


UL-EU CERTIFICATE

Certificate No.	UL-EU-01666-M1
Page	1/4
Date of Issue	2023-07-13
Certificate Holder	FLEX ELECTRONICS (SHANGHAI) CO LTD 33 FUHUA ROAD,JIADING DISTRICT SHANGHAI, 201818 CHINA
Production site	FLEX ELECTRONICS (SHANGHAI) CO LTD 33 FUHUA ROAD,JIADING DISTRICT SHANGHAI, 201818 CHINA
Certified Product	Switching Power Supply
Model	PKB2213D*, PKB4216HD*, PKB5213D* See page 2 for additional Information
Trademark	flex 
Ratings	(Optional) For Models PKB2213D* Input: 18 - 36Vdc Output: 12Vdc, 20A See page 2 for additional ratings
Tested acc. to	EN 62368-1:2014, EN 62368-1:2014/A11:2017
Test Report No.	E496569-A6001-CB-1 issued on 2023-07-13
Additional	The report was revised to include technical modifications. Summary of Modifications: Addition of new model, Update model name, Update Test Item Particulars, Update GPI, Update Energy Source Table, Update Clauses, Update Critical Components List, Update Summary of compliance with National Differences, see CB Test Report for details. This Certificate replaces Certificate No.: UL-EU-01666-A1 issued on 2019-09-05
Expire date	2024-07-06

Certification Manager
Thomas Wilson
UL International Demko A/S
Borupvang 5A
2750 Ballerup
Denmark

This is to certify that representative sample(s) of the Product described herein ("Certified Product") have been investigated and found in compliance with the Standard(s) indicated on this Certificate, in accordance with the UL-EU Requirements. As specified in the respective appendices below the designated Certificate holder is entitled to use the UL-EU Mark, or its alternative for cables, for the Certified Product manufactured at the production site(s) identified above, in accordance with the UL-EU Mark Service Agreement, including without limitation the UL-EU Mark Testing and Certification Services Service Terms. Only those Products bearing the UL-EU Mark for Europe should be considered as being covered by UL's UL-EU Mark Service. This Certificate shall remain valid through the expiration date, unless terminated earlier in accordance with the Service Agreement including without limitation if the Standard(s) identified on this Certificate is amended or withdrawn prior the expiration date.

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Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-01666-M1

Page 2/4

Date of Issue 2023-07-13

Additional Model details(s):

PKB2213D*, PKB4216HD*, PKB5213D*,

* means all models have at least one of the following suffixes:

PI - pins for through hole mounting

SI - pins for surface mounting

PI or SI may be followed by a combination of the following additional suffixes:

P - positive remote control (negative remote control is standard)

M - increased stand-off and height

LA - lead length 3.69 mm (0.145 in.) (5.33 mm (0.210 in.) is standard)

LB - lead length 4.57 mm (0.180 in.) (5.33 mm (0.210 in.) is standard)

LC - lead length 2.79 mm (0.110 in.) (5.33 mm (0.210 in.) is standard)

LD - lead length 2.40 mm (0.094 in.) (5.33 mm (0.210 in.) is standard)

NB - no base plate

OP - optional part list

HS - base plate (PKB-C models only)

HV - baseplate with wings

G - baseplate with ground pin

OC - custom optimized control loop

OV - 36-60V input voltage

OA - 1.5 V output voltage

OB - 1.2 V output voltage

LV - latching over voltage protection

LT - latching over temperature protection

LI - latching over current protection

LP - latching over temperature and over voltage protection

LIV - latching over current and over voltage protection

LIT - latching over current and over temperature protection

LPA - latching over voltage, over temperature and over current protection

OT - change Under Voltage at shut down level

Additional Ratings:

For model PKB4216HD*

Input: 36 - 60Vdc

Output: 50Vdc, 5A

For model PKB5213D*

Input: 18 - 60Vdc, 15A

Output: 12Vdc, 20A

Not classified, for building-in, IPX0

Certification Body

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

Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-01666-M1

Page 3/4

Date of Issue 2023-07-13

Certification Mark UL-EU Mark

The UL-EU Mark, as displayed below, shall appear on certified products only. Minimum size is not specified, as long as the Mark is legible. The following is suggested.



The minimum height of the registered trademark symbol ® shall be 1 mm. When the overall diameter of the UL-EU Mark is less than 9.5 mm, the trademark symbol may be omitted if it is not legible to the naked eye.

The UL-EU Mark may appear on a label, nameplate, or may be cast, stamped or molded into the product. When appearing on a label or nameplate, the Manufacturer's name or trademark along with a model number are also required on that same label or nameplate. If cast, stamped or molded, the Certificate Manufacturer's name or trademark and model number shall also appear elsewhere on the product.

All content shall be in accordance with the details provided on this UL-EU Certificate.

PROCUREMENT

The Production site may reproduce the Mark or obtain it from a UL authorized supplier. The list of UL authorized suppliers can be found on UL's online directory at www.ul.com

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Appendix UL-EU CERTIFICATE

Certificate No. UL-EU-01666-M1

Page 4/4

Date of Issue 2023-07-13

Alternate certification Mark for cables

As an alternative to the UL-EU Mark specified above the alternate UL-EU Mark, displayed below, can appear on certified cables only. Minimum size is not specified, as long as the mark is legible. The following is suggested:

(UL)-EU

The alternate UL-EU Mark may be cast, stamped or molded into the cable and continue throughout the length of the cable as specified in the applicable cable standard.

All content shall be in accordance with the details provided on this UL-EU Certificate.

Certification Body

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