

## Controller - AXC 1050 - 2700988

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Axio control for direct open-loop control of Axioline I/Os. With 2 Ethernet interfaces and programming capabilities according to IEC 61131-3. Complete with connector connector and labeling field.

### Product Description


The AXC 1050 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.

### Your advantages

- ✓ PROFINET controller (up to 16 devices) and/or PROFINET device
- ✓ Modbus/TCP-Client
- ✓ Numerous protocols supported such as: http, https, FTP, SNMP, SMTP, SQL, MySQL, DCP, etc.
- ✓ Free engineering with PC Worx Express (IEC 61131-3)
- ✓ 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 HTML5 and 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 -25°C ... +60°C



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 046356 731195
GTIN	4046356731195
Weight per Piece (excluding packing)	225.600 g
Custom tariff number	85371091
Country of origin	Germany

# Controller - AXC 1050 - 2700988

## Technical data

### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
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### Dimensions

Width	45 mm
Height	126.1 mm
Depth	74 mm

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-25 °C ... 60 °C up to 2000 m above mean sea level
	-25 °C ... 55 °C up to 3000 m above mean sea level
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

### Fieldbus function

Designation	System limits of the controller
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)

# Controller - AXC 1050 - 2700988

## Technical data

### Fieldbus function

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
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	yes
Note on controller redundancy	applicative system redundancy possible
Safety function	No

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## Technical data

### 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: $\pm 0.5$ kV/ $\pm 0.5$ kV (symmetrical/asymmetrical), fieldbus cable shield: $\pm 1$ 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)

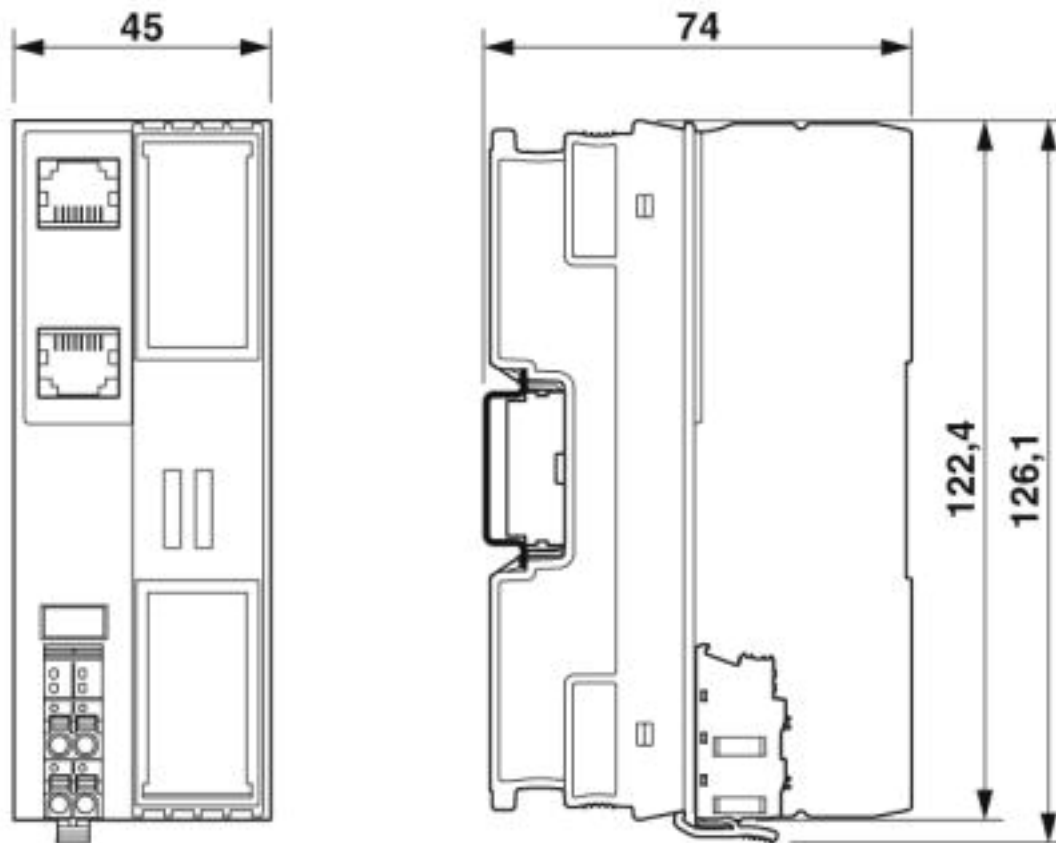
### Environmental Product Compliance

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

# Controller - AXC 1050 - 2700988

Dimensional drawing



## Classifications

### eCl@ss

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 8.0	27242207
eCl@ss 9.0	27242207

### ETIM

ETIM 3.0	EC001045
ETIM 4.0	EC001435
ETIM 5.0	EC000236
ETIM 6.0	EC000236
ETIM 7.0	EC000236

# Controller - AXC 1050 - 2700988

## Classifications

### 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

## Approvals

### Approvals

#### Approvals

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

#### Ex Approvals

### Approval details

DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAA00000DF
PRS		<a href="http://www.prs.pl/">http://www.prs.pl/</a>	TE/2239/880590/19
BV		<a href="http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials">http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials</a>	36433/B0 BV
LR		<a href="http://www.lr.org/en">http://www.lr.org/en</a>	14-20019
KR		<a href="http://www.krs.co.kr/eng/main/main.aspx">http://www.krs.co.kr/eng/main/main.aspx</a>	HMB17372-AC002

# Controller - AXC 1050 - 2700988

## Approvals

NK		<a href="http://www.classnk.or.jp/hp/en/">http://www.classnk.or.jp/hp/en/</a>	14A006
ABS		<a href="http://www.eagle.org/eagleExternalPortalWEB/">http://www.eagle.org/eagleExternalPortalWEB/</a>	18-HG1767360-PDA
BSH			840
RINA		<a href="http://www.rina.org/en">http://www.rina.org/en</a>	ELE256518XG
UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
EAC			EAC-Zulassung
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.

## Controller - AXC 1050 - 2700988

### Accessories

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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Software - PC WORX UA SERVER-PLC 40 - 2402685



OPC UA server for communication with a maximum of 25 controllers

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Software - PC WORX UA SERVER-PLC 80 - 2402686



OPC UA server for communication with a maximum of 200 controllers

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### Parameterization memory

Memory - SD FLASH 512MB - 2988146



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

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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, e.g., for: SNMP, SQL, wireless, motion functions, etc.

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## Controller - AXC 1050 - 2700988

### Accessories

#### 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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#### 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.

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#### Program / configuration memory - SD FLASH 2GB - 2988162



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

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#### 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, e.g., for: SNMP, SQL, wireless, motion functions, etc.

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#### 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.

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## Controller - AXC 1050 - 2700988

### Accessories

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



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

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



Program and configuration memory for extending the internal Flash memory, plug-in, 2 GB, with license key for function block libraries, e.g., for: webMI from atwise®, SNMP, SQL, wireless, motion functions, etc.

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### 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 input and output data

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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

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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

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### Programming cable

## Controller - AXC 1050 - 2700988

### Accessories

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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### 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 ...)