

# ILC 131 ETH - Controller

2700973

<https://www.phoenixcontact.com/us/products/2700973>



Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



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 131 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, 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) | 378 g         |
| Weight per piece (excluding packing) | 348.2 g       |
| Customs tariff number                | 85371091      |
| Country of origin                    | DE            |

# ILC 131 ETH - Controller

2700973

<https://www.phoenixcontact.com/us/products/2700973>



## Technical data

### Notes

#### Note on application

|                     |                         |
|---------------------|-------------------------|
| Note on application | Only for industrial use |
|---------------------|-------------------------|

#### Utilization restriction

|            |                                                               |
|------------|---------------------------------------------------------------|
| CCCex note | Use in potentially explosive areas is not permitted in China. |
|------------|---------------------------------------------------------------|

### Product properties

|                |                   |
|----------------|-------------------|
| Product type   | Controller        |
| Product family | Inline-Controller |
| Type           | modular           |

#### Display

|                     |    |
|---------------------|----|
| Diagnostics display | no |
|---------------------|----|

### System properties

|                        |                       |
|------------------------|-----------------------|
| Processor              | AlteraNios® II 64 MHz |
| Retentive data storage | 8 kByte (NVRAM)       |

#### 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)              |
| 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 |

# ILC 131 ETH - Controller

2700973

<https://www.phoenixcontact.com/us/products/2700973>



## Functionality

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

## System requirements

|                       |                               |
|-----------------------|-------------------------------|
| Engineering tool      | PC Worx                       |
|                       | PC Worx Express               |
| Configuration tool    | Config+ Version 1.01 or later |
| Diagnostics tool      | DIAG+                         |
| Runtime system        | eCLR                          |
| Application interface | OPC                           |

## Electrical properties

|                     |        |
|---------------------|--------|
| Transmission medium | Copper |
|---------------------|--------|

## Real-time clock

|                            |                                            |
|----------------------------|--------------------------------------------|
| Realtime clock             | yes                                        |
| Description realtime clock | 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 % |
|----------------|--------------------|

## 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) |

## 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) |
| 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) |
| Current draw         | max. 8 A DC                                                        |
|                      | 10 mA (without actuators)                                          |

## Input data

# ILC 131 ETH - Controller

2700973

<https://www.phoenixcontact.com/us/products/2700973>



## 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<br>max. 15 mA                                                                                                                  |
| Input filter time                 | typ. 5 ms (Signal change 0→  ILC 131)<br>typ. 5 ms () |

## 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 |
|------------|-----|

## Ethernet

|                      |             |
|----------------------|-------------|
| Bus system           | RJ45        |
| Number of interfaces | 1           |
| Connection method    | RJ45 jack   |
| Transmission speed   | 10/100 Mbps |
| No. of channels      | 1           |

# ILC 131 ETH - Controller



2700973

<https://www.phoenixcontact.com/us/products/2700973>

## 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) |
|-------|------------------|

## 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<br><br>Immunity test in accordance with EN IEC 61000-6-2 Electromagnetic fields IEC 61000-4-3 Criterion A, Field intensity: 10 V/m |

# ILC 131 ETH - Controller



2700973

<https://www.phoenixcontact.com/us/products/2700973>

|  |                                                                                                                                                                                                                          |
|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | 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 |
|---------------|-------------------|

# ILC 131 ETH - Controller

2700973

<https://www.phoenixcontact.com/us/products/2700973>



## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/2700973>



**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

# ILC 131 ETH - Controller

2700973

<https://www.phoenixcontact.com/us/products/2700973>



## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27242207 |
| ECLASS-15.0 | 27242207 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC000236 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 32151700 |
|-------------|----------|



## 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 |

### EF3.0 Climate Change

|         |              |
|---------|--------------|
| CO2e kg | 40.6 kg CO2e |
|---------|--------------|

Phoenix Contact 2025 © - all rights reserved  
<https://www.phoenixcontact.com>

Phoenix Contact USA  
 586 Fulling Mill Road  
 Middletown, PA 17057, United States  
 (+717) 944-1300  
[info@phoenixcon.com](mailto:info@phoenixcon.com)