

TYPE EXAMINATION CERTIFICATE



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

[3] Type Examination Certificate Number: **DEMKO 16 ATEX 1586X Rev. 0**

[4] Product: **Switching Power Supplies Series KHxA30F, KHxA60F, KHxA90F, KHxA120F, KHxA240F,
KHxA480F**

[5] Manufacturer: **Cosel Co. Ltd.**

[6] Address: **1-6-43 Kamiakae-Machi, Toyama-Shi, Toyama 930-0816 Japan**

[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. **4787106898**

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




EN 60079-0:2012+A11:2013 EN 60079-15:2010

except in respect of those requirements listed at item 18 of 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 specified in the schedule to 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:

 **II 3 G Ex nA IIC T4 Gc**
 **II 3 G Ex nA IIC T3 Gc**
 **II 3 G Ex nA nC IIC T4 Gc**

Certification Manager
Jan-Erik Storgaard

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: 2016-06-07

Certification Body

UL International Demko A/S, Borupvang 5A, 2750 Ballerup, Denmark
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Schedule

TYPE EXAMINATION CERTIFICATE No.

DEMKO 16 ATEX 1586X Rev. 0

[13]

[14]

[15] Description of Product:

These devices are open-type, switching power supplies designed to be installed in an end use enclosure. The enclosure is to utilize a tool removable cover/door.

The optical radiation output of the indicating LEDs on the apparatus 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 to the scope of EN 60079-28:2015.

KHxA480F-24 KHxA480F-48	Ex nA nC IIC T4 Gc
KHxA60F-24 KHxA60F-12	Ex nA IIC T3 Gc
KHxA30F-24 KHxA30F-5 KHxA30F-12 KHxA90F-24 KHxA90F-12 KHxA120F-24 KHxA240F-24	Ex nA IIC T4 Gc

Nomenclature

KH	x	y	z
-	I	II	III

Part	Designation	Description	
I	x	Terminal block type	"N" denotes Barrier type "E" denotes Euro type
II	Y	A30F-5 A30F-12 A30F-24 A60F-12 A60F-24 A90F-12 A90F-24 A120F-24 A240F-24 A480F-24 A480F-48	A30F series 5V output model A30F series 12V output model A30F series 24V output model A60F series 12V output model A60F series 24V output model A90F series 12V output model A90F series 24V output model A120F series 24V output model A240F series 24V output model A480F series 24V output model A480F series 48V output model
III	z	Options	"-C" denotes Damp proof coating provided "-N2" denote Wall mounting bracket provided. "-E" denotes Class 2 (only model KHxA90F-24)

Temperature range

The relation between ambient temperature and the assigned temperature class is as follows:

Ambient temperature range
-25 °C to +70 °C

Temperature class
T4

Electrical data

KHxA30F

Model	Electrical Rating
KHxA30F-24	Input: 100-240 Vac, 50/60 Hz, 0.63 A Output: 24Vdc, 1.3A
KHxA30F-5	Input: 100-240 Vac, 50/60 Hz, 0.52 A Output: 5Vdc, 5A
KHxA30F-12	Input: 100-240 Vac, 50/60 Hz, 0.57 A Output: 12Vdc, 2.3A

KHxA60F

Model	Electrical Rating
KHxA60F-24	Input: 100-240 Vac, 50/60 Hz, 1.2 A Output: 24Vdc, 2.5A
KHxA60F-12	Input: 100-240 Vac, 50/60 Hz, 1.1 A Output: 12Vdc, 4.5A

Schedule

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DEMKO 16 ATEX 1586X Rev. 0

[13]

[14]

KHxA90F

Model	Electrical Rating
KHxA90F-24	Input: 100-240 Vac, 50/60 Hz, 1.1 A Output: 24Vdc, 3.8A
KHxA90F-12	Input: 100-240 Vac, 50/60 Hz, 1.0 A Output: 12Vdc, 6.8A

KHxA120F

Model	Electrical Rating
KHxA120F-24	Input: 100-240 Vac, 50/60 Hz, 1.3 A Output: 24Vdc, 5A

KHxA240F

Model	Electrical Rating
KHxA240F-24	Input: 100-240 Vac, 50/60 Hz, 2.7 A Output: 24Vdc, 10A

KHxA480F

Model	Electrical Rating
KHxA480F-24	Input: 100-240 Vac, 50/60 Hz, 5.4 A Output: 24Vdc, 20A
KHxA480F-48	Input: 100-240 Vac, 50/60 Hz, 5.4 A Output: 48Vdc, 10A

[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] Special 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 60079-15 and accessible only use of a tool.
- Provision shall be made to prevent the rated voltage being exceeded by the transient disturbances of more than 140% of the peak rated voltage.

[18] Essential Health and Safety Requirements

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