# **UL-EU CERTIFICATE**

Certificate No. Page Date of Issue	UL-EU-01666-M2 1/4 2024-07-05
Certificate Holder	FLEX ELECTRONICS (SHANGHAI) CO LTD 33 FUHUA ROAD,JIADING DISTRICT SHANGHAI, Shanghai, 201818 CHINA
Production site	FLEX ELECTRONICS (SHANGHAI) CO LTD 33 FUHUA ROAD,JIADING DISTRICT SHANGHAI, SHANGHAI, 201818 CHINA
<b>Certified Product</b>	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 2024-07-03 E496569-A6001-CB-1 issued on 2024-07-05
Additional	This certificate replaces the certificate UL-EU-01666-M1 issued on 2023-07-13. Technical Amendment. Modifications conducted: Update model information.
Expire date	2026-01-07

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with the Service agreement including without limitation if the Standard(s) identified on this Certificate is amended or withdrawn prior the expiration date.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**

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### Additional Model(s):

PKB2213D \*, PKB4216HD \*, PKB5213D \*,

All models may be followed by any combination of characters representing minor differences that do not affect safety, see Test Report for explanation of the suffix "\*".

All models have suffixes that represent minor differences that do not affect safety.

\* 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

1 = pin in paste and soft tray

2 = pin in paste and hard tray

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

## Appendix UL-EU CERTIFICATE

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#### **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 <u>www.ul.com</u>

## **Appendix UL-EU CERTIFICATE**

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#### 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.