

# AXL P EX IS AO4 HART 1F - Analog module



1087082

<https://www.phoenixcontact.com/pc/products/1087082>

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Axioline P, Analog output module, Analog outputs: 4 (HART), 0 mA ... 20 mA, 4 mA ... 20 mA, connection technology: 2-conductor, transmission speed in the local bus: 100 Mbps, HART functionality, Intrinsically safe, degree of protection: IP20, including bus base module and connectors

## Product description

The module is an Axioline P I/O module for use in the Axioline P modular I/O system. The module is a modular I/O device that can be affixed to the Axioline P local bus, to communicate I/O data up to the Axioline P 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 is fully hot-swappable and can be removed while under power. The module allows the connection of up to four HART devices. The analog output I/O module with HART capabilities manages analog output and HART data to and from the field I/O terminals and makes this information available to the bus coupler through the Axioline P local bus.

## Your advantages

- 4 analog output-powered control signals for HART
- Current range: 4 mA ... 20 mA and 0 mA ... 20 mA
- Cyclic access to PV, SV, TV, QV, and Loop Current
- Temperature range: -40 °C ... +70 °C
- Hot-swappable
- Intrinsically safe analog inputs with connection to Zone 1, Zone 0 or Division 1

## Commercial data

Item number	1087082
Packing unit	1 pc
Minimum order quantity	1 pc
Product key	DRIP42
GTIN	4055626882550
Weight per piece (including packing)	382.1 g
Weight per piece (excluding packing)	236.1 g
Customs tariff number	85176200
Country of origin	US

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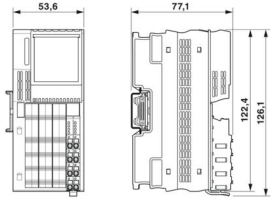


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## Technical data

### Dimensions

Dimensional drawing	
Width	53.6 mm
Height	126.1 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

#### Note on application

Note on application	Only for industrial use
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#### 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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### Material specifications

Color	traffic grey A RAL 7042
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### Interfaces

#### Axioline P local bus

Connection method	Connection for bus base module
Transmission speed	100 Mbps

### Output data

#### Analog:

Output name	Analog outputs
Connection method	Push-in connection
Connection technology	2-conductor
Note regarding the connection technology	shielded, twisted pair
Number of outputs	4 (HART)
Current output signal	0 mA ... 20 mA 4 mA ... 20 mA

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## Product properties

Product type	I/O component
Product family	Axioline P
Type	block modular
Mounting position	any (no temperature derating)
Scope of delivery	including bus base module and connectors
Special properties	HART functionality
	Intrinsically safe

## Data management status

Article revision	02
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## Insulation characteristics

Overvoltage category	II
Pollution degree	2

## Electrical properties

### Potentials: Supply voltage ( $U_L$ )

Supply voltage	24 V DC (via bus base module)
Supply voltage range	19.2 V DC ... 30 V DC
Current draw	max. 160 mA (via bus base module)

### Potentials: Axioline P local bus supply ( $U_{BUS}$ )

Supply voltage	5 V DC (via bus base module)
Current draw	max. 135 mA

### Electrical isolation/isolation of the voltage ranges

Test voltage: 5 V supply of the local bus ( $U_{BUS}$ ) / functional ground	500 V AC, 62 Hz, 1 min.
Test voltage: 24 V supply (I/O) / functional ground	500 V AC, 62 Hz, 1 min.
Test voltage: Field to functional earth	500 V AC, 62 Hz, 1 min.
Test voltage: Field to 5 V and 24 V supplies	1500 V AC, 62 Hz, 1 min.

## Connection data

### Connection technology

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

### Conductor connection

Connection method	Push-in connection
Conductor cross section rigid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	24 ... 16
Stripping length	8 mm

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## Axioline P connector

Connection method	Push-in connection
Note on the connection method	Please observe the information provided on conductor cross sections in the "Axioline P: system and installation" user manual.
Conductor cross section, rigid	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section, flexible	0.2 mm <sup>2</sup> ... 1.5 mm <sup>2</sup>
Conductor cross section AWG	24 ... 16
Stripping length	8 mm

## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP20
Ambient temperature (operation)	-40 °C ... 70 °C (Standard)
Degree of protection	IP20
Air pressure (operation)	70 kPa ... 106 kPa (up to 2000 m above sea level)
Air pressure (storage/transport)	70 kPa ... 106 kPa (up to 2000 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)
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## Approvals

### ATEX

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

### IECEX

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

### UKCA Ex (UKEX)

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

### UL, USA/Canada

Identification	cULus
Certificate	E238705

### UL Ex, USA / Canada

Class I, Division 2, Groups A, B, C, D, T4

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

## CCC / China-Ex

Identification	Ex ec [ia Ga] IIC T4 Gc
	[Ex ia Da] IIIC

## Ex data

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

Mounting type	DIN rail mounting
Mounting position	any (no temperature derating)

## Ex data

### Safety data

Max. output voltage $U_o$	24.8 V
Max. output current $I_o$	86.7 mA
Max. output power $P_o$	538 mW
Safety-related maximum voltage $U_m$	250 V
A, B / IIC: Max. external inductivity $L_o$ / Max. external capacitance $C_o$	4.1 mH / 0.112 $\mu$ F
C/II B, IIIC: Max. external inductivity $L_o$ / Max. external capacitance $C_o$	18.29 mH / 0.859 $\mu$ F
D/II A, E, F, G, Class III: Max. external inductivity $L_o$ / Max. external capacitance $C_o$	37.21 mH / 3.049 $\mu$ F

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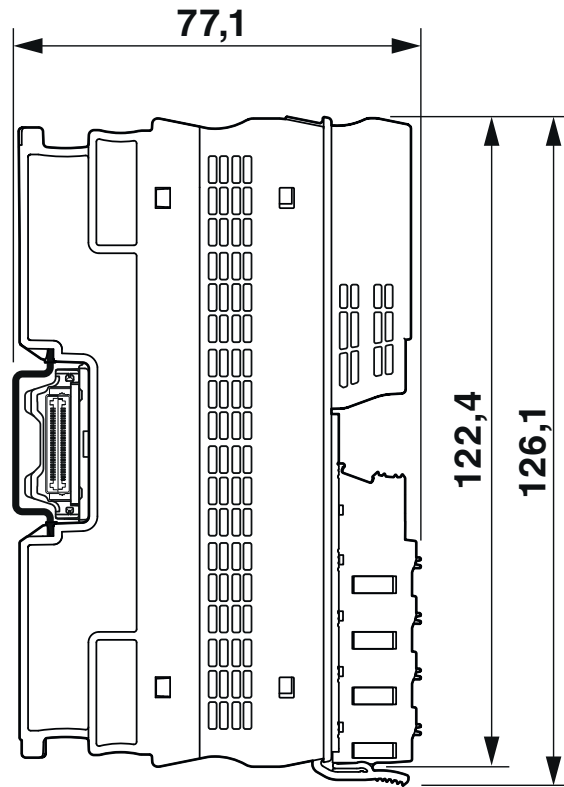
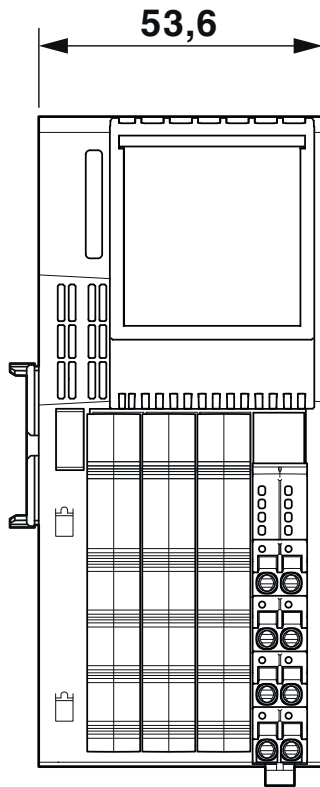


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## Drawings

Dimensional drawing



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/pc/products/1087082>



### UL Listed

Approval ID: File E238705



### cUL Listed

Approval ID: E238705



### IECEX

Approval ID: IECEX UL 20.0044X



### cUL Listed

Approval ID: FILE E196811



### UL Listed

Approval ID: FILE E196811



### ATEX

Approval ID: DEMKO 20 ATEX 2370X



### CCC

Approval ID: 2021122316114727



### UKCA-EX

Approval ID: UL22UKEX2508X

cULus Listed

cULus Listed

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## Classifications

### ECLASS

ECLASS-11.0	27242601
ECLASS-12.0	27242601
ECLASS-13.0	27242601

### ETIM

ETIM 9.0	EC001596
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### UNSPSC

UNSPSC 21.0	32151600
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## 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	dddde763-22c7-4eed-9754-87faeab1e0e0

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## Accessories

### AXL P BS F2 - Bus connector

1052428

<https://www.phoenixcontact.com/pc/products/1052428>



Axioline P bus base module for housing type F2

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### AXL SHIELD SET - Shield connection

2700518

<https://www.phoenixcontact.com/pc/products/2700518>



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

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## AXL F/P IO EX PP - Separating plate

1100201

<https://www.phoenixcontact.com/pc/products/1100201>

Axioline F/P partition plate for intrinsically safe modules



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## AXL P TERM PAIR - Terminal block

2316402

<https://www.phoenixcontact.com/pc/products/2316402>

Axioline P terminator pair



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## ZB 20,3 AXL UNPRINTED - Zack marker strip

0829579

<https://www.phoenixcontact.com/pc/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

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## AXL P TERM PAIR - Terminal block

2316402

<https://www.phoenixcontact.com/pc/products/2316402>



Axioline P terminator pair

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## AXL P BS F2 - Bus connector

1052428

<https://www.phoenixcontact.com/pc/products/1052428>

Axioline P bus base module for housing type F2



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