



IECEx Certificate of Conformity

INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification System for Explosive Atmospheres

for rules and details of the IECEx Scheme visit www.iecex.com

Certificate No.:	IECEx UL 20.0002X	Page 1 of 4	<u>Certificate history:</u>
Status:	Current	Issue No: 6	Issue 5 (2023-06-28)
Date of Issue:	2024-08-21		Issue 4 (2021-10-27)
			Issue 3 (2021-03-30)
			Issue 2 (2020-11-10)
Applicant:	PHOENIX CONTACT GmbH & Co. KG Flachmarktstraße 8 D-32825 Blomberg Germany		Issue 1 (2020-08-25)
			Issue 0 (2020-02-19)
Equipment:	I/O Modules, AXL F AI8 HART XC 1F, AXL F DI16 NAM XC 1F, AXL P DI16 NAM 1F, AXL P DI16/2 1F, AXL P AI8 HART 1F, AXL P AO4 HART 1F, AXL F AO4 HART XC 1F, AXL P AI8 P HART 1F, AXL F AI8 P HART XC 1F, AXL P RTD8 1F.		
Optional accessory:			
Type of Protection:	Increased Safety "ec"		
Marking:	Ex ec IIC T4 Gc		
	-25 °C to +60 °C (AXL F AI8 HART XC 1F, AXL F DI16 NAM XC 1F, AXL F AO4 HART XC 1F, AXL F AI8 P HART XC 1F)		
	-40 °C to +70 °C (AXL P DI16 NAM 1F, AXL P DI16/2 1F, AXL P AI8 HART 1F, AXL P AO4 HART 1F, AXL P AI8 P HART 1F, AXL P RTD8 1F)		

Approved for issue on behalf of the IECEx
Certification Body:

Lucy Frieders

Position:

Staff Engineer

Signature:
(for printed version)

Date:
(for printed version)

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting www.iecex.com or use of this QR Code.



Certificate issued by:

UL Solutions (US)
333 Pfingsten Road
Northbrook IL 60062-2096
United States of America





IECEx Certificate of Conformity

Certificate No.: **IECEx UL 20.0002X**

Page 2 of 4

Date of issue: 2024-08-21

Issue No: 6

Manufacturer: **PHOENIX CONTACT GmbH & Co. KG**
Flachsmarktstraße 8
D-32825 Blomberg
Germany

Manufacturing locations: **PHOENIX CONTACT Development & Manufacturing Inc.**
586 Fulling Mill Road, Middletown, PA
17057 USA
United States of America

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended

STANDARDS :

The equipment and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards

[IEC 60079-0:2017](#) Explosive atmospheres - Part 0: Equipment - General requirements
Edition:7.0

[IEC 60079-7:2017](#) Explosive atmospheres - Part 7: Equipment protection by increased safety "e"
Edition:5.1

This Certificate **does not** indicate compliance with safety and performance requirements other than those expressly included in the Standards listed above.

TEST & ASSESSMENT REPORTS:

A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in:

Test Reports:

[US/UL/ExTR20.0002/00](#)
[US/UL/ExTR20.0002/03](#)
[US/UL/ExTR20.0002/06](#)

[US/UL/ExTR20.0002/01](#)
[US/UL/ExTR20.0002/04](#)

[US/UL/ExTR20.0002/02](#)
[US/UL/ExTR20.0002/05](#)

Quality Assessment Report:

[NL/DEK/QAR11.0012/06](#)



IECEX Certificate of Conformity

Certificate No.: **IECEX UL 20.0002X**

Page 3 of 4

Date of issue: 2024-08-21

Issue No: 6

EQUIPMENT:

Equipment and systems covered by this Certificate are as follows:

These devices are open type programmable logic controllers, consisting of I/O modules and intended for Industrial Control applications. They are intended to be mounted within a suitable enclosure.

Please see Annex for additional information.

SPECIFIC CONDITIONS OF USE: YES as shown below:

- The equipment must be installed in a suitably-certified tool-secured enclosure providing a minimum ingress protection of IP54 in accordance with IEC 60079-0.
- The equipment shall only be used in an area of not more than pollution degree 2, as defined in IEC 60664-1.



IECEX Certificate of Conformity

Certificate No.: **IECEX UL 20.0002X**

Page 4 of 4

Date of issue: 2024-08-21

Issue No: 6

DETAILS OF CERTIFICATE CHANGES (for issues 1 and above)

Issue 1: Addition of new models AXL P DI16 NAM 1F and AXL P AI8 HART 1F.

Issue 2: Addition of new models AXL P AO4 HART 1F and AXL F AO4 HART XC 1F. Update of documentation for existing models.

Issue 3: Addition of new model AXL P DI16/2 1F. Update of standards for all models.

Issue 4: Addition of new models AXL F AI8 P HART XC 1F and AXL P AI8 P HART 1F.

Issue 5: Addition of new model AXL P RTD8 1F.

Issue 6: Update of Bill of materials to consolidate drawings. Update of schematics and component layout drawings.

Annex:

[Annex to IECEx UL 20.0002X Issue 6.pdf](#)



IECEx Certificate of Conformity

Annex to Certificate No.:

IECEx UL 20.0002X

Issue No.: 6

Page 1 of 4

PARAMETERS RELATING TO THE SAFETY

AXL F AI8 HART XC 1F

Supply rating: 24 V dc (19.2-30 VDC), 240mA

Outputs: 22 V dc, 20 mA per channel maximum

AXL P AI8 HART 1F

Supply rating: 24 V dc (19.2-30 VDC), 260mA

Outputs: 22 V dc, 20 mA per channel maximum

AXL F DI16 NAM XC 1F, AXL P DI16 NAM 1F

Supply rating: 24 V dc (19.2-30 VDC), 130mA

Field connections: 8 V dc, 8 mA per channel

AXL P DI16/2 1F

Supply rating: 24 V dc (19.2-30 VDC), 59mA

Field connections: 24 V dc, 2.4 mA per channel

AXL P AO4 HART 1F

Supply rating: 24 V dc (19.2-30 V dc), 160 mA

Outputs: 22 V dc, 20 mA per channel

AXL F AO4 HART XC 1F

Supply rating: 24 V dc (19.2-30 V dc), 150 mA

Outputs: 22 V dc, 20 mA per channel

AXL F AI8 P HART XC 1F

Supply rating: 24 V dc (19.2-30 V dc), 27 mA

Field Connections: 20 mA per channel maximum

AXL P AI8 P HART 1F

Supply rating: 24 V dc (19.2-30 V dc), 27 mA

Field Connections: 20 mA per channel maximum

AXL P RTD8 1F

Supply rating: 24 V dc (19.2-30 V dc), 40 mA

Field Connections: 5 V dc, 1 mA per channel, 2 mA total max

Ambient temperature range:

Models AXL F AI8 HART XC 1F, AXL F DI16 NAM XC 1F, AXL F AO4 HART XC 1F, AXL F AI8 P HART XC 1F
: -25°C to +60°C

Models AXL P AI8 HART 1F, AXL P DI16 NAM 1F, AXL P AO4 HART 1F, AXL P DI16/2 1F, AXL P AI8 P HART
1F, AXL P RTD8 1F: -40°C to +70°C



IECEx Certificate of Conformity

Annex to Certificate No.:

IECEx UL 20.0002X

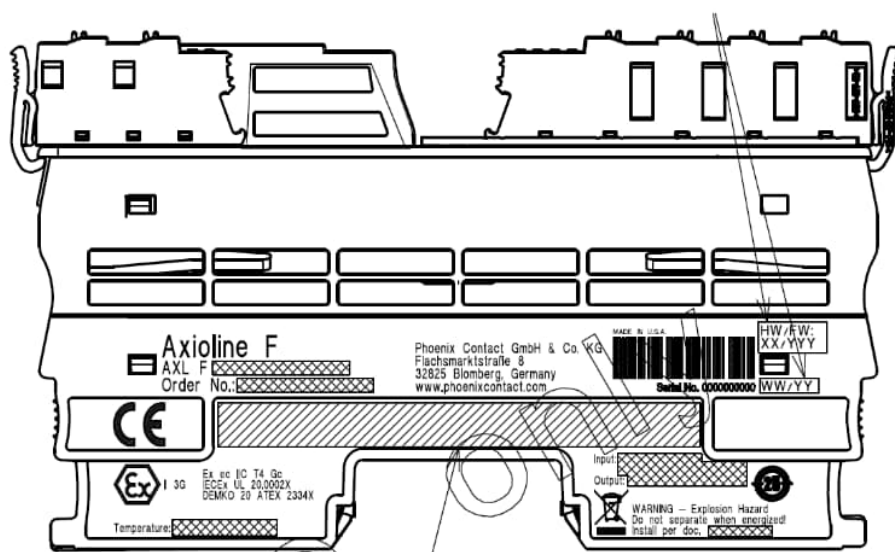
Issue No.: 6

Page 2 of 4

MARKING

Marking has to be readable and indelible; it has to include the following indications:

AXIO F series:





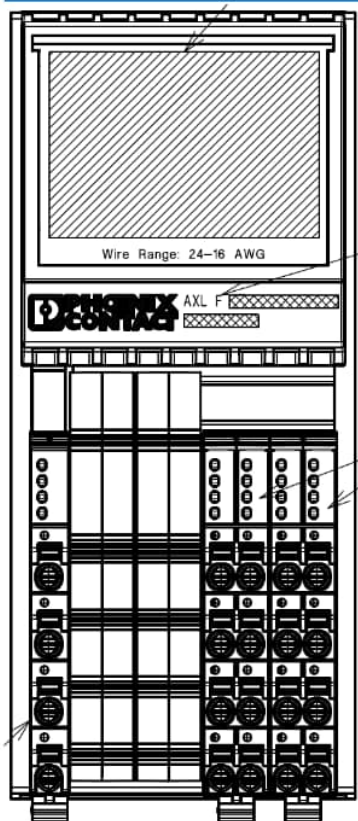
IECEX Certificate of Conformity

Annex to Certificate No.:

IECEX UL 20.0002X

Issue No.: 6

Page 3 of 4



1215394	AXL F A18 P HART XC 1F	-25°C TO 60°C	4136	24 VDC 27 mA MAX / 22 mA TYP	20 mA MAX
1087080	AXL F A04 HART XC 1F	-25°C TO 60°C	4101	24 VDC 150 mA MAX / 115 mA TYP	22 VDC 20 mA MAX
1052427	AXL F D16 NAM XC 1F	-25°C TO 60°C	4054	24 VDC 130 mA MAX / 95 mA TYP	8 VDC 8 mA MAX
1052434	AXL F A18 HART XC 1F	-25°C TO 60°C	4053	24 VDC 240 mA MAX / 180 mA TYP	22 VDC 20 mA MAX
Article No.	Description	Temp. Range	Install Doc.	Input	I/O



IECEx Certificate of Conformity

Annex to Certificate No.:

IECEx UL 20.0002X

Issue No.: 6

Page 4 of 4

AXIO P series:

Axioline P

12/22

AXL P AI8 HART 1F

Phoenix Contact GmbH & Co. KG
Flachsmarktstraße 8
32825 Blomberg, Germany

123456789

$-40^{\circ}\text{C} \leq T_a \leq 70^{\circ}\text{C}$

Input: 24VDC, 260 mA MAX
Output: 22 VDC, 20 mA MAX

Install per doc 4078

  II 3G Ex ec IIC T4 Gc

DEMKO 20 ATEX 2334X
IECEx UL 20.0002X



AXL P RTD8 1F	4178	24 VDC 40 mA MAX	1 mA MAX
AXL P AI8 P HART 1F	4137	24 VDC 27 mA MAX	20 mA MAX
AXL P AO4 HART 1F	4100	24 VDC 160 mA MAX	22 VDC 20 mA MAX
AXL P DI16 NAM 1F	4079	24 VDC 130 mA MAX	8 VDC 8 mA MAX
AXL P AI8 HART 1F	4078	24 VDC 260 mA MAX	22 VDC 20 mA MAX
AXL P DI16/2 1F	4117	24 VDC 59 mA MAX	24 VDC 2.4 mA MAX
Description	Install Doc.	Input	I/O