ILC 191 ME/AN - Controller

2700074

https://www.phoenixcontact.com/us/products/2700074

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.

Inline controller with integrated pulse/direction/PWM interface, RS-485/RS-422, analog inputs (0 ... 10 V), and analog outputs (0 ... 10 V), with programming options according to IEC 61131-3

Product description

The ILC 191 ME/AN is a reliable compact controller for the Inline I/O system. The controller uses directly alignable Inline I/O modules and also is notable for supporting a number of Ethernet-based protocols such as Modbus/TCP or PROFINET.

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.
- Integrated analog I/Os
- Integrated RS-485/RS-422 interface

Commercial data

Item number	2700074
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR10
Product key	DRAAAA
GTIN	4046356479097
Weight per piece (including packing)	624.3 g
Weight per piece (excluding packing)	450 g
Customs tariff number	85371091
Country of origin	DE

Technical data

Product properties

Product type	Controller
Product family	Inline-Controller
Type	modular

Display

Diagnostics display	no

System properties

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)
Amount of process data (INTERBUS input/output data max.)	max. 4096 bit (INTERBUS)
Amount of process data (Modbus/TCP client)	max. 32768 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. 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
Specification	2.2
Device ID	0096_{hex} / 150_{dez}
Vendor ID	$00B0_{hex}$ / 176_{dez}

Function

Diagnostics display	no
Redundancy function	no
Safety function	no

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

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

Potentials: 7.5 V communications power U_L (potential jumper)

Supply voltage	7.5 V DC ±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)

Input data

Analog:

Input name	Analog inputs
Number of inputs	2

Connection method	Inline potential distributor
Connection technology	2-conductor
Note regarding the connection technology	Inline potential distributor
Voltage input signal	0 V DC ... 10 V DC (Resolution: 11 bits)
Input resistance of voltage input	typ. 324 kΩ
A/D converter resolution	11 bit
Limit frequency (3 dB)	100 Hz
Common mode voltage range signal - ground	0 V ... 10 V

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→)
Typical response time	min. 3 ms

Output data

Analog:

Output name	Analog outputs
Connection method	Inline potential distributor
Connection technology	2-conductor
Number of outputs	2
D/A conversion time	10 ms
D/A converter resolution	11 bit
Voltage output signal	0 V DC ... 10 V DC
Load/output load voltage output	> 1 kΩ

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
Maximum output current per module / terminal block	2 A

Nominal load, lamp	12 W
Nominal load, ohmic	12 W

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 ±5 %
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

Bus system	RJ45
Number of interfaces	2
Connection method	RJ45 jack
Transmission speed	10/100 Mbps
No. of channels	2

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)
Resistance to gases that may endanger the functions, in acc. with DIN 40046-36, DIN 40046-37	Sulfur dioxide (SO_2) 10 ±0.3 ppm (test duration: 10 days), hydrogen sulfide (H_2S) 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 fieldsIEC 61000-4-3 Criterion A, Field intensity: 10 V/m
	Immunity test in accordance with EN IEC 61000-6-2 Fast transients (burst)IEC 61000-4-4 Criterion A, all interfaces ±1 kVCriterion B, all interfaces ±2 kV
	Immunity test in accordance with EN IEC 61000-6-2 Transient overvoltage (surge)IEC 61000-4-5 Criterion B; DC supply lines: ±0.5 kV/±1.0 kV (symmetrical/asymmetrical), fieldbus cable shielding: ±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 61000-6-4/IEC 61000-6-4 Class A

Mounting

Mounting type	DIN rail mounting

Classifications

ECLASS

ECLASS-13.0	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	d01afe61-c3f2-42da-a1bf-42a72d12504f

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