

[1]

TYPE EXAMINATION CERTIFICATE



[2]

Equipment or Protective System intended for use in Potentially Explosive Atmospheres Directive 2014/34/EU

[3]

Type Examination Certificate Number: **UL 20 ATEX 2441X Rev. 2**

[4]

Product: **Programmable Controllers** AXL F BK PN TPS XC, AXL F BK PB XC, AXL F BK ETH XC, AXL F BK EIP EF XC, AXL F DI16/4 XC 2F, AXL F DO16/3 XC 2F, AXL F DI8/1 DO8/1 XC 1H, AXL F AI4 I XC 1H, AXL F AI4 U XC 1H, AXL F AO4 XC 1H, AXL F RTD4 XC 1H, AXL F UTH8 XC 1F, AXL F RS UNI XC 1H, AXL F CNT2 INC2 XC 1F

[5]

Manufacturer: **PHOENIX CONTACT GmbH & Co. KG**

[6]

Address: **Flachsmarktstraße 8, 32825 Blomberg, Germany**

[7]

This equipment and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

[8]

UL International Demko A/S certifies that this product has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of products intended for use in potentially explosive atmospheres given in Annex II to Directive 2014/34/EU of the European Parliament and of the Council, dated 26 February 2014.

The examination and test results are recorded in confidential report no. **DK/ULD/ExTR20.0026/02.**

[9]

Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

EN IEC 60079-0:2018

EN IEC 60079-7:2015/A1:2018

Where additional criteria beyond those given here have been used, they are listed at item 18 in the Schedule.

[10]

If the sign "X" is placed after the certificate number, it indicates that the product is subject to the "Specific Conditions of Use" listed under item 17 of this certificate.

[11]

This Type examination certificate relates only to the design of the specified product, and not to specific items of product subsequently manufactured.

[12]

The marking of the product shall include the following (marking is provided in the Schedule as a part of item 15, if applicable):

II 3 G Ex ec IIC T4 Gc

Certification Manager

Thomas Wilson

This is to certify that the sample(s) of the Product described herein ("Certified Product") has been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the ATEX Product Certification Program Requirements. This certificate and test results obtained apply only to the product sample(s) submitted by the Manufacturer. UL did not select the sample(s) or determine whether the sample(s) provided were representative of other manufactured product. UL has not established Follow-Up Service or other surveillance of the product. The Manufacturer is solely and fully responsible for conformity of all product to all applicable Standards, specifications, requirements or Directives. The test results may not be used, in whole or in part, in any other document without UL's prior written approval.

Date of issue: 2020-12-22

Re-issued: 2025-02-24

Certification Body

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
Tel. +45 44 85 65 65, info.dk@ul.com, www.ul.com

Schedule

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Description of Product

These devices are open type electronic modules that can be combined to form a fully functional control system for IT-powered automation. Each module is equipped with AXIOLINE hinged connectors (designated FIBO...), used for supply, sensors, and actuators.

AXL F BK PN TPS XC
 AXL F BK PB XC
 AXL F BK ETH XC
 AXL F BK EIP EF XC
 AXL F DI16/4 XC 2F
 AXL F DO16/3 XC 2F
 AXL F DI8/1 DO8/1 XC 1H
 AXL F AI4 I XC 1H
 AXL F AI4 U XC 1H
 AXL F AO4 XC 1H
 AXL F RTD4 XC 1H
 AXL F UTH8 XC 1F
 AXL F RS UNI XC 1H
 AXL F CNT2 INC2 XC 1F

Temperature range

The ambient temperature range is -40 °C to +60 °C, for thermal limitations see Ratings.

Electrical data

Type	Input		Output		Ambient temperature range
	Volt	Amp	Volt	Amp	
AXL F BK PN TPS XC	UL: 24 V DC	532mA	-	-	-40°C to +60°C
AXL F BK PB XC	24 Vdc	567 mA	-	-	-40°C to +60°C
AXL F BK ETH XC	24 Vdc	583 mA	-	-	-40°C to +60°C
AXL F BK EIP EF XC	24 Vdc	583 mA	-	-	-40°C to +60°C
AXL F DI16/4 XC 2F	UI: 24 Vdc UBUS: 5 Vdc Inputs 24 Vdc	4 A 60 mA 16 channels 2.4 mA (each)	-	-	-40°C to +60°C
AXL F DO16/3 XC 2F	-	-	Uo: 24 Vdc UBUS: 5 Vdc	8 A 60 mA)	-40°C to +60°C
AXL F DI8/1 DO8/1 XC 1H Digital	UIO: 24 Vdc UBUS: 5 Vdc Inputs 24 Vdc	4 A 60 mA 8 channels, 2.4 mA each	24 Vdc	8 channels 0.5 A each	-40°C to +60°C
AXL F AI4 I XC 1H	UA: 24 Vdc UBUS: 5 Vdc	38 mA 120 mA	-	-	-40°C to +60°C
AXL F AI4 U XC 1H	UA: 24 Vdc UBUS: 5 Vdc	38 mA 120 mA	-	-	-40°C to +60°C
AXL F AO4 XC 1H	UA: 24 Vdc UBUS: 5 Vdc	110 mA 120 mA	24 Vdc	4 channels 20mA each @ 60°C	-40°C to +60°C
AXL F RTD4 XC 1H	UA: 24 Vdc UBUS: 5 Vdc	17 mA 140 mA	-	-	-40°C to +60°C

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[14]

Schedule

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Type	Input		Output		Ambient temperature range
	Volt	Amp	Volt	Amp	
AXL F UTH8 XC 1F	UA: 24 Vdc	45 mA	-	-	-40°C to +60°C
	UBUS: 5 Vdc	115 mA	-	-	
AXL F RS XC UNI 1H	Ubus: 5 Vdc	240 mA	-	-	-40°C to +60°C
AXL F CNT2 INC2 XC 1F	UI: 24 Vdc	2.5 A	-	-	-40°C to +60°C
	UBUS: 5 Vdc	120 mA	-	-	

Routine tests

Between the separated circuits all suitable for 24Vdc working voltage and the terminals suitable for less than 90 V ac, with a test voltage derived from the applicable industrial standard or with 500 V ac +5% or 2100 V dc +5 % for 1 minute or with 1.2 times of the test voltage for ≥ 100 millisecond.

Because the creepage and clearance dimensions are rigidly controlled by tooling in the manufacturing process, the routine tests will be performed on a statistical basis in accordance with ISO 2859-1 with an acceptance quality limit (AQL) of 0.04.

[16]

Descriptive Documents

The scheduled drawings are listed in the report no. provided under item no. [8] on page 1 of this Type Examination Certificate.

[17]

Specific conditions of use:

- The equipment is intended for installation in an area providing at least pollution degree 2 as defined by EN 60664-1.
- The device shall be installed in an enclosure (control or distributor box) that fulfills a type of protection of EN IEC 60079-0 and at least IP54 (EN 60529) degree of protection.

[18]

Essential Health and Safety Requirements

The Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9

Additional information

The trademark  will be used as the company identifier on the marking label.