Constructional Data Form (CDF) for Electrical Appliances

License holder	:	Ninghai Yingjiao Electrical Co., Ltd. Cuijia Village, Xidian Town, Ninghai County, Ningbo 315613, P.R. China
Factory	:	Ninghai Yingjiao Electrical Co., Ltd. Cuijia Village, Xidian Town, Ninghai County, Ningbo 315613, P.R. China
Type of Appliance	:	Power supply
Type Designation	:	YSD15S-xxxyyyy (xxx=050 to 480, in step of 1, yyyy=0100 to 2500, in step of 10)
Rating	:	Input : AC 100-240V, 50/60 Hz, Max.0.6A Output: 5-48VDC, 100-2500mA, Max. 15W
ta value	:	40°C
Moisture/dust protection	:	IP20
Protection class	:	Class II
Supply connection	:	☐ fixed power cord ☒ permanent connection ☐ appliance inlet ☐ direct plug in ☐ battery operated

Please tick above box ☒ when applicable

Additional information :

Operating temperature: 40°C

Model List (Electric Rating and difference):

Type Designation: YSD15S-xxxyyyy

Definition of variables:

Variable:	Range of variable:	Content:
xxx	xxx=050 to 480, in step of 1	Three digits indicating output voltage in Volt. E.g. 050indicates 5Vdc, 480 indicates 48Vdc, in step of 0.1 V.
yyyy	yyyy=0100 to 2500, in step of 10	Four digits indicating the output current in mA. E.g. 0100 indicates 100mA, 2500 indicates 2500mA. in step of 0.01A.

Electric Rating:

Model Name	Input voltage (Vac)	Frequency (Hz)	Max. Input current (A)	Max. Output power (W)	Output Voltage (Vdc)	Output Current (A)
YSD15S-xxxyyyy	100-240	50/60	0.6	15	5-48	0.1-2.5

TÜV Rheinland Group

Bonnie Xu

2023.02.06

Date **Name** **Signature**

Model list:

Models:	Output Voltage (Vdc)	Output Current (A)	Output Power (Max. W)	Transformer
YSD15S-xxxyyyy	5-11.9	0.1-2.5	15	PQ2058-6V
	12-14.9	0.1-1.25	15	PQ2058-12V
	15-23.9	0.1-1.0	15	PQ2058-15V
	24-47.9	0.1-0.63	15	PQ2058-24V
	48	0.1-0.31	15	PQ2058-48V

Remark: The minimum rising step of output voltage is 0.1V; the minimum rising step of output current is 0.01A. Output voltage multiplied with output current are only tested and certified up to the max. output power.

The above transformers are identical to each other except diameter and turns of secondary winding.

Model difference

Model (output voltage)	Components						
	C3	C4	R19	R18	R18A	D3	T1
5-11.9	330uF-3300uF, 16V	100uF-2200uF, 10V	10K -820K 0805	2K-750K 0805	2K-750K 0805	10A/100V	PQ2058-6V Primary winding : N1(1-H): 0.27x38TS N2(2-N): 0.15x3Px6TS N4(3-2): 0.13x2Px9TS N5(H-4): 0.27x9TS Secondary winding : N3(7-6):0.4x2Px3TS
12-14.9	330uF-3300uF, 16V	100uF-1000uF,25V	10K -820K 0805	2K-750K 0805	2K-750K 0805	10A/100V	PQ2058-12V Primary winding : N1(1-H): 0.27x38TS N2(2-N): 0.15x3Px6TS N4(3-2): 0.13x2Px9TS N5(H-4): 0.27x9TS Secondary winding : N3(7-6):0.4x2Px6TS
15-23.9	330uF-2200uF,25V	100uF-680uF,35V	10K -820K 0805	2K-750K 0805	2K-750K 0805	10A/100V	PQ2058-15V Primary winding : N1(1-H): 0.27x38TS N2(2-N): 0.15x3Px6TS N4(3-2): 0.13x2Px8TS

							N5(H-4): 0.27x9TS Secondary winding : N3(7-6):0.3x2Px7TS
24-47.9	330uF-1500uF,35V	100uF-680uF,35V	10K -820K 0805	2K-750K 0805	2K-750K 0805	10A/150V	PQ2058-24V Primary winding : N1(1-H): 0.27x38TS N2(2-N): 0.15x3Px6TS N4(3-2): 0.13x2Px9TS N5(H-4): 0.27x9TS Secondary winding : N3(7-6):0.4x12TS
48	100uF-1000uF,63V	10UF-100uF,100V	10K -1M 0805	2K-750K 0805	2K-750K 0805	2A/400V	PQ2058-48V Primary winding : N1(1-H): 0.27x38TS N2(2-N): 0.15x3Px6TS N4(3-2): 0.13x2Px9TS N5(H-4): 0.27x9TS Secondary winding : N3(7-6):0.25x24TS

Critical Components

Material: e.g. external enclosure, PCB, closed-end connector, sleeves, cord anchorage etc

Components with winding: e.g. motor, transformer, magnetic coil etc.

Other components: e.g. switch, thermostat, heater, plug, internal wire, capacitor, relay, varistor etc.

Object/part No.	Manufacturer/ trademark	Type/ model	Technical data	Standard	Mark(s) of conformity
Terminal	Cixi Kaifeng Electronic Co., Ltd.	KF 128V-5.0	250VAC,18A, 105°C	IEC/EN 60998-2-1 IEC/EN 60998-1	VDE (40037253)
Alternative	NINGBO MAX ELECTRONIC TECHNOLOGY CO LTD	MX128-5.0 MX128V-5.0	250VAC,18A, 105°C	IEC/EN 60998-2-1 IEC/EN 60998-1	TUV (B004887 0001)
Alternative	Degson Electronics Co., Ltd.	DG128-5.0	250VAC,18A, rated connecting capacity: 2.5mm^2 min. cross-sectional: 0.2mm^2, 105°C	IEC/EN 60998-2-1 IEC/EN 60998-1	VDE (40022088)
Alternative	Cixi Wanjie Electronic Co., Ltd	WJ128-5.0	250VAC, 20A, rated connecting capacity: 2.5mm^2 min. cross-sectional: 0.2mm^2, 105°C	IEC/EN 60998-2-1 IEC/EN 60998-1	VDE (40035117)
Alternative	TIANLI ELECTRICAL MACHINERY. (NINGBO) Co., Ltd	TL206-series	250VAC, 12A, rated connecting capacity: 2.5mm^2 min. cross-sectional: 0.5mm^2, 105°C	IEC/EN 60998-2-1 IEC/EN 60998-1	VDE (40025612)
Plastic enclosure	SABIC INNOVATIVE PLASTICS B V	940(f1)(gg*)	V-0, 120°C, min. thickness: 1.5mm	IEC/EN 62368-1	UL (E45329) + tested with appliance
NTC	Guangdong Hongzhi Electronic Technology Co., Ltd	5D-7	5Ω at 25°C, 2A, 150°C	IEC/EN 60539-1	TUV (B 001617 0001)
Alternative	Thinking Electronic Industrial Co., Ltd.	SCK-052	5Ω at 25°C, 2A, 150°C	IEC/EN 60539-1	TUV (R 50050155)
X-capacitor (CX1)	DAIN ELECTRONICS CO LTD	MEX/NPX/MPX	X2 type, 0.15µF, 275VAC , 40/110/21	IEC/EN 60384-14	VDE (40018798)
Alternative	JYH HSU (JEC) ELECTRONICS LTD	MPX	X2 type, 0.15µF, min.250VAC, 40/110/56	IEC/EN 60384-14	VDE (40044985)

Alternative	CHANGZHOU JIAGUAN ELECTRONICS CO., LTD.	MKP	X2 type, 0.15µF max, 275/300VAC, 40/110/21	IEC/EN60384-14	VDE (40037250)
Alternative	Guangdong JURCC electronics Co., LTD.	MPX/MKP	X2 type, 0.15µF, min.275VAC, 40/110/56	IEC/EN60384-14	VDE (40034920)
Alternative	Dongguan Weiqing Electronic Co., Ltd.	MPX	X2 type, 0.15µF, min.275VAC, 40/110/56	IEC/EN 60384-14	VDE (40040406)
Alternative	Dongguan Champion Electronic, Technology Co., Ltd	MPX	X2 type, 0.15µF, min.275VAC, 40/110/56	IEC/EN 60384-14	VDE (40044148)
Alternative	Dongguan QNC Electronics Co., Ltd	MPX/MKP Series	X2 type, 0.15µF, min.275VAC, 40/110/56	IEC/EN 60384-14	VDE (40053305)
Alternative	DONG GUAN AJC INDUSTRIAL CO.,LTD	MPX/MKP	X2 type, 0.15µF, min.275VAC, 40/110/56	IEC/EN 60384-14	VDE (40045532)
Alternative	Sichuan Sincerity Technology Co., Ltd.	MPX/MKP	X2 type, 0.15µF, min.275VAC, 40/110/56	IEC/EN 60384-14	VDE (4028812)
Alternative	Tenta Electric Industrial Co., Ltd.	MEX	X2 type, 0.15µF max.275VAC, 40/100/21	IEC/EN 60384-14	VDE (119119)
Varistor (MOV1)	Brightking (Shenzhen) Co., Ltd	07D471K/471 KD07	300Vac, 385Vdc 40/85/56	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE (40027827)
Alternative	BestBright Electronics Co. Ltd	07D471K/471 KD07	300Vac, 385Vdc 40/85/56	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE (40050493)
Alternative	Thinking Electronic Industrial Co., Ltd.	TVR07471	300Vac, 385Vdc 40/85/56	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE (005944)
Alternative	CERGLASS MFG INC	07D471k	300Vac, 385Vdc 40/85/21	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE (40028836)
Alternative	Dongguan City Dafu Electronics Co. Ltd.	07D471k	300Vac, 385Vdc 40/85/21	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE (40050909)
Alternative	Guangdong Huiwan Electronics Technology Co.,LTD.	V-471K-07 DEH	300Vac, 385Vdc, 40/85/21	IEC/EN 61051-1 IEC/EN 61051-2 IEC/EN 61051-2-2	VDE (40043880)

Voltage select switch VR1	NINGBO SHUANGJIAWEI PLASTIC CO., LTD.	ABS	V-1, min. thickness: 1.5mm	IEC/EN 62368-1	Tested with appliance
Fuse (F1)	Shanghai Fullness Electrical Co. Ltd.	TDP	250 Vac, T2.0A	IEC/EN 60127-1 IEC/EN 60127-3	TUV (R 50510065)
Alternative	ZHONG SHAN LANBAO ELECTRICAL APPLIANCES CO LTD	RTI-20	250 Vac, T2.0A	IEC/EN 60127-1 IEC/EN 60127-3	VDE (40012120)
Alternative	Dongguan Chevron Electronic Technology Co., Ltd.	3GT	250 Vac, T2.0A	IEC/EN 60127-1 IEC/EN 60127-3	VDE (40036523)
Transformer (T1)	NINGHAI YINGJIAO ELECTRICAL CO., LTD.	PQ2058-6V	Class B	IEC/EN 62368-1	tested with appliance
Transformer (T1)	NINGHAI YINGJIAO ELECTRICAL CO., LTD.	PQ2058-12V	Class B	IEC/EN 62368-1	tested with appliance
Transformer (T1)	NINGHAI YINGJIAO ELECTRICAL CO., LTD.	PQ2058-15V	Class B	IEC/EN 62368-1	tested with appliance
Transformer (T1)	NINGHAI YINGJIAO ELECTRICAL CO., LTD.	PQ2058-24V	Class B	IEC/EN 62368-1	tested with appliance
Transformer (T1)	NINGHAI YINGJIAO ELECTRICAL CO., LTD.	PQ2058-48V	Class B	IEC/EN 62368-1	tested with appliance
-Bobbin	Chang Chun Plastics Co., Ltd	T375J(G5)(G6)	Phenolic, V-0, 150°C, Min thickness: 0.8mm	IEC/EN 62368-1	UL (59481) + tested with appliance
-Insulation tape	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	PZ* (b)	130°C	IEC/EN 62368-1	UL (E165111) + tested with appliance
Alternative	JINGJIANG FUWEI ADHESIVE PRODUCT CO LTD	WF101	130°C	IEC/EN 62368-1	UL (E302608) + tested with appliance
Alternative	JINGJIANG JINGYANG INSULATING PRODUCT CO LTD	JY-133	130°C	IEC/EN 62368-1	UL (E309872) + tested with appliance

Alternative	JINGJIANG YAHUA PRESSURE SENSITIVE GLUE CO LTD	CT *(b)(g)	130°C	IEC/EN 62368-1	UL (E165111) + tested with appliance
-Magnet Wire	ZHEJIANG HONGBO TECHNOLOGY CO LTD	xUEW/130, QA-x/130	130°C	IEC/EN 62368-1	UL(E221719) + tested with appliance
Alternative	HUZHOU HUIFENG ELECTRICIAN TECHNOLOGY CO LTD	QA/155	155°C	IEC/EN 62368-1	UL(E499393) + tested with appliance
Alternative	NINGBO JINTIAN NEW MATERIAL CO LTD	xUEWN/155, QA/X-x/155	155°C	IEC/EN 62368-1	UL(E227047) + tested with appliance
-Triple Insulation Wire	Great Leoflon Industrial Co., Ltd.	TRW(B)-M	130°C	IEC/EN 62368-1	VDE (136581)
Alternative	Hangzhou Fuyang Youheng Cable Co., Ltd	GY-F	155°C	IEC/EN 62368-1	VDE (40041248)
-Tube	DONGGUAN CITY CHANGJIE METALS &PLASTIC PRODUCTS CO LTD	CJ-TT-T	300V 200°C	IEC/EN 62368-1	UL (E338209) + tested with appliance
Alternative	FLUO TECH INDUSTRIES CO LTD	TFT	300V, 200°C	IEC/EN 62368-1	UL (E175982) +tested with appliance
-Varnish	ZHUHAI CHANGXIAN NEW MATERIALS TECHNOLOGY CO LTD	E962	130°C	IEC/EN 62368-1	UL (E335405) + tested with appliance
-Alternative	JOHN C DOLPH CO	BC-359	155°C	IEC/EN 62368-1	UL (E317427) + tested with appliance
-Alternative	HANG CHEUNG COATINGS (HUIYANG) LTD	8562(a)	155°C	IEC/EN 62368-1	UL (E200154) + tested with appliance
Y capacitor (CY1,CY2)	Jya-Nay Co., Ltd.	JN	Y1 type, 250Vac min, 1000pF, 25/125/21	IEC/EN 60384-14	TUV (R 50232059)
Alternative	Jyh HSU(JEC) Electronic Co., Ltd.	JD	Y1 type, 250Vac min, 1000pF, 40/125/21	IEC/EN 60384-14	VDE (40038642)

Alternative	Dongguan City Dafu Electronics Co. Ltd.	CT7 Y1 Series	Y1 type, 250Vac min, 1000pF, 25/125/21	IEC/EN 60384-14	VDE (40041523)
Alternative	Guangdong Huiwan Electronics Technology Co.,LTD.	AR	Y1 type, 500Vac min, 1000pF, 40/125/21	IEC/EN 60384-14	VDE (40043989)
Alternative	Shenzhen Teruixiang Electronic Co, Ltd.	TY-Series	Y1 type, 400Vac min, 1000pF, 25/125/21	IEC/EN 60384-14	VDE (40031733)
Optocoupler (U1A)	Everlight Electronics Co., Ltd.	EL817	Cr>=7.6 mm Cl>=7.6mm dti>=0.4mm UIOTM =6000V Vini.a=4000V=Vini.b, 55/110/21	IEC/EN 60747-5-5	VDE (132249)
Alternative	Shenzhen Orient Components Co. Ltd.	OR817	Cr>=7.6 mm Cl>=7.6mm dti>=0.4mm UIOTM =6000V Vini.a=4000V=Vini.b, 55/110/21	IEC/EN 60747-5-5	VDE (40029733)
Alternative	FUJIAN LIGHTNING OPTOELECTRONIC CO., LTD	TD817XN	Cr>=7.6mm Cl>=7.6mm dti>=0.4mm UIOTM =8000V Vini.a=6000V=Vini.b, 55/110/21	IEC/EN 60747-5-5	VDE (40048885)
PCB	CHENGHUIXING ELECTRONICS (HUIZHOU) CO., LTD.	FG-109, FG-115, FG-114	V-0, 130°C	IEC/EN 62368-1	UL (E78769) + tested with appliance
Alternative	DONGGUAN ZHIHAN ELECTRONIC CO LTD	ZH-M, ZH-D	V-0, 130°C	IEC/EN 62368-1	UL (E485751) + tested with appliance
Alternative	GOLDWAN Circuit Limited	GW8081	V-0, 130°C	IEC/EN 62368-1	UL (E156176) + tested with appliance
Alternative	Wenzhou Juyi Electronic Technology Co., Ltd.	JY-D	V-0, 130°C	IEC/EN 62368-1	UL (E492597) + tested with appliance
Alternative	Dongguan Shuanghe Electronics Co., Ltd	SH108, SH808, SH908	V-0, 130°C	IEC/EN 62368-1	UL (E528144) + tested with appliance

Alternative	interchangeable	interchangeable	V-0, 130°C	UL	UL

Functional Components

Components which are required for performance purposes and not directly addressed by a component standard or product standard: Ripple capacitors, Mosfets, etc.

Object/part No.	Type/ model (optional)	Technical data
Bleeder resistor(R1, R2, R1A, R2A)	--	2Mohm, 1/4W
Primary Ripple capacitor (C1)	--	6.8μF, Min. 400V, Min. 105°C
BD1	--	1A,1000V