

TYPE EXAMINATION CERTIFICATE



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

Type Examination Certificate Number: **DEMKO 16 ATEX 1709X Rev. 5**

Product: **Open type programmable controllers, Models:**

FL SWITCH 2205, FL SWITCH 2208, FL SWITCH 2207-FX, FL SWITCH 2207-FX SM, FL SWITCH 2206-2FX, FL SWITCH 2206-2FX SM, FL SWITCH 2206-2FX ST, FL SWITCH 2206-2FX SM ST, FL NAT 2208, FL SWITCH 2204-2TC-2SFX, FL SWITCH 2208-2SFX, FL SWITCH 2308, FL SWITCH 2304-2GC-2SFP, FL SWITCH 2308-2SFP, FL SWITCH 2206-2SFX, FL SWITCH 2306-2SFP, FL NAT 2304-2GC-2SFP, FL NAT 2308-2SFP, FL SWITCH 2216, FL SWITCH 2216 PN, FL SWITCH 2214-2FX, FL SWITCH 2214-2FX SM, FL SWITCH 2214-2SFX, FL SWITCH 2214-2SFX PN, FL SWITCH 2212-2TC-2SFX, FL SWITCH 2316, FL SWITCH 2316 PN, FL SWITCH 2314-2SFP, FL SWITCH 2314-2SFP PN and FL SWITCH 2312-2GC-2SFP, FL SWITCH 2208 PN, FL SWITCH 2206-2SFX PN, FL SWITCH 2308 PN, FL SWITCH 2306-2SFP PN, FL MGUARD 1102, FL MGUARD 1105, FL MGUARD 3102, FL MGUARD 3105, FL MGUARD 3104-SFP, FL MGUARD 3302, FL MGUARD 3305, FL MGUARD 3304-SFP, FL MGUARD 2102, FL MGUARD 2102/K*, FL MGUARD 2105, FL MGUARD 2105/K*, FL MGUARD 4302, FL MGUARD 4302/K*, FL MGUARD 4305, FL MGUARD 4305/K*.

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

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

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

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/ExTR16.0018/05.**

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.

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.

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

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

Ex 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: 2017-03-14

Re-issued: 2025-02-24

Certification Body

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
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[13]

[14]

Schedule

TYPE EXAMINATION CERTIFICATE No.

DEMKO 16 ATEX 1709X Rev. 5

[15]

Description of Product:

The Managed Switches from the 2200 and 2300 series are Ethernet switches which are suitable for industrial use.
The devices of the FL MGUARD 1000/ 2000/ 3000/ 4000 series are security routers for industrial use.

Devices may be used with the following Phoenix optical transceiver modules:

SFP FO ports Gigabit

FL SFP LH, FL SFP LX40, FL SFP LX, FL SFP LX10-B, FL SFP SX, FL SFP SX2, FL SFP WDM10-A, FL SFP WDM10-B, FL SFP WDM10-SET

SFP FO ports Fast Ethernet

FL SFP FX SM, FL SFP FX, FL SFP FE WDM20-A, FL SFP FE WDM20-B, FL SFP FE WDM20-SET

Nomenclature for 2200 and 2300 series:

FL (Factory Line)	(0)	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
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- (0) SWITCH - If NAT stated, Switch with Network Address Translation (data processing method).
- (1) 2 - power class
- (2) 2 - Standard fast Ethernet variant (100Mbit/s) with one digital output and redundant power supply.
- 3 - Standard Gigabit Ethernet variant (1000Mbit/s) with one digital output and redundant power supply.
- (3) XX - Number of RJ45 Ethernet ports. 04, 05, 06, 07, 08, 14 or 16 possible.
- (4) -2FX - Number of fiber optic ports. FX for one port and 2FX for two ports. If nothing stated, no FO ports.
- 2TC/2GC - Number of combo ports consists of one RJ45- and one SFP port. GC for Gigabit Combo and TC for Fast Ethernet Combo. If nothing stated, no combo ports.
- (5) -2SFP/2SFX- Number of SFP or SFX ports. SFP for Gigabit and SFX for Fast Ethernet. If nothing stated, no SFP/SFX ports.
- (6) SM - Propagation variant. SM for Singlemode and if nothing stated Multimode.
- (7) ST - Connectivity of optic ports. ST for ST variant and if nothing stated SC variant.
- (8) PN - Profinet variant.

The optical radiation output of the product with respect to explosion protection, according to Annex II clause 1.3.1 of the Directive 2014/34/EU is covered in this certificate based on Exception 1) and 3) to the scope of EN 60079-28:2015.

MF MGUARDS device details:

FL MGUARD 1102	2 x RJ45 ports, SD card holder, digital service I/Os
FL MGUARD 1105	5 x RJ45 ports, SD card holder, digital service I/Os
FL MGUARD 2102	2 x RJ45 ports, SD card holder, digital service I/Os
FL MGUARD 2102/K*	2 x RJ45 ports, SD card holder, digital service I/Os,
FL MGUARD 2105	5 x RJ45 ports, SD card holder, digital service I/Os
FL MGUARD 2105/K*	5 x RJ45 ports, SD card holder, digital service I/Os
FL MGUARD 3102	2 x RJ45 ports, SD card holder, digital service I/Os
FL MGUARD 3105	5 x RJ45 ports, SD card holder, digital service I/Os
FL MGUARD 3302	2 x RJ45 ports, redundant power supply, SD card holder, digital service I/Os
FL MGUARD 3305	5 x RJ45 ports, redundant power supply, SD card holder, digital service I/Os
FL MGUARD 3104-SFP	4 x RJ45 ports, 1 x SFP slot for FO, SD card holder, digital service I/Os
FL MGUARD 3304-SFP	4 x RJ45 ports, 1 x SFP slot for FO, redundant power supply, SD card holder, digital service I/Os
FL MGUARD 4302	2 x RJ45 ports, redundant power supply, SD card holder, digital service I/Os
FL MGUARD 4302/K*	2 x RJ45 ports, redundant power supply, SD card holder, digital service I/Os
FL MGUARD 4305	5 x RJ45 ports, redundant power supply, SD card holder, digital service I/Os
FL MGUARD 4305/K*	5 x RJ45 ports, redundant power supply, SD card holder, digital service I/Os

“*” Stands for any number from 1 to 9 or any letter from A to Z and are preconfigured with application-relevant settings. The settings are mainly network, access and connection parameters that are basically necessary for the operation of the devices and must be made by the customer. To facilitate commissioning, the settings are preconfigured at the factory and delivered to the customer.

Ratings

Model	Ratings	Ambient Temperature range
FL SWITCH 2205	9 - 57 VDC; max 1.2A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2208	9 - 57 VDC; max 1.3A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2207-FX	9 - 57 VDC; max 1.4A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2207-FX SM	9 - 57 VDC; max 1.4A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2206-2FX	9 - 57 VDC; max 1.5A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2206-2FX SM	9 - 57 VDC; max 1.5A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2206-2FX ST	9 - 57 VDC; max 1.5A	-40 °C ≤ Ta ≤ +70 °C

[13]

[14]

Schedule

TYPE EXAMINATION CERTIFICATE No.

DEMKO 16 ATEX 1709X Rev. 5

FL SWITCH 2206-2FX SM ST	9 - 57 VDC; max 1.5A	-40 °C ≤ Ta ≤ +70 °C
FL NAT 2208	9 - 57 VDC; max 1.3A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2204-2TC-2SFX	12 - 57 VDC; max 1.4A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2208-2SFX	12 - 57 VDC; max 1.4A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2308	12 - 57 VDC; max 1.4A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2304-2GC-2SFP	12 - 57 VDC; max 1.5A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2308-2SFP	12 - 57 VDC; max 1.55A	-40 °C ≤ Ta ≤ +70 °C
FL NAT 2308-2SFP	12 - 57 VDC; max 1.55A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2206-2SFX	12 - 57 VDC; max 1.4A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2306-2SFP	12 - 57 VDC; max 1.5A	-40 °C ≤ Ta ≤ +70 °C
FL NAT 2304-2GC-2SFP	12 - 57 VDC; max 1.5A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2216	12 - 57 VDC; max 1.4A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2216 PN	12 - 57 VDC; max 1.4A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2214-2FX	12 - 57 VDC; max 1.8A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2214-2FX SM	12 - 57 VDC; max 1.8A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2214-2SFX	12 - 57 VDC; max 1.6A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2214-2SFX PN	12 - 57 VDC; max 1.6A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2212-2TC-2SFX	12 - 57 VDC; max 1.7A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2316	12 - 57 VDC; max 1.8A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2316 PN	12 - 57 VDC; max 1.8A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2314-2SFP	12 - 57 VDC; max 2.0A	-40 °C ≤ Ta ≤ +70 °C

Model	Ratings	Ambient Temperature range
FL SWITCH 2314-2SFP PN	12 - 57 VDC; max 2.0A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2312-2GC-2SFP	12 - 57 VDC; max 2.0A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2208 PN	12 - 57 VDC; max 1.3A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2206-2SFX PN	12 - 57 VDC; max 1.4A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2308 PN	12 - 57 VDC; max 1.4A	-40 °C ≤ Ta ≤ +70 °C
FL SWITCH 2306-2SFP PN	12 - 57 VDC; max 1.5A	-40 °C ≤ Ta ≤ +70 °C

Type	Input		Output		Ambient temperature range
	Volt	Amp	Volt	Amp	
FL MGuard 1102	Us: 18...36 VDC; 3 x Digital Input: 0...36 VDC, 5mA	1.0	18...36 VDC	3x0.25 A (General/Resistive Use)	0°C ≤ Ta ≤ +60°C
FL MGuard 1105	Us: 18...36 VDC; 3 x Digital Input: 0...36 VDC, 5mA	1.06	18...36 VDC	3x0.25 A (General/Resistive Use)	0°C ≤ Ta ≤ +60°C
FL, FL MGuard 2102, FL MGuard 2102/K*	Us: 12...36 VDC; 3 x Digital Input: 0...36 VDC, 5mA	1.12	12...36 VDC	3x0.25 A (General/Resistive Use)	-20 °C ≤ Ta ≤ +60 °C
FL MGuard 2105; FL MGuard 2105/K*;	Us: 12...36 VDC; 3 x Digital Input: 0...36 VDC, 5mA	1.21	12...36 VDC	3x0.25 A (General/Resistive Use)	-20 °C ≤ Ta ≤ +60 °C
FL MGuard 3102	Us: 18...36 VDC; 3 x Digital Input: 0...36 VDC, 5mA	1.0	18...36 VDC	3x0.25 A (General/Resistive Use)	0°C ≤ Ta ≤ +60°C
FL MGuard 3105	Us: 18...36 VDC; 3 x Digital Input: 0...36 VDC, 5mA	1.06	18...36 VDC	3x0.25 A (General/Resistive Use)	0°C ≤ Ta ≤ +60°C
FL MGuard 3104-SFP	Us: 18...36 VDC; 3 x Digital Input: 0...36 VDC, 5mA	1.09	18...36 VDC	3x0.25 A (General/Resistive Use)	0°C ≤ Ta ≤ +60°C
FL MGuard 3302	Us: 12...36 VDC; 3 x Digital Input: 0...36 VDC, 5mA	1.12	12...36 VDC	3x0.25 A (General/Resistive Use)	-40 °C ≤ Ta ≤ +70 °C
FL MGuard 3305	Us: 12...36 VDC; 3 x Digital Input: 0...36 VDC, 5mA	1.21	12...36 VDC	3x0.25 A (General/Resistive Use)	-40 °C ≤ Ta ≤ +70 °C
FL MGuard 3304-SFP	Us: 12...36 VDC; 3 x Digital Input: 0...36 VDC, 5mA	1.26	12...36 VDC	3x0.25 A (General/Resistive Use)	-40 °C ≤ Ta ≤ +70 °C

[13]

[14]

Schedule

TYPE EXAMINATION CERTIFICATE No.

DEMKO 16 ATEX 1709X Rev. 5

Type	Input		Output		Ambient temperature range
	Volt	Amp	Volt	Amp	
FL MGuard 4302, FL MGuard 4302/K*,	US: 12...36 VDC; 3 x Digital Input: 0...36 VDC, 5mA	1.12	12...36 VDC	3x0.25 A (General/Resistive Use)	-40 °C ≤ Ta ≤ +60 °C
FL MGuard 4305, FL MGuard 4305/K*,	US: 12...36 VDC; 3 x Digital Input: 0...36 VDC, 5mA	1.21	12...36 VDC	3x0.25 A (General/Resistive Use)	-40 °C ≤ Ta ≤ +60 °C

Routine tests:

According to EN IEC 60079-7 clause 7.1 in combination with clause 6.1 a dielectric strength test has to be carried out.

[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 shall only be used in an area of not more than pollution degree 2, as defined in EN 60664-1.
- The equipment shall be installed in an enclosure that provides a degree of protection not less than IP 54 in accordance with EN IEC 60079-0 and that has been considered to be not accessible in normal operation without the use of a tool.
- The ambient temperature inside the end-use enclosure shall be measured and maintained within 25mm to the device.

[18]

Essential Health and Safety Requirements

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