

AXC F 3152 - Controller



1069208

<https://www.phoenixcontact.com/us/products/1069208>

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PLCnext Control for the direct control of Axioline F I/Os. With three independent Ethernet interfaces. Complete with connector and bus base module.

Product description

The controllers of the PLCnext Control AXC F 3152 family for the Axioline I/O system are fast, robust, and easy to use. They were consistently designed for maximum performance, easy handling and use in harsh industrial environments.

Your advantages

- Linux operating system
- Supports high-level languages
- Up to 63 AXIO I/O modules can be mounted side by side
- 3 independent Ethernet interfaces
- Increased resistance to EMI
- Extended temperature range of -25 °C ... 60 °C
- PROFINET controller and PROFINET device
- Use of up to two left-alignable extension modules
- Connection to PROFICLOUD
- Numerous protocols supported such as: http, https, FTP, SNTP, SNMP, SMTP, SQL, MySQL, DCP, etc.
- Optional pluggable fan module allows reliable operation, even under challenging ambient conditions.

Commercial data

Item number	1069208
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR09
Product key	DRADAD
GTIN	4055626741192
Weight per piece (including packing)	671 g
Weight per piece (excluding packing)	670 g
Customs tariff number	85371091
Country of origin	DE

Technical data

Product properties

Type	modular
Product type	Controller
Product family	PLCnext Control

Insulation characteristics

Protection class	III (IEC 61140, EN 61140, VDE 0140-1)
Overvoltage category	II
Pollution degree	2

Display

Diagnostics display	No
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System properties

Processor	Intel® Atom™ x5-E3930 2x 1.3 GHz
Flash memory	1 GByte (internal flash memory) SD card from Phoenix Contact (for external flash memory, see accessories)
Retentive data storage	1 Mbyte
RAM	2048 Mbyte

IoT capability: PROFICLOUD

IoT platform	PROFICLOUD
Supports cloud computing	yes

IEC 61131 runtime system

Program memory	12 Mbyte
Data storage system	32 Mbyte

Axioline

Amount of process data	max. 1482 Byte (per station (total input and output data))
	max. 1024 Byte (Axioline F local bus (input))
	max. 1024 Byte (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
Update rate	min. 1 ms (32 participants)
	min. 2 ms (64 devices)
	min. 4 ms (128 participants)
Conformance Class	B
Supported functions	FSU PROFINET controller
Device ID	0158 _{hex}

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Vendor ID	00B0 _{hex}
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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)
	C++
	C#
	Java
	Python
Simulink	

System requirements

Engineering tool	PLCnext Engineer
	Eclipse
	Visual Studio
	MATLAB® Simulink®
Application interface	OPC UA

Electrical properties

Real-time clock

Realtime clock	Yes
Description realtime clock	0.7 s/day = 8 ppm at 25 °C

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 ($\pm 5\%$))
Current draw	max. 504 mA (with 1 A at U_{BUS} for the I/Os and $U_L = 24$ V)
Power consumption	max. 12.1 W (with 1 A at U_{BUS} for the I/Os and $U_L = 24$ V)
Protective circuit	Surge protection; electronic
	Reverse polarity protection; electronic

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

Supply voltage	5 V DC (via bus base module)
Power supply unit	1 A

Connection data

Axioline F connector

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

Interfaces

Web server	yes
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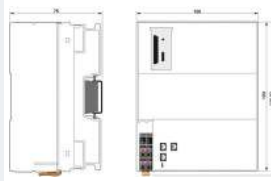
Axioline F local bus

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

Ethernet

Bus system	RJ45
Number of interfaces	3
Connection method	RJ45 jack
Note on the connection method	Auto negotiation and autocrossing
Transmission speed	10/100/1000 Mbps
Transmission physics	Ethernet in RJ45 twisted pair
Transmission length	max. 100 m
Protocols supported	HTTP HTTPS SFTP SNTP SNMP IPsec syslog OPC UA

Dimensions

Dimensional drawing	
Width	100 mm
Height	126.93 mm
Depth	75 mm
Note on dimensions	The depth applies when a TH 35-7.5 DIN rail is used (in accordance with EN 60715).

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 (observe derating)
	-25 °C ... 55 °C up to 3000 m above mean sea level (observe derating)
	55 °C (with max. 1 A on U _{Bus})
	55 °C ... 60 °C (only in conjunction with an Axioline F power module AXL F PWR 1H (Item no. 2688297))
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 % (according to DIN EN 61131-2)
Permissible humidity (storage/transport)	5 % ... 95 % (according to DIN EN 61131-2)
Shock (operation)	30g (in accordance with EN 60068-2-27/IEC 60068-2-27)
Vibration (operation)	5g (in accordance with EN 60068-2-6/IEC 60068-2-6)
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

Corrosive gas test

Identification	ISA S71.04.2013 G3 Harsh Group A, DIN EN 60068-2-60:2016-06 Method 4
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Industrial Cyber Security

Identification	Industrial IT Security, IACS Component
Certificate	IITS2 029429 0027 Rev. 00
Note	Configuration: Security Profile active

EMC data

Conformance with EMC directives	Immunity test in accordance with EN 61000-6-2/IEC 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 test in accordance with EN 61000-6-2/IEC 61000-6-2 Electromagnetic fieldsEN 61000-4-3/IEC 61000-4-3 Criterion A, Field intensity: 10 V/m
	Immunity test in accordance with EN 61000-6-2/IEC 61000-6-2 Fast transients (burst)EN 61000-4-4/IEC 61000-4-4 Criterion B, 2 kV
	Immunity test in accordance with EN 61000-6-2/IEC 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 test in accordance with EN 61000-6-2/IEC 61000-6-2 Conducted interferenceEN 61000-4-6/IEC 61000-4-6 Criterion A, Test voltage 10 V

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	Noise emission test in accordance with EN 61000-6-3/IEC 61000-6-3
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU

Mounting

Mounting type	DIN rail mounting
Connection method	Push-in connection

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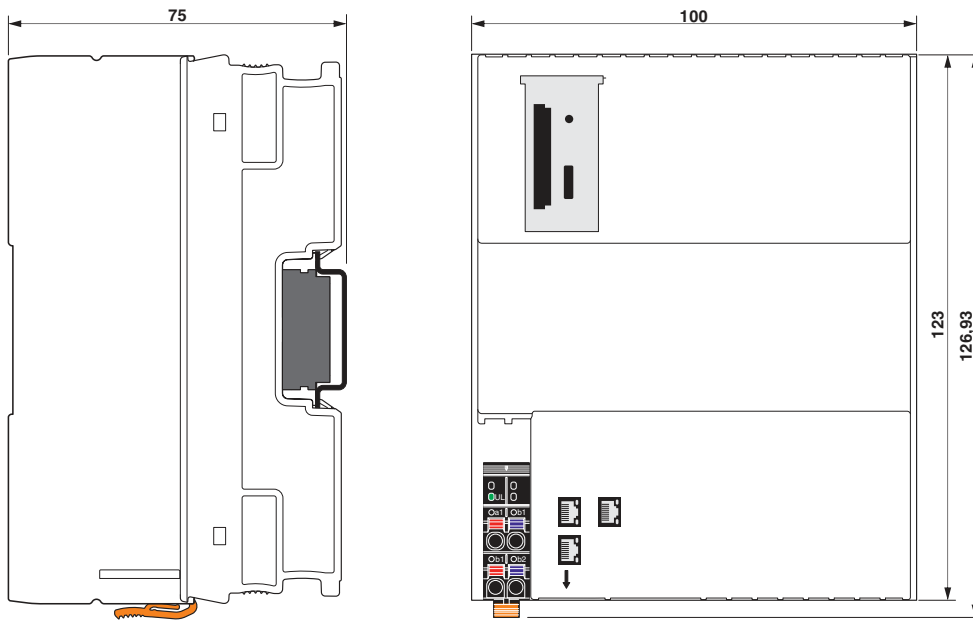
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Drawings

Dimensional drawing



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Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1069208>



EAC

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



DNV GL

Approval ID: TAA00000DF



LR

Approval ID: LR2001902TA



UL Listed

Approval ID: FILE E 238705



cUL Listed

Approval ID: FILE E 238705

BSH

Approval ID: 840

ABS

Approval ID: 20-2059154-PDA

PROFINET

Approval ID: Z13491

PROFINET

Approval ID: Z13492



TÜV SÜD Type tested

Approval ID: IITS2 029429 0027

PROFINET

Approval ID: Z13073

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PROFINET

Approval ID: Z13147

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 8.0	EC000236
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UNSPSC

UNSPSC 21.0	32151700
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Environmental product compliance

REACH SVHC

Lead 7439-92-1

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Accessories

PLCNEXT ENGINEER - Programming software

1046008

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Engineering software platform for Phoenix Contact automation controllers. PLCnext Engineer is IEC 61131-3-compliant and is available free of charge under Downloads. Its functionality can be extended using paid add-ins. To do this, open the license configurator via the "Configure" button.

SD FLASH 8GB PLCNEXT MEMORY - Program / configuration memory

1061701

<https://www.phoenixcontact.com/us/products/1061701>



Program and configuration memory for storing the application programs and other files in the file system of the PLC, plug-in, 8 GB.

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SD FLASH 2GB PLCNEXT MEMORY - Program / configuration memory

1043501

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Program and configuration memory for storing the application programs and other files in the file system of the PLC, plug-in, 2 GB.

SD FLASH 8GB PLCNEXT MEMORY LIC - Program / configuration memory

1151112

<https://www.phoenixcontact.com/us/products/1151112>



Program and configuration memory for storing the application programs, licenses, and other files in the file system of the PLC, plug-in, 8 GB.

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SD FLASH 32GB PLCNEXT MEMORY LIC - Program / configuration memory

1151111

<https://www.phoenixcontact.com/us/products/1151111>



Program and configuration memory for storing the application programs, licenses, and other files in the file system of the PLC, plug-in, 32 GB.

AXC F IL ADAPT - PLC extension module

1020304

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Right-alignable Inline adapter terminal (INTERBUS master) for one PLCnext Control device for setting up a PLCnext Technology Inline station

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AXC F XT ETH 1TX - PLC extension module

2403115

<https://www.phoenixcontact.com/us/products/2403115>



Left-alignable Ethernet interface, for connection to a compatible modular controller from the PLCnext Control range.

AXC F XT IB - PLC extension module

2403018

<https://www.phoenixcontact.com/us/products/2403018>



Left-alignable INTERBUS master, for the connection of INTERBUS remote bus components to a compatible modular controller from the PLCnext Control range.

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AXL F PWR 1H - Power module

2688297

<https://www.phoenixcontact.com/us/products/2688297>



Axioline F, Power module for the logic supply U_{Bus} , max. 4 A, degree of protection: IP20, including bus base module and Axioline F connector

AXC F 3 FAN MODULE - Fan

1173450

<https://www.phoenixcontact.com/us/products/1173450>



Fan module for the AXC F 3152

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