

# ILC 131 ETH - Controller

2700973

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Similar figure

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).

## 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, SNTP, SNMP, SMTP, SQL, MySQL, etc.

## Commercial data

Item number	2700973
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR10
Product key	DRAAAA
GTIN	4046356665490
Weight per piece (including packing)	358.6 g
Weight per piece (excluding packing)	348.2 g
Customs tariff number	85371091
Country of origin	DE

## Technical data

### Notes

#### Note on application

Note on application	Only for industrial use
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#### Utilization restriction

CCCex note	Use in potentially explosive areas is not permitted in China.
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### Product properties

Product type	Controller
Product family	Inline-Controller
Type	modular

#### Display

Diagnostics display	no
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### System properties

Retentive data storage	8 kByte (NVRAM)
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#### IEC 61131 runtime system

Program memory	192 kByte
Data storage system	192 kByte
Number of control tasks	8

#### INTERBUS-Master

Amount of process data	max. 4096 bit (INTERBUS)
Amount of process data (INTERBUS input/output data max.)	max. 4096 bit (INTERBUS)
Amount of process data (Modbus/TCP client)	max. 8192 bit (internal Modbus /TCP client)
Number of supported devices	max. 63
Number of local bus devices that can be connected	max. 63 (observe current consumption)
Number of devices with parameter channel	max. 8

#### Modbus/TCP-Client

Amount of process data	max. 8192 bit (internal Modbus /TCP client)
Number of Modbus/TCP clients	max. 4 later than FW 4.42

#### PROFINET

Device function	PROFINET device
Specification	2.2
Device ID	007D <sub>hex</sub> / 125 <sub>dez</sub>
Vendor ID	00B0 <sub>hex</sub> / 176 <sub>dez</sub>

#### Function

Diagnostics display	no
Redundancy function	no

Safety function	no
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## Functionality

Programming languages supported	Instruction list (IL)
	Symbolic flowchart (SFC)
	Ladder diagram (LD)
	Function block diagram (FBD)
	Structured text (ST)

## System requirements

Configuration tool	Config+ Version 1.01 or later
Diagnostics tool	DIAG+
Runtime system	eCLR
Application interface	OPC

## Electrical properties

Transmission medium	Copper
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### Real-time clock

Realtime clock	yes
Description realtime clock	8.5 s/day integrated (rechargeable battery buffered)

### Potentials: 24 V supply $U_{ILC}$

Supply voltage	24 V DC -15 % / +20 % (in accordance with EN 61131-2)
Supply voltage range	19.2 V DC ... 30 V DC
Current draw	80 mA (without connected I/O terminal blocks)

### Potentials: 7.5 V communications power $U_L$ (potential jumper)

Supply voltage	7.5 V DC $\pm$ 5 %
Power supply	max. 0.8 A DC (observe derating)

### Potentials: 24 V analog supply $U_{ANA}$ (potential jumper)

Supply voltage	24 V DC -15 % / +20 %
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Power supply	0.5 A DC (observe derating)

### Potentials: 24 V main supply $U_M$

Supply voltage	24 V DC -15 % / +20 % (in accordance with EN 61131-2)
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Power supply	max. 8 A DC (sum of $U_M + U_S$ )
Current draw	max. 8 A DC
	6 mA (without sensors)



### Potentials: 24 V segment supply $U_S$

Supply voltage	24 V DC -15 % / +20 % (in accordance with EN 61131-2)
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Power supply	max. 8 A (sum of $U_M + U_S$ )
Current draw	max. 8 A DC

	10 mA (without actuators)
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## Input data

### Digital:

Input name	Digital inputs
Description of the input	EN 61131-2 type 1 NPN/PNP
Number of inputs	8
Cable length	max. 30 m
Connection method	Inline potential distributor
Connection technology	2-, 3-, 4-conductor
Input voltage range	-0.5 V ... 30 V
Input voltage range "0" signal	-0.5 V ... 5 V
Input voltage range "1" signal	15 V ... 30 V
Nominal input current at $U_{IN}$	typ. 7 mA max. 15 mA
Input filter time	typ. 5 ms (Signal change 0→  typ. 5 ms (Signal change 1→ 

## Output data

### Digital:

Output name	Digital outputs
Connection method	Spring-cage connection
Connection technology	2-, 3-, 4-conductor
Number of outputs	4
Maximum output current per channel	500 mA
Maximum output current per module / terminal block	2 A
Nominal load, lamp	12 W
Nominal load, ohmic	12 W

## 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

## Interfaces

Web server	yes
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## Ethernet

Bus system	RJ45
Number of interfaces	1
Connection method	RJ45 jack

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Transmission speed	10/100 Mbps
No. of channels	1

## INTERBUS local bus (master)

Number of interfaces	1
Connection method	Inline data jumper
Transmission speed	500 kBaud / 2 MBaud (can be switched)

## Parameterization/operation/diagnostics

Bus system	RS-232
Number of interfaces	1
Connection method	6-pos. MINI DIN socket (PS/2)
Transmission speed	max. 115.2 kbps
Transmission physics	Copper
No. of channels	1

## Dimensions

Width	80 mm
Height	119.8 mm
Depth	71.5 mm

## Material specifications

Color	green (RAL 6021)
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## Environmental and real-life conditions

### 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)
Shock	25g, Criterion 1, according to IEC 60068-2-27
Vibration (operation)	5g
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)
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

## EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Conformance with EMC directives	Immunity test in accordance with EN IEC 61000-6-2 Electrostatic discharge (ESD) IEC 61000-4-2 Criterion B, ±6 kV contact discharge, ±8 kV air discharge Immunity test in accordance with EN IEC 61000-6-2 Electromagnetic fields IEC 61000-4-3 Criterion A, Field intensity: 10 V/m

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	Immunity test in accordance with EN IEC 61000-6-2 Fast transients (burst)IEC 61000-4-4 Criterion A, all interfaces $\pm 1$ kVCriterion B, all interfaces $\pm 2$ kV
	Immunity test in accordance with EN IEC 61000-6-2 Transient overvoltage (surge)IEC 61000-4-5 Criterion B; DC supply lines: $\pm 0.5$ kV/ $\pm 1.0$ kV (symmetrical/asymmetrical), fieldbus cable shielding: $\pm 1.0$ kV
	Immunity test in accordance with EN IEC 61000-6-2 Conducted interferenceIEC 61000-4-6 Criterion A, Test voltage 10 V
	Noise emission test in accordance with EN IEC 61000-6-4 Class A

## Mounting

Mounting type	DIN rail mounting
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## Approvals

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**LR**

Approval ID: LR23398855TA

**BSH**

Approval ID: 858



**RINA**

Approval ID: ELE121121XG

**ABS**

Approval ID: 22-2226444-PDA



**cULus Listed**

Approval ID: E238705

**DNV**

Approval ID: TAA00002CU



**BV**

Approval ID: 20989\_C1 BV



**cULus Listed**

Approval ID: E199827

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## Classifications

### ECLASS

ECLASS-13.0	27242207
ECLASS-15.0	27242207

### UNSPSC

UNSPSC 21.0	32151700
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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	529ed154-954b-4cf2-bf74-44b52ca266d0

### EF3.1 Climate Change

CO2e kg	40.6 kg CO2e
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