

AXC F 1152 - Controller



1151412

<https://www.phoenixcontact.com/sg/products/1151412>

Please be informed that the data shown in this PDF document is generated from our online catalog. Please find the complete data in the user documentation. Our general terms of use for downloads are valid.



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

Product description

The controllers of the PLCnext Control AXC F 1152 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
- 2x Ethernet interfaces (integrated switch)
- Increased resistance to EMI
- Extended temperature range of -25 °C ... 60 °C
- PROFINET support
- Connection to PROFICLOUD
- Numerous protocols supported such as: http, https, FTP, OPC UA, SNMP, SMTP, SQL, MySQL, DCP, etc.
- Connection to the PLCnext Store

Technical data

Notes

Utilization restriction

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

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

Display

Diagnostics display	No
---------------------	----

System properties

Processor	Arm® Cortex®-A9 1x 800 MHz
Flash memory	512 Mbyte (internal flash memory) SD card from Phoenix Contact (for external flash memory, see accessories)
Retentive data storage	48 kByte (NVRAM)
RAM	512 Mbyte DDR3 SDRAM

IoT capability: PROFICLOUD

IoT platform	PROFICLOUD
Supports cloud computing	yes

IEC 61131 runtime system

Program memory	8 Mbyte
Data storage system	12 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
Specification	Version 2.3
Update rate	min. 1 ms (4 devices)

AXC F 1152 - Controller



1151412

<https://www.phoenixcontact.com/sg/products/1151412>

	min. 4 ms (16 devices)
Conformance Class	A
Number of supported devices	max. 16 (at PROFINET controller)
Supported functions	MRP FSU PROFINET controller MRP PROFINET device
Device ID	0169 _{hex}
Vendor ID	00B0 _{hex}

Function

Diagnostics display	No
Controller redundancy	No
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	1.73 s/day = 20 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. 442 mA (with 1 A at U_{BUS} for the I/Os and $U_L = 24$ V)
Power consumption	max. 10.6 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})

AXC F 1152 - Controller



1151412

<https://www.phoenixcontact.com/sg/products/1151412>

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

Connection data

Connection method	Push-in connection
Cross section AWG	(converted acc. to IEC)

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
	Modbus/TCP (via corresponding library)
	Modbus/RTU (via corresponding library)
	Ethernet/IP (Adapter)
	CANopen [®] (via corresponding library)
	DALI (via corresponding library)
	DALI2 (via corresponding app)
	HART (via corresponding app)
	IO-Link (via corresponding app)
	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

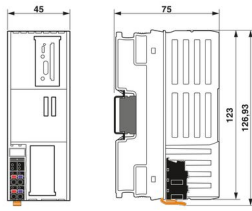
AXC F 1152 - Controller

1151412

<https://www.phoenixcontact.com/sg/products/1151412>

Transmission speed	100 Mbps
Ethernet	
Bus system	RJ45
Number of interfaces	2 (Switched internally)
Connection method	RJ45 jack
Note on the connection method	Auto negotiation and autocrossing
Transmission speed	10/100 Mbps (full duplex)
Transmission physics	Ethernet in RJ45 twisted pair
Transmission length	max. 100 m

Dimensions

Dimensional drawing	
Width	45 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

AXC F 1152 - Controller



1151412

<https://www.phoenixcontact.com/sg/products/1151412>

Identification	cULus
Certificate	E238705

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 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/ ± 1.0 kV (symmetrical/asymmetrical), fieldbus cable shielding: ± 1.0 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
	Noise emission test in accordance with EN 61000-6-4/IEC 61000-6-4
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU

Mounting

Mounting type	DIN rail mounting
Connection method	Push-in connection

Phoenix Contact 2023 © - all rights reserved
<https://www.phoenixcontact.com>

PHOENIX CONTACT SEA Pte. Ltd.
105 Eunos Avenue 3, #04-00
Singapore 409836
+65 6228 4900
marketing@phoenixcontact.com.sg