ILC 191 ME/INC - Controller

2700075

https://www.phoenixcontact.com/us/products/2700075

Inline controller with integrated pulse/direction/PWM interface, RS-485/RS-422, fast counters, and incremental encoder inputs, with programming options according to IEC 61131-3

Product description

The ILC 191 ME/INC modular small-scale controller for the Inline I/O system is at the heart of Easy Automation. The new 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. The controller already has 8 digital inputs and 4 outputs, a two-channel pulse/direction/PWM interface, an integrated RS-232 interface and RS-485/RS-422 interface, a two-channel fast counter with a cut-off frequency of up to 200 kHz, and two incremental encoder inputs for asymmetrical incremental encoders.

Your advantages

- Web server, FTP server, and Flash file system
- Integrated fast counters and incremental encoder inputs
- Integrated pulse/direction/PWM interface
- Integrated RS-485/RS-422 interface
- Numerous protocols supported such as: HTTP, FTP, SNTP, SNMP, SMTP, SQL, MySQL, etc.
- Modbus/TCP server
- Large program memory and data storage (1024 kB/1024 kB)
- Modbus/TCP-Client
- PROFINET-Device
- HTML 5
- Free engineering with PC Worx Express (IEC 61131-3)

Commercial data

Item number	2700075
Packing unit	1 pc
Note	Made to order (non-returnable)
Sales key	DR10
Product key	DRAAAA
Catalog page	Page 82 (C-6-2017)
GTIN	4046356479103
Weight per piece (including packing)	607.8 g
Weight per piece (excluding packing)	450 g
Customs tariff number	85371091
Country of origin	DE

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Technical data

Notes

Utilization restriction

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

Product properties

Product type	Controller
Product family	Inline
Type	Inline format with alignable I/Os

Display

Diagnostics display	no

System properties

Processor	AlteraNios® II 64 MHz
Retentive data storage	48 kByte (NVRAM)

IEC 61131 runtime system

Program memory	1 Mbyte
Data storage system	1 Mbyte
Number of control tasks	8

INTERBUS-Master

Amount of process data	max. 4096 bit (INTERBUS)
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. 24
Number of supported branch terminals with remote bus branch	max. 3

Modbus/TCP-Client

Amount of process data	max. 32768 bit (internal Modbus /TCP client)
Number of Modbus/TCP clients	max. 16 later than FW 4.42

PROFINET

Device function	PROFINET device

Function

Diagnostics display	no
Controller redundancy	no
Safety function	no

Functionality

Programming languages supported	Programming in acc. with IEC 61131-3

System requirements

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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
Maximum power dissipation for nominal condition	max. 8.4 W

Supply

Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC
Residual ripple	± 5 %
Typical current consumption	350 mA

Real-time clock

Realtime clock	yes
Description realtime clock	integrated (rechargeable battery buffered)

Potentials

Supply voltage	7.5 V DC ±5 %

Potentials

Supply voltage	24 V DC -15 % / +20 %
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)

Potentials

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

Potentials

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

Input data

Encoder

Input name	Encoder input
Number of inputs	2 (3-coil, asymmetrical)
Input voltage range "1" signal	5 V DC ... 24 V DC

Digital:

Input name	Digital inputs
Description of the input	EN 61131-2 type 1 NPN/PNP

ILC 191 ME/INC - Controller

2700075

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Number of inputs	8
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
Typical response time	min. 3 ms

Counter:

Input name	Counter input for 24 V signals
Number of inputs	2
Input voltage range "1" signal	5 V DC ... 24 V DC
Input frequency	200 kHz

Output data

Digital:

Output name	Digital outputs
Connection method	Spring-cage connection
Connection technology	2-, 3-, 4-conductor
Number of outputs	4
Output voltage	24 V DC
Maximum output current per channel	500 mA

Pulse direction

Output name	Pulse directional output for 5 V signals
Number of pulse direction outputs	2 (can be used as an alternative to pulse width modulation)
Output voltage	5 V
Limit frequency	150 kHz

Connection data

Inline connector

Connection method	Spring-cage connection
Conductor cross section, rigid	0.08 mm² ... 1.5 mm²
Conductor cross section, flexible	0.08 mm² ... 1.5 mm²
Conductor cross section AWG	28 ... 16

Interfaces

Web server	yes

Ethernet 10Base-T/100Base-TX

Bus system	RJ45
Number of interfaces	2
Connection method	RJ45 jack
Transmission speed	10/100 Mbps

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2700075

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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

RS-422/-485

Bus system	RS-485/-422
Number of interfaces	1
Connection method	4-pos. for full duplex
	2-pos. for half duplex

Dimensions

Width	164 mm
Height	136.8 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)

EMC data

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Conformance with EMC directives	Immunity test in accordance with EN 61000-6-2/IEC 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 test in accordance with EN 61000-6-2/IEC 61000-6-2 Electromagnetic fieldsEN 61000-4-3/IEC 61000-4-3 Criterion A, Field intensity: 10 V/m
	Immunity test in accordance with EN 61000-6-2/IEC 61000-6-2 Fast transients (burst)EN 61000-4-4/IEC 61000-4-4 Criterion A, all interfaces ±1 kVCriterion B, all interfaces ±2 kV
	Immunity test in accordance with EN 61000-6-2/IEC 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
	Immunity test in accordance with EN 61000-6-2/IEC 61000-6-2 Conducted interferenceEN 61000-4-6/IEC 61000-4-6 Criterion A, Test voltage 10 V
	Noise emission test in accordance with EN 61000-6-4/IEC 61000-6-4 EN 55011 Class A

Mounting

Mounting type	DIN rail mounting

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Classifications

ECLASS

ECLASS-11.0	27242207

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Environmental product compliance

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.)	No substance above 0.1 wt%

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