

## Controller - AXC F 2152 - 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 AXCF 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

- ✓ PROFINET support
- ✓ Connection to PROFICLOUD
- ✓ Numerous protocols supported such as: http, https, FTP, OPC UA, SNMP, SMTP, SQL, MySQL, DCP, etc.
- ✓ Connection to PLCnext Store
- ✓ Up to 63 AXIO I/O modules can be mounted side by side
- ✓ 2 x Ethernet interfaces (integrated switch)
- ✓ Increased resistance to EMI
- ✓ Extended temperature range of -25°C ... +60°C
- ✓ Linux operating system
- ✓ Supports high-level languages



### Key Commercial Data

Packing unit	1 pc
GTIN	 4 055626 356280
GTIN	4055626356280
Weight per Piece (excluding packing)	280.000 g
Custom tariff number	85371091
Country of origin	Germany

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## Technical data

### Note

Utilization restriction	EMC: class A product, see manufacturer's declaration in the download area
	Use in potentially explosive areas is not permitted in China.

### Dimensions

Width	45 mm
Height	126.93 mm
Depth	75 mm

### 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 (order number 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)
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)
Shock	30g, 11 ms period, half-sine shock pulse, according to IEC 60068-2-27
Vibration (operation)	5g

### IoT capability

Supports cloud computing	yes
IoT platform	PROFICLOUD

### Control system

Engineering tool	PLCnext Engineer
	Eclipse
	MATLAB® Simulink®
Programming languages supported	Programming in acc. with IEC 61131-3
	C++
	C#
	Java
	Manufacturer-specific

### General data

Processor	Arm® Cortex®-A9 2x 800 MHz
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### General data

Operating system	Linux
RAM	512 Mbyte DDR3 SDRAM

### IEC 61131 runtime system

Engineering tool	PLCnext Engineer
	Eclipse
	MATLAB® Simulink®
Program memory	8 Mbyte
Mass storage	16 Mbyte
Retentive mass storage	48 kByte (NVRAM)
Realtime clock	Yes
Accuracy realtime clock	1.73 s/day = 20 ppm at 25 °C

### Fieldbus function

Amount of process data	max. 16384 Bit (per station)
	max. 8192 Bit (Axioline F local bus (input))
	max. 8192 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)
Program memory	8 Mbyte

### Data interfaces

Interface	Axioline F local bus
Number	1
Connection method	Bus base module
Transmission speed	100 Mbps
Interface	Ethernet
Number	2
Connection method	RJ45 jack
Transmission speed	10/100 Mbps (full duplex)
Protocols supported	HTTP
	HTTPS
	SFTP
	SNTP
	IPsec
	syslog
	OPC UA

### PROFINET

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### PROFINET

Device function	PROFINET controller, PROFINET device
Specification	Version 2.3
Update rate	min. 1 ms (4 devices)
	min. 16 ms (64 devices)

### Power supply

Typical current consumption	typ. 200 mA (without I/Os and $U_L = 24\text{ V}$ )
Max. current consumption	442 mA
Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC
Residual ripple	$\pm 5\%$
Power dissipation	max. 10.6 W

### Mechanical design

Weight	223 g
Note on weight specifications	with connector and bus base module
Diagnostics display	No
Controller redundancy	yes
Note on controller redundancy	applicative system redundancy possible
Safety function	No

### Standards and Regulations

Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU
Interference emission	Noise emission test as per EN 61000-6-4
Immunity to surge	Noise immunity test in accordance with EN 61000-6-2 Transient overvoltage (surge) EN 61000-4-5/IEC 61000-4-5 Criterion B, DC supply lines: $\pm 0.5\text{ kV}/\pm 0.5\text{ kV}$ (symmetrical/asymmetrical), fieldbus cable shield: $\pm 1\text{ kV}$
Immunity to burst	Noise immunity test in accordance with EN 61000-6-2 Fast transients (burst) EN 61000-4-4/IEC 61000-4-4 Criterion B, 2 kV
Immunity to EF	Noise immunity test in accordance with EN 61000-6-2 Electromagnetic fields EN 61000-4-3/IEC 61000-4-3 Criterion A, Field intensity: 10 V/m
Immunity to ESD	Noise immunity test in accordance with EN 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 to conducted interference	Noise immunity test in accordance with EN 61000-6-2 Conducted interference EN 61000-4-6/IEC 61000-4-6 Criterion A, Test voltage 10 V
Vibration (storage/transport)	5g
Shock	30g, 11 ms period, half-sine shock pulse, according to IEC 60068-2-27
Vibration (operation)	5g
Shock (operation)	10g (Bump endurance test according to DIN EN 60068-2-27)

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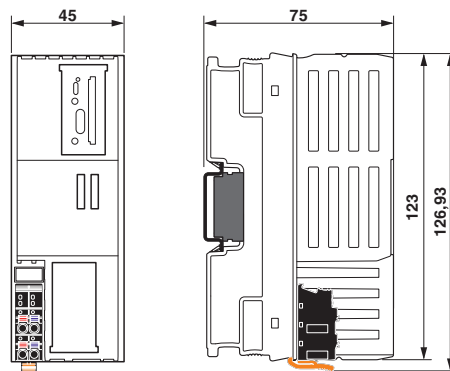
## Technical data

### Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For details about hazardous substances go to tab "Downloads", Category "Manufacturer's declaration"

## Drawings

Dimensional drawing



## Classifications

### eCl@ss

eCl@ss 10.0.1	27242207
eCl@ss 11.0	27242207
eCl@ss 4.0	27240602
eCl@ss 4.1	27240602
eCl@ss 5.0	27242700
eCl@ss 5.1	27242700
eCl@ss 6.0	27242200
eCl@ss 7.0	27242207
eCl@ss 9.0	27242207

### ETIM

ETIM 3.0	EC001045
ETIM 4.0	EC001435
ETIM 6.0	EC000236
ETIM 7.0	EC000236

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## Approvals

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ABS / BSH / RINA / PRS / BV / NK / KR / LR / DNV GL / UL Listed / cUL Listed / PROFINET / LR / UL Listed / cUL Listed / NK / ABS / PRS / DNV GL / BV / RINA / BSH / PROFINET / KR

#### Ex Approvals

IECEX / UL Listed / cUL Listed / ATEX / IECEX / UL Listed / cUL Listed / ATEX

### Approval details

ABS		<a href="http://www.eagle.org/eagleExternalPortalWEB/">http://www.eagle.org/eagleExternalPortalWEB/</a>	18-HG1767360-PDA
BSH			840
RINA		<a href="http://www.rina.org/en">http://www.rina.org/en</a>	ELE030120XG
PRS		<a href="http://www.prs.pl/">http://www.prs.pl/</a>	TE/1117/880590/20
BV		<a href="http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials">http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials</a>	36433/B2 BV
NK		<a href="http://www.classnk.or.jp/hp/en/">http://www.classnk.or.jp/hp/en/</a>	14A006
KR		<a href="http://www.krs.co.kr/eng/main/main.aspx">http://www.krs.co.kr/eng/main/main.aspx</a>	HMB17372-AC002
LR		<a href="http://www.lr.org/en">http://www.lr.org/en</a>	LR2001902TA




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## Approvals

DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAA00000DF
UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
PROFINET			Z13024
LR		<a href="http://www.lr.org/en">http://www.lr.org/en</a>	LR2001902TA
UL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
cUL Listed		<a href="http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm">http://database.ul.com/cgi-bin/XYV/template/LISEXT/1FRAME/index.htm</a>	FILE E 238705
NK		<a href="http://www.classnk.or.jp/hp/en/">http://www.classnk.or.jp/hp/en/</a>	14A006
ABS		<a href="http://www.eagle.org/eagleExternalPortalWEB/">http://www.eagle.org/eagleExternalPortalWEB/</a>	18-HG1767360-PDA
PRS		<a href="http://www.prs.pl/">http://www.prs.pl/</a>	TE/1117/880590/20
DNV GL		<a href="https://approvalfinder.dnvgl.com/">https://approvalfinder.dnvgl.com/</a>	TAA00000DF

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## Approvals

BV		<a href="http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials">http://www.veristar.com/portal/veristarinfo/generalinfo/approved/approvedProducts/equipmentAndMaterials</a>	36433/B2 BV
RINA		<a href="http://www.rina.org/en">http://www.rina.org/en</a>	ELE030120XG
BSH			840
PROFINET			Z13024
KR		<a href="http://www.krs.co.kr/eng/main/main.aspx">http://www.krs.co.kr/eng/main/main.aspx</a>	HMB17372-AC002

## Accessories

### Accessories

#### DIN rail connector

Bus connector - AXC BS L 2 - 1064312



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

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#### I/O component

Extension module - AXC F IL ADAPT - 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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### Accessories

#### Extension module - AXC F XT ETH 1TX - 2403115



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

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#### Extension module - AXC F XT IB - 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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#### Power module - AXL F PWR 1H - 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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### Parameterization memory

#### Program / configuration memory - SD FLASH 8GB PLCNEXT MEMORY - 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 - SD FLASH 2GB PLCNEXT MEMORY - 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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### Accessories

#### Programming

##### Software - PLCNEXT ENGINEER - 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. [Kostenloser Download PLCnext Engineer Software](https://phoe.co/download_plcnext_engineer)

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#### Programming cable

##### Connecting cable - CAB-USB C/ USB C/1,8M - 1021809



Connecting cable, for connecting the controller to a PC from USB C to USB C

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##### Connecting cable - CAB-USB A/ USB C/1,8M - 2404677



Connecting cable, for connecting the controller to a PC from USB A to USB C

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#### Spare parts

##### Bus connector - AXL BS BK - 2701422



Axoline F bus base module for housing type BK