

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.
- Cybersecurity in accordance with IEC 62443

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
Trusted Platform Module	TPM 1.2
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

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Device ID	0158 _{hex}
Vendor ID	00B0 _{hex}

Function

Diagnostics display	No
Controller redundancy	yes
Safety function	No

Functionality

Programming languages supported	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

Connection method	Push-in connection
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Axioline F connector

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

Supported protocols	HTTP
	HTTPS
	PROFINET
	INTERBUS
	Modbus/TCP (via corresponding library)
	Modbus/RTU (via corresponding library)
	Ethernet/IP™  Adapter
	CANopen® (via corresponding library)
	DALI (via corresponding library)
	DALI-2 (via corresponding app)
	HART (via corresponding app)
	IO-Link® (via corresponding app)
	PROFIBUS
	MQTT (via corresponding app)
	OPC UA® Server
	OPC UA® Client (via corresponding app)
	DHCP (via corresponding app)
	SFTP
	SMTP (via corresponding app)
	SNTP (via corresponding app)
	SNMP (via corresponding app)
	DNS (via corresponding app)
	DNP3 (via corresponding app)
IEC 60870-5-1 (via corresponding library)	
IEC 60870-5-104 (via corresponding library)	
IPsec	
syslog	
Web server	yes

Axioline F local bus

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

Ethernet

Bus system	RJ45
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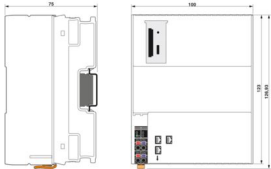
<https://www.phoenixcontact.com/us/products/1069208>

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

Service

Bus system	USB
Number of interfaces	1
Connection method	USB type C
Note on the connection method	Only device interface

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).

Material specifications

Color (Housing)	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 (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)

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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
Note	Configuration: Security Profile active

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, ± 6 kV contact discharge, ± 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, ± 2 kV
	Immunity test in accordance with EN IEC 61000-6-2 Transient overvoltage (surge)IEC 61000-4-5 Criterion B; DC supply lines: ± 0.5 kV/ ± 1.0 kV (symmetrical/asymmetrical), fieldbus cable shielding: ± 1.0 kV
	Immunity test in accordance with EN IEC 61000-6-2 Conducted interferenceIEC 61000-4-6 Criterion A, Test voltage 10 V
Electromagnetic compatibility	Noise emission test in accordance with EN IEC 61000-6-4 Class A
	Conformance with EMC Directive 2014/30/EU

Mounting

Mounting type	DIN rail mounting
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Classifications

ECLASS

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

ETIM

ETIM 9.0	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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