

접수 번호 : 22-081377-24-1
(Receipt No.)



안전인증서

Safety Certificate

안전인증번호 : SU10509-20004A
(Certificate No.)

제조업자/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 : GSM220B48
(Basic Model)

파생모델명 : GSM220B24
(Series Model)

정격/안전기준상의 모델구분 : I/P: AC 100-240 V, 50/ 60 Hz, 2.5-1.3 A
(Rating) O/P: DC 48 V, 4.6 A, 221 W max.

시험기준 : K60950-1(2011-12)
(Standard)

본 인증서는 제조국명 : 중국
제조업자명 : 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
Enclosure	SABIC INNOVATIVE PLASTICS JAPAN L L C	945 (GG), 940(f1)	V-0, 120 °C, min. 1.1 mm thick	UL
(Alternative)	SABIC INNOVATIVE PLASTICS B V	945 (GG), 940(f1)	V-0, 120 °C, min. 1.1 mm thick	UL
(Alternative)	SABIC INNOVATIVE PLASTICS US LL C	945 (GG), 940(f1)	V-0, 120 °C, min. 1.1 mm thick	UL
Appliance Inlet	TECX-UNIONS	SO-222	2.5 A, AC 250 V	VDE
(Alternative)	RONG FENG INDUSTRIAL CO LTD	RF-180	2.5 A, AC 250 V	VDE
(Alternative)	Sun Fair Electric Wire & Cable (Hk) Co Ltd	S-01	2.5 A, AC 250 V	VDE
(Alternative)	Rich Bay Co Ltd	R-201SN	2.5 A, AC 250 V	VDE
(Alternative)	Zhe Jiang Bei Er Jia Electronic Co Ltd	ST-A03 series	2.5 A, AC 250 V	VDE
Fuse (FS1)	CONQUER ELECTRONICS CO LTD	MST	T 5 AL, 250 V	VDE
(Alternative)	WALTER ELECTRONIC CO LTD	2010	T 5 AL, 250 V	VDE
Inductor (LF1)	Mean Well Enterprises Co., Ltd.	TR-889	Min. 105 °C	Tested in appliance
(Alternative)	Mean Well Enterprises Co., Ltd.	TR-889B	Min. 105 °C	Tested in appliance
Inductor (LF2)	Mean Well Enterprises Co., Ltd.	TR-890	Min. 105 °C	Tested in appliance
(Alternative)	Mean Well Enterprises Co., Ltd.	TR-890A	Min. 105 °C	Tested in appliance
Inductor (L2) (Optional)	Mean Well Enterprises Co., Ltd.	TR-892	Min. 130 °C	Tested in appliance

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternative)	Mean Well Enterprises Co., Ltd.	TR-892A	Min. 130 °C	Tested in appliance
Inductor (L1) (Optional)	Mean Well Enterprises Co., Ltd.	TF-5260	Min. 130 °C	Tested in appliance
(Alternative)	Mean Well Enterprises Co., Ltd.	TF-5260A	Min. 130 °C	Tested in appliance
Varistor (ZNR1) (Optional)	Thinking Electronic Industrial Co., Ltd.	TVR10511-M, TVR14511-M	AC 320 V, DC 410 V (Flame class of body coating complied with V-0), 125 °C	VDE
(Alternative)	Thinking Electronic Industrial Co., Ltd.	TVR10471-M, TVR14471-M	AC 300 V, DC 385 V (Flame class of body coating complied with V-0), 125 °C	VDE
(Alternative)	Thinking Electronic Industrial Co., Ltd.	TVR10561-M, TVR14561-M	AC 350 V, DC 450 V (Flame class of body coating complied with V-0), 125 °C	VDE
(Alternative)	Joyin Co., Ltd.	JVT10S471K or JVT14S471K	AC 350 V, DC 450 V (Flame class of body coating complied with V-0), 125 °C	VDE
(Alternative)	Joyin Co., Ltd.	JVT10S511K or JVT14S511K	AC 320 V, DC 410 V (Flame class of body coating complied with V-0), 125 °C	VDE
(Alternative)	Joyin Co., Ltd.	JVT10S561K or JVT14S561K	AC 350 V, DC 450 V (Flame class of body coating complied with V-0), 125 °C	VDE
X-Capacitor (C1, C2, C6) (Optional) (can be used for only each of one with 2.2 µF max.)	KEMET ELECTRONICS ITALIA SRL	R.46	Min 250 V, min. 100 °C or 110 °C Max. 2.2 µF	ENEC
(Alternative)	KEMET ELECTRONICS ITALIA SRL	R.49	Min 250 V, min. 110 °C, Max. 2.2 µF	ENEC

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternative)	EPCOS Electronic Components S.A	B3292#	Min 250 V, min. 110 °C, Max. 2.2 μF	ENEC
(Alternative)	EPCOS Electronic Components S.A	B3292#CD	Min 250 V, min. 110 °C, Max. 2.2 μF	ENEC
(Alternative)	ISKRA SISTEMI, D D	KNB 1560	Max. 2.2 μF, 275 V, 110 °C or 300 V, 125 °C	VDE
(Alternative)	LIOW GU ELECTRONICS INDUSTRY CO LTD	GS-L	Min 250 V, min. 110 °C, Max. 2.2 μF	ENEC
(Alternative)	PILKOR ELECTRONICS CO LTD	PCX2 335M	Min 250 V, 100 °C or 105 °C, Max. 2.2 μF	ENEC
(Alternative)	PILKOR ELECTRONICS CO LTD	PCX2 337	Min 250 V, 100 °C or 110 °C, Max. 2.2 μF	ENEC
(Alternative)	ULTRA TECH XIPHI ENTERPRISE CO LTD	HQX	Min 250 V, 110 °C Max. 2.2 μF	VDE
(Alternative)	CHENG TUNG INDUSTRIAL CO LTD	CTX	Min 250 V, 110 °C Max. 2.2 μF	ENEC
(Alternative)	Okaya Electric Industries Co., Ltd.	LE Series	Min. AC 250 V, 110 °C, Max. 2.2 μF	VDE
(Alternative)	XIAMEN FARATRONIC CO LTD	MKP62	Min 250 V, 110 °C Max. 2.2 μF	VDE
(Alternative)	HUA JUNG COMPONENTS CO LTD	MKP	Min. AC 250 V, 110 °C, Max. 2.2 μF	ENEC
(Alternative)	CARLI ELECTRONICS CO LTD	MPX	Min. 250 V, min. 110 °C Max. 2.2 μF	ENEC
(Alternative)	JOEY ELECTRONICS (DONG GUAN) CO LTD	MPX	Min 250 V, 105 °C Max. 2.2 μF	VDE
(Alternative)	Iskra	KNB1530	Min 250 V, 100 °C Max. 2.2 μF	VDE
Bridge Capacitor (C3, C4) (Optional)	MURATA MFG CO LTD	KX	Min. AC 250 V, min. 125 °C max. 330 pF	VDE
(Alternative)	TDK-EPC CORPORATION	CD	Min. AC 250 V, min. 125 °C max. 330 pF	VDE

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternative)	WALSIN TECHNOLOGY CORP	AH	Min. AC 250 V, min. 125 °C max. 330 pF	VDE
(Alternative)	WELSON INDUSTRIAL CO LTD	WD	Min. AC 250 V, min. 125 °C max. 330 pF	VDE
Bridge Capacitor (C21, C22) (Optional)	MURATA MFG CO LTD	KX	Min. AC 250 V, min. 125 °C max. 470 pF	VDE
(Alternative)	TDK-EPC CORPORATION	CD	Min. AC 250 V, min. 125 °C max. 470 pF	VDE
(Alternative)	WALSIN TECHNOLOGY CORP	AH	Min. AC 250 V, min. 125 °C max. 470 pF	VDE
(Alternative)	WELSON INDUSTRIAL CO LTD	WD	Min. AC 250 V, min. 125 °C max. 470 pF	VDE
Bridge Capacitor (C23, C24) (Optional)	MURATA MFG CO LTD	KX	Min. AC 250 V, min. 125 °C max. 680 pF	VDE
(Alternative)	TDK-EPC CORPORATION	CD	Min. AC 250 V, min. 125 °C max. 680 pF	VDE
(Alternative)	WALSIN TECHNOLOGY CORP	AH	Min. AC 250 V, min. 125 °C max. 680 pF	VDE
(Alternative)	WELSON INDUSTRIAL CO LTD	WD	Min. AC 250 V, min. 125 °C max. 680 pF	VDE
Bridge Capacitor (C31, C32) (Optional)	MURATA MFG CO LTD	KX	Min. AC 250 V, min. 125 °C max. 1000 pF	VDE
(Alternative)	TDK-EPC CORPORATION	CD	Min. AC 250 V, min. 125 °C max. 1000 pF	VDE
(Alternative)	WALSIN TECHNOLOGY CORP	AH	Min. AC 250 V, min. 125 °C max. 1000 pF	VDE
(Alternative)	WELSON INDUSTRIAL CO LTD	WD	Min. AC 250 V, min. 125 °C max. 1000 pF	VDE
Bleeder Resistors (R7, R8)	Interchangeable	Interchangeable	Max. 400 K Ω , min. 1/4 W	Tested in appliance
Bleeder Resistors (R1, R2)	Interchangeable	Interchangeable	Max. 3 M Ω , min. 1/4 W	Tested in appliance

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
Optical Isolator (U3, U4, U5) (U3 optional provide)	SHARP CORP ELECTRONIC COMPONENTS AND DEVICES DIV	PC123	Dti = 0.4 mm, Dcr = 8.0 mm, 110 °C. Type B, Tsi = 150 °C	VDE
(Alternative)	COSMO Electronics Corporation	K1010	Dti = 0.7 mm, Ext. dcr = 8.0 mm, thermal cycle test, 100 °C	VDE
(Alternative)	TOSHIBA CORP, SEMICONDUCT OR CO DISCRETE SEMICONDUCT OR DIV	TLP785F	Dti = 0.6 mm, Dcr = 8.0 mm, 110 °C, Tsi = 150 °C.	VDE
(Alternative)	TOSHIBA CORP, SEMICONDUCT OR CO DISCRETE SEMICONDUCT OR DIV	TLP781F	Dti = 0.6 mm, Dcr = 8.0 mm, 110 °C, Tsi = 150 °C.	VDE
(Alternative)	Lite-On Technology Corporation	LTV-817M	Dti = 0.4 mm Int. dcr = 5.2 mm Ext. dcr = 8.0 mm, thermal cycling test, 115 °C	VDE
Transformer (T1)	Mean Well Enterprises Co., Ltd.	TF-5279A (for x=24), TF-5280A (for x=48)	Class B	Tested in appliance
(Alternative)	Yu Jing	TF-5279A (for x=24), TF-5280A (for x=48)	Class B	Tested in appliance
Thermal cut-off (TSW1)	Seki Controls Co Ltd	ST-22	100-130 °C	UL, VDE
(Alternative)	Dongguan Kain Electronic	BW-A1D-***	100-130 °C	UL, VDE
(Alternative)	Guangzhou Safty Electronic	BW - DCP *	100-130 °C	UL, VDE
(Alternative)	Yangzhou Baozhu	TB02	100-130 °C	UL, TUV

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, I _{disch_min} = 0.85 mA (Applicable for use to mains supply AC 100-240 V 60-50 Hz) X-Caps.: 0.047-2.2 μF. Resistors: 150k-1 MΩ	CB(NEMKO)
(Alternative)	Power Integrations, Inc	SC1143	Rated AC 85-265 V, 47-63 Hz. X-Caps.: Min. 100 nF, max. 6 μF. Resistors: Min. 142 kΩ, max. 7.5 MΩ	CB(NEMKO)
Printed Wiring Board	Interchangeable	Interchangeable	Min. V-1 or better, 130 °C	UL

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 21 조제 1 항 또는 제 38 조제 1 항 규정에 의한 안전인증 취소 혹은 안전확인신고 효력상실 사유가 됨을 유의하시기 바랍니다.

The Safety Certification will be cancelled under the Article 21(1), 38(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)
GSM220B24	All models are similar to each other in design, except for model designation number, mains transformer T1 secondary windings and the rating of the secondary components, output voltage and power ratings: DC 24 V, 9.2 A, 221 W max.

제품특기사항 및 시험조건
Remarks & Test conditions

1. Review Ref. No.: 20-076303-01-2
2. Product Description:
 - Measured Power Consumption: 240.8 W
 - Insulation Class: Class II
 - Protection against Ingress of water: IP22
 - Mass of Equipment: Max. 1.06 kg

For GSM220B24 Input test:

1.6.2 TABLE: Electrical data (in normal conditions)						P
U (V)	I (A)	I rated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status
GSM220B24						
90V50Hz	2.69	---	241.8	FS1	2.69	24Vdc/ 9.2A
90V60Hz	2.69	---	241.9	FS1	2.69	24Vdc/ 9.2A
100V50Hz	2.41	2.5	240.6	FS1	2.41	24Vdc/ 9.2A
100V60Hz	2.41	2.5	240.8	FS1	2.41	24Vdc/ 9.2A
240V50Hz	1.03	1.3	233.3	FS1	1.03	24Vdc/ 9.2A
240V60Hz	1.03	1.3	233.5	FS1	1.03	24Vdc/ 9.2A
264V50Hz	0.97	---	232.9	FS1	0.97	24Vdc/ 9.2A
264V60Hz	0.97	---	232.9	FS1	0.97	24Vdc/ 9.2A
Supplementary information: ---						

본 제품의 검토내용에 관하여 문의하실 사항이 있으시면 아래 연락처로 문의하시기 바랍니다.
검토 담당자 / 연락처 : 고객지원본부 인증융합평가센터 김 재희 / 02-860-1420

If you have any question on product review, please contact the person below :
Job holder: Customer Support Division, Certification Convergence Evaluation Center, Jae-hee Kimi / +82 2 860-1420

FP511-05

첨부 3 : 안전인증의 변경 현황
Revisions Status

변경발급 내용 Contents of Certificate Revisions
1 st Rev.) Change of manufacturer president and address (22-081377-24-1 : 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

접수번호 : 20-076303-01-1
(Receipt No.)



안전인증서

Safety Certificate

안전인증번호 : SU10509-20004
(Certificate No.)

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

주소 : No. 77, Jian-min Road, Dong-qiao, Pan-yang Ind. Park, Huang-dai
(Address) Town, Xiang-cheng District, Suzhou, Jiangsu 215152, P.R. China

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

기본모델명 : GSM220B48
(Basic Model)

파생모델명 : GSM220B24
(Series Model)

정격/안전기준상의 모델구분 : I/P: AC 100-240 V, 50/ 60 Hz, 2.5-1.3 A
(Rating) O/P: DC 48 V, 4.6 A, 221 W max.

시험기준 : K60950-1(2011-12)
(Standard)

본 인증서는 제조국명 : 중국
제조업자명 : 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, 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.

2020 년 12 월 09 일
Year month day

한국산업기술시험원장

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
Enclosure	SABIC INNOVATIVE PLASTICS JAPAN L L C	945 (GG), 940(f1)	V-0, 120 °C, min. 1.1 mm thick	UL
(Alternative)	SABIC INNOVATIVE PLASTICS B V	945 (GG), 940(f1)	V-0, 120 °C, min. 1.1 mm thick	UL
(Alternative)	SABIC INNOVATIVE PLASTICS US LL C	945 (GG), 940(f1)	V-0, 120 °C, min. 1.1 mm thick	UL
Appliance Inlet	TECX-UNIONS	SO-222	2.5 A, AC 250 V	VDE
(Alternative)	RONG FENG INDUSTRIAL CO LTD	RF-180	2.5 A, AC 250 V	VDE
(Alternative)	Sun Fair Electric Wire & Cable (HK) Co Ltd	S-01	2.5 A, AC 250 V	VDE
(Alternative)	Rich Bay Co Ltd	R-201SN	2.5 A, AC 250 V	VDE
(Alternative)	Zhe Jiang Bei Er Jia Electronic Co Ltd	ST-A03 series	2.5 A, AC 250 V	VDE
Fuse (FS1)	CONQUER ELECTRONICS CO LTD	MST	T 5 AL, 250 V	VDE
(Alternative)	WALTER ELECTRONIC CO LTD	2010	T 5 AL, 250 V	VDE
Inductor (LF1)	Mean Well Enterprises Co., Ltd.	TR-889	Min. 105 °C	Tested in appliance
(Alternative)	Mean Well Enterprises Co., Ltd.	TR-889B	Min. 105 °C	Tested in appliance
Inductor (LF2)	Mean Well Enterprises Co., Ltd.	TR-890	Min. 105 °C	Tested in appliance
(Alternative)	Mean Well Enterprises Co., Ltd.	TR-890A	Min. 105 °C	Tested in appliance
Inductor (L2) (Optional)	Mean Well Enterprises Co., Ltd.	TR-892	Min. 130 °C	Tested in appliance

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternative)	Mean Well Enterprises Co., Ltd.	TR-892A	Min. 130 °C	Tested in appliance
Inductor (L1) (Optional)	Mean Well Enterprises Co., Ltd.	TF-5260	Min. 130 °C	Tested in appliance
(Alternative)	Mean Well Enterprises Co., Ltd.	TF-5260A	Min. 130 °C	Tested in appliance
Varistor (ZNR1) (Optional)	Thinking Electronic Industrial Co., Ltd.	TVR10511-M, TVR14511-M	AC 320 V, DC 410 V (Flame class of body coating complied with V-0), 125 °C	VDE
(Alternative)	Thinking Electronic Industrial Co., Ltd.	TVR10471-M, TVR14471-M	AC 300 V, DC 385 V (Flame class of body coating complied with V-0), 125 °C	VDE
(Alternative)	Thinking Electronic Industrial Co., Ltd.	TVR10561-M, TVR14561-M	AC 350 V, DC 450 V (Flame class of body coating complied with V-0), 125 °C	VDE
(Alternative)	Joyin Co., Ltd.	JVT10S471K or JVT14S471K	AC 350 V, DC 450 V (Flame class of body coating complied with V-0), 125 °C	VDE
(Alternative)	Joyin Co., Ltd.	JVT10S511K or JVT14S511K	AC 320 V, DC 410 V (Flame class of body coating complied with V-0), 125 °C	VDE
(Alternative)	Joyin Co., Ltd.	JVT10S561K or JVT14S561K	AC 350 V, DC 450 V (Flame class of body coating complied with V-0), 125 °C	VDE
X-Capacitor (C1, C2, C6) (Optional) (can be used for only each of one with 2.2 µF max.)	KEMET ELECTRONICS ITALIA SRL	R.46	Min 250 V, min. 100 °C or 110 °C Max. 2.2 µF	ENEC
(Alternative)	KEMET ELECTRONICS ITALIA SRL	R.49	Min 250 V, min. 110 °C, Max. 2.2 µF	ENEC

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternative)	EPCOS Electronic Components S.A	B3292#	Min 250 V, min. 110 °C, Max. 2.2 μF	ENEC
(Alternative)	EPCOS Electronic Components S.A	B3292#CD	Min 250 V, min. 110 °C, Max. 2.2 μF	ENEC
(Alternative)	ISKRA SISTEMI, D D	KNB 1560	Max. 2.2 μF, 275 V, 110 °C or 300 V, 125 °C	VDE
(Alternative)	LIOW GU ELECTRONICS INDUSTRY CO LTD	GS-L	Min 250 V, min. 110 °C, Max. 2.2 μF	ENEC
(Alternative)	PILKOR ELECTRONICS CO LTD	PCX2 335M	Min 250 V, 100 °C or 105 °C, Max. 2.2 μF	ENEC
(Alternative)	PILKOR ELECTRONICS CO LTD	PCX2 337	Min 250 V, 100 °C or 110 °C, Max. 2.2 μF	ENEC
(Alternative)	ULTRA TECH XIPHI ENTERPRISE CO LTD	HQX	Min 250 V, 110 °C Max. 2.2 μF	VDE
(Alternative)	CHENG TUNG INDUSTRIAL CO LTD	CTX	Min 250 V, 110 °C Max. 2.2 μF	ENEC
(Alternative)	Okaya Electric Industries Co., Ltd.	LE Series	Min. AC 250 V, 110 °C, Max. 2.2 μF	VDE
(Alternative)	XIAMEN FARATRONIC CO LTD	MKP62	Min 250 V, 110 °C Max. 2.2 μF	VDE
(Alternative)	HUA JUNG COMPONENTS CO LTD	MKP	Min. AC 250 V, 110 °C, Max. 2.2 μF	ENEC
(Alternative)	CARLI ELECTRONICS CO LTD	MPX	Min. 250 V, min. 110 °C Max. 2.2 μF	ENEC
(Alternative)	JOEY ELECTRONICS (DONG GUAN) CO LTD	MPX	Min 250 V, 105 °C Max. 2.2 μF	VDE
(Alternative)	Iskra	KNB1530	Min 250 V, 100 °C Max. 2.2 μF	VDE
Bridge Capacitor (C3, C4) (Optional)	MURATA MFG CO LTD	KX	Min. AC 250 V, min. 125 °C max. 330 pF	VDE
(Alternative)	TDK-EPC CORPORATION	CD	Min. AC 250 V, min. 125 °C max. 330 pF	VDE

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
(Alternative)	WALSIN TECHNOLOGY CORP	AH	Min. AC 250 V, min. 125 °C max. 330 pF	VDE
(Alternative)	WELSON INDUSTRIAL CO LTD	WD	Min. AC 250 V, min. 125 °C max. 330 pF	VDE
Bridge Capacitor (C21, C22) (Optional)	MURATA MFG CO LTD	KX	Min. AC 250 V, min. 125 °C max. 470 pF	VDE
(Alternative)	TDK-EPC CORPORATION	CD	Min. AC 250 V, min. 125 °C max. 470 pF	VDE
(Alternative)	WALSIN TECHNOLOGY CORP	AH	Min. AC 250 V, min. 125 °C max. 470 pF	VDE
(Alternative)	WELSON INDUSTRIAL CO LTD	WD	Min. AC 250 V, min. 125 °C max. 470 pF	VDE
Bridge Capacitor (C23, C24) (Optional)	MURATA MFG CO LTD	KX	Min. AC 250 V, min. 125 °C max. 680 pF	VDE
(Alternative)	TDK-EPC CORPORATION	CD	Min. AC 250 V, min. 125 °C max. 680 pF	VDE
(Alternative)	WALSIN TECHNOLOGY CORP	AH	Min. AC 250 V, min. 125 °C max. 680 pF	VDE
(Alternative)	WELSON INDUSTRIAL CO LTD	WD	Min. AC 250 V, min. 125 °C max. 680 pF	VDE
Bridge Capacitor (C31, C32) (Optional)	MURATA MFG CO LTD	KX	Min. AC 250 V, min. 125 °C max. 1000 pF	VDE
(Alternative)	TDK-EPC CORPORATION	CD	Min. AC 250 V, min. 125 °C max. 1000 pF	VDE
(Alternative)	WALSIN TECHNOLOGY CORP	AH	Min. AC 250 V, min. 125 °C max. 1000 pF	VDE
(Alternative)	WELSON INDUSTRIAL CO LTD	WD	Min. AC 250 V, min. 125 °C max. 1000 pF	VDE
Bleeder Resistors (R7, R8)	Interchangeable	Interchangeable	Max. 400 KΩ , min. 1/4 W	Tested in appliance
Bleeder Resistors (R1, R2)	Interchangeable	Interchangeable	Max. 3 MΩ , min. 1/4 W	Tested in appliance

부품명(회로기호) Component(Part no.)	제조사(상표명) Manufacturer(Brand)	모델명(형식) Model(Type)	정격 또는 특성 Rating or Characteristics	인증마크 Tested by
Optical Isolator (U3, U4, U5) (U3 optional provide)	SHARP CORP ELECTRONIC COMPONENTS AND DEVICES DIV	PC123	Dti = 0.4 mm, Dcr = 8.0 mm, 110 °C. Type B, Tsi = 150 °C	VDE
(Alternative)	COSMO Electronics Corporation	K1010	Dti = 0.7 mm, Ext. dcr = 8.0 mm, thermal cycle test, 100 °C	VDE
(Alternative)	TOSHIBA CORP, SEMICONDUCT OR CO DISCRETE SEMICONDUCT OR DIV	TLP785F	Dti = 0.6 mm, Dcr = 8.0 mm, 110 °C, Tsi = 150 °C.	VDE
(Alternative)	TOSHIBA CORP, SEMICONDUCT OR CO DISCRETE SEMICONDUCT OR DIV	TLP781F	Dti = 0.6 mm, Dcr = 8.0 mm, 110 °C, Tsi = 150 °C.	VDE
(Alternative)	Lite-On Technology Corporation	LTV-817M	Dti = 0.4 mm Int. dcr = 5.2 mm Ext. dcr = 8.0 mm, thermal cycling test, 115 °C	VDE
Transformer (T1)	Mean Well Enterprises Co., Ltd.	TF-5279A (for x=24), TF-5280A (for x=48)	Class B	Tested in appliance
(Alternative)	Yu Jing	TF-5279A (for x=24), TF-5280A (for x=48)	Class B	Tested in appliance
Thermal cut-off (TSW1)	Seki Controls Co Ltd	ST-22	100-130 °C	UL, VDE
(Alternative)	Dongguan Kain Electronic	BW-A1D-***	100-130 °C	UL, VDE
(Alternative)	Guangzhou Safty Electronic	BW - DCP *	100-130 °C	UL, VDE
(Alternative)	Yangzhou Baozhu	TB02	100-130 °C	UL, TUV

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, I _{disch_min} = 0.85 mA (Applicable for use to mains supply AC 100-240 V 60-50 Hz) X-Caps.: 0.047-2.2 μF. Resistors: 150k-1 MΩ	CB(NEMKO)
(Alternative)	Power Integrations, Inc	SC1143	Rated AC 85-265 V, 47-63 Hz. X-Caps.: Min. 100 nF, max. 6 μF. Resistors: Min. 142 kΩ, max. 7.5 MΩ	CB(NEMKO)
Printed Wiring Board	Interchangeable	Interchangeable	Min. V-1 or better, 130 °C	UL

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 21 조제 1 항 또는 제 38 조제 1 항 규정에 의한 안전인증 취소 혹은 안전확인신고 효력상실 사유가 됨을 유의하시기 바랍니다.

The Safety Certification will be cancelled under the Article 21(1), 38(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)
GSM220B24	All models are similar to each other in design, except for model designation number, mains transformer T1 secondary windings and the rating of the secondary components, output voltage and power ratings: DC 24 V, 9.2 A, 221 W max.

제품특기사항 및 시험조건
Remarks & Test conditions

1. Review Ref. No.: 20-076303-01-2
2. Product Description:
 - Measured Power Consumption: 240.8 W
 - Insulation Class: Class II
 - Protection against Ingress of water: IP22
 - Mass of Equipment: Max. 1.06 kg

For GSM220B24 Input test:

1.6.2	TABLE: Electrical data (in normal conditions)						P
U (V)	I (A)	Irated (A)	P (W)	Fuse #	Ifuse (A)	Condition/status	
GSM220B24							
90V50Hz	2.69	--	241.8	FS1	2.69	24Vdc/9.2A	
90V60Hz	2.69	--	241.9	FS1	2.69	24Vdc/9.2A	
100V50Hz	2.41	2.5	240.6	FS1	2.41	24Vdc/9.2A	
100V60Hz	2.41	2.5	240.8	FS1	2.41	24Vdc/9.2A	
240V50Hz	1.03	1.3	233.3	FS1	1.03	24Vdc/9.2A	
240V60Hz	1.03	1.3	233.5	FS1	1.03	24Vdc/9.2A	
264V50Hz	0.97	--	232.9	FS1	0.97	24Vdc/9.2A	
264V60Hz	0.97	--	232.9	FS1	0.97	24Vdc/9.2A	
Supplementary information: --							

□ 본 제품의 검토내용에 관하여 문의하실 사항이 있으시면 아래 연락처로 문의하시기 바랍니다.
검토담당자 : BK전략본부 인증관리센터 김 재 희 / 02-860-1420
□ If you have any question on product review, please contact the person below :
Job holder BK Strategy Division, Certification Management Center, Jae-hee Kim / +82 2 860-1420

첨부 3 : 안전인증의 변경 현황
Revisions Status

변경발급 내용 Contents of Certificate Revisions
Not applicable

FP511-06