

# AXC 1050 - Controller

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 for up to 16 devices and/or PROFINET device functionality
- Memory extendable by up to 2 GB via plug-in SD card
- Free engineering with PC Worx Express (IEC 61131-3)
- Modbus/TCP-Client
- Integrated FTP and HTML5 web server
- Numerous protocols supported such as: HTTP, FTP, SNTP, SNMP, SMTP, SQL, MySQL, etc.

## Commercial data

Item number	2700988
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR10
Product key	DRAAEA
Catalog page	Page 44 (C-6-2019)
GTIN	4046356731195
Weight per piece (including packing)	234.1 g
Weight per piece (excluding packing)	244 g
Customs tariff number	85371091
Country of origin	DE

## Technical data

### Notes

#### Utilization restriction

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

Product type	Controller
Product family	Axioccontrol
Type	modular

#### Insulation characteristics

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
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#### Display

Diagnostics display	No
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### System properties

Processor	Altera Nios <sup>®</sup> II 1x 100 MHz
Retentive data storage	48 kByte (NVRAM)

#### IEC 61131 runtime system

Program memory	2 Mbyte
Data storage system	2 Mbyte
Number of control tasks	8

#### Axioline

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))
Number of supported devices	max. 63 (per station)
Number of local bus devices that can be connected	max. 63 (observe current consumption)

#### 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 (1 device)
Conformance Class	A
Number of supported devices	max. 16 (at PROFINET controller)
Supported functions	MRP

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	MRP
Device ID	0093 <sub>hex</sub>
Vendor ID	00B0 <sub>hex</sub>

## Function

Diagnostics display	No
Controller redundancy	yes
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

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

Maximum power dissipation for nominal condition	3.2 W
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## Real-time clock

Realtime clock	Yes
Description realtime clock	1.73 s/day = 20 ppm at 25 °C

## Potentials

Protective circuit	Surge protection of the supply voltage; electronic
	Polarity reversal protection of the supply voltage; electronic

Potentials: Communications power  $U_L$  feed-in (the supply of the Axioline F local bus  $U_{BUS}$  is generated from  $U_L$ )

Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	max. 650 mA (with 2 A at $U_{BUS}$ for the I/Os and $U_L = 24$ V)
	typ. 100 mA (without I/Os and $U_L = 24$ V)
Power consumption	max. 13.2 W (2.0 A on $U_{BUS}$ , $U_L = 24$ V)

Potentials: Axioline F local bus supply ( $U_{BUS}$ )

Supply voltage	5 V DC (via bus base module)
Power supply unit	2 A

## Connection data

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Connection method	Push-in connection
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## Axioline F connector

Connection method	Push-in connection
Conductor cross section, rigid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section, flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	24 ... 16
Stripping length	8 mm

## Interfaces

Web server	yes
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## Axioline F local bus

Number of interfaces	1
Connection method	Bus base module
Transmission speed	100 Mbps

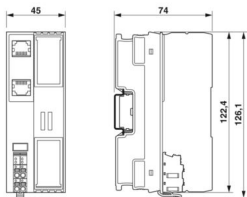
## Ethernet

Bus system	RJ45
Number of interfaces	2
Connection method	RJ45 jack
Note on the connection method	Auto negotiation and autocrossing
Transmission speed	10/100 Mbps (half or full duplex (automatic detection))
Transmission physics	Ethernet in RJ45 twisted pair
No. of channels	2

## Service

Bus system	USB
Number of interfaces	1
Connection method	Micro USB type B
Transmission speed	max. 115.2 kbps
No. of channels	1

## Dimensions

Dimensional drawing	
Width	45 mm
Height	126.1 mm
Depth	74 mm
Note on dimensions	The depth applies when a TH 35-7.5 DIN rail is used (in accordance with EN 60715).

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## Material specifications

Color	gray (RAL 7042)
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## Environmental and real-life conditions

### 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)
Shock (operation)	10g (Bump endurance test according to DIN EN 60068-2-27)
Vibration (operation)	5g
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)

## Approvals

### UL, USA/Canada

Identification	cULus
Certificate	E238705

## EMC data

Conformance with EMC directives	Immunity test in accordance with EN IEC 61000-6-2 Electrostatic discharge (ESD)IEC 61000-4-2 Criterion B, $\pm 6$ kV contact discharge, $\pm 8$ 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 B, $\pm 2$ kV
	Immunity test in accordance with EN IEC 61000-6-2 Transient overvoltage (surge)IEC 61000-4-5 Criterion B; DC supply lines: $\pm 0.5$ kV/ $\pm 1.0$ kV (symmetrical/asymmetrical), fieldbus cable shielding: $\pm 1.0$ 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 IEC 61000-6-3 Class B
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU

## Mounting

Mounting type	DIN rail mounting
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