

접 수 번 호 : 22-081377-35-1
(Receipt No.)



안 전 인 증 서

Safety Certificate

안 전 인 증 번 호 : SU10509-16018B
(Certificate No.)

제 조 업 자/수 입 업 자 명 : SuZhou MEAN WELL Technology Co., Ltd.
(Manufacturer/importer)

주 소 : No.269, ChangPing Road, Huangdai Town, Xiangcheng District,
(Address) Suzhou, China

제 품 명 : 직류전원장치(AC/DC Switching Adaptor)
(Product)

기 본 모 델 명 : GST160A48
(Basic Model)

파 생 모 델 명 : See the attachment 2
(Series Model)

정격/안전기준상의 모델구분 : 100-240 Vac, 50/60 Hz, 2.0 A, Class I
(Rating) (Output: 48 Vdc, 3.34 A, 160 W MAX.)

시 험 기 준 : K60950-1(2011-12)
(Standard)

본 인증서는 제 조 국 명 : 중국
제 조 업 자 명 : SuZhou MEAN WELL Technology Co., Ltd.
제조공장의 주소 : No.269, ChangPing Road, Huangdai Town, Xiangcheng District, Suzhou, China
의 제품에만 해당함

「전기용품 및 생활용품 안전관리법 시행규칙」 제9조제2항, 제4항, 제10조제2항 또는 제15조제2항에 따라 안전인증서를 발급합니다.

We Issue This Safety Certificate for the above appliances in accordance with the Article 9(2), 9(4), 10(2) or 15(2) of the Enforcement Rule of the Electrical Appliances and Consumer Products Safety Control Act.

2023 년 03 월 09 일
Year month day

한국산업기술시험원
KOREA TESTING LABORATORY



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

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

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
Plastic Enclosure	Sabic Innovative Plastics	945, 940	V-0, 120 °C, min. 1.5 mm thick	UL
AC Inlet	Pronic Electronics (Shenzhen) Co., Ltd.	PST-101	10 A, 250 Vac	VDE
(Alternate)	TECX-UNIONS Technology Corporation	TU-301-A, TU-301-AP, TU-301-S, TU-301-SP, TU-301-SF	10 A, 250 Vac	VDE
(Alternate)	Rong Feng Industrial Co., Ltd.	SS-7B Series, SS-120 Series	10 A, 250 Vac	VDE
Fuse (FS1)	Littelfuse Inc.	392	T 4 A, 250 V	VDE
(Alternate)	Ever Island Electric Co., Ltd. and Walter Electric	2010 Serie(s)	T 4 A, 250 V	VDE
(Alternate)	Conquer	MST	T 4 A, 250 V	VDE
Y-Capacitors (C3, C4, C22) (Y1 or Y2)	Murata Mfg. Co., Ltd.	KH, KX, KY	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	TDK-EPC Corporation	CD, CS	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	Walsin Technology Corp	AH, AC	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	Welson Industrial Co., Ltd.	WD, KL	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	VISHAY	338 6	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
X-Capacitor (C1, C2) (X1 or X2 type)	Kemet Electronics Italia Srl (Arcotronics SPA)	R.46	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110/125 °C	ENEC
(Alternate)	Kemet Electronics Italia Srl (Arcotronics SPA)	R.49	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
(Alternate)	EPCOS Electronic Components S.A.	B3292#	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 105 °C	VDE

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternate)	ISKRA SISTEMI, d.d.	KNB 1530	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 100 °C	VDE
(Alternate)	ISKRA SISTEMI, d.d.	KNB 1560	C1: 0.68 uF, C2: 0.47 uF, 275 V, 110 °C or 300 V, 125 °C	VDE
(Alternate)	Liow Gu Electronics Industry Co. Ltd.	GS-L	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
(Alternate)	Pilkor Electronics Ltd.	PCX2 335M	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 105 °C	ENEC
(Alternate)	Pilkor Electronics Ltd.	PCX2 337	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
(Alternate)	VISHAY Capacitors Belgium NV	339	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
(Alternate)	Cheng Tung Industrial Co., Ltd.	CTX	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 100 °C	VDE
(Alternate)	Shiny Space Enterprise Co., Ltd.	SX1	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 100 °C	VDE
(Alternate)	Xiamen Faratronic	MKP62	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	VDE
(Alternate)	Hua Jung	MKP	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	VDE
(Alternate)	Carli	MPX	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 100 or 110 °C	VDE
(Alternate)	EPCOS Electronic Components S.A.	B3292#CD series	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternate)	Joey	MPX	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 105 °C	VDE
(Alternate)	Ultra Tech Xiphi Enterprise Co. Ltd.	HQX	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
Varistor (ZNR1) (Optional)	Thinking Electronic Industrial Co., Ltd.	TVR10511-M, TVR14511-M	320 Vac, 410 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Thinking Electronic Industrial Co., Ltd.	TVR10471-M, TVR14471-M	300 Vac, 385 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Thinking Electronic Industrial Co., Ltd.	TVR10561-M, TVR14561-M	350 Vac, 450 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Joyin Co., Ltd.	JVT10S471K, JVT14S471K	300 Vac, 385 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Joyin Co., Ltd.	JVT10S5111K, JVT14S511K	320 Vac, 410 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Joyin Co., Ltd.	JVT10S561K, JVT14S561K	350 Vac, 450 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
Bridge Capacitor (C31, C32) (Y1 type)	Murata Mfg. Co., Ltd.	KX	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	TDK-EPC Corporation	CD	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	Walsin Technology Corp	AH	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternate)	Welson Industrial Co., Ltd.	WD	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE
Photo Coupler (U3, U4)	Lite-On Technology Corporation	LTV-817, LTV-817M, LTV817	Dti=0.4 mm Int. dcr=5.2 mm Ext. dcr=7.0 mm, thermal cycling test, 115 °C	VDE, FIMKO
(Alternate)	Sharp Corporation Electronic Components and Devices Division	PC123	Dti=0.4 mm, Ext. dcr=8.0 mm, thermal cycle test, 110 °C	VDE, Semko
(Alternate)	COSMO Electronics Corporation	K1010	Dti=0.7 mm, Ext. dcr=8.0 mm, thermal cycle test, 100 °C	VDE, Semko
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP785F	Di=0.6 mm, Int. dcr=5.0 mm, Ext. dcr=8 mm, thermal cycling test, 115 °C	VDE
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP785	Di=0.6 mm, Int. dcr=5.0 mm, Ext. dcr=6.5 mm, thermal cycling test, 115 °C	VDE
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP781F	Di=0.6 mm, Int. dcr=5.0mm, Ext. dcr=8 mm, thermal cycling test, 115 °C	VDE
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP781	Di=0.6 mm, Int. dcr=5.0mm, Ext. dcr=6.5 mm, thermal cycling test, 115 °C	VDE
Transformer (T1) (for model GST160A48)	Mean Well	TF-5285	Class B	Tested with appliance
(Alternate)	Yu Jing	TF-5285	Class B	Tested with appliance
Transformer (T1) (for model GST160A12)	Mean Well	TF-5281	Class B	Tested with appliance
(Alternate)	Yu Jing	TF-5281	Class B	Tested with appliance

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
Transformer (T1) (for model GST160A24)	Mean Well	TF-5284	Class B	Tested with appliance
(Alternate)	Yu Jing	TF-5284	Class B	Tested with appliance
Transformer (T1) (for model GST160A36)	Mean Well	TF-5365	Class B	Tested with appliance
(Alternate)	Yu Jing	TF-5365	Class B	Tested with appliance
Discharging IC (U2)	On- Semiconductor	NCP4810	Maximum AC1 pin Voltage related to AC2 pin = - 700 V to 700 V, Idisch_min = 0.85 mA (Applicable for use to mains supply 100-240 Vac 60-50 Hz) X-Caps.: 0.047- 2.2 μ F. Resistors: 150 k- 1 M Ω	NEMKO
(Alternate)	Power Integrations, Inc.	SC1143	230 VAC nominal (tested for 85-265 Vac, 47-63 Hz) X-Capacitance: 100 nF - 6 μ F Resistance: 142 k - 7.5 M Ω	NEMKO(CB)
PCB	Interchangeable	Interchangeable	V-1 or better, min. 105 °C	UL
Bleeder Resistors (R7, R8)	Interchangeable	Interchangeable	Total 150 k-440 k Ω , min. 1/4 W	Tested with appliance

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
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☐ 유의사항 (Attention) :

1. 안전관리부품은 전기적인 안전에 직접적인 영향을 주는 부품으로서 안전인증기관이 정기공장검사 시 확인 관리 하는 사항입니다. 따라서 상기목록에 기재된 사항을 변경하거나 또는 복수등재를 원하시는 경우는 안전인증기관에 인증변경신청을 하여야 합니다.

As the "Critical components" are parts in directly related with safety, these components shall be checked during a factory inspection by the certification body. In case of applying multiple listing or changing the items above, the certification revision shall be applied.

2. 인증변경신청 없이 임의로 변경하는 경우는, 전기용품 및 생활용품 안전관리법 시행규칙 제 20 조제 1 항 또는 제 36 조제 1 항 규정에 의한 안전인증 취소 혹은 안전확인신고 효력상실 사유가 됨을 유의하시기 바랍니다.

The Safety Certification will be cancelled under the Article 20(1), 36(1) of the Enforcement Rule of the Electrical appliances and Consumer Products Safety Control Act if the contents of the Certification is altered without our authorization.

FP511-04

☐ 첨부 2 : 기본모델 · 파생모델의 내용
Description of the basic and series model

파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
GST160A12	Same as basic model except for transformer sources, output rating and model designation. (Output: 12 Vdc, 11.5 A, 138 W MAX.)
GST160A24	Same as basic model except for transformer sources, output rating and model designation. (Output: 24 Vdc, 6.67 A, 160 W MAX.)
GST160A36	Same as basic model except for transformer sources, output rating and model designation. (Output: 36 Vdc, 4.44 A, 160 W MAX.)
제품특기사항 및 시험조건 Remarks & Test conditions	
1. Test Report Ref. No. : 16-031551-01 (2016.10.12) 2. Product Description - Measured power consumption: 173 W - Class of equipment: Class I - Protection against ingress of water: IPX0 - Mass of equipment (kg): 0.7 kg	
☐ 본 제품의 시험내용에 관하여 문의하실 사항이 있으시면 아래 연락처로 문의하시기 바랍니다. 시험 담당자 / 연락처 : 디지털산업본부 전기전자기술센터 문 상현 / (02)860-1432 ☐ If you have any question on product testing, please contact the person below : Job holder : S.M.A.R.T. Industry Division, Electrical and Electronic Technology Center, Sang-heon Moon / +82 2 860-1432	

FP511-05

☐ 첨부 3 : 안전인증의 변경 현황
Revisions Status

변경발급 내용 Contents of Certificate Revisions		
1 st Rev.) Addition of alternate Discharging IC(U2) (18-032594-04-2: 2018.06.05)		
Components	Manufacturer	Model
Discharging IC (U2)	Power Integrations, Inc.	SC1143
2 nd Rev.) Change of manufacturer president and address (22-081377-35-1 : 2023.03.09.)		
- Before : Mr. Jerry Lin /		
No. 77, Jian-Min Road, Dong-Qiao, Pan-Yang Ind. Park, Huang-Dai Town,Xiang		
Cheng District, Suzhou, Jiangsu 215152, P.R. China		
After : Alan Liu /		
No.269, ChangPing Road, Huangdai Town, Xiangcheng District, Suzhou, China		

FP511-06

접 수 번 호 : 18-032594-04-1
(Receipt No.)



안 전 인 증 서

Safety Certificate

안 전 인 증 번 호 : SU10509-16018A
(Certificate No.)

제 조 업 자/수 입 업 자 명 : SuZhou MEAN WELL Technology Co., Ltd.
(Manufacturer/importer)

주 소 : No. 77, Jian-Min Road, Dong-Qiao, Pan-Yang Ind. Park, Huang-Dai
(Address) Town, Xiang-Cheng District, Suzhou, Jiangsu 215152, P.R. China

제 품 명 : 직류전원장치(AC/DC Switching Adaptor)
(Product)

기 본 모 델 명 : GST160A48
(Basic Model)

파 생 모 델 명 : See the attachment 2
(Series Model)

정격/안전기준상의 모델구분 : 100-240 Vac, 50/60 Hz, 2.0 A, Class I
(Rating) (Output: 48 Vdc, 3.34 A, 160 W MAX.)

시 험 기 준 : K60950-1(2011-12)
(Standard)

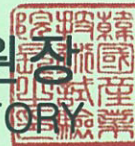
본 인증서는 제 조 국 명 : 중국
제 조 업 자 명 : SuZhou MEAN WELL Technology Co., Ltd.
제조공장의 주소 : No. 77, Jian-Min Road, Dong-Qiao, Pan-Yang Ind. Park, Huang-Dai Town, Xiang-Cheng District, Suzhou, Jiangsu 215152, P.R. China
의 제품에만 해당함

「전기용품 및 생활용품 안전관리법 시행규칙」 제9조제2항·제4항 또는 제10조제2항에 따라 안전인증서를 발급합니다.

We Issue This Safety Certificate for the above appliances in accordance with the Article 9(2), 9(4) or 10(2) of the Enforcement Rule of the Electrical Appliances and Consumer Products Safety Control Act.

2018 년 06 월 07 일
Year month day

한국산업기술시험원
KOREA TESTING LABORATORY



* 이 인증서는 「전기용품 및 생활용품 안전관리법 시행규칙」에 따른 제품의 안전성 확인에 한정된 것이며, 그 밖의 다른 법률이 적용되는 제품의 경우에는 해당 법률에 따라 추가로 인증·허가 등을 받아야 합니다.

첨부서류

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

□ 첨부 1 : 전기용품의 안전관리부품 및 재질목록
List of Critical Components

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
Plastic Enclosure	Sabic Innovative Plastics	945, 940	V-0, 120 °C, min. 1.5 mm thick	UL
AC Inlet	Pronic Electronics (Shenzhen) Co., Ltd.	PST-101	10 A, 250 Vac	VDE
(Alternate)	TECX-UNIONS Technology Corporation	TU-301-A, TU-301-AP, TU-301-S, TU-301-SP, TU-301-SF	10 A, 250 Vac	VDE
(Alternate)	Rong Feng Industrial Co., Ltd.	SS-7B Series, SS-120 Series	10 A, 250 Vac	VDE
Fuse (FS1)	Littelfuse Inc.	392	T 4 A, 250 V	VDE
(Alternate)	Ever Island Electric Co., Ltd. and Walter Electric	2010 Serie(s)	T 4 A, 250 V	VDE
(Alternate)	Conquer	MST	T 4 A, 250 V	VDE
Y-Capacitors (C3, C4, C22) (Y1 or Y2)	Murata Mfg. Co., Ltd.	KH, KX, KY	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
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(Alternate)	Welson Industrial Co., Ltd.	WD, KL	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	VISHAY	338 6	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
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(Alternate)	Kemet Electronics Italia Srl (Arcotronics SPA)	R.49	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
(Alternate)	EPCOS Electronic Components S.A.	B3292#	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 105 °C	VDE

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternate)	ISKRA SISTEMI, d.d.	KNB 1530	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 100 °C	VDE
(Alternate)	ISKRA SISTEMI, d.d.	KNB 1560	C1: 0.68 μ F, C2: 0.47 μ F, 275 V, 110 °C or 300 V, 125 °C	VDE
(Alternate)	Liow Gu Electronics Industry Co. Ltd.	GS-L	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 110 °C	ENEC
(Alternate)	Pilkor Electronics Ltd.	PCX2 335M	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 105 °C	ENEC
(Alternate)	Pilkor Electronics Ltd.	PCX2 337	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 110 °C	ENEC
(Alternate)	VISHAY Capacitors Belgium NV	339	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 110 °C	ENEC
(Alternate)	Cheng Tung Industrial Co., Ltd.	CTX	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 100 °C	VDE
(Alternate)	Shiny Space Enterprise Co., Ltd.	SX1	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 100 °C	VDE
(Alternate)	Xiamen Faratronic	MKP62	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 110 °C	VDE
(Alternate)	Hua Jung	MKP	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 110 °C	VDE
(Alternate)	Carli	MPX	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 100 or 110 °C	VDE
(Alternate)	EPCOS Electronic Components S.A.	B3292#CD series	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 110 °C	ENEC

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternate)	Joey	MPX	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 105 °C	VDE
(Alternate)	Ultra Tech Xiphi Enterprise Co. Ltd.	HQX	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 110 °C	ENEC
Varistor (ZNR1) (Optional)	Thinking Electronic Industrial Co., Ltd.	TVR10511-M, TVR14511-M	320 Vac, 410 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Thinking Electronic Industrial Co., Ltd.	TVR10471-M, TVR14471-M	300 Vac, 385 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Thinking Electronic Industrial Co., Ltd.	TVR10561-M, TVR14561-M	350 Vac, 450 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Joyin Co., Ltd.	JVT10S471K, JVT14S471K	300 Vac, 385 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Joyin Co., Ltd.	JVT10S5111K, JVT14S511K	320 Vac, 410 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Joyin Co., Ltd.	JVT10S561K, JVT14S561K	350 Vac, 450 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
Bridge Capacitor (C31, C32) (Y1 type)	Murata Mfg. Co., Ltd.	KX	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	TDK-EPC Corporation	CD	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	Walsin Technology Corp	AH	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternate)	Welson Industrial Co., Ltd.	WD	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE
Photo Coupler (U3, U4)	Lite-On Technology Corporation	LTV-817, LTV-817M, LTV817	Dti=0.4 mm Int. dcr=5.2 mm Ext. dcr=7.0 mm, thermal cycling test, 115 °C	VDE, FIMKO
(Alternate)	Sharp Corporation Electronic Components and Devices Division	PC123	Dti=0.4 mm, Ext. dcr=8.0 mm, thermal cycle test, 110 °C	VDE, Semko
(Alternate)	COSMO Electronics Corporation	K1010	Dti=0.7 mm, Ext. dcr=8.0 mm, thermal cycle test, 100 °C	VDE, Semko
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP785F	Di=0.6 mm, Int. dcr=5.0 mm, Ext. dcr=8 mm, thermal cycling test, 115 °C	VDE
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP785	Di=0.6 mm, Int. dcr=5.0 mm, Ext. dcr=6.5 mm, thermal cycling test, 115 °C	VDE
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP781F	Di=0.6 mm, Int. dcr=5.0mm, Ext. dcr=8 mm, thermal cycling test, 115 °C	VDE
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP781	Di=0.6 mm, Int. dcr=5.0mm, Ext. dcr=6.5 mm, thermal cycling test, 115 °C	VDE
Transformer (T1) (for model GST160A48)	Mean Well	TF-5285	Class B	Tested with appliance
(Alternate)	Yu Jing	TF-5285	Class B	Tested with appliance
Transformer (T1) (for model GST160A12)	Mean Well	TF-5281	Class B	Tested with appliance
(Alternate)	Yu Jing	TF-5281	Class B	Tested with appliance

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
Transformer (T1) (for model GST160A24)	Mean Well	TF-5284	Class B	Tested with appliance
(Alternate)	Yu Jing	TF-5284	Class B	Tested with appliance
Transformer (T1) (for model GST160A36)	Mean Well	TF-5365	Class B	Tested with appliance
(Alternate)	Yu Jing	TF-5365	Class B	Tested with appliance
Discharging IC (U2)	On- Semiconductor	NCP4810	Maximum AC1 pin Voltage related to AC2 pin = - 700 V to 700 V, Idisch_min = 0.85 mA (Applicable for use to mains supply 100-240 Vac 60-50 Hz) X-Caps.: 0.047- 2.2 μ F. Resistors: 150 k- 1 M Ω	NEMKO
(Alternate)	Power Integrations, Inc.	SC1143	230 VAC nominal (tested for 85-265 Vac, 47-63 Hz) X-Capacitance: 100 nF - 6 μ F Resistance: 142 k - 7.5 M Ω	NEMKO(CB)
PCB	Interchangeable	Interchangeable	V-1 or better, min. 105 °C	UL
Bleeder Resistors (R7, R8)	Interchangeable	Interchangeable	Total 150 k-440 k Ω , min. 1/4 W	Tested with appliance

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
☐ 유의사항 (Attention) : 안전관리부품은 전기적인 안전에 직접적인 영향을 주는 부품으로서 안전인증기관이 정기공장검사 시 확인 관리 하는 사항입니다. 따라서 상기목록에 기재된 사항을 변경하거나 또는 복수등재를 원하시는 경우는 안전인증기관에 인증변경신청을 하여야 합니다. <i>As the "Critical components" are parts in directly related with safety, these components shall be checked during a factory inspection by the certification body. In case of applying multiple listing or changing the items above, the certification revision shall be applied.</i> 인증변경신청 없이 임의로 변경하는 경우는, 전기용품 및 생활용품 안전관리법 시행규칙 제 20 조제 1 항 또는 제 36 조제 1 항 규정에 의한 안전인증 취소 혹은 안전확인신고 효력상실 사유가 됨을 유의하시기 바랍니다. <i>The Safety Certification will be cancelled under the Article 20(1), 36(1) of the Enforcement Rule of the Electrical appliances and Consumer Products Safety Control Act if the contents of the Certification is altered without our authorization.</i>				

FP511-04

□ 첨부 2 : 기본모델 · 파생모델의 내용
Description of the basic and series model

파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
GST160A12	Same as basic model except for transformer sources, output rating and model designation. (Output: 12 Vdc, 11.5 A, 138 W MAX.)
GST160A24	Same as basic model except for transformer sources, output rating and model designation. (Output: 24 Vdc, 6.67 A, 160 W MAX.)
GST160A36	Same as basic model except for transformer sources, output rating and model designation. (Output: 36 Vdc, 4.44 A, 160 W MAX.)
제품특기사항 및 시험조건 Remarks & Test conditions	
1. Test Report Ref. No. : 16-031551-01 (2016.10.12) 2. Product Description - Measured power consumption: 173 W - Class of equipment: Class I - Protection against ingress of water: IPX0 - Mass of equipment (kg): 0.7 kg □ 본 제품의 시험내용에 관하여 문의하실 사항이 있으시면 아래 연락처로 문의하시기 바랍니다. 시험담당자: 인증산업본부 정보조명평가센터 문 상 현 / (02)860-1432 □ If you have any question on product testing, please contact the person below : Job holder : Certification Business Division, IT & Lighting Testing Center, Sang-heon Moon / +82 2 860-1432	

FP511-05

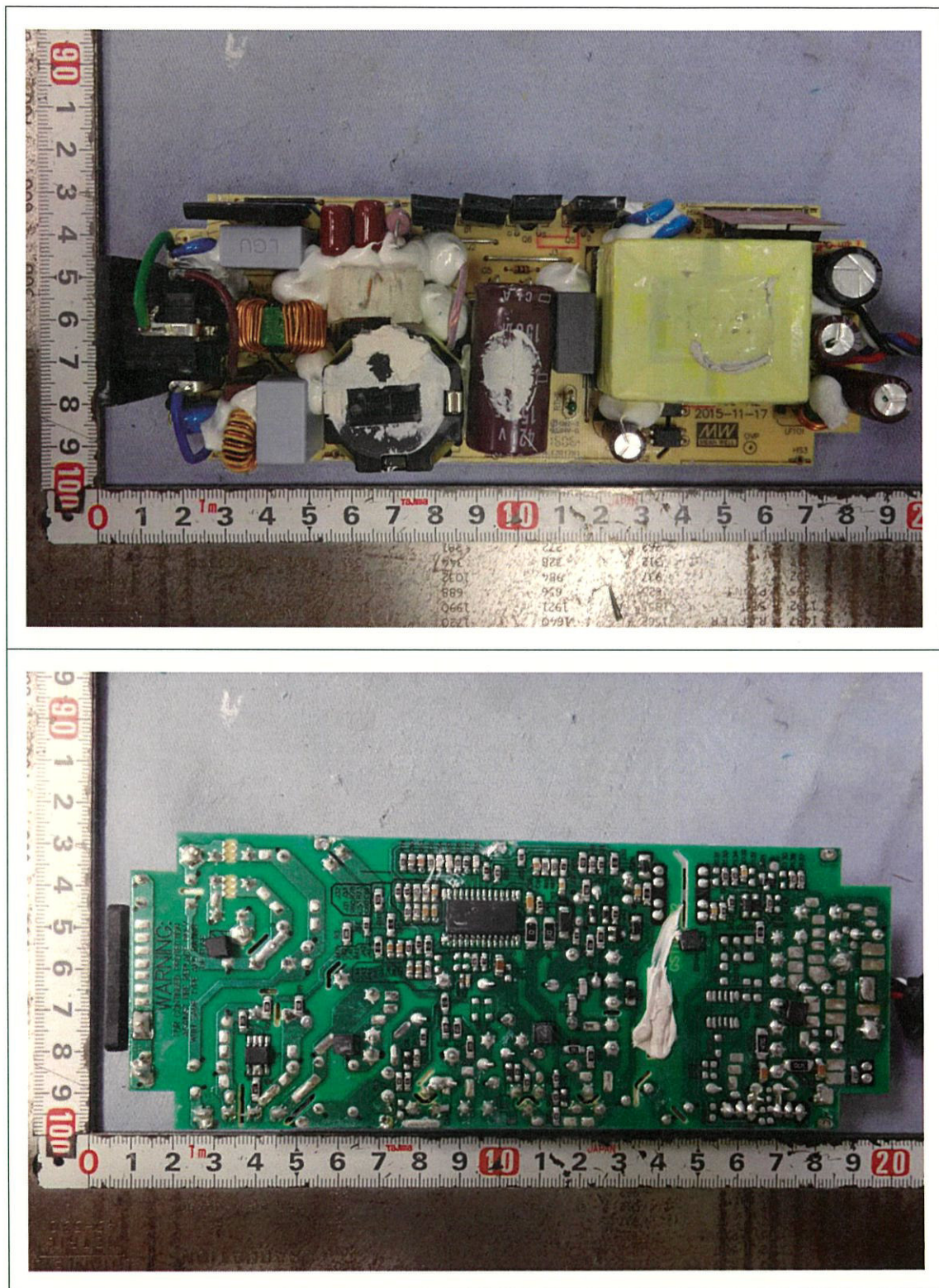
□ 첨부 3 : 안전인증의 변경 현황
Revisions Status

변경발급 내용 Contents of Certificate Revisions		
1 st Rev.) Addition of alternate Discharging IC(U2) (18-032594-04-2: 2018.06.05)		
Components	Manufacturer	Model
Discharging IC (U2)	Power Integrations, Inc.	SC1143

FP511-06

☐ 첨부 : 제품사진
Photographs





접 수 번 호 : 16-031551-01
(Receipt No.)



전 기 용 품 안 전 인 증 서

Electrical Appliances Safety Certificate

안 전 인 증 번 호 (Certificate No.)	: SU10509-16018
제 조 업 자 명 (Manufacturer)	: SuZhou MEAN WELL Technology Co., Ltd.
대 표 자 명 (President)	: Mr. Jerry Lin
제조공장의 주소 (Factory Address)	: No. 77, Jian-Min Road, Dong-Qiao, Pan-Yang Ind. Park, Huang-Dai Town, Xiang-Cheng District, Suzhou, Jiangsu 215152, P.R. China
제 품 명 (Product)	: 직류전원장치(AC/DC Switching Adaptor)
기 본 모 델 명 (Basic Model)	: GST160A48
정 격 (Rating)	: 100-240 Vac, 50/60 Hz, 2.0 A, Class I (Output: 48 Vdc, 3.34 A, 160 W MAX.)
파 생 모 델 명 (Series Model)	: See the attachment 2
적 용 기 준 (Standard)	: K 60950-1 (2011-12)

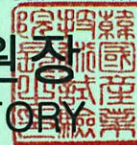
「전기용품안전 관리법 시행규칙」 제6조제2항에 따라 위의 전기용품에 대하여 안전인증서를 발급합니다.

We Issue Electrical Appliances Safety Certification as above product by Article 6 Section 2 of the Electrical Appliances Safety Control Law Enforcement Regulation.

2016 년 10 월 13 일
Year month day



한국산업기술시험원
KOREA TESTING LABORATORY



※ 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.

- 첨 부 : (Annex)
1. 안전관리부품 및 재질목록 (List of Critical Components)
 2. 기본모델·파생모델의 내용 (Descriptions of the basic and series model)
 3. 전기용품안전인증의 변경 현황 (Revisions Status)

□ 첨부 1 : 안전관리부품 및 재질목록
List of Critical Components

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
Plastic Enclosure	Sabic Innovative Plastics	945, 940	V-0, 120 °C, min. 1.5 mm thick	UL
AC Inlet	Pronic Electronics (Shenzhen) Co., Ltd.	PST-101	10 A, 250 Vac	VDE
(Alternate)	TECX-UNIONS Technology Corporation	TU-301-A, TU-301-AP, TU-301-S, TU-301-SP, TU-301-SF	10 A, 250 Vac	VDE
(Alternate)	Rong Feng Industrial Co., Ltd.	SS-7B Series, SS-120 Series	10 A, 250 Vac	VDE
Fuse (FS1)	Littelfuse Inc.	392	T 4 A, 250 V	VDE
(Alternate)	Ever Island Electric Co., Ltd. and Walter Electric	2010 Serie(s)	T 4 A, 250 V	VDE
(Alternate)	Conquer	MST	T 4 A, 250 V	VDE
Y-Capacitors (C3, C4, C22) (Y1 or Y2)	Murata Mfg. Co., Ltd.	KH, KX, KY	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	TDK-EPC Corporation	CD, CS	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	Walsin Technology Corp	AH, AC	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	Welson Industrial Co., Ltd.	WD, KL	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	VISHAY	338 6	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
X-Capacitor (C1, C2) (X1 or X2 type)	Kemet Electronics Italia Srl (Arcotronics SPA)	R.46	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110/125 °C	ENEC
(Alternate)	Kemet Electronics Italia Srl (Arcotronics SPA)	R.49	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
(Alternate)	EPCOS Electronic Components S.A.	B3292#	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 105 °C	VDE

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternate)	ISKRA SISTEMI, d.d.	KNB 1530	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 100 °C	VDE
(Alternate)	ISKRA SISTEMI, d.d.	KNB 1560	C1: 0.68 μ F, C2: 0.47 μ F, 275 V, 110 °C or 300 V, 125 °C	VDE
(Alternate)	Liow Gu Electronics Industry Co. Ltd.	GS-L	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 110 °C	ENEC
(Alternate)	Pilkor Electronics Ltd.	PCX2 335M	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 105 °C	ENEC
(Alternate)	Pilkor Electronics Ltd.	PCX2 337	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 110 °C	ENEC
(Alternate)	VISHAY Capacitors Belgium NV	339	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 110 °C	ENEC
(Alternate)	Cheng Tung Industrial Co., Ltd.	CTX	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 100 °C	VDE
(Alternate)	Shiny Space Enterprise Co., Ltd.	SX1	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 100 °C	VDE
(Alternate)	Xiamen Faratronic	MKP62	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 110 °C	VDE
(Alternate)	Hua Jung	MKP	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 110 °C	VDE
(Alternate)	Carli	MPX	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 100 or 110 °C	VDE
(Alternate)	EPCOS Electronic Components S.A.	B3292#CD series	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 110 °C	ENEC

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternate)	Joey	MPX	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 105 °C	VDE
(Alternate)	Ultra Tech Xiphi Enterprise Co. Ltd.	HQX	C1: 0.68 μ F, C2: 0.47 μ F, Min. 250 Vac, 110 °C	ENEC
Varistor (ZNR1) (Optional)	Thinking Electronic Industrial Co., Ltd.	TVR10511-M, TVR14511-M	320 Vac, 410 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Thinking Electronic Industrial Co., Ltd.	TVR10471-M, TVR14471-M	300 Vac, 385 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Thinking Electronic Industrial Co., Ltd.	TVR10561-M, TVR14561-M	350 Vac, 450 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Joyin Co., Ltd.	JVT10S471K, JVT14S471K	300 Vac, 385 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Joyin Co., Ltd.	JVT10S5111K, JVT14S511K	320 Vac, 410 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Joyin Co., Ltd.	JVT10S561K, JVT14S561K	350 Vac, 450 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
Bridge Capacitor (C31, C32) (Y1 type)	Murata Mfg. Co., Ltd.	KX	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	TDK-EPC Corporation	CD	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	Walsin Technology Corp	AH	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternate)	Welson Industrial Co., Ltd.	WD	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE
Photo Coupler (U3, U4)	Lite-On Technology Corporation	LTV-817, LTV-817M, LTV817	Dti=0.4 mm Int. dcr=5.2 mm Ext. dcr=7.0 mm, thermal cycling test, 115 °C	VDE, FIMKO
(Alternate)	Sharp Corporation Electronic Components and Devices Division	PC123	Dti=0.4 mm, Ext. dcr=8.0 mm, thermal cycle test, 110 °C	VDE, Semko
(Alternate)	COSMO Electronics Corporation	K1010	Dti=0.7 mm, Ext. dcr=8.0 mm, thermal cycle test, 100 °C	VDE, Semko
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP785F	Di=0.6 mm, Int. dcr=5.0 mm, Ext. dcr=8 mm, thermal cycling test, 115 °C	VDE
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP785	Di=0.6 mm, Int. dcr=5.0 mm, Ext. dcr=6.5 mm, thermal cycling test, 115 °C	VDE
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP781F	Di=0.6 mm, Int. dcr=5.0mm, Ext. dcr=8 mm, thermal cycling test, 115 °C	VDE
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP781	Di=0.6 mm, Int. dcr=5.0mm, Ext. dcr=6.5 mm, thermal cycling test, 115 °C	VDE
Transformer (T1) (for model GST160A48)	Mean Well	TF-5285	Class B	Tested with appliance
(Alternate)	Yu Jing	TF-5285	Class B	Tested with appliance
Transformer (T1) (for model GST160A12)	Mean Well	TF-5281	Class B	Tested with appliance
(Alternate)	Yu Jing	TF-5281	Class B	Tested with appliance

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
Transformer (T1) (for model GST160A24)	Mean Well	TF-5284	Class B	Tested with appliance
(Alternate)	Yu Jing	TF-5284	Class B	Tested with appliance
Transformer (T1) (for model GST160A36)	Mean Well	TF-5365	Class B	Tested with appliance
(Alternate)	Yu Jing	TF-5365	Class B	Tested with appliance
Discharging IC (U2)	On-Semiconductor	NCP4810	Maximum AC1 pin Voltage related to AC2 pin = - 700 V to 700 V, Idisch_min = 0.85 mA (Applicable for use to mains supply 100-240 Vac 60-50 Hz) X-Caps.: 0.047- 2.2 μ F. Resistors: 150 k- 1 M Ω	NEMKO
PCB	Interchangeable	Interchangeable	V-1 or better, min. 105 °C	UL
Bleeder Resistors (R7, R8)	Interchangeable	Interchangeable	Total 150 k-440 k Ω , min. 1/4 W	Tested with appliance

☐ 유의사항 (Attention) :

- 안전관리부품은 전기적인 안전에 직접적인 영향을 주는 부품으로서 안전인증기관이 정기공장검사 시 확인 관리 하는 사항입니다. 따라서 상기목록에 기재된 사항을 변경하거나 또는 복수등재를 원하시는 경우는 안전인증기관에 인증변경신청을 하여야 합니다.

As the "Critical components" are parts in directly related with safety, these components shall be checked during a factory inspection by the certification body. In case of applying multiful listing or changing the items above, the certification revision shall be applied.

- 인증변경신청 없이 임의로 변경하는 경우는, 전기용품안전관리법 제 8 조제 1 항의 규정에 의한 안전인증취소 사유가 됨을 유의하시기 바랍니다.

The Safety Certification will be cancelled under the Safety Control Law for Electrical Appliances, Paragraph 1 of Article 8 if the contents of the Certification is altered without our authorization.

FP511-10-00

☐ 첨부 2 : 기본모델 · 파생모델의 내용
General description of Certified Products

파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
GST160A12	Same as basic model except for transformer sources, output rating and model designation. (Output: 12 Vdc, 11.5 A, 138 W MAX.)
GST160A24	Same as basic model except for transformer sources, output rating and model designation. (Output: 24 Vdc, 6.67 A, 160 W MAX.)
GST160A36	Same as basic model except for transformer sources, output rating and model designation. (Output: 36 Vdc, 4.44 A, 160 W MAX.)
제품특기사항 및 시험조건 Remarks & Test conditions	
1. Test Report Ref. No. : 16-031551-01 (2016.10.12) 2. Product Description - Measured power consumption: 173 W - Class of equipment: Class I - Protection against ingress of water: IPX0 - Mass of equipment (kg): 0.7 kg ☐ 본 제품의 시험내용에 관하여 문의하실 사항이 있으시면 아래 연락처로 문의하시기 바랍니다. 시험담당자 : 디지털산업본부 정보조명평가센터 박 일 우 / 02-860-1436 ☐ If you have any question on product testing, please contact the person below : Job holder : S.M.A.R.T. Industry Division, IT & Lighting Testing Center, Park Il-Woo / +82 2 860-1436	

FP511-09-00

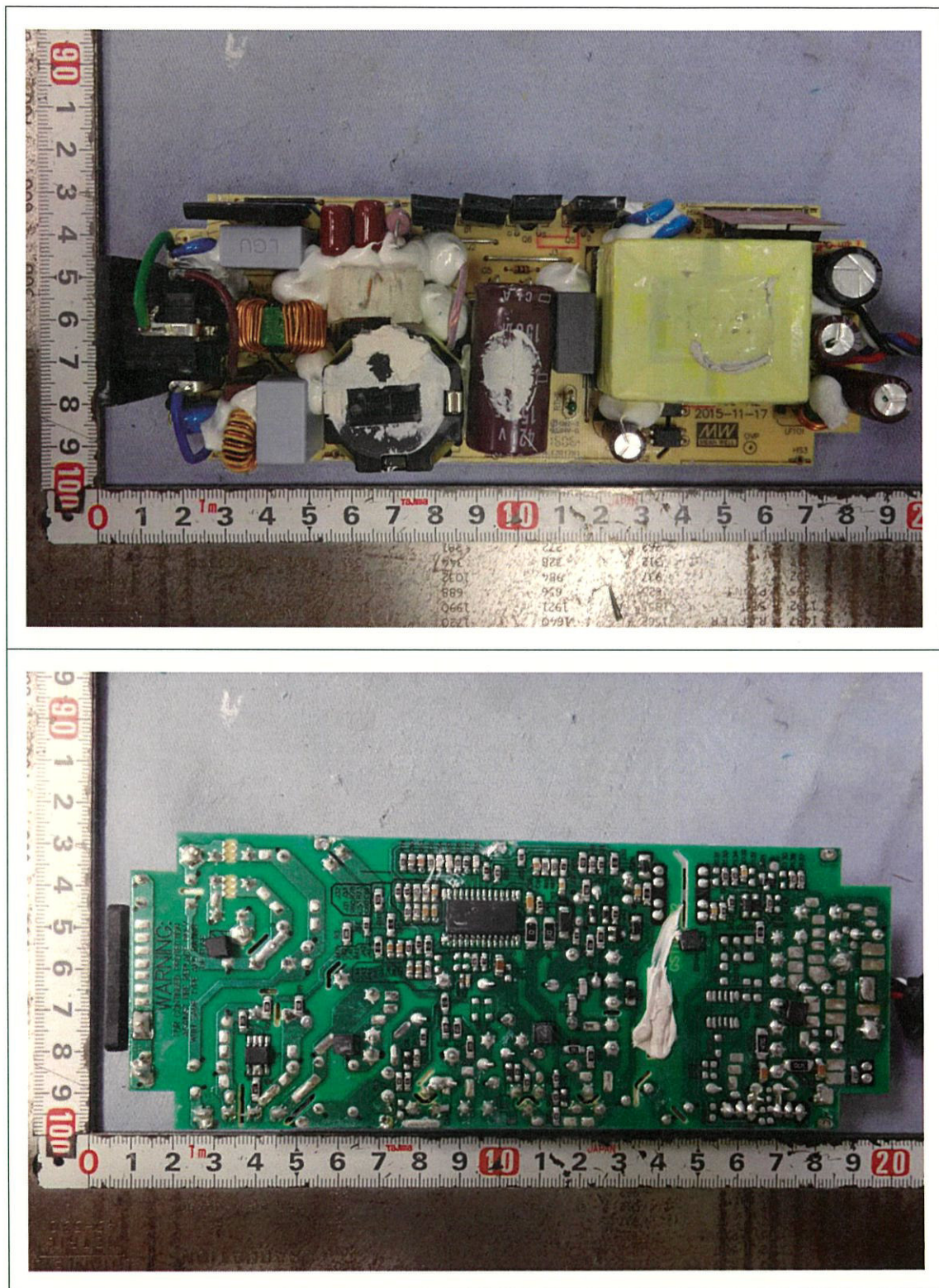
☐ 첨부 3 : 전기용품안전인증의 변경 현황
Status of Certificate Revisions

변경발급 내용 Contents of Certificate Revisions
Not applicable

FP511-11-00

☐ 첨부 : 제품사진
Photographs





접수번호 : 22-081377-36-1
(Receipt No.)



안전인증서

Safety Certificate

안전인증번호 : SU10509-16017B
(Certificate No.)

제조사/수입업자명 : SuZhou MEAN WELL Technology Co., Ltd.
(Manufacturer/importer)

주소 : No.269, ChangPing Road, Huangdai Town, Xiangcheng District,
(Address) Suzhou, China

제품명 : 직류전원장치(AC/DC Switching Adaptor)
(Product)

기본모델명 : GST160A20
(Basic Model)

파생모델명 : GST160A15
(Series Model)

정격/안전기준상의 모델구분 : 100-240 Vac, 50/60 Hz, 2.0 A, Class I
(Rating) (Output: 20 Vdc, 8 A, 160 W MAX.)

시험기준 : K60950-1(2011-12)
(Standard)

본 인증서는 제조국명 : 중국
제조사명 : SuZhou MEAN WELL Technology Co., Ltd.
제조공장의 주소 : No.269, ChangPing Road, Huangdai Town, Xiangcheng District, Suzhou, China
의 제품에만 해당함

「전기용품 및 생활용품 안전관리법 시행규칙」 제9조제2항, 제4항, 제10조제2항 또는 제15조제2항에 따라 안전인증서를 발급합니다.

We Issue This Safety Certificate for the above appliances in accordance with the Article 9(2), 9(4), 10(2) or 15(2) of the Enforcement Rule of the Electrical Appliances and Consumer Products Safety Control Act.

2023 년 03 월 09 일
Year month day

한국산업기술시험원
KOREA TESTING LABORATORY



* 이 인증서는 「전기용품 및 생활용품 안전관리법 시행규칙」에 따른 제품의 안전성 확인에 한정된 것이며, 그 밖의 다른 법률이 적용되는 제품의 경우에는 해당 법률에 따라 추가로 인증·허가 등을 받아야 합니다.

첨부서류

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

□ 첨부 1 : 전기용품의 안전관리부품 및 재질목록
List of Critical Components

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
Plastic Enclosure	Sabic Innovative Plastics	945, 940	V-0, 120 °C, min. 1.5 mm thick	UL
AC Inlet	Pronic Electronics (Shenzhen) Co., Ltd.	PST-101	10 A, 250 Vac	VDE
(Alternate)	TECX-UNIONS Technology Corporation	TU-301-A, TU-301-AP, TU-301-S, TU-301-SP, TU-301-SF	10 A, 250 Vac	VDE
(Alternate)	Rong Feng Industrial Co., Ltd.	SS-7B Series, SS-120 Series	10 A, 250 Vac	VDE
Fuse (FS1)	Littelfuse Inc.	392	T 4 A, 250 V	VDE
(Alternate)	Ever Island Electric Co., Ltd. and Walter Electric	2010 Serie(s)	T 4 A, 250 V	VDE
(Alternate)	Conquer	MST	T 4 A, 250 V	VDE
Y-Capacitors (C3, C4, C22) (Y1 or Y2)	Murata Mfg. Co., Ltd.	KH, KX, KY	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	TDK-EPC Corporation	CD, CS	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	Walsin Technology Corp	AH, AC	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	Welson Industrial Co., Ltd.	WD, KL	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	VISHAY	338 6	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
X-Capacitor (C1, C2) (X1 or X2 type)	Kemet Electronics Italia Srl (Arcotronics SPA)	R.46	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110/125 °C	ENEC
(Alternate)	Kemet Electronics Italia Srl (Arcotronics SPA)	R.49	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
(Alternate)	EPCOS Electronic Components S.A.	B3292#	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 105 °C	VDE

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternate)	ISKRA SISTEMI, d.d.	KNB 1530	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 100 °C	VDE
(Alternate)	ISKRA SISTEMI, d.d.	KNB 1560	C1: 0.68 uF, C2: 0.47 uF, 275 V, 110 °C or 300 V, 125 °C	VDE
(Alternate)	Liow Gu Electronics Industry Co. Ltd.	GS-L	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
(Alternate)	Pilkor Electronics Ltd.	PCX2 335M	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 105 °C	ENEC
(Alternate)	Pilkor Electronics Ltd.	PCX2 337	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
(Alternate)	VISHAY Capacitors Belgium NV	339	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
(Alternate)	Cheng Tung Industrial Co., Ltd.	CTX	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 100 °C	VDE
(Alternate)	Shiny Space Enterprise Co., Ltd.	SX1	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 100 °C	VDE
(Alternate)	Xiamen Faratronic	MKP62	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	VDE
(Alternate)	Hua Jung	MKP	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	VDE
(Alternate)	Carli	MPX	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 100 or 110 °C	VDE
(Alternate)	EPCOS Electronic Components S.A.	B3292#CD series	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternate)	Joey	MPX	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 105 °C	VDE
(Alternate)	Ultra Tech Xiphi Enterprise Co. Ltd.	HQX	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
Varistor (ZNR1) (Optional)	Thinking Electronic Industrial Co., Ltd.	TVR10511-M, TVR14511-M	320 Vac, 410 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Thinking Electronic Industrial Co., Ltd.	TVR10471-M, TVR14471-M	300 Vac, 385 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Thinking Electronic Industrial Co., Ltd.	TVR10561-M, TVR14561-M	350 Vac, 450 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Joyin Co., Ltd.	JVT10S471K, JVT14S471K	300 Vac, 385 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Joyin Co., Ltd.	JVT10S5111K, JVT14S511K	320 Vac, 410 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Joyin Co., Ltd.	JVT10S561K, JVT14S561K	350 Vac, 450 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
Bridge Capacitor (C31, C32) (Y1 type)	Murata Mfg. Co., Ltd.	KX	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	TDK-EPC Corporation	CD	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	Walsin Technology Corp	AH	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternate)	Welson Industrial Co., Ltd.	WD	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE
Photo Coupler (U3, U4)	Lite-On Technology Corporation	LTV-817, LTV-817M, LTV817	Dti=0.4 mm Int. dcr=5.2 mm Ext. dcr=7.0 mm, thermal cycling test, 115 °C	VDE, FIMKO
(Alternate)	Sharp Corporation Electronic Components and Devices Division	PC123	Dti=0.4 mm, Ext. dcr=8.0 mm, thermal cycle test, 110 °C	VDE, Semko
(Alternate)	COSMO Electronics Corporation	K1010	Dti=0.7 mm, Ext. dcr=8.0 mm, thermal cycle test, 100 °C	VDE, Semko
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP785F	Di=0.6 mm, Int. dcr=5.0 mm, Ext. dcr=8 mm, thermal cycling test, 115 °C	VDE
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP785	Di=0.6 mm, Int. dcr=5.0 mm, Ext. dcr=6.5 mm, thermal cycling test, 115 °C	VDE
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP781F	Di=0.6 mm, Int. dcr=5.0mm, Ext. dcr=8 mm, thermal cycling test, 115 °C	VDE
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP781	Di=0.6 mm, Int. dcr=5.0mm, Ext. dcr=6.5 mm, thermal cycling test, 115 °C	VDE
Transformer (T1) (for model GST160A20)	Mean Well	TF-5283	Class B	Tested with appliance
(Alternate)	Yu Jing	TF-5283	Class B	Tested with appliance
Transformer (T1) (for model GST160A15)	Mean Well	TF-5282	Class B	Tested with appliance
(Alternate)	Yu Jing	TF-5282	Class B	Tested with appliance

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
Discharging IC (U2)	On-Semiconductor	NCP4810	Maximum AC1 pin Voltage related to AC2 pin = - 700 V to 700 V, Idisch_min = 0.85 mA (Applicable for use to mains supply 100-240 Vac 60-50 Hz) X-Caps.: 0.047- 2.2 μ F. Resistors: 150 k- 1 M Ω	NEMKO
(Alternate)	Power Integrations, Inc.	SC1143	230 VAC nominal (tested for 85-265 Vac, 47-63 Hz) X-Capacitance: 100 nF - 6 μ F Resistance: 142 k - 7.5 M Ω	CB(NEMKO)
PCB	Interchangeable	Interchangeable	V-1 or better, min. 105 °C	UL
Bleeder Resistors (R7, R8)	Interchangeable	Interchangeable	Total 150 k-440 k Ω , min. 1/4 W	Tested with appliance

☐ 유의사항 (Attention) :

1. 안전관리부품은 전기적인 안전에 직접적인 영향을 주는 부품으로서 안전인증기관이 정기공장검사 시 확인 관리 하는 사항입니다. 따라서 상기목록에 기재된 사항을 변경하거나 또는 복수등재를 원하시는 경우는 안전인증기관에 인증변경신청을 하여야 합니다.

As the "Critical components" are parts in directly related with safety, these components shall be checked during a factory inspection by the certification body. In case of applying multiple listing or changing the items above, the certification revision shall be applied.

2. 인증변경신청 없이 임의로 변경하는 경우는, 전기용품 및 생활용품 안전관리법 시행규칙 제 20 조제 1 항 또는 제 36 조제 1 항 규정에 의한 안전인증 취소 혹은 안전확인신고 효력상실 사유가 됨을 유의하시기 바랍니다.

The Safety Certification will be cancelled under the Article 20(1), 36(1) of the Enforcement Rule of the Electrical appliances and Consumer Products Safety Control Act if the contents of the Certification is altered without our authorization.

☐ 첨부 2 : 기본모델 · 파생모델의 내용
Description of the basic and series model

파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
GST160A15	Same as basic model except for transformer sources, output rating and model designation. (Output: 15 Vdc, 9.6 A, 144 W MAX.)
제품특기사항 및 시험조건 Remarks & Test conditions	
1. Test Report Ref. No. : 16-030396-01 (2016.10.12) 2. Product Description - Measured power consumption: 174 W - Class of equipment: Class I - Protection against ingress of water: IPX0 - Mass of equipment (kg): 0.7 kg ☐ 본 제품의 시험내용에 관하여 문의하실 사항이 있으시면 아래 연락처로 문의하시기 바랍니다. 시험 담당자 / 연락처 : 디지털산업본부 전기전자기술센터 이 선경 / 02-860-1434 ☐ If you have any question on product testing, please contact the person below : Job holder : S.M.A.R.T. Industry Division, Electrical and Electronic Technology Center, SUN KYUNG LEE / +82 2 860-1434	

FP511-05

☐ 첨부 3 : 안전인증의 변경 현황
Revisions Status

변경발급 내용 Contents of Certificate Revisions
1st Rev.) Addition of component(18-032594-03-2: 2018.06.05) - Discharge IC, Power Integrations, Inc, SC1143, 230 Vac nominal(tested for 85-265 Vac) 2nd Rev.) Change of manufacturer president and address (22-081377-36-1 : 2023.03.09.) - Before : Mr. Jerry Lin / No. 77, Jian-Min Road, Dong-Qiao, Pan-Yang Ind. Park, Huang-Dai Town,Xiang Cheng District, Suzhou, Jiangsu 215152, P.R. China - After : Alan Liu / No.269, ChangPing Road, Huangdai Town, Xiangcheng District, Suzhou, China

FP511-06

접 수 번 호 : 18-032594-03-1
(Receipt No.)



안 전 인 증 서

Safety Certificate

안 전 인 증 번 호 : SU10509-16017A
(Certificate No.)

제 조 업 자/수 입 업 자 명 : SuZhou MEAN WELL Technology Co., Ltd.
(Manufacturer/importer)

주 소 : No. 77, Jian-Min Road, Dong-Qiao, Pan-Yang Ind. Park, Huang-Dai
(Address) Town, Xiang-Cheng District, Suzhou, Jiangsu 215152, P.R. China

제 품 명 : 직류전원장치(AC/DC Switching Adaptor)
(Product)

기 본 모 델 명 : GST160A20
(Basic Model)

파 생 모 델 명 : GST160A15
(Series Model)

정격/안전기준상의 모델구분 : 100-240 Vac, 50/60 Hz, 2.0 A, Class I
(Rating) (Output: 20 Vdc, 8 A, 160 W MAX.)

시 험 기 준 : K60950-1(2011-12)
(Standard)

본 인증서는 제 조 국 명 : 중국
제 조 업 자 명 : SuZhou MEAN WELL Technology Co., Ltd.
제조공장의 주소 : No. 77, Jian-Min Road, Dong-Qiao, Pan-Yang Ind. Park, Huang-Dai Town, Xiang-Cheng District, Suzhou, Jiangsu 215152, P.R. China
의 제품에만 해당함

「전기용품 및 생활용품 안전관리법 시행규칙」 제9조제2항·제4항 또는 제10조제2항에 따라 안전인증서를 발급합니다.

We Issue This Safety Certificate for the above appliances in accordance with the Article 9(2), 9(4) or 10(2) of the Enforcement Rule of the Electrical Appliances and Consumer Products Safety Control Act.

2018 년 06 월 07 일
Year month day

한국산업기술시험원
KOREA TESTING LABORATORY



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

첨부서류

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

□ 첨부 1 : 전기용품의 안전관리부품 및 재질목록
List of Critical Components

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
Plastic Enclosure	Sabic Innovative Plastics	945, 940	V-0, 120 °C, min. 1.5 mm thick	UL
AC Inlet	Pronic Electronics (Shenzhen) Co., Ltd.	PST-101	10 A, 250 Vac	VDE
(Alternate)	TECX-UNIONS Technology Corporation	TU-301-A, TU-301-AP, TU-301-S, TU-301-SP, TU-301-SF	10 A, 250 Vac	VDE
(Alternate)	Rong Feng Industrial Co., Ltd.	SS-7B Series, SS-120 Series	10 A, 250 Vac	VDE
Fuse (FS1)	Littelfuse Inc.	392	T 4 A, 250 V	VDE
(Alternate)	Ever Island Electric Co., Ltd. and Walter Electric	2010 Serie(s)	T 4 A, 250 V	VDE
(Alternate)	Conquer	MST	T 4 A, 250 V	VDE
Y-Capacitors (C3, C4, C22) (Y1 or Y2)	Murata Mfg. Co., Ltd.	KH, KX, KY	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	TDK-EPC Corporation	CD, CS	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	Walsin Technology Corp	AH, AC	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	Welson Industrial Co., Ltd.	WD, KL	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	VISHAY	338 6	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
X-Capacitor (C1, C2) (X1 or X2 type)	Kemet Electronics Italia Srl (Arcotronics SPA)	R.46	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110/125 °C	ENEC
(Alternate)	Kemet Electronics Italia Srl (Arcotronics SPA)	R.49	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
(Alternate)	EPCOS Electronic Components S.A.	B3292#	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 105 °C	VDE

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternate)	ISKRA SISTEMI, d.d.	KNB 1530	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 100 °C	VDE
(Alternate)	ISKRA SISTEMI, d.d.	KNB 1560	C1: 0.68 uF, C2: 0.47 uF, 275 V, 110 °C or 300 V, 125 °C	VDE
(Alternate)	Liow Gu Electronics Industry Co. Ltd.	GS-L	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
(Alternate)	Pilkor Electronics Ltd.	PCX2 335M	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 105 °C	ENEC
(Alternate)	Pilkor Electronics Ltd.	PCX2 337	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
(Alternate)	VISHAY Capacitors Belgium NV	339	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
(Alternate)	Cheng Tung Industrial Co., Ltd.	CTX	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 100 °C	VDE
(Alternate)	Shiny Space Enterprise Co., Ltd.	SX1	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 100 °C	VDE
(Alternate)	Xiamen Faratronic	MKP62	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	VDE
(Alternate)	Hua Jung	MKP	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	VDE
(Alternate)	Carli	MPX	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 100 or 110 °C	VDE
(Alternate)	EPCOS Electronic Components S.A.	B3292#CD series	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternate)	Joey	MPX	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 105 °C	VDE
(Alternate)	Ultra Tech Xiphi Enterprise Co. Ltd.	HQX	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
Varistor (ZNR1) (Optional)	Thinking Electronic Industrial Co., Ltd.	TVR10511-M, TVR14511-M	320 Vac, 410 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Thinking Electronic Industrial Co., Ltd.	TVR10471-M, TVR14471-M	300 Vac, 385 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Thinking Electronic Industrial Co., Ltd.	TVR10561-M, TVR14561-M	350 Vac, 450 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Joyin Co., Ltd.	JVT10S471K, JVT14S471K	300 Vac, 385 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Joyin Co., Ltd.	JVT10S511K, JVT14S511K	320 Vac, 410 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Joyin Co., Ltd.	JVT10S561K, JVT14S561K	350 Vac, 450 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
Bridge Capacitor (C31, C32) (Y1 type)	Murata Mfg. Co., Ltd.	KX	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	TDK-EPC Corporation	CD	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	Walsin Technology Corp	AH	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternate)	Welson Industrial Co., Ltd.	WD	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE
Photo Coupler (U3, U4)	Lite-On Technology Corporation	LTV-817, LTV-817M, LTV817	Dti=0.4 mm Int. dcr=5.2 mm Ext. dcr=7.0 mm, thermal cycling test, 115 °C	VDE, FIMKO
(Alternate)	Sharp Corporation Electronic Components and Devices Division	PC123	Dti=0.4 mm, Ext. dcr=8.0 mm, thermal cycle test, 110 °C	VDE, Semko
(Alternate)	COSMO Electronics Corporation	K1010	Dti=0.7 mm, Ext. dcr=8.0 mm, thermal cycle test, 100 °C	VDE, Semko
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP785F	Di=0.6 mm, Int. dcr=5.0 mm, Ext. dcr=8 mm, thermal cycling test, 115 °C	VDE
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP785	Di=0.6 mm, Int. dcr=5.0 mm, Ext. dcr=6.5 mm, thermal cycling test, 115 °C	VDE
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP781F	Di=0.6 mm, Int. dcr=5.0mm, Ext. dcr=8 mm, thermal cycling test, 115 °C	VDE
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP781	Di=0.6 mm, Int. dcr=5.0mm, Ext. dcr=6.5 mm, thermal cycling test, 115 °C	VDE
Transformer (T1) (for model GST160A20)	Mean Well	TF-5283	Class B	Tested with appliance
(Alternate)	Yu Jing	TF-5283	Class B	Tested with appliance
Transformer (T1) (for model GST160A15)	Mean Well	TF-5282	Class B	Tested with appliance
(Alternate)	Yu Jing	TF-5282	Class B	Tested with appliance

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
Discharging IC (U2)	On-Semiconductor	NCP4810	Maximum AC1 pin Voltage related to AC2 pin = - 700 V to 700 V, Idisch_min = 0.85 mA (Applicable for use to mains supply 100-240 Vac 60-50 Hz) X-Caps.: 0.047- 2.2 μ F. Resistors: 150 k- 1 M Ω	NEMKO
(Alternate)	Power Integrations, Inc.	SC1143	230 VAC nominal (tested for 85-265 Vac, 47-63 Hz) X-Capacitance: 100 nF - 6 μ F Resistance: 142 k - 7.5 M Ω	CB(NEMKO)
PCB	Interchangeable	Interchangeable	V-1 or better, min. 105 °C	UL
Bleeder Resistors (R7, R8)	Interchangeable	Interchangeable	Total 150 k-440 k Ω , min. 1/4 W	Tested with appliance

☐ 유의사항 (Attention) :

1. 안전관리부품은 전기적인 안전에 직접적인 영향을 주는 부품으로서 안전인증기관이 정기공장검사 시 확인 관리 하는 사항입니다. 따라서 상기목록에 기재된 사항을 변경하거나 또는 복수등재를 원하시는 경우는 안전인증기관에 인증변경신청을 하여야 합니다.

As the "Critical components" are parts in directly related with safety, these components shall be checked during a factory inspection by the certification body. In case of applying multiple listing or changing the items above, the certification revision shall be applied.

2. 인증변경신청 없이 임의로 변경하는 경우는, 전기용품 및 생활용품 안전관리법 시행규칙 제 20 조제 1 항 또는 제 36 조제 1 항 규정에 의한 안전인증 취소 혹은 안전확인신고 효력상실 사유가 됨을 유의하시기 바랍니다.

The Safety Certification will be cancelled under the Article 20(1), 36(1) of the Enforcement Rule of the Electrical appliances and Consumer Products Safety Control Act if the contents of the Certification is altered without our authorization.

☐ 첨부 2 : 기본모델 · 파생모델의 내용
Description of the basic and series model

파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
GST160A15	Same as basic model except for transformer sources, output rating and model designation. (Output: 15 Vdc, 9.6 A, 144 W MAX.)
제품특기사항 및 시험조건 Remarks & Test conditions	
1. Test Report Ref. No. : 16-030396-01 (2016.10.12) 2. Product Description - Measured power consumption: 174 W - Class of equipment: Class I - Protection against ingress of water: IPX0 - Mass of equipment (kg): 0.7 kg	
☐ 본 제품의 시험내용에 관하여 문의하실 사항이 있으시면 아래 연락처로 문의하시기 바랍니다. 시험담당자 : 인증산업본부 정보조명평가센터 이 선경 / 02-860-1434 ☐ If you have any question on product testing, please contact the person below : Job holder : Certification Business Division, IT & Lighting Testing Center, SUN KYUNG LEE / +82 2 860-1434	

FP511-05

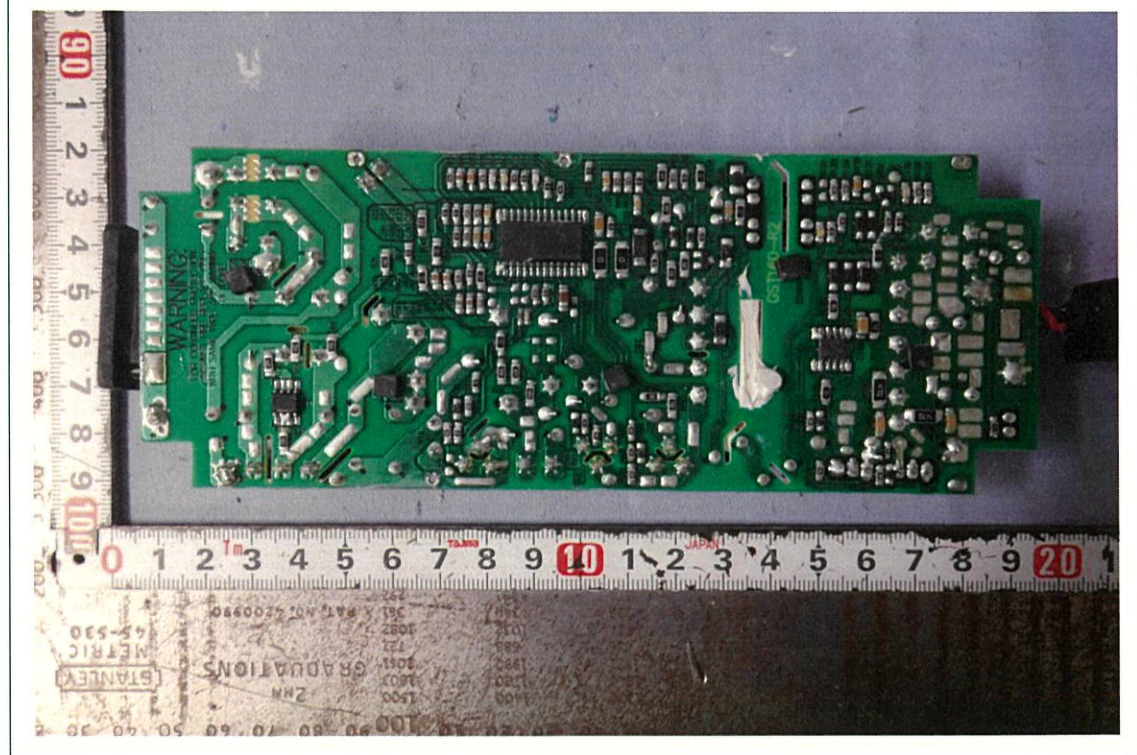
☐ 첨부 3 : 안전인증의 변경 현황
Revisions Status

변경발급 내용 Contents of Certificate Revisions
1st Rev.) Addition of component(18-032594-03-2: 2018.06.05) - Discharge IC, Power Integrations, Inc, SC1143, 230 Vac nominal(tested for 85-265 Vac)

FP511-06

☐ 첨부 : 제품사진
Photographs





접 수 번 호 : 16-030396-01
(Receipt No.)



전 기 용 품 안 전 인 증 서

Electrical Appliances Safety Certificate

안 전 인 증 번 호 (Certificate No.)	: SU10509-16017
제 조 업 자 명 (Manufacturer)	: SuZhou MEAN WELL Technology Co., Ltd.
대 표 자 명 (President)	: Mr. Jerry Lin
제조공장의 주소 (Factory Address)	: No. 77, Jian-Min Road, Dong-Qiao, Pan-Yang Ind. Park, Huang-Dai Town, Xiang-Cheng District, Suzhou, Jiangsu 215152, P.R. China
제 품 명 (Product)	: 직류전원장치(AC/DC Switching Adaptor)
기 본 모 델 명 (Basic Model)	: GST160A20
정 격 (Rating)	: 100-240 Vac, 50/60 Hz, 2.0 A, Class I (Output: 20 Vdc, 8 A, 160 W MAX.)
파 생 모 델 명 (Series Model)	: GST160A15
적 용 기 준 (Standard)	: K 60950-1 (2011-12)

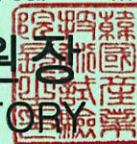
「전기용품안전 관리법 시행규칙」 제6조제2항에 따라 위의 전기용품에 대하여 안전인증서를 발급합니다.

We Issue Electrical Appliances Safety Certification as above product by Article 6 Section 2 of the Electrical Appliances Safety Control Law Enforcement Regulation.

2016 년 10 월 13 일
Year month day



한국산업기술시험원
KOREA TESTING LABORATORY



※ 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.

- 첨 부 : (Annex)
1. 안전관리부품 및 재질목록 (List of Critical Components)
 2. 기본모델 · 파생모델의 내용 (Descriptions of the basic and series model)
 3. 전기용품안전인증의 변경 현황 (Revisions Status)

□ 첨부 1 : 안전관리부품 및 재질목록
List of Critical Components

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
Plastic Enclosure	Sabic Innovative Plastics	945, 940	V-0, 120 °C, min. 1.5 mm thick	UL
AC Inlet	Pronic Electronics (Shenzhen) Co., Ltd.	PST-101	10 A, 250 Vac	VDE
(Alternate)	TECX-UNIONS Technology Corporation	TU-301-A, TU-301-AP, TU-301-S, TU-301-SP, TU-301-SF	10 A, 250 Vac	VDE
(Alternate)	Rong Feng Industrial Co., Ltd.	SS-7B Series, SS-120 Series	10 A, 250 Vac	VDE
Fuse (FS1)	Littelfuse Inc.	392	T 4 A, 250 V	VDE
(Alternate)	Ever Island Electric Co., Ltd. and Walter Electric	2010 Serie(s)	T 4 A, 250 V	VDE
(Alternate)	Conquer	MST	T 4 A, 250 V	VDE
Y-Capacitors (C3, C4, C22) (Y1 or Y2)	Murata Mfg. Co., Ltd.	KH, KX, KY	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	TDK-EPC Corporation	CD, CS	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	Walsin Technology Corp	AH, AC	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	Welson Industrial Co., Ltd.	WD, KL	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	VISHAY	338 6	Max. 4700 pF, Min. 250 Vac, 125 °C	VDE
X-Capacitor (C1, C2) (X1 or X2 type)	Kemet Electronics Italia Srl (Arcotronics SPA)	R.46	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110/125 °C	ENEC
(Alternate)	Kemet Electronics Italia Srl (Arcotronics SPA)	R.49	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
(Alternate)	EPCOS Electronic Components S.A.	B3292#	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 105 °C	VDE

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternate)	ISKRA SISTEMI, d.d.	KNB 1530	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 100 °C	VDE
(Alternate)	ISKRA SISTEMI, d.d.	KNB 1560	C1: 0.68 uF, C2: 0.47 uF, 275 V, 110 °C or 300 V, 125 °C	VDE
(Alternate)	Liow Gu Electronics Industry Co. Ltd.	GS-L	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
(Alternate)	Pilkor Electronics Ltd.	PCX2 335M	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 105 °C	ENEC
(Alternate)	Pilkor Electronics Ltd.	PCX2 337	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
(Alternate)	VISHAY Capacitors Belgium NV	339	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
(Alternate)	Cheng Tung Industrial Co., Ltd.	CTX	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 100 °C	VDE
(Alternate)	Shiny Space Enterprise Co., Ltd.	SX1	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 100 °C	VDE
(Alternate)	Xiamen Faratronic	MKP62	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	VDE
(Alternate)	Hua Jung	MKP	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	VDE
(Alternate)	Carli	MPX	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 100 or 110 °C	VDE
(Alternate)	EPCOS Electronic Components S.A.	B3292#CD series	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternate)	Joey	MPX	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 105 °C	VDE
(Alternate)	Ultra Tech Xiphi Enterprise Co. Ltd.	HQX	C1: 0.68 uF, C2: 0.47 uF, Min. 250 Vac, 110 °C	ENEC
Varistor (ZNR1) (Optional)	Thinking Electronic Industrial Co., Ltd.	TVR10511-M, TVR14511-M	320 Vac, 410 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Thinking Electronic Industrial Co., Ltd.	TVR10471-M, TVR14471-M	300 Vac, 385 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Thinking Electronic Industrial Co., Ltd.	TVR10561-M, TVR14561-M	350 Vac, 450 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Joyin Co., Ltd.	JVT10S471K, JVT14S471K	300 Vac, 385 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Joyin Co., Ltd.	JVT10S5111K, JVT14S511K	320 Vac, 410 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
(Alternate)	Joyin Co., Ltd.	JVT10S561K, JVT14S561K	350 Vac, 450 Vdc (Flame class of body coating complied with V- 0), 125 °C	VDE
Bridge Capacitor (C31, C32) (Y1 type)	Murata Mfg. Co., Ltd.	KX	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	TDK-EPC Corporation	CD	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE
(Alternate)	Walsin Technology Corp	AH	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternate)	Welson Industrial Co., Ltd.	WD	Max. 3300 pF, Min. 250 Vac, 125 °C	VDE
Photo Coupler (U3, U4)	Lite-On Technology Corporation	LTV-817, LTV-817M, LTV817	Dti=0.4 mm Int. dcr=5.2 mm Ext. dcr=7.0 mm, thermal cycling test, 115 °C	VDE, FIMKO
(Alternate)	Sharp Corporation Electronic Components and Devices Division	PC123	Dti=0.4 mm, Ext. dcr=8.0 mm, thermal cycle test, 110 °C	VDE, Semko
(Alternate)	COSMO Electronics Corporation	K1010	Dti=0.7 mm, Ext. dcr=8.0 mm, thermal cycle test, 100 °C	VDE, Semko
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP785F	Di=0.6 mm, Int. dcr=5.0 mm, Ext. dcr=8 mm, thermal cycling test, 115 °C	VDE
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP785	Di=0.6 mm, Int. dcr=5.0 mm, Ext. dcr=6.5 mm, thermal cycling test, 115 °C	VDE
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP781F	Di=0.6 mm, Int. dcr=5.0mm, Ext. dcr=8 mm, thermal cycling test, 115 °C	VDE
(Alternate)	Toshiba Corp, Semiconductor Co Discrete Semiconductor Div	TLP781	Di=0.6 mm, Int. dcr=5.0mm, Ext. dcr=6.5 mm, thermal cycling test, 115 °C	VDE
Transformer (T1) (for model GST160A20)	Mean Well	TF-5283	Class B	Tested with appliance
(Alternate)	Yu Jing	TF-5283	Class B	Tested with appliance
Transformer (T1) (for model GST160A15)	Mean Well	TF-5282	Class B	Tested with appliance
(Alternate)	Yu Jing	TF-5282	Class B	Tested with appliance

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
Discharging IC (U2)	On-Semiconductor	NCP4810	Maximum AC1 pin Voltage related to AC2 pin = - 700 V to 700 V, Idisch_min = 0.85 mA (Applicable for use to mains supply 100-240 Vac 60-50 Hz) X-Caps.: 0.047- 2.2 μ F. Resistors: 150 k- 1 M Ω	NEMKO
PCB	Interchangeable	Interchangeable	V-1 or better, min. 105 °C	UL
Bleeder Resistors (R7, R8)	Interchangeable	Interchangeable	Total 150 k-440 k Ω , min. 1/4 W	Tested with appliance

☐ 유의사항 (Attention) :

1. 안전관리부품은 전기적인 안전에 직접적인 영향을 주는 부품으로서 안전인증기관이 정기공장검사 시 확인 관리 하는 사항입니다. 따라서 상기목록에 기재된 사항을 변경하거나 또는 복수등재를 원하시는 경우는 안전인증기관에 인증변경신청을 하여야 합니다.

As the "Critical components" are parts in directly related with safety, these components shall be checked during a factory inspection by the certification body. In case of applying multiful listing or changing the items above, the certification revision shall be applied.

2. 인증변경신청 없이 임의로 변경하는 경우는, 전기용품안전관리법 제 8 조제 1 항의 규정에 의한 안전인증취소 사유가 됨을 유의하시기 바랍니다.

The Safety Certification will be cancelled under the Safety Control Law for Electrical Appliances, Paragraph 1 of Article 8 if the contents of the Certification is altered without our authorization.

FP511-10-00

☐ 첨부 2 : 기본모델 · 파생모델의 내용
General description of Certified Products

파생모델명 Derivative model	기본모델과의 차이점 Differences between the basic and derivative model(s)
GST160A15	Same as basic model except for transformer sources, output rating and model designation. (Output: 15 Vdc, 9.6 A, 144 W MAX.)
제품특기사항 및 시험조건 Remarks & Test conditions	
1. Test Report Ref. No. : 16-030396-01 (2016.10.12) 2. Product Description - Measured power consumption: 174 W - Class of equipment: Class I - Protection against ingress of water: IPX0 - Mass of equipment (kg): 0.7 kg ☐ 본 제품의 시험내용에 관하여 문의하실 사항이 있으시면 아래 연락처로 문의하시기 바랍니다. 시험담당자 : 디지털산업본부 정보조명평가센터 박 일 우 / 02-860-1436 ☐ If you have any question on product testing, please contact the person below : Job holder : S.M.A.R.T. Industry Division, IT & Lighting Testing Center, Park Il-Woo / +82 2 860-1436	

FP511-09-00

☐ 첨부 3 : 전기용품안전인증의 변경 현황
Status of Certificate Revisions

변경발급 내용 Contents of Certificate Revisions
Not applicable

FP511-11-00

☐ 첨부 : 제품사진
Photographs



