



Type Approval Certificate

This is to certify that the undernoted product(s) has/have been tested with satisfactory results in accordance with the relevant requirements of the Lloyd's Register Type Approval System.

Manufacturer	Phoenix Contact GmbH & Co. KG
Address	Flachsmarktstr. 8, Blomberg, 32825, Germany
Type	Control Units
Description	FL Switch and small form-factor pluggable modules Refer to the Appendix for further details.
Trade Name	FL Switch
Application	Marine, offshore and industrial applications for use in environmental categories ENV1, ENV2 and ENV3 as defined in Lloyd's Register's Type Approval System, Test Specification Number 1 – July, 2015.
Specified Standard	LR Test Specification Number 1 – July, 2015 Manufacturer's specification IACS unified requirements E10 (Rev.8 Feb 2021)
Ratings	Power supply: 24VDC Refer to the Appendix for further details.
Additional Tests	Low temperature test (-15°C/16 h)

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This certificate is not valid for equipment, the design, ratings or operating parameters of which have been varied from the specimen tested. The manufacturer should notify Lloyd's Register EMEA of any modification or changes to the equipment in order to obtain a valid Certificate.

Previous Version: This certificate supersedes certificate number LR22250919TA issued on 01 July 2022 which is hereby cancelled.

The Design Appraisal Document HPC1662152-24/TW and its supplementary Type Approval Terms and Conditions form part of this Certificate.

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Appendix

TYPES

No. / Types	Description
2702326 FL SWITCH 2205	Managed Switch, 5x 10/100MBit
2702327 FL SWITCH 2208	Managed Switch, 8x 10/100MBit
1044024 FL SWITCH 2208 PN	Managed Switch, 8x 10/100MBit, PROFINET status LEDs (SF, BF), and PROFINET mode
2702882 FL NAT 2208	Managed Switch/NAT router, 8x 10/100MBit
2702328 FL SWITCH 2207-FX	Managed Switch, 8x 10/100MBit incl. 1x FO port in SC format for multimode
2702329 FL SWITCH 2207-FX SM	Managed Switch, 8x 10/100MBit incl. 1x FO port in SC format for single mode
2702330 FL SWITCH 2206-2FX	Managed Switch, 8x 10/100MBit incl. 2x FO ports in SC format for multimode
2702331 FL SWITCH 2206-2FX SM	Managed Switch, 8x 10/100MBit incl. 2x FO ports in SC format for single mode
2702332 FL SWITCH 2206-2FX ST	Managed Switch, 8x 10/100MBit incl. 2x FO ports in ST format for multimode
2702333 FL SWITCH 2206-2FX SM ST	Managed Switch, 8x 10/100MBit incl. 2x FO ports in ST format for single mode
1044028 FL SWITCH 2206-2SFX PN	Managed Switch, 8x 10/100MBit incl. 2x SFX, PROFINET status LEDs (SF, BF), and PROFINET mode
2702652 FL SWITCH 2308	Managed Switch, 8x 10/100/1000MBit
1009220 FL SWITCH 2308 PN	Managed Switch, 8x 10/100/1000MBit, PROFINET status LEDs (SF, BF), and PROFINET mode
2702334 FL SWITCH 2204-2TC-2SFX	Managed Switch, 8x 10/100MBit incl. 2/4x SFX
2702970 FL SWITCH 2306-2SFP	Managed Switch, 8x 10/100/1000MBit incl. 2x SFP
1009222 FL SWITCH 2306-2SFP PN *	Managed Switch, 8x 10/100/1000MBit incl. 2x SFP, PROFINET status LEDs (SF, BF), and PROFINET mode
2702981 FL NAT 2304-2GC-2SFP	Managed Switch/NAT router, 8x Port 10/100/1000MBit incl. 2/4x SFP
2702969 FL SWITCH 2206-2SFX	Managed Switch, 8 10/100MBit incl. 2x SFX
2702653 FL SWITCH 2304-2GC-2SFP	Managed Switch, 8 10/100/1000MBit incl. 2/4x SFP
2702904 FL SWITCH 2216	Managed Switch, 16x 10/100MBit
1044029 FL SWITCH 2216 PN	Managed Switch, 16x 10/100MBit, PROFINET status LEDs (SF, BF), and PROFINET mode
2702905 FL SWITCH 2214-2FX	Managed Switch, 16x 10/100MBit incl. 2x FO ports in SC format for multimode
2702906 FL SWITCH 2214-2FX SM	Managed Switch, 16x 10/100MBit incl. 2x FO ports in SC format for single mode
1006188 FL SWITCH 2214-2SFX	Managed Switch, 16x 10/100MBit incl. 2x SFX
1044030 FL SWITCH 2214-2SFX PN	Managed Switch, 16x 10/100MBit incl. 2x SFX, PROFINET status LEDs (SF, BF), and PROFINET mode
2702907 FL SWITCH 2212-2TC-2SFX	Managed Switch, 16x 10/100MBit, incl. 2/4x SFX
2702909 FL SWITCH 2316	Managed Switch, 16x 10/100/1000MBit



1031673 FL SWITCH 2316 PN	Managed Switch, 16x 10/100/1000MBit, PROFINET status LEDs (SF, BF), and PROFINET Mode
1006191 FL SWITCH 2314-2SFP	Managed Switch, 16x 10/100/1000MBit incl. 2x SFP
1031683 FL SWITCH 2314-2SFP PN	Managed Switch, 16x 10/100/1000MBit incl. 2/4x SFP, PROFINET status LEDs (SF, BF), and PROFINET mode
2702910 FL SWITCH 2312-2GC-2SFP	Managed Switch, 16x 10/100/1000MBit incl. 2/4x SFP (DUT)
1043412 FL SWITCH 2408	Managed Switch, 8x Port 10/100MBit
1043414 FL SWITCH 2406-2SFX	Managed Switch, 8x Port 10/100MBit incl. 2x SFX
1043484 FL SWITCH 2508	Managed Switch, 8x Port 10/100/1000MBit
1043491 FL SWITCH 2506-2SFP	Managed Switch, 8x Port 10/100/1000MBit incl. 2x SFP
1088853 FL SWITCH 2404-2TC-2SFX	Managed Switch, 8x Port 10/100MBit incl. 2/4x SFX
1089126 FL SWITCH 2406-2SFX PN	Managed Switch, 8x Port 10/100MBit incl. 2x SFX, PROFINET status LEDs (SF, BF), and PROFINET mode
1089133 FL SWITCH 2408 PN	Managed Switch, 8x Port 10/100MBit, PROFINET status LEDs (SF, BF), and PROFINET mode
1089134 FL SWITCH 2508 PN	Managed Switch, 8x Port 10/100/1000MBit, PROFINET status LEDs (SF, BF), and PROFINET mode
1215350 FL SWITCH 2508/K1	Managed Switch, 8x Port 10/100/1000MBit, without pot. free output
1089135 FL SWITCH 2506-2SFP PN	Managed Switch, 8x Port 10/100/1000MBit incl. 2x SFP, PROFINET status LEDs (SF, BF), and PROFINET mode
1215329 FL SWITCH 2506-2SFP/K1	Managed Switch, 8x Port 10/100/1000MBit incl. 2x SFP, without pot. free output
1088872 FL SWITCH 2504-2GC-2SFP	Managed Switch, 8x Port 10/100/1000MBit incl. 2/4x SFP (DUT)
1043416 FL SWITCH 2416	Managed Switch, 16x Port 10/100Mbit
1043423 FL SWITCH 2414-2SFX	Managed Switch, 16x Port 10/100MBit incl. 2x SFX
1043496 FL SWITCH 2516	Managed Switch, 16x Port 10/100/1000MBit
1043499 FL SWITCH 2514-2SFP	Managed Switch, 16x Port 10/100/1000MBit incl. 2x SFP
1088875 FL SWITCH 2412-2TC-2SFX	Managed Switch, 16x Port 10/100/MBit incl. 2/4x SFX
1089150 FL SWITCH 2416 PN	Managed Switch, 16x Port 10/100MBit, PROFINET status LEDs (SF, BF), and PROFINET mode
1089139 FL SWITCH 2414-2SFX PN	Managed Switch, 16x Port 10/100MBit incl. 2x SFX, PROFINET status LEDs (SF, BF), and PROFINET mode
1089154 FL SWITCH 2514-2SFP PN	Managed Switch, 16x Port 10/100/1000MBit incl. 2x SFP, PROFINET status LEDs (SF, BF), and PROFINET mode
1089205 FL SWITCH 2516 PN	Managed Switch, 16x Port 10/100/1000MBit, PROFINET status LEDs (SF, BF), and PROFINET mode
1088856 FL SWITCH 2512-2GC-2SFP	Managed Switch, 16x Port 10/100/1000MBit incl. 2/4x SFP (DUT)

Not listed devices with /K1 to /K9 or /KA to /KZ as additional name suffix are certified devices according to the above list, which 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.

Software version: 3.xx

(xx=minor modification/bug fixes)



Small form-factor pluggable modules

2891754 FL SFP SX	Gigabit SFP module for transmission up to 1 km with a wavelength of 850 nm
2891767 FL SFP LX	Gigabit SFP module for transmission up to 30 km with a wavelength of 1310 nm
2702397 FL SFP SX2	Gigabit SFP module for transmission up to 2 km with a wavelength of 1310 nm
2702437 FL SFP FE WDM20-A	Fast Ethernet SFP WDM module for transmission up to a maximum of 20 km on a single fiber with a wavelength of 1310/1550 nm
2702438 FL SFP FE WDM20-B	Fast Ethernet SFP WDM module for transmission up to a maximum of 20 km on a single fiber with a wavelength of 1550/1310 nm.
2702439 FL SFP FE WDM20-SET	Fast Ethernet SFP WDM set for transmission up to a maximum of 20 km on a single fiber with a wavelength of 1310/1550 nm
2702440 FL SFP WDM10-A	Gigabit SFP WDM module for transmission up to a maximum of 10 km on a single fiber with a wavelength of 1310/1550 nm
2702441 FL SFP WDM10-B	Gigabit SFP WDM module for transmission up to a maximum of 10 km on a single fiber with a wavelength of 1310/1550 nm
2702442 FL SFP WDM10-SET	Gigabit SFP WDM set for transmission up to a maximum of 10 km on a single fiber with a wavelength of 1310/1550 nm
2891081 FL SFP FX	The narrow form-factor plug-in module provides a fiber optic interface with a data transmission speed of 100 Mbps with a wavelength of 1310 nm (long)
2891082 FL SFP FX SM	The narrow form-factor plug-in module provides a fiber optic interface with a data transmission speed of 100 Mbps with a wavelength of 1310 nm (long).
2989912 FL SFP LH	SFP module with a data transmission speed of 1000 Mbps, a wavelength of 1550 nm and a maximum transmission length of 80 km.