AXL F EX IS DO4 SD 21-60 XC 1F - Digital module

1086902

https://www.phoenixcontact.com/us/products/1086902

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Axioline F, Digital output module, Digital outputs: 4, 21 V, connection technology: 2-conductor, Extreme conditions version, Intrinsically safe, Solenoid drive, transmission speed in the local bus: 100 Mbps, degree of protection: IP20, including bus base module and Axioline F connectors

Product description

The module is an Axioline F I/O module for use in the Axioline F modular I/O system. The module is a modular I/O device that can be affixed to the Axioline F local bus, to communicate I/O data up to the Axioline F controller or bus coupler, which forms the head of the station. As an intrinsic safety I/O module, this device allows direct connection from intrinsically safe field I/Os to the terminals of the module. The module digital output characteristics of 21 V DC and 60 mA allow the connection of up to four solenoid driven, digital output signals.

Your advantages

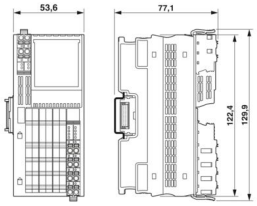
- Four 21 V DC - 60 mA digital output-powered control signals for solenoid drives
- Intrinsically safe digital outputs with connection to Zone 1, Zone 0 or Division 1
- Can be used under extreme ambient conditions
- Extended temperature range of -40 °C ... +70 °C (see “Tested successfully: use under extreme ambient conditions” in the data sheet)

Commercial data

Item number	1086902
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	DR02
Product key	DRI2E4
GTIN	4055626880679
Weight per piece (including packing)	390 g
Weight per piece (excluding packing)	264.1 g
Customs tariff number	85389099
Country of origin	US

Technical data

Dimensions

Dimensional drawing	
Width	53.6 mm
Height	129.9 mm
Depth	77.14 mm
Note on dimensions	The depth applies when a TH 35-7.5 DIN rail is used (in accordance with EN 60715).

Notes

Utilization restriction

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

Utilization restriction

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

Material specifications

Color	traffic grey A RAL 7042

Interfaces

Axioline F local bus

No. of channels	2
Connection method	Bus base module
Transmission speed	100 Mbps

System properties

Module

Input address area	0 Byte
Output address area	1 Byte
Required parameter data	12 Byte
Required configuration data	6 Byte

Output data

Digital:

Output name	Digital outputs

Connection method	Push-in connection
Connection technology	2-conductor
Number of outputs	4
Output voltage	21 V
Maximum output current per channel	60 mA
Nominal output voltage	21 V

Product properties

Product type	I/O component
Product family	Axioline F
Type	block modular
Scope of delivery	including bus base module and Axioline F connectors
Special properties	Solenoid drive
	Extreme conditions version
	Intrinsically safe

Electrical properties

Potentials: Axioline F local bus supply (U_{Bus})

Supply voltage	5 V DC (via bus base module)
Current draw	max. 60 mA
	typ. 40 mA

Potentials: Supply for digital output modules (U_O)

Supply voltage	24 V DC
Supply voltage range	19.2 V DC ... 30 V DC (including all tolerances, including ripple)
Current draw	max. 420 mA

Electrical isolation/isolation of the voltage ranges

Test voltage: 5 V supply of the local bus (U_{Bus}) / 24 V supply (I/Os)	500 V AC, 50 Hz, 1 min.
Test voltage: 5 V supply of the local bus (U_{Bus}) / functional ground	500 V AC, 50 Hz, 1 min.
Test voltage: 24 V supply (I/O) / functional ground	500 V AC, 50 Hz, 1 min.
Test voltage: Field to functional earth	500 V AC, 50 Hz, 1 min.
Test voltage: Field to 5V or 24V supplies	1500 V AC, 50 Hz, 1 min.

Connection data

Connection technology

Connection name	Axioline F connector
Note on the connection method	Please observe the information provided on conductor cross sections in the “Axioline F: system and installation” user manual.

Conductor connection

Connection method	Push-in connection
Conductor cross section rigid	0.2 mm² ... 1.5 mm²
Conductor cross section flexible	0.2 mm² ... 1.5 mm²

Conductor cross section AWG	24 ... 16
Stripping length	8 mm

Axioline F connector

Connection method	Push-in connection
Note on the connection method	Please observe the information provided on conductor cross sections in the “Axioline F: system and installation” user manual.
Conductor cross section, rigid	0.2 mm² ... 1.5 mm²
Conductor cross section, flexible	0.2 mm² ... 1.5 mm²
Conductor cross section AWG	24 ... 16
Stripping length	8 mm

Environmental and real-life conditions

Ambient conditions

Ambient temperature (operation)	-25 °C ... 60 °C (Standard)
	-40 °C ... 70 °C (Extended, see section “Tested successfully: use under extreme ambient conditions” in the data sheet.)
Degree of protection	IP20
Air pressure (operation)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Air pressure (storage/transport)	70 kPa ... 106 kPa (up to 3000 m above sea level)
Ambient temperature (storage/transport)	-40 °C ... 85 °C
Permissible humidity (operation)	5 % ... 95 % (non-condensing)
Permissible humidity (storage/transport)	5 % ... 95 % (non-condensing)

Standards and regulations

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

Approvals

ATEX

Identification	II 3(1) G Ex ec [ia IIB Ga] IIC T4 Gc II (1) D [Ex ia Da] IIIC
Certificate	DEMKO 20 ATEX 2370X

IECEx

Identification	Ex ec [ia IIB Ga] IIC T4 Gc [Ex ia Da] IIIC
Certificate	IECEx UL 20.0044X

UKCA Ex (UKEX)

Identification	II 3(1) G Ex ec [ia IIB Ga] IIC T4 Gc II (1) D [Ex ia Da] IIIC
Certificate	UL22UKEX2508X

UL, USA/Canada

Identification	cULus
Certificate	E238705

UL Ex, USA / Canada

Identification	Class I, Division 2, Groups A, B, C, D, T4
	Intrinsically safe outputs for: Class I, Groups C, D; Class II, Groups E, F, G; Class III; [Ex ia] Haz loc
	Class I, Zone 2, AEx ec [ia IIB Ga] IIC T4 Gc
	[AEx ia Da] IIIC
	Ex ec [ia IIB Ga] IIC T4 Gc
	[Ex ia Da] IIIC
Certificate	E196811

CCC / China-Ex

Identification	Ex ec [ia IIB Ga] IIC T4 Gc

CCC / China-Ex

Identification	[Ex ia Da] IIIC

Ex data

UL, USA / Canada	Ind. Cont. Eq. (E238705) also Listed Ind. Cont. Eq. for haz. loc. E196811 Install in: Class I, Div. 2, Groups A, B, C, D T4 Intrinsically safe outputs for: Class I, Groups C, D; Class II, Groups E, F, G; Class III; [Ex ia] Haz loc Class I, Zone 2, AEx ec [ia IIB Ga] IIC T4 Gc [AEx ia Da] IIIC Ex ec [ia IIB Ga] IIC T4 Gc [Ex ia Da] IIIC

Mounting

Mounting type	DIN rail mounting

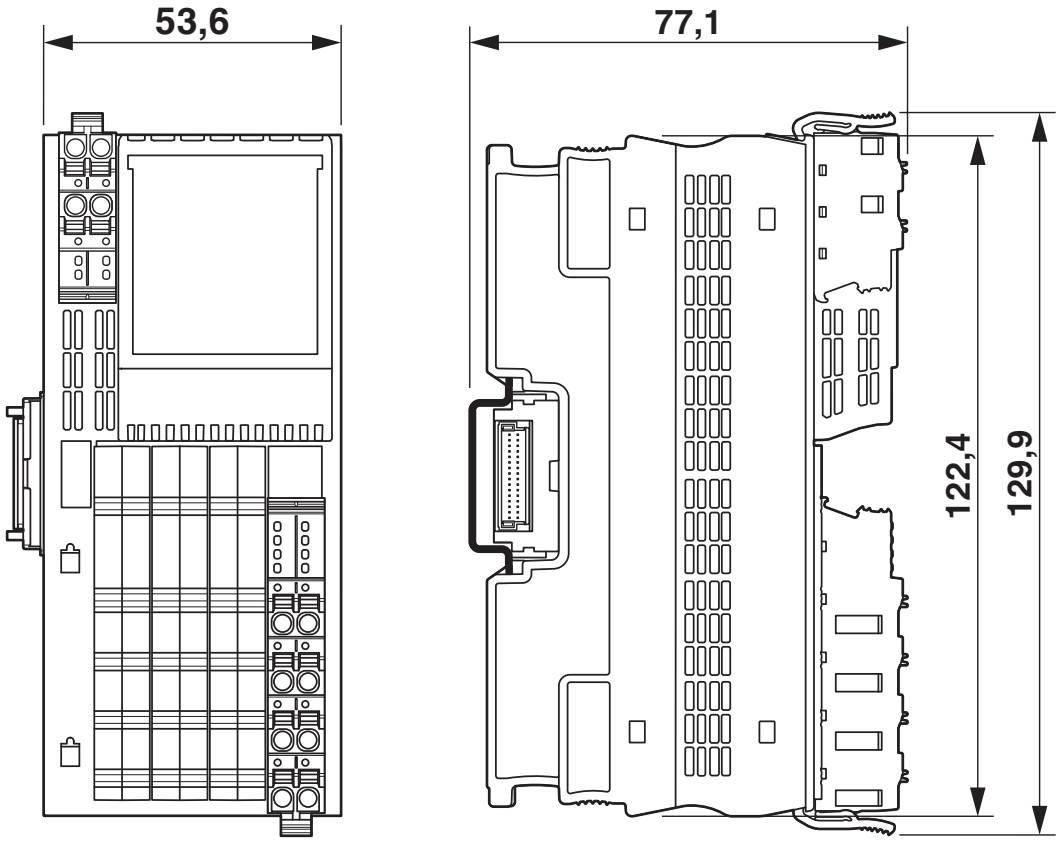
Ex data

Safety data

Max. output voltage U_o	24.8 V
Max. output current I_o	180 mA
Max. output power P_o	1116 mW
Safety-related maximum voltage U_m	250 V
C/IIB, IIIC: Max. external inductivity L_o / Max. external capacitance C_o	2.779 mH / 0.86 µF
D/IIA, E, F, G, Class III: Max. external inductivity L_o / Max. external capacitance C_o	7.168 mH / 3.05 µF

Drawings

Dimensional drawing



Approvals

To download certificates, visit the product detail page: https://www.phoenixcontact.com/us/products/1086902

UL Listed
Approval ID: FILE E 238705

cUL Listed
Approval ID: FILE E 238705

IECEx
Approval ID: IECEx UL 20.0044X

cUL Listed
Approval ID: FILE E196811

UL Listed
Approval ID: FIILE E196811

ATEX
Approval ID: DEMKO 20 ATEX 2370X

CCC
Approval ID: 2021122316114727

UKCA-EX
Approval ID: UL22UKEX2508X

cULus Listed

cULus Listed

Classifications

ECLASS

ECLASS-11.0	27242604
ECLASS-12.0	27242604
ECLASS-13.0	27242604

ETIM

ETIM 9.0	EC001599

UNSPSC

UNSPSC 21.0	32151600

Environmental product compliance

EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	7(a), 7(c)-I

China RoHS

Environment friendly use period (EFUP)	EFUP-25
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	6ac8b0a5-86b7-41d6-808c-27f8f27fa071

Accessories

AXL F BS F - Bus connector

2688129

https://www.phoenixcontact.com/us/products/2688129



Axioline F bus base module for housing type F

AXL SHIELD SET - Shield connection

2700518

https://www.phoenixcontact.com/us/products/2700518



Axioline shield connection set (contains 2 shield bus holders and 2 SK 5 shield connection clamps)

ZB 20,3 AXL UNPRINTED - Zack marker strip

0829579

https://www.phoenixcontact.com/us/products/0829579



Zack marker strip for Axioline F (device labeling), in 2 x 20.3 mm pitch, unprinted, 25-section, for individual labeling with B-STIFT 0.8, X-PEN, or CMS-P1-PLOTTER

ZBF 10/5,8 AXL UNPRINTED - Zack Marker strip, flat

0829580

https://www.phoenixcontact.com/us/products/0829580



Zack Marker strip, flat, Strip, white, unlabeled, can be labeled with: PLOTMARK, CMS-P1-PLOTTER, mounting type: snapped, for terminal block width: 10.15 mm, lettering field size: 4 x 10, 15 x 5 mm, 1 x 5.8 x 5 mm, Number of individual labels: 50

EMT (35X46)R - Insert label

0801604

https://www.phoenixcontact.com/us/products/0801604



Insert label, for marking the Axioline F series from Phoenix Contact, Roll, white, unlabeled, can be labeled with: THERMOMARK E.300 (D)/600 (D), THERMOMARK ROLL 2.0, THERMOMARK ROLL, THERMOMARK ROLL X1, THERMOMARK ROLLMASTER 300/600, THERMOMARK X1.2, mounting type: insert, lettering field size: 35 x 46 mm, Number of individual labels: 500

AXL F/P IO EX PP - Separating plate

1100201

https://www.phoenixcontact.com/us/products/1100201

Axioline F/P partition plate for intrinsically safe modules



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