



접수번호 : 20150818-0040

전기용품안전인증서 Electrical Appliances Safety Certificate

안전인증번호: HU10587-15037A
(Certificate No.)

제조업자명: Channel Well Technology (Guangzhou) Co., Ltd.
(Manufacturer)

대표자명: Pan junwei
(President)

제조공장의 주소: Bldg.B, Eastern Hi-tech Industrial Base, Zengjiang Street, Zengcheng,
(Factory Address) Guangzhou, Guangdong Province, P.R. China

제품명: 직류전원장치
(Product)

기본모델명: KPL-065M-VI
(Basic Model)

정격: 100-240 V~, 50/60 Hz, 1.7 A (O/P: 24 Vdc, 2.71 A)
(Rating)

파생모델명 (Series Model):

| | |
|-------------|-------------|
| KPL-040J-VI | KPL-040K-VI |
| KPL-040L-VI | KPL-040M-VI |
| KPL-040N-VI | KPL-040Q-VI |
| KPL-040R-VI | KPL-040W-VI |
| KPL-050J-VI | KPL-050K-VI |
| KPL-050L-VI | KPL-050M-VI |
| KPL-050N-VI | KPL-050Q-VI |
| KPL-050R-VI | KPL-050W-VI |
| KPL-060K-VI | KPL-060M-VI |
| KPL-060W-VI | 이면기재 |

적용기준: K 60950-1(2.0)(2011-12)
(Standard)

「전기용품안전 관리법 시행규칙」 제6조제2항에 따라 위의 전기용품에 대하여 안전인증서를 발급합니다.
We issue this Electrical Appliances Safety Certificate for the above electrical appliance in accordance with the Article 6(2) of the Enforcement Rule of the Electrical Appliances Safety Control Act.



2015 년 9 월 23 일
(Year) (Month) (Day)

한국기계전기전자시험연구원
Korea Testing Certification



※ 이 인증서는 「전기용품안전 관리법」에 따른 전기용품 안전성 확인에 한정된 것이며, 그 밖의 다른 법률이 적용되는 제품의 경우에는 해당 법률에 따라 추가로 인증·허가 등을 받아야 합니다.

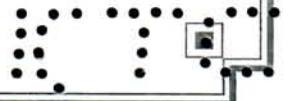
- 첨부서류 1. 안전관리부품 및 재질목록 (List of Critical Components)
2. 기본모델·파생모델의 내용 (Descriptions of the basic and series model)
3. 전기용품 안전인증의 변경 현황 (Revisions Status)





KPL-065J-VI
KPL-065L-VI
KPL-065Q-VI

KPL-065K-VI
KPL-065N-VI
KPL-065R-VI



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1. 기본모델 · 파생모델의 내용 (General Descriptions of Certified Products)

1.1 제품의 설명 (Product description)

인증제품의 개요는 다음과 같다.

(Information on certified basic model product is as follow)

| 구분 (Section) | 내 용 (Description) |
|---------------------------------|---|
| 용도 (Normal use) | The apparatus designed to be used for converting AC main voltage to DC low voltage. |
| 내부구조 (Internal construction) | Consisting of the primary and reinforced or double insulated SELV circuit. |
| 외부구조 (External construction) | Provided with plastic enclosure having min. V-1 flammability and appliance inlet. |
| 기타 (Others) | Class I. |

1.2 전기용품의 표시: 전기용품안전 관리법 시행규칙 제15조(안전인증의 표시)에 따라 표시한다.

(Marking of KC Mark: Marking shall comply with enforcement rule Article 15 of the Electrical Appliances Safety Control Law)

1.3 등록모델 (Registered Models)

| 구 분 (Class) | 모 델 명 및 정 격 (Model / Rating) | 기본모델과의 차이점 (Difference between basic model and series model) |
|------------------------|--|--|
| 기본모델 (Basic model) | KPL-065M-VI 100-240 V~, 50/60 Hz, 1.7 A (O/P: 24 Vdc, 2.71 A) | |
| 파생모델 (Series model) | KPL-060M-VI | Identical to basic model except for model designation and output rating. (O/P: 24 Vdc, 2.50 A) |
| | KPL-050M-VI | Identical to basic model except for model designation and output rating. (O/P: 24 Vdc, 2.08 A) |
| | KPL-040M-VI | Identical to basic model except for model designation and output rating. (O/P: 24 Vdc, 1.67 A) |
| | KPL-065R-VI | Identical to basic model except for model designation and output rating. (O/P: 23 Vdc, 2.83 A) |
| | KPL-050R-VI | Identical to basic model except for model designation and output rating. (O/P: 23 Vdc, 2.17 A) |



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| | |
|-------------|--|
| KPL-040R-VI | Identical to basic model except for model designation and output rating. (O/P: 23 Vdc, 1.74 A) |
| KPL-065Q-VI | Identical to basic model except for model designation and output rating. (O/P: 22 Vdc, 2.95 A) |
| KPL-050Q-VI | Identical to basic model except for model designation and output rating. (O/P: 22 Vdc, 2.27 A) |
| KPL-040Q-VI | Identical to basic model except for model designation and output rating. (O/P: 22 Vdc, 1.82 A) |
| KPL-065N-VI | Identical to basic model except for model designation and output rating. (O/P: 21 Vdc, 3.10 A) |
| KPL-050N-VI | Identical to basic model except for model designation and output rating. (O/P: 21 Vdc, 2.38 A) |
| KPL-040N-VI | Identical to basic model except for model designation and output rating. (O/P: 21 Vdc, 1.90 A) |
| KPL-065L-VI | Identical to basic model except for model designation and output rating. (O/P: 20 Vdc, 3.25 A) |
| KPL-050L-VI | Identical to basic model except for model designation and output rating. (O/P: 20 Vdc, 2.50 A) |
| KPL-040L-VI | Identical to basic model except for model designation and output rating. (O/P: 20 Vdc, 2.00 A) |
| KPL-065K-VI | Identical to basic model except for model designation and output rating. (O/P: 19 Vdc, 3.42 A) |
| KPL-060K-VI | Identical to basic model except for model designation and output rating. (O/P: 19 Vdc, 3.16 A) |



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| | |
|-------------|--|
| KPL-050K-VI | Identical to basic model except for model designation and output rating. (O/P: 19 Vdc, 2.63 A) |
| KPL-040K-VI | Identical to basic model except for model designation and output rating. (O/P: 19 Vdc, 2.11 A) |
| KPL-065J-VI | Identical to basic model except for model designation and output rating. (O/P: 18 Vdc, 3.61 A) |
| KPL-050J-VI | Identical to basic model except for model designation and output rating. (O/P: 18 Vdc, 2.78 A) |
| KPL-040J-VI | Identical to basic model except for model designation and output rating. (O/P: 18 Vdc, 2.22 A) |
| KPL-060W-VI | Identical to basic model except for model designation and output rating. (O/P: 17 Vdc, 3.53 A) |
| KPL-050W-VI | Identical to basic model except for model designation and output rating. (O/P: 17 Vdc, 2.94 A) |
| KPL-040W-VI | Identical to basic model except for model designation and output rating. (O/P: 17 Vdc, 2.35 A) |



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2. 안전관리 부품 및 재질목록(List of Critical Components)

| 부품명 (Components) | 번호 (Part No) | 특성 (Technical Data) | 제조사 (Manufacturer) | 인증규격 (Certification) |
|---------------------|-----------------|--|---|-------------------------|
| Plastic Enclosure | - | Type: SE1X, V-1 or better, 105 °C, thickness 1.5 mm min | SABIC Innovative Plastics Japan LLC | UL |
| PCB | - | Rated: V-1 or better, min. 130 °C | Various | UL |
| Plastic Enclosure | - (alt) | Type: 940, V-0 or better, 120 °C, thickness 1.5 mm min. | SABIC Innovative Plastics Japan LLC | UL |
| Plastic Enclosure | - (alt) | Type: LN-1250G, V-0 or better, 115 °C, thickness 1.5 mm min. | Teijin Chemicals Plastic Compounds Shanghai Ltd | UL |
| T.I.W | - (of T1) | Type: TRW(B), 130 °C | Great Leoflon Industrial Co.,Ltd | VDE,UL |
| Bobbin | - (of T1) | Type: T375J, Phenolics, 150 °C, V-0 | Chang Chun Palstics Co., Ltd | UL |
| Bridge Diode | BD1 | Rated: Min. 2 A, min. 600 V | Various | - |
| Appliance Inlet | CON1 | Type: TU-301-SP, 10 A, 250 Vac, 70 °C | Tecx-Unions Technology Corporation | IEC |
| Appliance Inlet | CON1 (alt) | Type: R-301SN, 10 A, 250 Vac, 70 °C | Rich Bay Co., Ltd | IEC |
| Appliance Inlet | CON1 (alt) | Type: R-30790, 2.5 A, 250 Vac, 70 °C | Rich Bay Co., Ltd | IEC |
| Appliance Inlet | CON1 (alt) | Type: SS-120, 10 A, 250 Vac, 70 °C | Rong Feng Industrial Co., Ltd | IEC |
| Appliance Inlet | CON1 (alt) | Type: ST-A04-002, 2.5 A, 250 Vac, 70 °C | Zhe Jiang Bei Er Jia Electronic Co., Ltd | IEC |
| Appliance Inlet | CON1 (alt) | Type: TU-333, 2.5 A, 250 Vac, 70 °C | Tecx-Unions Technology Corporation | IEC |
| Appliance Inlet | CON1 (alt) | Type: ST-A01-003J, 10 A, 250 Vac, 70 °C | Zhe Jiang Bei Er Jia Electronic Co., Ltd | IEC |
| Appliance Inlet | CON1 (alt) | Type: RF-190, 2.5 A, 250 Vac, 70 °C | Rong Feng Industrial Co., Ltd | IEC |
| X-Capacitor | CX1 | Type: LE, 0.33 μF, min. 250 Vac | Okaya Electric Industries Co., Ltd | IEC |



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| 부품명 (Components) | 번호 (Part No) | 특성 (Technical Data) | 제조사 (Manufacturer) | 인증규격 (Certification) |
|---------------------|-----------------|--|--|-------------------------|
| X-Capacitor | CX1 (alt) | Type: HQX, 0.33 μ F, min. 250 Vac | Ultra Tech Xiphi Enterprise Co., Ltd | IEC |
| X-Capacitor | CX1 (alt) | Type: MKP, 0.33 μ F, min. 250 Vac | Hua Jung Components Co., Ltd | IEC |
| X-Capacitor | CX1 (alt) | Type: MPX2, 0.33 μ F, min. 250 Vac | Europtronic (Taiwan) Ind. Corp. | IEC |
| X-Capacitor | CX1 (alt) | Type: R.46, 0.33 μ F, min. 250 Vac | Arcotronics Italia S.P.A | IEC |
| X-Capacitor | CX1 (alt) | Type: MPX, 0.33 μ F, min. 250 Vac | Jenn Fu Electronics Corporation | IEC |
| Bridge Capacitor | CY1 | Type: CD, 1000 pF, min. 250 Vac, Y1 type | TDK Corporation | IEC |
| Bridge Capacitor | CY1 (alt) | Type: AH, 1000 pF, min. 250 Vac, Y1 type | Walsin Technology Corp | IEC |
| Bridge Capacitor | CY1 (alt) | Type: SB, 1000 pF, min. 250 Vac, Y1 type | Success Electronics Co.,Ltd | IEC |
| Bridge Capacitor | CY1 (alt) | Type: JN, 1000 pF, min. 250 Vac, Y1 type | JYA-NAY Co., Ltd | IEC |
| Bridge Capacitor | CY1 (alt) | Type: SE, 1000 pF, min. 250 Vac, Y1 type | Success Electronics Co.,Ltd | IEC |
| Bridge Capacitor | CY1 (alt) | Type: YO, 1000 pF, min. 250 Vac, Y1 type | Xiangtai Electronics Co., Ltd | IEC |
| Fuse | F2 | Type: 4T, T3.15 AL, 250 Vac | XC Electronics (Shenzhen) Corp. Ltd. | IEC |
| Fuse | F2 (alt) | Type: 2010, T3.15 AL, 250 Vac | Ever Island Electric Co., Ltd. and Walter Electric | IEC |
| Fuse | F2 (alt) | Type: 392, T3.15 AL, 250 Vac | Littelfuse, Inc. Wickmann- Werke | IEC |
| Fuse | F2 (alt) | Type: 5TE, T3.15 AL, 250 Vac | XC Electronics (Shenzhen) Corp. Ltd. | IEC |
| Fuse | F2 (alt) | Type: MST, T3.15 AL, 250 Vac | Conquer Electronics Co., Ltd | IEC |
| Fuse | F2 (alt) | Type: PTU, T3.15 AL, 250 Vac | Conquer Electronics Co., Ltd | IEC |



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| 부품명 (Components) | 번호 (Part No) | 특 성 (Technical Data) | 제조사 (Manufacturer) | 인증규격 (Certification) |
|------------------------|------------------------|---|--|-------------------------|
| Fuse | F2 (alt) | Type: ICP, T3.15 AL, 250 Vac | Walter Electronic Co. Ltd. | IEC |
| Optocoupler | IC1 | Type: LTV-817, Dti ≥ 0.4 mm | Lite-On Technology Corporation | VDE,UL |
| Optocoupler | IC1 (alt) | Type: EL817, Dti = 0.5 mm | Everlight Electronics Co Ltd | VDE,UL |
| Optocoupler | IC1 (alt) | Type: TLP781/TL781F, Dti = 0.5 mm | Toshiba Corp. Semiconductor | VDE,UL |
| Optocoupler | IC1 (alt) | Type: K1010, Dti = 0.5 mm | Cosmo Electronics Corporation | VDE,UL |
| Optocoupler | IC1 (alt) | Type: PC123, Dti = 0,7 mm | Sharp Corp Electronic Components And Devices Group | VDE,UL |
| Optocoupler | IC1 (alt) | Type: PC817, Dti = 0,7 mm | Sharp Corp Electronic Components And Devices Group | VDE,UL |
| Optocoupler | IC1 (alt) | Type: FOD817, Dti ≥ 0.4 mm | Fairchild Semiconductor | VDE,UL |
| Line Choke | LF1 | Type: T18*10*7, 130 ℃ | Sunycore Electronics Co., Ltd | - |
| Line Choke | LF1 (alt) | Type: T18*10*7, 130 ℃ | Channel Well Technology Co., Ltd | - |
| Line Choke | LF2 | Type: T10*6*5+C, 130 ℃ | Sunycore Electronics Co., Ltd | - |
| Line Choke | LF2 (alt) | Type: T10*6*5+C, 130 ℃ | Channel Well Technology Co., Ltd | - |
| Transistor | Q1 | Type: WFF10N60, Min. 4.5 A, min. 600 V | WINSEMI Electronics Co., Ltd | - |
| Transistor | Q1 (alt) | Type: 2SK3569, Min. 4.5 A, min. 600 V | Toshiba Corporation Semiconductor | - |
| Transistor | Q1 (alt) | Type: TK10A60D, Min. 4.5 A, min. 600 V | Toshiba Corporation Semiconductor | - |
| Bleeder Resistor | R2, R3, R4, R5 | Rated: 3.0 MΩ or 3.9 MΩ 1/4 W, SMD type | Various | - |
| Current sense resistor | R9, R15, R16, R18, R23 | Rated: Min. 1.5 Ω, min. 1/4 W, SMD type | Various | - |



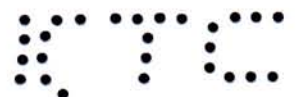
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| 부품명 (Components) | 번호 (Part No) | 특성 (Technical Data) | 제조사 (Manufacturer) | 인증규격 (Certification) |
|---------------------|-----------------|---------------------------|-------------------------------------|-------------------------|
| Transformer | T1 | Type: PQ-2620-17, Class B | Channel Well Technology Co.,Ltd. | - |



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3. 전기용품안전인증의 변경현황(Status of Certificate Revisions)

| 일자(Date) | 발급현황(Status of issues) |
|------------|---------------------------------|
| | 변경내용(Modification of Contents) |
| 2015/09/23 | 기본+파생모델등록(Basic + Series Model) |
| | |

4. 기타(Carefully Informed Note)

- 1) 안전관리부품 및 재질목록에 기재된 사항은 전기적인 안전에 직접적인 영향을 주는 부분이므로 내용을 변경 또는 복수등재를 원하는 경우 안전인증변경신청을 하여야 합니다. 안전인증변경신청을 하지 않고 제조자가 임의로 변경하는 경우에는 전기용품안전 관리법 제8조제1항제2호에 의거 안전인증이 취소될 수 있습니다.
(Certificate holder should apply for the revision of certificate issued from Issuing Certification Body if registered critical components would be changed, modified or alternated. Should the contents of Certificate are altered without Safety Certification Modification Application by Certificate holder, Safety Certification(KC Mark) may be withdrawn under Section 2, Paragraph 1, Article 8 of the Electrical Appliances Safety Control Law)
- 2) 정기검사(시료채취포함)를 거부, 방해 또는 기피하는 경우에는 전기용품안전 관리법 제8조제1항제4호에 의거 안전인증이 취소될 수 있습니다.
(If Annual Follow-up Factory Inspection, including sampling representative model by 11 categories of the certified product at factory-site for re-testing, should not has been arranged by Certificate holder, Safety Certification(KC Mark) may be withdrawn under Section 4, Paragraph 1, Article 8 of the Electrical Appliances Safety Control Law)
- 3) 공장주소(전화번호포함), 대표자, 상호 및 부품변경 등 전기용품 안전인증서의 내용이 변경되었을 때 제조자가 안전인증변경신청을 하지 않을 경우에는 전기용품안전 관리법 제8조제1항제3호에 의거 안전인증이 중지 또는 취소될 수 있습니다.
(If Safety Certification Modification Application by Certificate holder should not has been made to Issuing Certification Body, when Factory Address, including telephone/facsimile no., Manufacturer Name, Registered Critical Components, etc would be changed, Safety Certification(KC Mark) may be suspended or withdrawn under Section 3, Paragraph 1, Article 8 of the Electrical Appliances Safety Control Law)
- 4) 조건부 인증사항 (Conditional certification items):

