

AXC F 2152 - Controller



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
- Cybersecurity in accordance with IEC 62443

Commercial data

Item number	2404267
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR09
Product key	DRADAC
Catalog page	Page 10 (C-6-2019)
GTIN	4055626356280
Weight per piece (including packing)	290 g
Weight per piece (excluding packing)	223 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	Arm® Cortex®-A9 2x 800 MHz
Trusted Platform Module	TPM 1.2
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
Update rate	min. 1 ms (4 devices)
	min. 16 ms (64 devices)
Conformance Class	B
Number of supported devices	max. 64 (at PROFINET controller)
Supported functions	MRP FSU PROFINET controller

AXC F 2152 - Controller



2404267

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

	MRP PROFINET device
Device ID	0142 _{hex}
Vendor ID	00B0 _{hex}

Function

Diagnostics display	No
Controller redundancy	yes
Safety function	No

Functionality

Programming languages supported	Symbolic flowchart (SFC)
	Instruction list (IL)
	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})


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 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

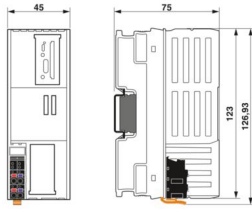
AXC F 2152 - Controller

2404267

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

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).

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)

Approvals

ATEX

AXC F 2152 - Controller



2404267

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Identification	Ex ec IIC T4 Gc
Certificate	TÜV 19 ATEX 8356 X

IECEX

Identification	Ex ec IIC T4 Gc
Certificate	IECEX TUR 19.0031X

CCC / China-Ex

Identification	Ex ec IIC T4 Gc
Certificate	CCC

UL Ex, USA / Canada

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

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 fields IEC 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 interference IEC 61000-4-6 Criterion A, Test voltage 10 V
	Noise emission test in accordance with EN IEC 61000-6-4 Class A
Electromagnetic compatibility	Conformance with EMC Directive 2014/30/EU

Mounting

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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
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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