Electronics & Telematics Laboratory

Test Certificate No.: <u>9412321227</u> 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 : 29/07/2014

Description of sample:

Solar Inverter

Models : 867R017, 867R020, 867R023

Manufacturer : AEI Power GmbH

Country of origin : Germany

(see additional product information on pages 2-19)

Sampling details:

No sample required.

Nature of test:

Review of test reports Ref. No.: 14TH0086-AS/NZS4777_0, dated 24/07/2014, and 14TH0086-AS/NZS3100_0, dated 16/07/2014, issued by Bureau Veritas Consumer Products Services, Germany for the above-specified solar inverter models according to the following standards:

AS/NZS 4777.2:2005 - Grid connection of energy systems via inverters: Inverter requirements, with Deviations for Israel according to SI 4777 part 2

 $AS/NZS\ 4777.3:2005\ -\ Grid\ connection\ of\ energy\ systems\ via\ inverters:\ Grid\ protection\ requirements,\ with\ Deviations\ for\ Israel\ according\ to\ SI\ 4777\ part\ 3$

AS/NZS 3100:2009 including A1:2010 + A2:2012 - General requirements for electrical equipment

This document contains 19 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 test reports Ref. No.: 14TH0086-AS/NZS 4777_0 and 14TH0086-AS/NZS3100_0, the above-specified solar inverter models comply with the requirements of the above-specified standards.

Sergey Voytenko
Testing Engineer, Electrical Safety Branch
Electronics and Telematics Laboratory
The Standards Institution of Israel

Date: 13/08/2014

Michael Terman
Head of Electrical Safety Branch
Electronics and Telematics Laboratory
The Standards Institution of Israel

Date: 13/08/2014





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ADDITIONAL PRODUCT INFORMATION

Electrical ratings:

| Test item description | Grid-tied photovoltaic inverter | | | | |
|-----------------------------|---------------------------------|----------------|-----------|--|--|
| Trademark: | ADVANCED ENERGY® | | | | |
| Model / Type: | 867R017, 867R020, 86 | 7R023 | | | |
| Ratings: | 867R017 | 867R020 | 867R023 | | |
| 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] | 3AC400- | 3AC460+N, 50Hz | | | |
| Output AC current [A] | 3x 29,2 | 3x 29,2 | 3x 29,2 | | |
| Output power [VA] | 17000 | 20000 | 23000 | | |



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List of components:

| | lection of material: lection of compon | | cal components) | | Р | |
|---|---|------------------------------|--|------------|-------------------------------------|--|
| Object / part No. | | Type / model | Technical data | Standard | Mark(s) of conformity ¹⁾ | |
| Enclosure | + Refu | Refusol867R0 XX | 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 | + Refu | Aluminium | Overall approx. dimension: 420mm by 459mm by 117mm by min. 1,3mm thickness | | Accepted | |
| Enclosure Bracket | + Refu | 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 | |
| Connector Terminal Output Power | Phoenix Contact | VC-AMS 5 | 600V; 45A | (ECBT2) | cURus E118976 | |
| Fan | + Papst | 4414FL | 24Vdc; 42mA; 1W; 1600cpm | (GPWV2) | cURus E38324 VDE | |





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| 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 2,5mm²; AWG14 | (AVLV2) | cURus E63634 VDE |
| Internal wiring PE from Connector Terminal Output Power to Enclosure Case | + Lappkabel | AWG10 | 600V; 105°C; Size 6mm²; 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 6mm² | TUV-PV1 | TUV |
| Internal wiring from Connector Generator to Main Board | + Huber + Suhner | Radox 125 | 600Vac/100Vac; 120°C; Size 10mm² | 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 6mm² | 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 |
| 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 |



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| SV33400B | | | | | |
|---|---------|-------------------|---|---|-------------------------|
| Power Board | | | | | |
| PCB Power Board | + KSG | ML6 | Overall approx. dimension: 281mm by 110mm by min. 2,4mm thickness Flame Class: | (ZPMV2) | cURus E143060 |
| Connector | Phoenix | ZFKDSA10- | 94V-0; RTI = 130°C 300V/150V; 10A/65A; | (XCFR2) | cURus |
| Terminal (XA1, XA2, XB1, XB2, XA200, XA202) | | 11,7 | FW2 | , | 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 |
| 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 |





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| Inductor (L1) | Schaffner | RU21759-36- 02 - NR: 298- 911 | Open type construction with overall approx. dimension: 60mm by 35mm | | Accepted |
|------------------------------------|-----------|-------------------------------------|---|-------------------------|-------------------------|
| | | | 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 | | |
| Inductor (L1) | VAC | T60405- R6123-X004 | Open type construction with overall approx. dimension: 60mm by 35mm | | Accepted |
| | | | Rating: 2x2,2mH; 48A | | |
| | | | Core: TOROID ACM | | |
| | | | 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; Χ | (FOKY2) IEC 60384-14 | cURus E157153 VDE |





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| Capacitor (C47) Line to Line | + Epcos | MKP Series | 900Vdc; 10μF/12μF; Χ | (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 Case: Class B Insulation System: RTI = 155°C; Class C | | Accepted |
| 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 |





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| Inductor (L2) | ABC | SB1806470 MLB | Open type construction with overall approx. dimension: 60mm by 35mm Rating: 47µH; 4,4Arms Core: Ferrite Coil: Enamelled copper Magnet wire wound on Core | | Accepted |
|---------------------------------------|---------|-------------------|---|-----------|------------------|
| WR32000B | | | | | |
| Main Board | 140.0 | | | (75) 11/2 | |
| PCB Main Board | + KSG | ML5 | Overall approx. dimension: 460mm by 275mm by min. 2,5 mm thickness Flame Class: 94V-0; RTI = 130°C | (ZPMV2) | cURus E143060 |
| 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 |





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| 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 |
|---|---------|--------------------|---|---------|------------------|
| 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 |





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| 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 Coil: Enamelled copper Magnet wire with | | Accepted |
|--|----------|------------------|--|---------------------|------------------------|
| | | | 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 | (UZKX2) VDE 0341 | URus E203174 VDE |
| | | | Flame Class: Complies with Type Horizontal-Specimen Flame requirements of UL1441 | | |
| Inductor Extern Insulation Tape | СМС | 10966 | Temp. Class: RTI = 130°C min. 0,023mm thickness Flame Class: | (OANZ2) | URus E93622 |
| | | | According UL 510 | | |
| Inductor Extern Insulation Tape | зм | 1350F | Temp. Class: RTI = 130°C; min. 0,063mm thickness | (OANZ2) | URus E17385 |
| | | | Flame Class: According UL 510 | | |
| 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 |





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| | _ | _ | _ | 1 | |
|--|-----------|----------------------|--|-------------------------|-------------------------|
| Power module (V120, V121, V122) | Danfoss | DP50Y1200 101953 | Rating: 1200V; 50A | (QQQX2) | URus E197736 |
| 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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| Inductor (L1) Common mode choke | Schaffner | RU21758-25- 02 | Open type construction with overall approx. dimension: 45mm by 24mm Rating: 4x1,28mH; 29A | | Accepted |
|--|------------------------|-----------------------|--|---------|-----------------|
| | | | Core: TOROID ACM Coil: Enamelled copper Magnet wire wound on Core | | |
| 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 Flame Class: 94V-0; min. 1mm thickness | (OBJS2) | URus E209169 |
| Inductor (L1) Potting compound | зм | 3779 | Flame Class: 94V-0; min. 3mm thickness | (QMFZ2) | URus E61941 |





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| Inductor (L1) Potting compound | зм | 3748 | Flame Class: 94V-2; min. 1,5mm thickness | (QMFZ2) | URus E61941 |
|--|------------------|------------|---|-------------------------|-------------------------|
| Inductor (L1) Insulation System | BASF | BASF 130-1 | Temp. Class: 130°C | (OBJS2) | 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 Core: EFD 20/10/7; N87 | | Accepted |





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| 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 | зм | 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 | зм | 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 | зм | 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 Primary: 25A Secondary: | (NMTR2) IEC 61010-1 | cURus E189713 VDE |
| | | | Insulation Voltage: 4kV Flame Class: | | |





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| Transformer (T9) | Voltis GmbH & Co | EFD30 SMD | Closed type construction with | | Accepted |
|--|------------------|------------------------|---|---------|------------------|
| | | | overall approx. dimension: 33,1mm by 32,8mm by 17mm | | |
| | | | Rating: Input: 50Vss; 240mA | | |
| | | | Output: 50Vss; 80mA Switching Frequency: 140kHz | | |
| | | | <u>Core:</u> EFD 30/15/9 N87 | | |
| Transformer (T9) Bobbin | BASF | Ultramid A3X2G10 | Temp. Class: 130°C; Class B | (QMFZ2) | cURus E41871 |
| | | | Flame Class: 94V-2; min. 0,6mm thickness | | |
| Transformer (T9) Winding | Rubadue | TCA3 | Temp. Class: 155°C; Class F | (OBJT2) | URus E206198 |
| Transformer (T9) Winding | Furukawa | TEX-BS | Temp. Class: 130°C; Class B | (OBJT2) | URus E206440 |
| Transformer (T9) Insulation Tape | зм | 1350-1(b) Polyester | Temp. Class: 130°C; Class B; min. 0,023mm thickness | (OANZ2) | URus E173 85 |
| Transformer (T9) | Lanxess | Durethan BG30X | Temp. Class: 115°C; Class B | (QMFZ2) | cURus E245249 |
| | | | Flame Class: 94V-HB; min. 0,75mm thickness | | |
| Transformer (T9) Potting | Wevo | PU 552 | Temp. Class: 130°C; Class B | (QMFZ2) | cURus E108835 |
| compound | | | Flame Class: 94V-0 | | |
| Transistor (V1, V2) | Renesas | 2SK2225 | Drain to source Voltage: 1500V Drain current: 2A Drain peak current: 7A | | Accepted |
| | | | Mounted in to socket | | |





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| wain Board | | | | | |
|--|-----------------|---------------|--|-------------------------|-------------------------|
| WR32000B.1 Main Board | | | | | |
| | | | Flame Class: 94V-0; RTI = 130°C | | |
| PCB Panel Board Provided with Display | + KSG | ML4 | Overall approx. dimension: 90mm by 90mm by min. 1,6mm thickness | (ZPMV2) | cURus E143060 |
| BF29724B | | | Flame Class: 94V-0; RTI = 125°C | | |
| PCB Control Board | + PHYTEC | PL2294.4 | Overall approx. dimension: 251mm by 112mm by min. 1,6mm thickness | (ZPMV2) | cURus E143060 |
| SR33600 | | | | | |
| Capacitor (C17) Line to PE | + Vishay | MKP Series | 300Vac; 68nF; Y2 | (FOKY2) IEC 60384-14 | cURus E109565 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 (C13, C14, C15, C16) Line to PE | + Vishay | WKP Series | 500Vac; 220pF; Y1 UL 250Vac | (FOWX2) IEC 60384-14 | cURus E183844 VDE |
| 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 |
| FP30650B FP30650B.1 Filter Board AC | | | | | |
| Relay (K5) | Tyco Schrack | RT444024 | Coil: 24Vdc Contact: 250Vac; 8A | (NLDX2) EN 60255 | cURus E214025 VDE |
| (V1, V2) Potting compound | | 286 Twin pack | | | |
| Transistor | Emerson&Cuming | | Flame Class: | | Accepted |





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| 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 |
|---|-------------|--------------------|---|--------------------------|-------------------------|
| 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; 6Ohm; 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 |
| Inductor (L1) Spacer | BASF | Ultradur | Temp. Class: 130°C Flame Class: 94V-0; min. 1mm thickness | BASF | Ultradur |
| Inductor (L1) Potting compound | зм | 3779 | Flame Class: 94V-0; min. 3mm thickness | зм | 3779 |





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| Inductor (L1) Potting compound | зм | 3748 | Flame Class: 94V-2; min. 1,5mm thickness | зм | 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.