

# Controller - AXC F 2152



2404267

<https://www.phoenixcontact.com/us/products/2404267>

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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 PLCnext AXC F 2152 controller for the Axioline I/O system is fast, robust and easy to use. It has been 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

## Commercial Data

Item number	2404267
Packing unit	1 pc
Minimum order quantity	1 pc
Sales Key	D01
Product Key	DRADAC
Catalog Page	Page 10 (C-6-2019)
GTIN	4055626356280
Weight per Piece (including packing)	286.3 g
Weight per Piece (excluding packing)	223 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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#### Utilization restriction

CCCex note	Use in potentially explosive areas is not permitted in China.
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### Product properties

Type	modular
Product type	Controller

#### Insulation characteristics

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

#### Display

Diagnostics display	No
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### 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 ()
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 ( $U_{BUS}$ )

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

### Connection data

#### Axioline F connector

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

### Interfaces

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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 (full duplex)
Transmission physics	Ethernet in RJ45 twisted pair
Transmission length	max. 100 m
No. of channels	2
Protocols supported	HTTP
	HTTPS
	SFTP
	SNTP
	IPsec
	syslog
	OPC UA

## System properties

Processor	Arm® Cortex®-A9 2x 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

## IEC 61131 runtime system

Program memory	8 Mbyte
Data storage	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)

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	min. 16 ms (64 devices)
Conformance Class	A
Number of supported devices	max. 64 (at PROFINET controller)

## Function

Diagnostics display	No
Controller redundancy	yes
Safety function	No

## Software

### 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

## IoT capabilities

Platform: PROFICLOUD

Supports cloud computing	yes
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## Dimensions

Dimensional drawing	
Width	45 mm
Height	126.93 mm
Depth	75 mm

Note on dimensions	The depth is valid when a TH 35-7,5 DIN rail is used (according to EN 60715).
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## Material specifications

Color	gray
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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 <sub>Bus</sub> )
	> 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 (according to EN 60068-2-27/IEC 60068-2-27)
Vibration (operation)	5g (according to 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)

## Approval data

### ATEX

Designation	ATEX
Identification	□ II 3 G Ex ec IIC T4 Gc
Certificate	TÜV 19 ATEX 8356 X

### ATEX

Designation	IECEX
Identification	Ex ec IIC T4 Gc
Certificate	IECEX TUR 19.0031X

### ATEX

Designation	CCC / China-Ex
Identification	Ex ec IIC T4 Gc
Certificate	2021122304114448

### ATEX

Designation	UL, USA / Canada
Identification	cULus
Certificate	E238705

### ATEX

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Designation	UL Ex, USA / Canada
Identification	Class I, Zone 2, AEx nA IIC T4, Ex nA IIC Gc T4 Class I, Div. 2, Groups A, B, C, D
Certificate	E366272

## ATEX

Designation	Corrosive gas test
Identification	ISA S71.04.2013 G3 Harsh Group A, DIN EN 60068-2-60:2016-06 Method 4

## 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 fields EN 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: $\pm 0.5$ kV/ $\pm 0.5$ kV (symmetrical/asymmetrical), fieldbus cable shield: $\pm 1$ kV
	Immunity test in accordance with EN 61000-6-2/IEC 61000-6-2 Conducted interference EN 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
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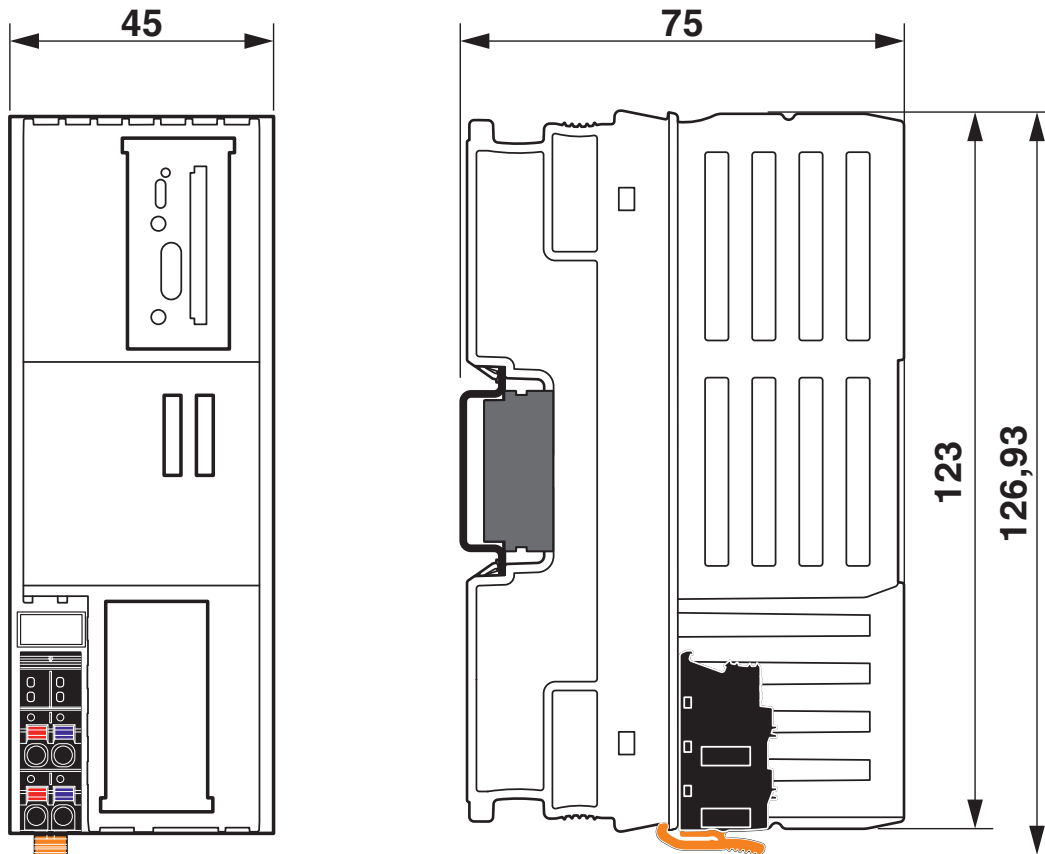
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## Drawings

Dimensional drawing



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## Approvals



**DNV GL**

Approval ID: TAA00000DF



**LR**

Approval ID: LR2001902TA



**KR**

Approval ID: HMB17372-AC002



**NK**

Approval ID: 14A006



**BV**

Approval ID: 36433/B4 BV



**PRS**

Approval ID: TE/1020/880590/21



**UL Listed**

Approval ID: FILE E 238705



**cUL Listed**

Approval ID: FILE E 238705

**BSH**

Approval ID: 840



**RINA**

Approval ID: ELE283021XG

**ABS**

Approval ID: 21-2187864-PDA



**cUL Listed**

Approval ID: FILE E 238705



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**UL Listed**

Approval ID: FILE E 238705

**PROFINET**

Approval ID: Z13024

**ABS**

Approval ID: 21-2187864-PDA

**BSH**

Approval ID: 840



**BV**

Approval ID: 36433/B4 BV



**DNV GL**

Approval ID: TAA00000DF



**KR**

Approval ID: HMB17372-AC002



**PRS**

Approval ID: TE/1020/880590/21

**ClassNK**

**NK**

Approval ID: 14A006



**RINA**

Approval ID: ELE283021XG



**LR**

Approval ID: LR2001902TA

**PROFINET**

Approval ID: Z13024

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## PROFINET

Approval ID: Z13146



## IECEX

Approval ID: IECEX TUR 19.0031X



## cUL Listed

Approval ID: FILE E 366272



## UL Listed

Approval ID: FILE E 366272



## cULus Listed

Approval ID: FILE E 366272



## IECEX

Approval ID: IECEX TUR 19.0031X



## ATEX

Approval ID: TÜV 19 ATEX 8356 X



## ATEX

Approval ID: TÜV 19 ATEX 8356 X

## cULus Listed

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## Classifications

### ECLASS

ECLASS-9.0	27242207
ECLASS-10.0.1	27242207
ECLASS-11.0	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
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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## Accessories

### Programming software

Programming software - PLCNEXT ENGINEER - 1046008

<https://www.phoenixcontact.com/us/products/1046008>



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.

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### Program / configuration memory

Program / configuration memory - SD FLASH 8GB PLCNEXT 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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## Program / configuration memory

Program / configuration memory - SD FLASH 2GB PLCNEXT MEMORY - 1043501

<https://www.phoenixcontact.com/us/products/1043501>



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

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## Program / configuration memory

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

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

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## Extension module

Extension module - AXC F IL ADAPT - 1020304

<https://www.phoenixcontact.com/us/products/1020304>



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

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## Extension module

Extension module - AXC F XT ETH 1TX - 2403115

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



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

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## Extension module

Extension module - AXC F XT IB - 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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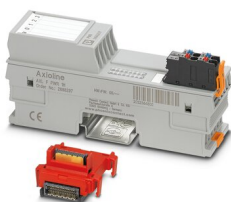
<https://www.phoenixcontact.com/us/products/2404267>



## Power module

Power module - AXL F PWR 1H - 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

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## Bus connector

Bus connector - AXC BS L 2 - 1064312

<https://www.phoenixcontact.com/us/products/1064312>



Bus base module for left-aligning the AXC F 2xxx controllers

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## Bus connector

Bus connector - AXL F BS BK - 2701422

<https://www.phoenixcontact.com/us/products/2701422>

Axioline F bus base module for housing type BK



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