ILC 151 ETH - Controller

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).

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.

ELEKTROGERÄTE RÜCKNAHME

Commercial data

Item number	2700974
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR10
Product key	DRAAAA
GTIN	4046356665506
Weight per piece (including packing)	363 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

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

IEC 61131 runtime system

Program memory	256 kByte
Retentive data storage	8 kByte (NVRAM)
Data storage system	256 kByte
Number of data blocks	depending on data storage
Number of control tasks	8

System limits

Amount of process data (INTERBUS input/output data)	max. 4096 bit (INTERBUS)
Amount of process data (Modbus/TCP client)	max. 16384 bit (internal Modbus /TCP client)
Number of supported devices (INTERBUS)	max. 128
Number of Modbus/TCP clients	max. 8 later than FW 4.42
Number of local bus devices that can be connected (INTERBUS)	max. 63 (observe current consumption)
Number of devices with parameter channel	max. 16
Number of supported branch terminals with remote bus branch	max. 3

PROFINET

Device function	PROFINET device
Specification	2.2
Number of slots	1
Device ID	$007E_{hex}$ / 126_{dez}
Vendor ID	$00B0_{hex}$ / 176_{dez}

Function

Diagnostics display	no
Redundancy function	no

Safety function	no

Programming data

Register length (master)	512 Byte

Functionality

Programming tool	PC Worx
	PC Worx Express
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)
Power reserve	max. 240 h (at 25 °C)

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	typ. 80 mA (without connected I/O terminal blocks)

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	max. 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

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 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	1
Connection method	RJ45 jack
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)

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

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

Classifications

ECLASS

ECLASS-13.0	27242207
ECLASS-15.0	27242207

ETIM

ETIM 10.0	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	6c30b054-6cee-47f6-9b39-a504876fff1b

EF3.1 Climate Change

CO2e kg	40.6 kg CO2e

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