

UL-EU CERTIFICATE

Certificate No. UL-EU-01765-M2
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Date of Issue 2020-12-22

Certificate Holder Flex Electronics (Shanghai) Co Ltd
33 Fuhua Road, Jiading District
Shanghai, 201818 China

Manufacturer 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 DC-DC Converter
Model 1. PKB 4318 PIOB 2. PKB 4418 PIOA 3. PKB 4418 PI*
4. PKB 4619 PI* 5. PKB 4510 PI* See Page 2

Trademark 

Rated Voltage / Frequency See Page 2

Rated Current / Power See Page 2

Insulation Class -

Degree of protection (IP) IP X0

Tested acc. to EN 62368-1:2014/A11:2017, EN 62368-1:2014

Test Report No. OFF-4788962525-A-1-Amendment-2 issued on 2020-12-21

Additional The report was revised to include technical modification(s).

Expire date 2029-07-07

Certification Manager
Jan-Erik Storgaard
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with the Service Agreement including without limitation if the Standard(s) identified on this Certificate is amended or withdrawn prior the expiration date.

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Model Details:

1. PKB 4318 PIOB 2. PKB 4418 PIOA 3. PKB 4418 PI* 4. PKB 4619 PI* 5. PKB 4510 PI* 6. PKB 4610 PI* 7. PKB 4810 PI* 8. PKB 4417 PI* 9. PKB 4711 PI* 10. PKB 4713 PI* 11. PKB 4913 PI* 12. PKB 4715 PI* 13. PKB 4317Y PI* 14. PKB 4717 PI* 15. PKB 5610 PI* 16. PKB 5711 PI* 17. PKB 5713 PI* 18. PKB 5410 PI* 19. PKB 4110C PI* 20. PKB 4111C PI* 21. PKB 4113C PI* 22. PKB 4718LC PI* 23. PKB 4918HC PI* 24. PKB 4118GC PI* 25. PKB 4513 PI* 26. PKB 4318N PI* 27. PKB 4513 PINBOVLC 28. PKB 4111A PI* 29. PKB 4910A PI* 30. PKB 4111A SIOT 31. PKB 4518NC PI* 32. PKB 4216C PI* 33. PKB 4111D PI* 34. PKB 4110D PI* 35. PKB 4313D PI* 36. PKB 4211D PI* 37. PKB 4213D PI* 38. PKB 4413D PI* 39. PKB 4313DA* 40. PKB 4413DA* 41. PKB 4217ND* 42. PKB 4313DA PIOA 43. PKB 4413D PIHSUALA

PI in the type designation is replaced by SI for surface mount versions of the above through hole mount models, all models may be followed by any combination of characters representing minor differences that do not affect safety, see model differences for examples of suffixes.

All models' suffix is optional:

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(PKB-B models only)

OP - Optional part list

HS - base plate

LHS-low base plate

HV - baseplate with wings

G - baseplate with ground pin (HV baseplate only)

OC - custom optimized control loop

OV - 36-60V input voltage (PKB 4513 PINBOVLC only)

OA - 1.5 V output voltage (PKB 4418 PIOA only)

OB - 1.2 V output voltage (PKB 4318 PIOB only)

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 UnderVoltage at shut down level

O - Electrical Optional part list

L - Low Profile (means Lower product height)

Z - 3.25mm standoff UA - Input voltage minimum is 34.5V

UA - Input voltage minimum is 34.5V

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Ratings:

(optional)

Model	Input (dc)	Output (dc)	
	V	V	A
PKB 4318 PIOB	36-75	1.2	30
PKB 4418 PIOA	36-75	1.5	30
PKB 4418 PI*	36-75	1.8	25
PKB 4619 PI*	36-75	2.5	25
PKB 4510 PI*	36-75	3.3	15
PKB 4610 PI*	36-75	3.3	20
PKB 4810 PI*	36-75	3.3	25
PKB 4417 PI*	36-60	3.6	8
PKB 4711 PI*	36-75	5	15
PKB 4713 PI*	36-75	12	6
PKB 4913 PI*	38-75	12	7.5
PKB 4715 PI*	38-75	15	5
PKB 4317Y PI*	36-60	3.6	9
PKB 4717 PI*	36-75	7.2	10.5
PKB 5610 PI*	18-60	3.3	20
PKB 5711 PI*	18-60	5	15
PKB 5713 PI*	18-60	12	6.25
PKB 5410 PI*	18-62.5	3.3	12.1
PKB 4110C PI*	36-75	3.3	40
PKB 4111C PI*	36-75	5.0	28
PKB 4113C PI*	36-75	12	12
PKB 4110D PI*	36-75	3.3	40
PKB 4111D PI*	36-75	5.0	30
PKB 4313D PI*	36-75	12	25
PKB 4718LC PI*	36-75	1.2	60
PKB 4918HC PI*	36-75	1.5	60
PKB 4118GC PI*	36-75	1.8	60
PKB 4513 PI*	36-75	12	4
PKB 4318N PI*	36-75	1	30
PKB 4513 PINBOVLC	30-60	12	4
PKB 4111A PI*	36-75	5	125W
PKB 4910A PI*	36-75	3.3	100W
PKB 4111A SIOT	36-75	5	125W
PKB 4518NC PI*	36-75	1	50
PKB 4216C PI*	36-75	15-33	6.6
PKB 4211D PI*	36-75	5	40
PKB 4213D PI*	36-75	12	22
PKB 4413D PI*	36-60	12	450W
PKB 4313DA*	36-75	12	32.5A 390W
PKB 4413DA*	36-75	12	34A 408W
PKB 4217ND*	36-75	10	25A
PKB 4313DA PIOA	36-75	12	32.5A
PKB 4413D PIHSUALA	34.5-60	12	450W

Additional Information:

This certificate replaces the certificate No. UL-EU-01765-M1, issued on 2019-12-30 due to:

- Add new model PKB 4413D PIHSUALA.
- Add two suffixes.



Certification Body

UL International Demko A/S, Borupvang 5A, 2750 Ballerup
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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 www.ul.com

Certification Body

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Denmark.



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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.

Certification Body

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

