

# AXL P EX IS AI8 HART 1F - Analog module



1052431

<https://www.phoenixcontact.com/us/products/1052431>

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Axioline P, Analog input module, Active analog inputs: 8 (HART), 4 mA ... 20 mA, connection technology: 2-conductor, transmission speed in the local bus: 100 Mbps, HART functionality, Intrinsically safe, degree of protection: IP20

## 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/O to the terminals of the module. The analog input I/O module with HART capabilities collects analog input and HART data from the field I/O terminals and makes this information available to the bus coupler through the Axioline P local bus. The active analog input module allows the connection of up to eight HART enabled, passive analog input signals. The module is fully hot-swappable on the Axioline P local bus, which also provides power to the module.

## Your advantages

- Active analog input module
- Sources power for up to 8 HART enabled, passive analog input signals
- Connection of sensors in 2-conductor technology
- Current range: 4 mA ... 20 mA
- Intrinsically safe analog inputs with connection to Zone 1, Zone 0 or Division 1
- Can be used under extreme ambient conditions
- Temperature range: -40 °C ... +70 °C
- Hot-swappable

## Commercial data

Item number	1052431
Packing unit	1 pc
Sales key	DR06
Product key	DRIP41
GTIN	4055626675947
Weight per piece (including packing)	383.3 g
Weight per piece (excluding packing)	261 g
Customs tariff number	85176200
Country of origin	US

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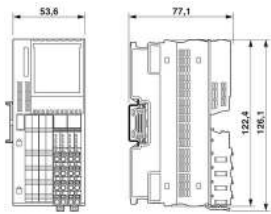


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## Technical data

### 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

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
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### Interfaces

Axioline P local bus	
Connection method	Connection for bus base module
Transmission speed	100 Mbps

### Input data

Analog	
Input name	Active analog inputs
Description of the input	HART enabled, active analog input signals
Number of inputs	8 (HART)
Connection method	Push-in connection
Connection technology	2-conductor
Note regarding the connection technology	shielded, twisted pair
Current input signal	4 mA ... 20 mA
Protective circuit	Polarity reversal protection of the inputs

### Product properties

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Type	block modular
Product type	I/O component
Product family	Axioline P
Mounting position	any (no temperature derating)

## Insulation characteristics

Overvoltage category	II
Pollution degree	2

## Electrical properties

### Potentials: Supply of the logic voltage $U_L$

Supply voltage range	19.2 V DC ... 30 V DC (via bus base module ( $U_L$ ) at AXL P BK...)
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### Potentials: Supply of the Axioline P local bus $U_{Bus}$

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

### Potentials: Axioline P extension module supply voltage

Supply voltage	$U_L$ (via bus base module)
Current draw	max. 260 mA (via bus base module)

## 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

### 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
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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

### 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 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
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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 $I_o$	85.8 mA
Max. output power $P_o$	532 mW
Safety-related maximum voltage $U_m$	250 V

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A, B / IIC ((A, B, or IIC)): Max. external inductivity $L_o$ / Max. external capacitance $C_o$	/ 0.113 $\mu$ F
C/IIB, IIIC ((C, IIB, or IIIC)): Max. external inductivity $L_o$ / Max. external capacitance $C_o$	/ 0.86 $\mu$ F
D/IIA, E, F, G, Class III ((D, E, F, G, Class III, or IIA)): Max. external inductivity $L_o$ / Max. external capacitance $C_o$	/ 3.05 $\mu$ F
A, B / IIC ((A, B, or IIC)): Max. external inductivity $L_o$ / Max. external capacitance $C_o$	2.95 mH
C/IIB, IIIC ((C, IIB, or IIIC)): Max. external inductivity $L_o$ / Max. external capacitance $C_o$	18.95 mH
D/IIA, E, F, G, Class III ((D, E, F, G, Class III, or IIA)): Max. external inductivity $L_o$ / Max. external capacitance $C_o$	30.95 mH

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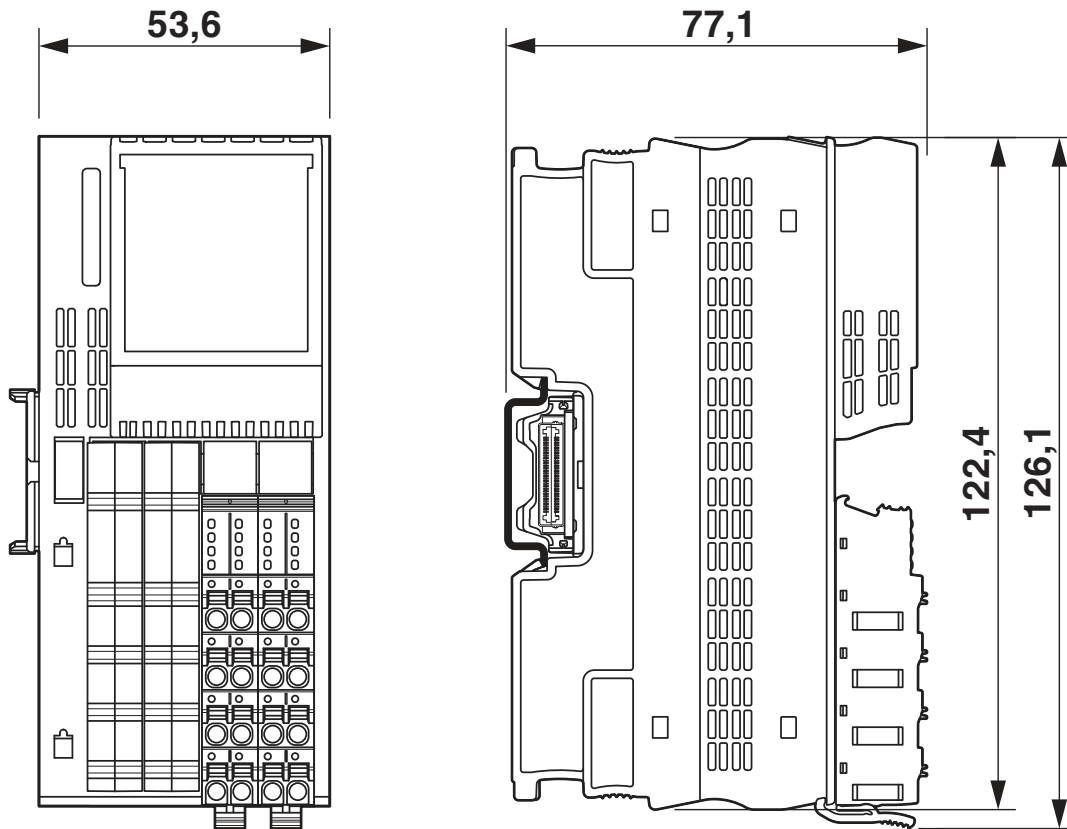


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## Drawings

Dimensional drawing



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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1052431>



**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 E 196811



**UL Listed**

Approval ID: FILE E 196811



**ATEX**

Approval ID: DEMKO 20 ATEX 2370X



**CCC**

Approval ID: 2021122316114727

**cULus Listed**

**cULus Listed**

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## Classifications

### ECLASS

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

### ETIM

ETIM 8.0	EC001596
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### UNSPSC

UNSPSC 21.0	32151600
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## Environmental product compliance

REACH SVHC	Lead 7439-92-1
	Dechlorane Plus
China RoHS	Environmentally Friendly Use Period = 25;
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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## Accessories

### AXL P BS F2 - Bus connector

1052428

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

Axioline F/P partition plate for intrinsically safe modules



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## AXL P TERM PAIR - Termination block

2316402

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

Axioline P terminator pair



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## 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

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## AXL P TERM PAIR - Termination block

2316402

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Axioline P terminator pair

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## AXL P BS F2 - Bus connector

1052428

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

Axioline P bus base module for housing type F2



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