



Test Certificate No.: 9612314416
In accordance with Clause 12 of the Standards Law – 1953

Details of order:

Name of customer	: Bureau Veritas Consumer Product Services GmbH
Address	: Businesspark A96, 86842 Türkheim, Germany
Date of order	: 12/04/2016

Description of sample:

Solar Inverter Models	: REFUsol 08K (867P008), REFUsol 10K (867P010), REFUsol 13K (867P013), REFUsol 17K (867P017), REFUsol 20K (867P020), REFUsol 23K (867P023)
Manufacturer	: REFU Elektronik GmbH
Country of origin	: Germany
(see additional product information on pages 2-22)	

Sampling details:

No sample required.

Nature of test:

<p>Review of test reports Ref. No.: 14TH0086-IEC62109-1_3, dated 01/02/2016, 14TH0086-IEC62109-2_2, dated 01/02/2016, and 14TH0086-AS/NZS_1, dated 08/04/2016, issued by Bureau Veritas Consumer Products Services, Germany GmbH for the above-specified solar inverter models according to the following standards:</p> <p>IEC 62109-1: 2010 / EN 62109-1: 2011 Safety of power converters for use in photovoltaic power system – Part 1: General requirements</p> <p>IEC 62109-2: 2011 / EN 62109-2: 2011 Safety of power converters for use in photovoltaic power system – Part 2: Particular requirements for inverters</p> <p>AS/NZS 4777.2: 2005 - Grid connection of energy systems via inverters: Inverter requirements</p> <p>AS/NZS 4777.3: 2005 - Grid connection of energy systems via inverters: Grid protection requirements, with Deviations for Israel according to SI 4777 parts 2, 3: 2008 according to the Guidelines for Importers, Installers and Owners of Electricity Generating Systems Using Photo-Voltaic Technology, regarding Adjustment of Photo-Voltaic Inverters: 2013</p>


This document contains 22 pages and may be used only in full.

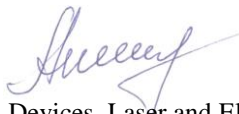
The test results in this report refer only to the item tested.

This document alone is not sufficient for the release of goods from customs.

Test Conclusions:

Based on the information provided in the above mentioned test reports, the above-specified solar inverter models comply with the Israeli requirements for grid-tied photovoltaic inverters.
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Anatoly Oimatov 
 Testing Engineer, Electrical Safety Branch
 Electronics and Telematics Laboratory
 The Standards Institution of Israel
 Date: 19/05/2016

Irina Antonov 
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 Date: 19/05/2016

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ADDITIONAL PRODUCT INFORMATION

Electrical Ratings

Test item description.....: Grid-tied photovoltaic inverter			
Trademark: REFU Elektronik			
Model / Type: REFUsol 08K (867P008), REFUsol 10K (867P010), REFUsol 13K (867P013), REFUsol 17K (867P017), REFUsol 20K(867P020), REFUsol 23K (867P023)			
Ratings..... :	REFUsol 17K (867P017)	REFUsol 20K (867P020)	REFUsol 23K (867P023)
MPP DC voltage range [V].....:	460 - 850	490 - 850	575 - 850
Input DC voltage range [V].....:	1000		
Input DC current [A].....:	38,3	41,8	41,0
Output AC voltage [V].....:	3AC400V+N, 50Hz		3AC460V+N, 50Hz
Output AC current [A].....:	3x 29,2	3x 29,2	3x 29,2
Output power [kVA].....:	17	20	23
Ratings..... :	REFUsol 08K (867P008)	REFUsol 10K (867P010)	REFUsol 13K (867P013)
MPP DC voltage range [V].....:	370 - 850	410 - 850	480 - 850
Input DC voltage range [V].....:	1000		
Input DC current [A].....:	23,0	25,0	31,0
Output AC voltage [V].....:	3AC400+N, 50Hz		
Output AC current [A].....:	3x 12,0	3x 16,0	3x 21,0
Output power [kVA].....:	8,25	10	13



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APPENDIX
List of Critical Components

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14.1		TABLE: Critical components information				P
Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾	
Enclosure	+ REFUsol	REFUsol xxK (867P0XX)	Aluminium; Top overall approx. dimension: 530mm by 570mm by 19mm by min. 2,5mm thickness Provided with foil keyboard Aluminium; Case overall approx. dimension: 520,5mm by 595mm by 136mm by min. 2,2mm thickness		Accepted	
Enclosure Heat sink	+ REFUsol	Aluminium	Overall approx. dimension: 420mm by 459mm by 117mm by min. 1,3mm thickness		Accepted	
Enclosure Bracket	+ REFUsol	Aluminium	Overall approx. dimension: 470mm by 357mm by min. 2mm thickness		Accepted	
Gasket	Rampf	RAKU-PUR 32-3250-11	Flame Class: 94V-0	(JMST2)	URus MH30032	
Switch DC Terminal	+ Santon	X75.32P2U-D-X0140	Insulation Voltage: 1000V; 32A Amb. Temp.: 70°C	IEC60947-3	Accepted	
Connector Generator Input Male	MultiContact	MC4 PV-I-ADBP4 32.0754	1000V; 30A	VDE 0126-3	TUV	
Connector Generator Input Female	MultiContact	MC4 PV-I-ADSP4 32.0755	1000V; 30A	VDE 0126-3	TUV	
Connector Relay extern Male	Phoenix Contact	SACC-E-MS-4CON-M16	250V; 4A	(ECBT2)	cURus E118976	

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Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Connector Terminal Output Power	Phoenix Contact	VC-AMS 5	600V; 45A	(ECBT2)	cURus E118976
Fan	+ Papst	4414FL	24Vdc; 42mA; 1W; 1600cpm	(GPVV2)	cURus E38324 VDE
Fan Cable	+ Medi-Kabelhandel	1007	300V; 105°C; Style1007; AWG 22 TR64, Approved with 3800Vac Tubing Acryl fiber glass hose; double Insulation	(AVLV2)	cURus E223795
Internal wiring PE from Top to Enclosure Bracket	+ Lappkabel	Style 1015	600V; 105°C; Size 2,5mm ² ; AWG14	(AVLV2)	cURus E63634 VDE
Internal wiring PE from Connector Terminal Output Power to Enclosure Case	+ Lappkabel	AWG10	600V; 105°C; Size 6mm ² ; AWG10	(AVLV2)	cURus E63634 VDE
Internal wiring from Switch DC to Power Board (XA1, XA2, XB1, XB2)	+ Huber + Suhner	Radox 125	600Vac/100Vac; 120°C; Size 6mm ²	TUV-PV1	TUV
Internal wiring from Connector Generator to Main Board	+ Huber + Suhner	Radox 125	600Vac/100Vac; 120°C; Size 10mm ²	TUV-PV1	TUV
Internal wiring from Power Board (XA200) to Main Board (XB200) and from Power Board (XA202) to Main Board (XB202)	+ Huber + Suhner	Radox 125	600Vac/100Vac; 120°C; Size 6mm ²	TUV-PV1	TUV
Tubing for Internal wiring Power	+ Hartmann	Glass filament- textile sleeving GS.PUR	Temp. Class: Temp class 155°C; min. 0,5mm thickness	(UZKX2)	E 203174

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Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Internal wiring USB	+ Datacon	Style 2725	30V; 80°C, 2A 28AWGX1P; 24AWGX2C		Accepted
Internal wiring Ethernet	+ DAETWYLER	Patch cable RJ45	CAT 5, -5-70°C; Size 5,1mm		Accepted
Tubing for Internal wiring (Relay, Sensor, RS485, Fan)	+ Kaltenbach	kalTherm 155- SGA/UL	Temp. Class: RTI = 155°C; min. 0,7mm thickness	(UZFT2)	cURus E155918
Tubing for Internal wiring from Power Board to Main Board	+ Zipper	GPS/63-B	Temp. Class: RTI = 105°C; min. 0,3mm thickness	DIN 53 438 Part 2	accepted
SV33400B Power Board					
PCB Power Board	+ KSG	ML6	Overall approx. dimension: 281mm by 110mm by min. 2,4mm thickness Flame Class: 94V-0; RTI = 130°C	(ZPMV2)	cURus E143060
Connector Terminal (XA1, XA2, XB1, XB2, XA200, XA202)	Phoenix	ZFKDSA10- 11,7	300V/150V; 10A/65A; FW2	(XCFR2)	cURus E60425
Connector Terminal (XB200, XB202)	Phoenix	ZFKDSA10- 11,7	300V/150V; 10A/65A; FW2	(XCFR2)	cURus E60425
Capacitor (C18, C19, C20, C21, C43, C44, C45, C46) Line to PE	+ Kemet	R.41	300Vac; 33nF; 110°C; Y2/X1	(FOKY2) IEC 60384-14	cURus E85238 VDE
Capacitor (C16, C17) Plus to Minus	+ Epcos	MKP Series	1100Vdc; 3µF; X	(FOKY2) IEC 60384-14	cURus E157153 VDE

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Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Capacitor (C16, C17) Plus to Minus	+ Epcos	MKP Series	1100Vdc; 3μF; X	(FOWX2) IEC 60384-14	cURus E97863 VDE
Varistor (R39, R40, R41, R42)	+ Epcos	S20K385	385Vac; diameter 20mm Clamping Voltage min. 1025V	(VZCA2) IEC61643-331	URus E321126 VDE
Inductor (L1)	Schaffner	RU21759-36-02 - NR: 298-911	Open type construction with overall approx. dimension: 60mm by 35mm Rating: 2x2,2mH; 36A; 2x1000V Core: TOROID ACM Coil: Enamelled copper Magnet wire wound on Core Insulation System: RTI = 130°C; Class I (E209169) by BASF 130-1		Accepted
Inductor (L1)	VAC	T60405-R6123-X004	Open type construction with overall approx. dimension: 60mm by 35mm Rating: 2x2,2mH; 48A Core: TOROID ACM		Accepted

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Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
			Coil: Enamelled copper Magnet wire wound on Core Insulation System: RTI = 130°C; Class I (E209169) by BASF 130-1		
Capacitor (C22) Line to Line	+ Epcos	MKP4	1000Vdc; 0,22µF; X		Accepted
Capacitor (C47) Line to Line	+ Epcos	MKP Series	900Vdc; 10µF/12µF; X	(FOKY2) IEC 60384-14	cURus E157153 VDE
Capacitor (C47) Line to Line	+ Epcos	MKP Series	900Vdc; 10µF/12µF; X	(FOWX2) IEC 60384-14	cURus E97863 VDE
Transistor (V13)	+ STMicro- electronic	STW4N150 2SK2225-E	1500V;4A		Accepted
Transformer (T1)	Voltis GmbH & Co	ETD-34	Closed type construction with overall approx. dimension: 42mm by 41mm by 34,5mm Rating: Input: 200- 1000Vdc; Output: 24Vdc; 1A Switching Frequency: 21kHz Core: ETD 34/N87 Coil: Ferrite; ETD 34/N87		Accepted

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Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
			<p>Case: Class B</p> <p>Insulation System: RTI = 155°C; Class C</p>		
Optical Isolator (U1)	Avago	HCNR201	Rated Isolation min. 5000Vac	(FPQU2)	URus E55361
Optical Isolator (U25, U26, U27, U28)	Avago	HCNR201	Rated Isolation min. 5000Vac	(FPQU2)	URus E55361
Capacitor (C11, C12, C13, C14) Electrolytic Bulk	+ Nippon	LXY Series	35V; 1000µF; 105°C		Accepted
Inductor (L2)	ABC	SB1806470 MLB	<p>Open type construction with overall approx. dimension: 60mm by 35mm</p> <p>Rating: 47µH; 4,4Arms</p> <p>Core: Ferrite</p> <p>Coil: Enamelled copper Magnet wire wound on Core</p>		Accepted
WR35100B Main Board					
PCB Main Board	+ KSG	ML5	<p>Overall approx. dimension: 460mm by 275mm by min. 2,5 mm thickness</p> <p>Flame Class: 94V-0; RTI = 130°C</p>	(ZPMV2)	cURus E143060

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Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Current Sensor (U31)	LEM	LA55-P/SP18	Closed type construction with overall approx. dimension: 36mm by 14mm by 27,5mm Primary: 50A Secondary: 50mA Insulation Voltage: 2,5kV Flame Class: 94V-0	(NMTR2)	cURus E189713
Connector (XB200, XB202) Female	Phoenix	ZFKDSA10-11,7	320V; 76A; FW-2; AWG24-6	(XCFR2)	cURus E60425
Current Sensor (U32, U33)	LEM	LTS25-NP	Closed type construction with overall approx. dimension: 22,2mm by 9,3mm by 23,7mm Primary: 25A Secondary: 50mA Insulation Voltage: 2,5kV Flame Class: 94V-0	(NMTR2)	cURus E189713

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Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Connector for Inductor Extern (XA214, XA215, XA216, XA217, XB214, XB215, XB216, XB217) Female	Phoenix	SPT2,5/1-V-5,0	300V; 20A; FW-2; AWG24-12	(XCFR2)	cURus E60425
High control module (V5)	Danfoss	DP35Y600 101954	Rating: 600V; 30A	(QQQX2)	URus E197736
Inductor Extern	Gass	2E65	Open type construction with overall approx. dimension: 65mm by 65mm by 110mm Rating: 2mH; 8,5Adc Core: Ferrite; E65-PL-7-1,5 Coil: Enamelled copper Magnet wire with tubed outlets wound on Bobbin		Accepted
Inductor Extern	Gass	BV 33006A	Open type construction with overall approx. dimension: 65mm by 65mm by 110mm Rating: 2mH; 15A Core: Ferrite; E65-PL-7-1,5		Accepted

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Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
			Coil: Enamelled copper Magnet wire with tubed outlets wound on Bobbin		
Inductor Extern Bobbin	Bayer	Durethan	Temp. Class: RTI = 120°C	(QMFZ2)	cURus E41613
Inductor Extern Tubing	Hartmann	GS-PUR	Temp. Class: RTI = 155°C; Class F Flame Class: Complies with Type Horizontal-Specimen Flame requirements of UL1441	(UZKX2) VDE 0341	URus E203174 VDE
Inductor Extern Insulation Tape	CMC	10966	Temp. Class: RTI = 130°C min. 0,023mm thickness Flame Class: According UL 510	(OANZ2)	URus E93622
Inductor Extern Insulation Tape	3M	1350F	Temp. Class: RTI = 130°C; min. 0,063mm thickness Flame Class: According UL 510	(OANZ2)	URus E17385
Inductor Extern Varnish	DuPont	VOLTATEX 4001	Temp. Class: 200°C	(OBOR2)	URus E101752
Capacitor (C326, C327, C328, C329, C330, C331, C332, C333, C334, C335, C336, C337, C338, C339, C340, C341)	+ Vishay	MKP 1840	630Vdc/250Vac; 0,33µF; - 55°C to +100°C		Accepted
Power module (V120, V121, V122)	Danfoss	DP50Y1200 101953	Rating: 1200V; 50A	(QQQX2)	URus E197736

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Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Power module (V120, V121, V122)	Danfoss	DP50Y1200 101995	Rating: 1200V; 50A	(QQQX2)	URus E197736
Connector (X1, X2, X3, X202, XA211, XA212, XA213, XB211, XB212, XB213) Female	Phoenix	SPT5/1-V-7,5	UL 600V; 5A; AWG24-8	(XCFR2)	cURus E60425
Capacitor (C84, C85)	+ Epcos	MKP Series	630Vdc; 3μF		Accepted
Capacitor (C41, C42, C43, C45, C46, C47, C50, C51, C52, C55, C56, C57) Electrolytic Bulk	+ Hitachi	HU Series	450Vdc; 330μF; 105°C		Accepted
Capacitor (C41, C42, C43, C45, C46, C47, C50, C51, C52, C55, C56, C57) Electrolytic Bulk	+ Hitachi	HU Series	450Vdc; 470μF; 105°C		Accepted
Varistor (R146, R147, R148)	+ Epcos	S20K300	300V; diameter 20mm Electric strength 2,5kV	(VZCA2) IEC61643-331	URus E321126 VDE
Relay (K1, K2, K3, K4)	Finder	66.22.9.024.0 600	Coil: 24Vdc Contact: 220V; 0,5A	(NLDX2) VDE 0106	cURus E106390 VDE
Capacitor (C15, C16, C17)	+ Epcos	MKP Series	305Vac; 0,1μF; X2	(FOKY2) IEC 60384-14	cURus E157153 VDE
Capacitor (C86) Line to PE	+ Kemet	R.41	300Vac; 33nF; 110°C; Y2	(FOKY2) IEC 60384	cURus E85238 VDE

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Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Inductor (L1) Common mode choke	Schaffner	RU21758-25-02	Open type construction with overall approx. dimension: 45mm by 24mm Rating: 4x1,28mH; 29A Core: TOROID ACM Coil: Enamelled copper Magnet wire wound on Core		Accepted
Inductor (L1) Common mode choke	VAC	T60405-S6122-X427	Open type construction with overall approx. dimension: 45mm by 24mm Rating: 4x1,28mH; 29A Core: TOROID ACM Coil: Enamelled copper Magnet wire wound on Core		Accepted
Inductor (L1) Base plate	Momentive Specialty	BAKELITE	Temp. Class: Class I Flame Class: 94V-0; min. 2mm thickness	(OMFZ2)	cURus E61040
Inductor (L1) Spacer	BASF	Ultradur	Temp. Class: 130°C	(OBJS2)	URus E209169

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			Flame Class: 94V-0; min. 1mm thickness		
Inductor (L1) Insulation System	BASF	BASF 130-1	Temp. Class: 130°C	(OBS2)	URus E209169
Capacitor (C1, C2, C3)	+ Epcos	MKP Series	305Vac; 1µF; X2	(FOKY2) IEC 60384-14	cURus E157153 VDE
Capacitor (C300, C301, C302)	+ Epcos	MKP Series	305Vac; 3,3µF; X2	(FOKY2) IEC 60384-14	cURus E157153 VDE
Capacitor (C1, C2, C3)	+ Epcos	MKP Series	305Vac; 3,3µF; X2	(FOKY2) IEC 60384-14	cURus E157153 VDE
Transformer (T1, T2, T3, T4, T5, T6, T7, T8)	Voltis GmbH & Co	E-909KA	Closed type construction with overall approx. dimension: 28mm by 21,5mm by 11,4mm Rating: Input: 50Vss; 30mA Output: 50Vss; 10mA Switching Frequency: 140kHz Core: EFD 20/10/7; N87		Accepted
Transformer (T1, T2, T3, T4, T5, T6, T7, T8)	Voltis GmbH & Co	E-3168K	Closed type construction with overall approx. dimension: 28mm by 21,5mm by 11,4mm Rating: Input: 50Vss; 30mA Output: 50Vss; 10mA Switching Frequency: 140kHz		Accepted

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Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
			Core: EFD 20/10/7; N87		
Transformer (T1, T2, T3, T4, T5, T6, T7, T8) Bobbin	SUMITOMO BAKELITE CO LTD	Phenolic PM-9630	Temp. Class: 150°C; Class F Flame Class: 94V-0; min. 0,51mm thickness	(QMFZ2)	cURus E41429
Transformer (T1, T2, T3, T4, T5, T6, T7, T8) Winding	Rubadue	TCA3	Temp. Class: 155°C; Class F	(OBJT2)	URus E206198
Transformer (T1, T2, T3, T4, T5, T6, T7, T8) Winding	Furukawa	TEX-BS	Temp. Class: 130°C; Class B	(OBJT2)	URus E206440
Transformer (T1, T2, T3, T4, T5, T6, T7, T8) Insulation Tape	3M	1350-1(b) Polyester	Temp. Class: 130°C; Class B; min. 0,023mm thickness	(OANZ2)	URus E173 85
Transformer (T1, T2, T3, T4, T5, T6, T7, T8) Wrap Insulation	3M	1350-1(b) Polyester	Temp. Class: 130°C; Class B; min. 0,023mm thickness	(OANZ2)	URus E173 85
Transformer (T1, T2, T3, T4, T5, T6, T7, T8) Core Insulation	3M	1350-1(b) Polyester	Temp. Class: 130°C; Class B; min. 0,023mm thickness	(OANZ2)	URus E173 85
Optical Isolator (U25, U26, U27, U28)	Agilent	HCNR201	Rated Isolation min. 5000Vac	(FPQU2) VDE 0884	URus E55361 VDE
Current Sensor (U1, U2, U3)	LEM	CAS25-NP 40	Closed type construction with overall approx. dimension: 22,2mm by 9,3mm by 23,7mm	(NMTR2) IEC 61010-1	cURus E189713 VDE

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Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
			<p>Primary: 25A</p> <p>Secondary: max. 4,625A</p> <p>Insulation Voltage: 4kV</p> <p>Flame Class: 94V-0</p>		
Transformer (T9)	Voltis GmbH & Co	EFD30 SMD	<p>Closed type construction with overall approx. dimension: 33,1mm by 32,8mm by 17mm</p> <p>Rating: Input: 50Vss; 240mA Output: 50Vss; 80mA Switching Frequency: 140kHz</p> <p>Core: EFD 30/15/9 N87</p>		Accepted
Transformer (T9) Bobbin	BASF	Ultramid A3X2G10	<p>Temp. Class: 130°C; Class B</p> <p>Flame Class: 94V-2; min. 0,6mm thickness</p>	(QMFZ2)	cURus E41871
Transformer (T9) Winding	Rubadue	TCA3	<p>Temp. Class: 155°C; Class F</p>	(OBJT2)	URus E206198
Transformer (T9) Winding	Furukawa	TEX-BS	<p>Temp. Class: 130°C; Class B</p>	(OBJT2)	URus E206440

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Transformer (T9) Insulation Tape	3M	1350-1(b) Polyester	Temp. Class: 130°C; Class B; min. 0,023mm thickness	(OANZ2)	URus E173 85
Transformer (T9) Case	Lanxess	Durethan BG30X	Temp. Class: 115°C; Class B Flame Class: 94V-HB; min. 0,75mm thickness	(QMFZ2)	cURus E245249
Transformer (T9) Potting compound	Wevo	PU 552	Temp. Class: 130°C; Class B Flame Class: 94V-0	(QMFZ2)	cURus E108835
Transistor (V1, V2)	Renesas	2SK2225	Drain to source Voltage: 1500V Drain current: 2A Drain peak current: 7A Mounted in to socket		Accepted
Transistor (V1, V2) Potting compound	Emerson&Cuming	ECCOBOND 286 Twin pack	Flame Class: 93°C		Accepted
Relay (K5)	Tyco Schrack	RT444024	Coil: 24Vdc Contact: 250Vac; 8A	(NLDX2) EN 60255	cURus E214025 VDE
FP30650B FP30650B.1 Filter Board AC					
PCB Filter Board AC	+ KSG	DKL6	Overall approx. dimension: 79mm by 33mm by min. 1,6mm thickness Flame Class: 94V-0; RTI = 130°C	(ZPMV2)	cURus E143060

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Object / part No.	Manufacturer/ trademark	Type / model	Technical data	Standard	Mark(s) of conformity ¹⁾
Capacitor (C13, C14, C15, C16) Line to PE	+ Vishay	WKP Series	500Vac; 220pF; Y1 UL 250Vac	(FOWX2) IEC 60384-14	cURus E183844 VDE
Capacitor (C13, C14, C15, C16) Line to PE	+ Vishay	WKP Series	500Vac; 1nF; Y1 UL 250Vac	(FOWX2) IEC 60384-14	cURus E183844 VDE
Capacitor (C17) Line to PE	+ Vishay	MKP Series	300Vac; 68nF; Y2	(FOKY2) IEC 60384-14	cURus E109565 VDE
SR33600 Control Board					
PCB Control Board	+ PHYTEC	PL2294.4	Overall approx. dimension: 251mm by 112mm by min. 1,6mm thickness Flame Class: 94V-0; RTI = 125°C	(ZPMV2)	cURus E143060
BF29724B Panel Board					
PCB Panel Board Provided with Display	+ KSG	ML4	Overall approx. dimension: 90mm by 90mm by min. 1,6mm thickness Flame Class: 94V-0; RTI = 130°C	(ZPMV2)	cURus E143060
WR35100B.1 Main Board					
Relay (K1, K2, K3, K4)	Finder	66.22-1700S	Coil: 24Vdc Contact: 250Vac; 30A Dielectric strength: 1500Vac Amb. Temp.: 70°C	(NLDX2) EN 60335-1	cURus E81856 VDE

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Optical Isolator (U4, U5, U6, U7, U8, U9, U10, U11, U12, U13, U14, U15, U16, U17, U18, U19, U20, U21, U22, U23, U24, U29, U30, U37)	Fairchild	FOD8320	Rated Isolation min. 5000Vac Op. Temp.: 100°C	(FPQU2) IEC 60747-5-2	URus E90700 VDE
High control module (V5)	Danfoss	DP35Y60010 1954	Rating: 600V; 30A; 150°C	(QQQX2)	URus E197736
Transistor (V249)	+ Fairchild	BSS123	100V; 0,17A; 60hm; 150°C		Accepted
FP31151B.1 Filter Board AC					
PCB Filter Board	+ KSG	DKL6	Overall approx. dimension: 137mm by 33mm by min. 1,6mm thickness Flame Class: 94V-0; RTI = 130°C	(ZPMV2)	cURus E143060
Capacitor (C1) Line to PE	+ Vishay	WKP Series	500Vac; 1,5nF; Y1 UL 250Vac	(FOWX2) IEC 60384-14	cURus E183844 VDE
Capacitor (C2, C3, C4) Line to PE	+ Vishay	WKP Series	500Vac; 4,7nF; Y1 UL 250Vac	(FOWX2) IEC 60384-14	cURus E183844 VDE
Capacitor (C5, C6, C7) Line to PE	+ Vishay	WKP Series	500Vac; 220pF; Y1 UL 250Vac	(FOWX2) IEC 60384-14	cURus E183844 VDE
Capacitor (C8) Line to PE	+ Vishay	WKP Series	300Vac; 470nF; Y1 UL 250Vac	(FOWX2) IEC 60384-14	cURus E183844 VDE
Varistor (R146, R147, R148)	Epcos	S20K385	385V; Diameter 20mm; 85°C	Epcos	S20K385

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Inductor (L1) Common mode choke	Schaffner	RU21758-25-02	Open type construction with overall approx. dimension: 45mm by 24mm Rating: 4x1,28mH; 29A Core: TOROID ACM Coil: Enamelled copper Magnet wire wound on Core	Schaffner	RU21758-25-02
Inductor (L1) Common mode choke	VAC	T60405-S6122-X427	Open type construction with overall approx. dimension: 45mm by 24mm Rating: 4x1,28mH; 29A Core: TOROID ACM Coil: Enamelled copper Magnet wire wound on Core	VAC	T60405-S6122-X427
Inductor (L1) Base plate	Momentive Specialty	BAKELITE	Temp. Class: Class I Flame Class: 94V-0; min. 2mm thickness	Momentive Specialty	BAKELITE

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Inductor (L1) Spacer	BASF	Ultradur	Temp. Class: 130°C Flame Class: 94V-0; min. 1mm thickness	BASF	Ultradur
Inductor (L1) Potting compound	3M	3779	Flame Class: 94V-0; min. 3mm thickness	3M	3779
Inductor (L1) Potting compound	3M	3748	Flame Class: 94V-2; min. 1,5mm thickness	3M	3748
Inductor (L1) Insulation System	BASF	BASF 130-1	Temp. Class: 130°C	BASF	BASF 130-1
Power module (V120, V121, V122)	Danfoss	DP50Y1200 101995	Rating: 1200V; 50A	(QQQX2)	URus E197736
Note: ¹⁾ Provided evidence ensures the agreed level of compliance. See OD-CB2039.					