductor
Description of the input	EN 61131-2 type 1 NPN/PNP
Output name	Digital outputs
Number of outputs	4
Connection method	Spring-cage connection
Connection technology	2-, 3-, 4-conductor
Maximum output current per channel	500 mA

### Mechanical design

Weight	285 g
Diagnostics display	No
Controller redundancy	No
Safety function	No

### General data

Processor	Altera Nios II 64 MHz
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### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Interference emission	Noise emission test as per EN 61000-6-4 EN 55011 Class A
Immunity to surge	Noise immunity test in accordance with EN 61000-6-2 Transient overvoltage (surge) EN 61000-4-5/IEC 61000-4-5 Criterion B, supply lines DC: 0.5 kV/0.5 kV (symmetrical/asymmetrical), fieldbus cable shield 1 kV

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### Standards and Regulations

Immunity to burst	Noise immunity test in accordance with EN 61000-6-2 Fast transients (burst) EN 61000-4-4/IEC 61000-4-4 Criterion A, all interfaces 1 kV Criterion B, all interfaces 2 kV
Immunity to EF	Noise immunity test in accordance with EN 61000-6-2 Electromagnetic fields EN 61000-4-3/IEC 61000-4-3 Criterion A, Field intensity: 10 V/m
Immunity to ESD	Noise immunity test in accordance with EN 61000-6-2 Electrostatic discharge (ESD) EN 61000-4-2/IEC 61000-4-2 Criterion B, 6 kV contact discharge, 8 kV air discharge
Immunity to conducted interference	Noise immunity test in accordance with EN 61000-6-2 Conducted interference EN 61000-4-6/IEC 61000-4-6 Criterion A, Test voltage 10 V
Vibration (storage/transport)	5g
Shock	25g, Criterion 1, according to IEC 60068-2-27
Vibration (operation)	5g

### Environmental Product Compliance

REACH SVHC	1,2-dimethoxyethane, ethylene glycol dimethyl ether (EGDME) 110-71-4
	Lead 7439-92-1
	Lead titanium trioxide 12060-00-3
	Lead titanium zirconium oxide 12626-81-2
	4,4'-isopropylidenediphenol (BPA) 80-05-7
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Classifications

### eCl@ss

eCl@ss 10.0.1	27242207
eCl@ss 11.0	27242207
eCl@ss 4.0	27240400
eCl@ss 4.1	27240400
eCl@ss 5.0	27242700
eCl@ss 5.1	27242700
eCl@ss 6.0	27242200
eCl@ss 7.0	27242207
eCl@ss 9.0	27242207

### ETIM

ETIM 3.0	EC001423
ETIM 4.0	EC000236
ETIM 6.0	EC000236
ETIM 7.0	EC000236

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## Classifications

### UNSPSC

UNSPSC 6.01	43172015
UNSPSC 7.0901	43201404
UNSPSC 11	43172018
UNSPSC 12.01	43201404
UNSPSC 13.2	39122114
UNSPSC 18.0	39122114
UNSPSC 19.0	39122114
UNSPSC 20.0	39122114
UNSPSC 21.0	39122114

## Approvals

### Approvals




#### Approvals

DNV GL / BV / LR / ABS / BSH / RINA / EAC / EAC / cULus Listed

#### Ex Approvals

UL Listed / cUL Listed / ATEX / cULus Listed

### Approval details

DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAA00002CU
BV		<a href="http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials">http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials</a>	20989_C0 BV
LR		<a href="http://www.lr.org/en">http://www.lr.org/en</a>	08/20033
ABS		<a href="http://www.eagle.org/eagleExternalPortalWEB/">http://www.eagle.org/eagleExternalPortalWEB/</a>	17-HG1621871-PDA
BSH			858

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## Approvals

RINA		<a href="http://www.rina.org/en">http://www.rina.org/en</a>	ELE001320XG
EAC			EAC-Zulassung
EAC			RU *- DE.A*30.B.00238
cULus Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705

## Accessories

### Accessories

#### Drivers and interfaces

#### Software - AX OPC SERVER - 2985945



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

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#### Software - PC WORX UA SERVER-PLC 10 - 2402684



OPC UA server for communication with a maximum of 10 modular small-scale controllers (AXC 1xxx or ILC 1x1)

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#### Software - PC WORX UA SERVER-PLC 40 - 2402685



OPC UA server for communication with a maximum of 25 controllers

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## Accessories

Software - PC WORX UA SERVER-PLC 80 - 2402686



OPC UA server for communication with a maximum of 200 controllers

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## Parameterization memory

Memory - SD FLASH 512MB - 2988146



Program and configuration memory, plug-in, 512 Mbyte.

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Program / configuration memory - SD FLASH 512MB APPLIC A - 2701799



Program and configuration memory for extending the internal Flash memory, plug-in, 512 MB with license key for function block libraries. For licensed function blocks, please refer to the documentation.

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Memory - SD FLASH 512MB PDPI BASIC - 2701800



Program and configuration memory, plug-in, 512 MB with license key for licensing the PDPI - BASIC functional block for precise multi-channel controllers with self-optimization, e.g., for heating and cooling functions or hydraulic movements.

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Memory - SD FLASH 512MB PDPI PRO - 2701801



Program and configuration memory, plug-in, 512 MB with license key for licensing the PDPI - PRO functional 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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### Accessories

Program / configuration memory - SD FLASH 2GB - 2988162



Program and configuration memory, for extending the internal flash memory, pluggable, 2 GB.

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Program / configuration memory - SD FLASH 2GB APPLIC A - 2701190



Program and configuration memory for extending the internal Flash memory, plug-in, 2 GB with license key for function block libraries. For licensed function blocks, please refer to the documentation.

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Program / configuration memory - SD FLASH 2GB EASY SAFE BASIC - 2403297

Program and configuration memory, plug-in, 2 GB, with license key and application program for easy web-based configuration and startup of a SafetyBridge solution.

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Program / configuration memory - SD FLASH 2GB EASY SAFE PRO - 2403298

Program and configuration memory, plug-in, 2 GB, with license key and application program for easy web-based configuration and startup of a SafetyBridge solution including communication via Modbus/TCP, PROFINET, and e-mail.

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### 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

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### Software library



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### Accessories

#### Function block - RESY+ - 2400295



Resy+ includes function block libraries. The control technology from Phoenix Contact supplements remote control protocols, such as IEC 60870-5-101/104, Modbus TCP/RTU, and ODP (Open Data Port). Resy+ is used in water management, the gas sector, and the energy industry, for example. The function blocks can be downloaded.

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#### 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.

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