

Controller - AXC 1050 XC - 2701295

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Axiocontrol for the direct control of AxioLine I/Os. With 2 Ethernet interfaces, extended temperature range, and programming options according to IEC 61131-3. Complete with connector connector and marking field.

Product Description

The AXC 1050/XC modular small-scale controller for the AxioLine I/O system is fast, robust, and easy, i.e., it is consistently designed for maximum performance, easy handling, and use in harsh industrial environments in the extended temperature range from -40°C to +70°C.

Your advantages

- PROFINET controller (up to 16 devices) and/or PROFINET device
- Modbus/TCP-Client
- Numerous protocols supported such as: HTTP, FTP, SNTP, SNMP, SMTP, SQL, MySQL, etc.
- Free engineering with PC Worx Express (IEC 61131-3)
- Maritime approvals (GL, DNV, LR, BV, RINA, ABS)
- Up to 63 AXIO I/O modules can be mounted side by side
- Integrated UPS for targeted shutdown of the application
- Configuration via USB
- Web server - JAVA
- SD card up to 2 GB as optional plug-in parameterization memory
- 2 x Ethernet interfaces (integrated switch)
- Increased resistance to EMI
- Extended temperature range of -40°C ... 70°C (with derating)



Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 000091
GTIN	4055626000091
Weight per Piece (excluding packing)	260.000 g

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Custom tariff number	85371091
Country of origin	Germany

Technical data

Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
	Use in potentially explosive areas is not permitted in China.

Dimensions

Width	45 mm
Height	126.1 mm
Depth	74 mm

Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C up to 2000 m above mean sea level (observe derating)
	-40 °C ... 65 °C up to 3000 m above mean sea level (observe derating)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 % (according to DIN EN 61131-2, non-condensing, no ice formation)
Permissible humidity (storage/transport)	5 % ... 95 % (according to DIN EN 61131-2, non-condensing, no ice formation)
Air pressure (operation)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Air pressure (storage/transport)	58 kPa ... 106 kPa (up to 4500 m above mean sea level)
Shock	30g, 11 ms period, half-sine shock pulse, according to IEC 60068-2-27
Vibration (operation)	5g

Control system

Engineering tool	PC WORX
	PC WORX EXPRESS
Programming languages supported	Programming in acc. with IEC 61131-3
Diagnostics tool	DIAG+
Configuration tool	Config+ Version 1.01 or later

IEC 61131 runtime system

Engineering tool	PC WORX
	PC WORX EXPRESS
Program memory	2 Mbyte
Mass storage	2 Mbyte
Retentive mass storage	48 kByte (NVRAM)
Number of control tasks	8
Realtime clock	Yes

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Technical data

IEC 61131 runtime system

Accuracy realtime clock	1.73 s/day = 20 ppm at 25 °C
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Fieldbus function

Amount of process data	max. 8192 Bit (per station)
	max. 4096 Bit (AxioLine F local bus (input))
	max. 4096 Bit (AxioLine F local bus (output))
	max. 32768 Bit (internal Modbus /TCP client)
Number of supported devices	max. 63 (per station)
Number of local bus devices that can be connected	max. 63 (observe current consumption)
Program memory	2 Mbyte

Data interfaces

Interface	AxioLine F local bus
Number	1
Connection method	Bus base module
Transmission speed	100 Mbps
Interface	Ethernet
Number	2
Connection method	RJ45 jack
Transmission speed	10/100 Mbps (half or full duplex (automatic detection))
Interface	Service
Number	1
Connection method	Micro USB type B
Transmission speed	max. 115.2 kbps

PROFINET

Device function	PROFINET controller, PROFINET device
Specification	Version 2.3
Update rate	min. 32 ms (16 devices)
	min. 32 ms (8 devices)
	min. 16 ms (4 devices)
	min. 8 ms (2 devices)
	min. 4 ms (1st device)

Power supply

Typical current consumption	125 mA
Max. current consumption	160 mA
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC

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Power supply

Residual ripple	± 5 %
Power dissipation	max. 3 W

Mechanical design

Weight	195 g
Note on weight specifications	with connector and bus base module
Diagnostics display	No
Controller redundancy	No
Safety function	No

General data

Processor	Altera Nios II 1x 100 MHz
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Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Interference emission	Noise emission test according to EN 61000-6-3 Class B
Immunity to surge	Noise immunity test in accordance with EN 61000-6-2 Transient overvoltage (surge) EN 61000-4-5/IEC 61000-4-5 Criterion B, DC supply lines: ±0.5 kV/±0.5 kV (symmetrical/asymmetrical), fieldbus cable shield: ±1 kV
Immunity to burst	Noise immunity test in accordance with EN 61000-6-2 Fast transients (burst) EN 61000-4-4/IEC 61000-4-4 Criterion B, 2 kV
Immunity to EF	Noise immunity test in accordance with EN 61000-6-2 Electromagnetic fields EN 61000-4-3/IEC 61000-4-3 Criterion A, Field intensity: 10 V/m
Immunity to ESD	Noise immunity test in accordance with EN 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 to conducted interference	Noise immunity test in accordance with EN 61000-6-2 Conducted interference EN 61000-4-6/IEC 61000-4-6 Criterion A, Test voltage 10 V
Vibration (storage/transport)	5g
Shock	30g, 11 ms period, half-sine shock pulse, according to IEC 60068-2-27
Vibration (operation)	5g
Shock (operation)	10g (Bump endurance test according to DIN EN 60068-2-27)

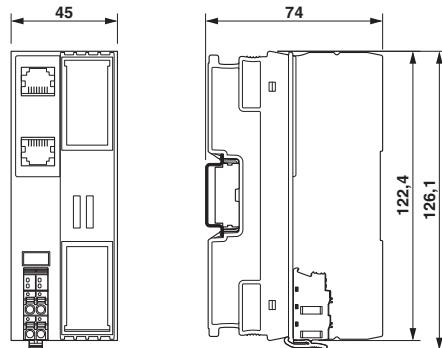
Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

Drawings

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Dimensional drawing



Classifications

eCl@ss

eCl@ss 10.0.1	27242207
eCl@ss 11.0	27242207
eCl@ss 4.0	27240600
eCl@ss 4.1	27240600
eCl@ss 5.0	27242700
eCl@ss 5.1	27242700
eCl@ss 6.0	27242200
eCl@ss 7.0	27242207
eCl@ss 9.0	27242207

ETIM

ETIM 3.0	EC001045
ETIM 4.0	EC001435
ETIM 6.0	EC000236
ETIM 7.0	EC000236

UNSPSC

UNSPSC 6.01	81111810
UNSPSC 7.0901	81111810
UNSPSC 11	81111810
UNSPSC 12.01	81111810
UNSPSC 13.2	39122114
UNSPSC 18.0	39122114
UNSPSC 19.0	39122114
UNSPSC 20.0	39122114
UNSPSC 21.0	39122114

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Approvals

Approvals

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PRS / BV / LR / KR / NK / ABS / BSH / RINA / DNV GL / UL Listed / cUL Listed / cULus Listed

Ex Approvals

ATEX

Approval details

PRS		http://www.prs.pl/	TE/1117/880590/20
BV		http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials	36433/B2 BV
LR		http://www.lr.org/en	LR2001902TA
KR		http://www.krs.co.kr/eng/main/main.aspx	HMB17372-AC002
NK		http://www.classnk.or.jp/hp/en/	14A006
ABS		http://www.eagle.org/eagleExternalPortalWEB/	18-HG1767360-PDA
BSH			840
RINA		http://www.rina.org/en	ELE030120XG

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Approvals

DNV GL



<https://approvalfinder.dnvgi.com/>

TAA00000DF

UL Listed



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 238705

cUL Listed



<http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm>

FILE E 238705

cULus Listed



Accessories

Accessories

Drivers and interfaces

Software - AX OPC SERVER - 2985945



AX OPC SERVER, communication interface for OPC-capable visualization with PC WORX-based controls.

Software - PC WORX UA SERVER-PLC 10 - 2402684



OPC UA server for communication with a maximum of 10 modular small-scale controllers (AXC 1xxx or ILC 1x1)

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Accessories

Software - PC WORX UA SERVER-PLC 40 - 2402685



OPC UA server for communication with a maximum of 25 controllers

Software - PC WORX UA SERVER-PLC 80 - 2402686



OPC UA server for communication with a maximum of 200 controllers

Parameterization memory

Memory - SD FLASH 512MB - 2988146



Program and configuration memory, plug-in, 512 Mbyte.

Program / configuration memory - SD FLASH 512MB APPLIC A - 2701799



Program and configuration memory for extending the internal Flash memory, plug-in, 512 MB with license key for function block libraries. For licensed function blocks, please refer to the documentation.

Memory - SD FLASH 512MB PDPI BASIC - 2701800



Program and configuration memory, plug-in, 512 MB with license key for licensing the PDPI - BASIC functional block for precise multi-channel controllers with self-optimization, e.g., for heating and cooling functions or hydraulic movements.

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Accessories

Memory - SD FLASH 512MB PDPI PRO - 2701801



Program and configuration memory, plug-in, 512 MB with license key for licensing the PDPI - PRO functional block for precise multi-channel controllers with self-optimization, additional functions: e.g., for setpoint processing, for heating and cooling functions.

Program / configuration memory - SD FLASH 2GB - 2988162



Program and configuration memory, for extending the internal flash memory, pluggable, 2 GB.

Program / configuration memory - SD FLASH 2GB APPLIC A - 2701190



Program and configuration memory for extending the internal Flash memory, plug-in, 2 GB with license key for function block libraries. For licensed function blocks, please refer to the documentation.

Program / configuration memory - SD FLASH 2GB AXC EASY SAFE PRO - 2403730



Program and configuration memory for extending the internal flash memory, plug-in, 2 GB, with license key and application program for the simple web-based configuration and commissioning of a SafetyBridge solution, including communication via Modbus/TCP, PROFINET, and e-mail.

Program / configuration memory - SD FLASH 2GB ATVISE - 2400088



Program and configuration memory for extending the internal Flash memory, plug-in, 2 GB, with license key for webMI from atvise®

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Accessories

Program / configuration memory - SD FLASH 2GB APPLIC A ATVISE - 2400089



Program and configuration memory for extending the internal Flash memory, plug-in, 2GB, with a function block library for webMI from atvise®. For additional licensed function blocks, please refer to the documentation.

Programming

Software - PC WORX DEMO - 2985725



Software package for PC-based automation solutions. PC WORX DEMO contains all 5 IEC languages with MSFC compiler. Max. 16 bytes of input and output data can be used with the demo version. It is available free of charge and does not require a license key. It is part of the AUTOMATIONWORX Software Suite, which you can download under "Downloads".

Software - PC WORX BASIC LIC - 2985275



Software package for PC-based automation solutions, PC WORX BASIC license, contains all 5 IEC languages, without MSFC compiler, max. 2048 byte input and output data, version-specific license key

Software - PC WORX PRO LIC - 2985385



Software package for PC-based automation solutions, PC WORX PRO license, contains all 5 IEC languages, with MSFC compiler, max 128 kB input and output data, version-specific license key

Programming cable

Connecting cable - CAB-USB A/MICRO USB B/2,0M - 2701626



Connecting cable, for connecting the controller to a PC for PC Worx and LOGIC+, USB A to micro USB B, 2 m in length.

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Accessories

Spare parts

Bus connector - AXL BS BK - 2701422



Axioline F bus base module for housing type BK

Plug - AXL CN S/UL - 2701421



Axioline F short power connector (for e.g., AXL F BK ...)
