

# AXC 1050 - Controller



2700988

<https://www.phoenixcontact.com/in/products/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                            | DRA                |
| 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

#### Note on application

|                     |                         |
|---------------------|-------------------------|
| Note on application | Only for industrial use |
|---------------------|-------------------------|

#### Utilization restriction

|          |   |
|----------|---|
| EMC note | EMC: class A product, see manufacturer's declaration in the download area |
|----------|---|

### Product properties

|                |             |
|----------------|-------------|
| Product type   | Controller  |
| Product family | Axiocontrol |
| Type           | modular     |

#### Data management status

|                  |    |
|------------------|----|
| Article revision | 15 |
|------------------|----|

#### Insulation characteristics

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

#### Display

|                     |    |
|---------------------|----|
| Diagnostics display | no |
|---------------------|----|

### System properties

|                        |                            |
|------------------------|----------------------------|
| Processor              | AlteraNios® 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)               |

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

## Function

|                               |  |
|-------------------------------|--|
| Diagnostics display           | no                                     |
| Controller redundancy         | yes                                    |
| Note on controller redundancy | applicative system redundancy possible |
| 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 |
|---|-------|

## 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)                    |

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

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

## Connection data

|                   |                    |
|-------------------|--------------------|
| Connection method | Push-in connection |
|-------------------|--------------------|

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 |
|------------|-----|

Axioline F local bus

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

Ethernet

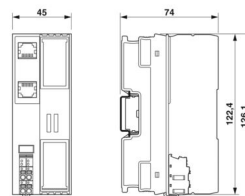
|                               |   |
|-------------------------------|---|
| Bus system                    | RJ45  |
| Number of interfaces          | 2   |
| Connection method             | RJ45 jack   |
| Note on the connection method | Auto negotiation and autocrossing                       |
| Transmission 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



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|                    |  |
|--------------------|--|
| 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). |

## Material specifications

|       |                 |
|-------|-----------------|
| Color | gray (RAL 7042) |
|-------|-----------------|

## 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<br>-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  |

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## Mounting

Mounting type

DIN rail mounting

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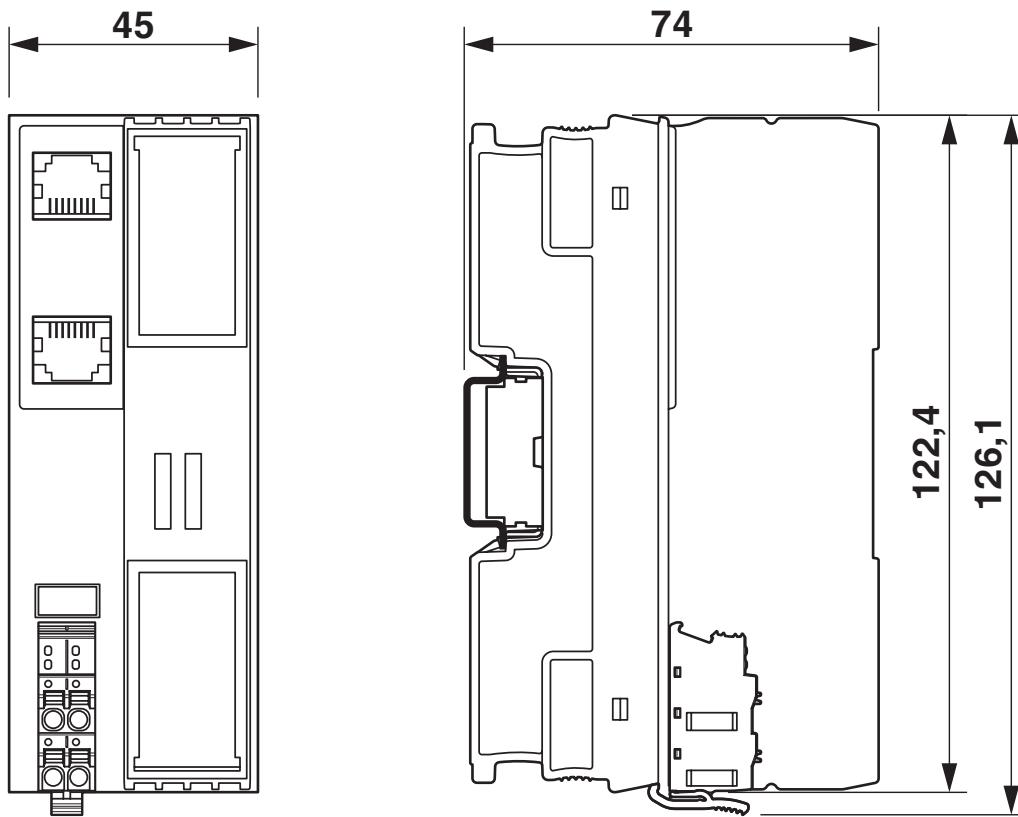
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## Drawings

Dimensional drawing



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/in/products/2700988>



**EAC**

Approval ID: RU\*DE\*08.B.00529/19



**DNV GL**

Approval ID: TAA0000DF Rev.12



**LR**

Approval ID: LR2480202TA



**UL Listed**

Approval ID: E238705



**cUL Listed**

Approval ID: E238705

**BSH**

Approval ID: 840

**ABS**

Approval ID: 23-2449604-PDA

**UAE-RoHS**

Approval ID: 23-02-63241

**cULus Listed**



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27242207 |
| ECLASS-12.0 | 27242207 |
| ECLASS-13.0 | 27242207 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC000236 |
|----------|----------|

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 32151700 |
|-------------|----------|

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## 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                                | 1832c9e3-43ef-4e09-b03e-951014e0fc84 |

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