

TYPE EXAMINATION CERTIFICATE



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

[3] Type Examination Certificate Number: **DEMKO 16 ATEX 1746X Rev. 2**

[4] Product: **Switch Mode Power Supply, Models CP-C.1 24/5.0-C, CP-C.1 24/10.0-C and CP-C.1 24/20.0-C,
and Redundancy Module CP-C.1-A-RU-C**

[5] Manufacturer: **ABB STOTZ-KONTAKT GmbH**

[6] Address: **Eppelheimer Strasse 82, 69123 Heidelberg, 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 eproduct 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. **4787854823**

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

EN 60079-0:2012+A11:2013

EN 60079-7:2015

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 ec nC IIC T4 Gc**
(for Models CP-C.1 24... Power Supplies only)

 **II 3 G Ex ec IIC T4 Gc**
(for Redundancy Module CP-C.1-A-RU only)

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: 2016-12-22

Re-issued: 2017-09-27



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

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[15] Description of Product:

The products are Switch Mode Power Supplies for DIN-Rail mounting and intended as a built-in component. The power supplies employ two sealed device relays in type of protection “nC”, while all other electronics are designed to comply with type of protection Increased Safety “ec”.

The CP-C.1-A-RU-C is a redundancy unit for CP-C.1 range power supplies. This unit, with 2 inputs / channels rated each 30 A and an output of max. 60 A, provides true redundancy by 100 % decoupling of two parallel connected power supplies, designed to comply with type of protection Increased Safety “ec”.

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 not covered in this certificate

Temperature range

The ambient temperature range, and the relation between ambient temperature and the assigned temperature class, is as detailed in Table 1 shown in the “Electrical Data” section as below.

Electrical data

CP-C.1 24/5.0-C, CP-C.1 24/10-C and CP-C.1 24/20-C conformal coated PWBs

Output voltage is rated 24Vdc, adjustable between 22.5 to 28.5Vdc. Output power is ratings as shown:

CP-C.1 24/5.0-C

Maximum Output Power: 180VA at 40°C, 120VA at 60°C, 90VA at 70°C.

CP-C.1 24/10.0-C

Maximum Output Power: 360W at 40°C and 22.5-24 VDC, 240W at 60°C, 180W at 70°C.

CP-C.1 24/20.0-C

Maximum Output Power: 624W at 40°C, 480W at 60°C, 360W at 70°C.

Ratings:

Table 1

Input	Output	Ambient Temperature	Temperature Classification
CP-C.1 24/5.0-C			
100-240 VAC (50-60 Hz), max. 2A; 90-300 VDC / max. 2 A	22.5-24 VDC: 7.5A / > 24-28.5 VDC: 180 W +40°C	-40 ≤ Tamb ≤ +40°C	T4
	22.5-24 VDC: 5 A; >24-28.5 VDC: 120 W +60°C	-40 ≤ Tamb ≤ +60°C	T4
	> +60°C up to +70°C Derating 2.5%/K	-40 ≤ Tamb ≤ +70°C	T4
CP-C.1 24/10.0-C			
100-240 VAC (50-60 Hz), max. 4.4 A; 90-300 VDC / max. 4.4 A	22.5-24 VDC: 15 A / > 24-28.5 VDC: 300 W +40°C	-40 ≤ Tamb ≤ +40°C	T4
	22.5-24 VDC: 10 A / > 24-28.5 VDC: 240 W +60°C	-40 ≤ Tamb ≤ +60°C	T4
	> +60°C up to +70°C Derating 2.5%/K	-40 ≤ Tamb ≤ +70°C	T4
CP-C.1 24/20.0-C			
100-240 VAC / 50-60 Hz / max. 7.5A 90-250 VDC / max. 8.3A	22.5 - 24 VDC: 26 A / > 24 - 28.5 VDC: 624W	-40 ≤ Tamb ≤ +40°C	T4
	22.5 - 24 VDC: 20A / > 24 - 28.5 VDC: 480W	-40 ≤ Tamb ≤ +60°C	T4
	> +60°C up to +70°C Derating 2.5%/K	-40 ≤ Tamb ≤ +70°C	T4

Schedule

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Input	Output	Ambient Temperature	Temperature Classification
CP-C.1-A-RU-C			
10 - 28.5 VDC: 30A (per channel)	Input voltage minus 0.6V 60A	$-40 \leq T_{amb} \leq +40^{\circ}\text{C}$	T4
10 - 28.5 VDC: 20A (per channel)	Input voltage minus 0.6V 40A	$-40 \leq T_{amb} \leq +60^{\circ}\text{C}$	T4
	> +60°C up to +70°C Output power derating 2.5%/K	$-40 \leq T_{amb} \leq +70^{\circ}\text{C}$	T4

Signal Relay (K301); 24 V dc, 1 A

Routine tests

A dielectric strength routine test is required, as per the relevant industrial standards.

[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 enclosure must ensure sufficient light / UV protection for the internal components.
- The equipment shall be mounted with output terminals on top and input terminals on bottom.

Installation instructions:

The equipment shall be installed in an enclosure that provides a minimum degree of ingress protection of IP 54 (as defined in EN 60529) in accordance with EN 60079-0.

[18]

Essential Health and Safety Requirements

In addition to the Essential Health and Safety Requirements (EHSRs) covered by the standards listed at item 9, the following are considered relevant to this product, and conformity is demonstrated in the report.

Additional information

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

The manufacturer shall inform the notified body concerning all modifications to the technical documentation as described in Annex III to Directive 2014/34/EU of the European Parliament and the Council of 26 February 2014.