| SPECIFICATIONS(PHU-5 kW Series) | | | | | | | | |
|---|------------------|--------|--------------------|------------------------|------------------------|---------------------|---------------------|---------------------|
| Model | | PHU | 80-170 | 200-70 | 500-30 | 750-20 | 1000-15 | 1500-10 |
| Rated output voltage (*1) | | V | 80 | 200 | 500 | 750 | 1000 | 1500 |
| Rated output current (*2) | | Α | 170 | 70 | 30 | 20 | 15 | 10 |
| Rated output power | | W | 5000 | 5000 | 5000 | 5000 | 5000 | 5000 |
| Output power ratio | | | 2.72 | 2.8 | 3 | 3 | 3 | 3 |
| Constant Voltage Mode | L | | 2.72 | 2.0 | | <u> </u> | L v | |
| Line regulation (*3) [0.01 % of Vo_rated] | 1 | mV | 8 | 20 | 50 | 75 | 100 | 150 |
| Load regulation (*4) [0.02 % of Vo_rated] | | mV | 16 | 40 | 100 | 150 | 200 | 300 |
| Load regulation (4) [0.02 % of Vo_fated] | p-p (*6) | mV | 200 | 300 | 350 | 800 | 1600 | 2400 |
| Ripple and noise (*5) | | mV | 16 | 40 | 70 | 200 | 350 | 400 |
| T | r.m.s. (*7) | | | l | | | 350 | 400 |
| Temperature coefficient | 50/ 61/ | ppm/°C | | | following 30 minutes | | | 75 |
| Remote snese compensation voltage | 5 % of Vo_rated | V | 4 | 10 | 25 | 37.5 | 50 | 75 |
| Rise time (*8) | Rated load | ms | 30 | 30 | 30 | 30 | 30 | 30 |
| | No load | ms | 30 | 30 | 30 | 30 | 30 | 30 |
| Fall time (*9) | Rated load | ms | 80 | 80 | 80 | 80 | 80 | 80 |
| ` ' | No load | ms | 1000 | 1000 | 1000 | 1200 | 1000 | 1200 |
| Transient response time (*10) | | ms | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Constant Current Mode | | | | | | | | |
| Line regulation (*3) [0.05 % of lo_rated] | | mA | 85 | 35 | 15 | 10 | 7.5 | 5 |
| Load regulation (*11) [0.1 % of lo_rated] | | mA | 170 | 70 | 30 | 20 | 15 | 10 |
| Ripple and noise (*12) | r.m.s.(*7) | mA | 170 | 50 | 16 | 16 | 8 | 8 |
| Temperature coefficient | | ppm/°C | | | following 30 minutes | | | |
| Protection Function | | | | | | | | |
| | Setting range | V | 5.00 V to 88.00 V | 5.00 V to 220.00 V | 5.00 V to 550.00 V | 5.0 V to 825.0 V | 5.0 V to 1100.0 V | 5.0 V to 1650.0 V |
| Over voltage protection (OVP) | Setting accuracy | mV | 80 | 200 | 500 | 750 | 1000 | 1500 |
| | Setting range | A | 5.00 A to 187.00 A | 5.00 A to 77.00 A | 3.000 A to 33.000 A | 2.000 A to 22.000 A | 1.500 A to 16.500 A | 1.000 A to 11.000 A |
| Over current protection (OCP) | | mA | 340 | 140 | 60 | 40 | 30 | 20 |
| | Setting accuracy | W | 100 W to 5500 W | 140 100 W to 5500 W | 100 W to 5500 W | 100 W to 5500 W | 100 W to 5500 W | 100 W to 5500 W |
| Over power protection (OPP) | Setting range | 1 | | | | | | |
| | Setting accuracy | W | 50 | 50 | 50 | 50 | 50 | 50 |
| Over voltage limit (OVL) | Setting range | V | 0.00 V to 84.00 V | 0.00 V to 210.00 V | 0.00 V to 525.00 V | 0.0 V to 787.5 V | 0.0 V to 1050.0 V | 0.0 V to 1575.0 V |
| Under voltage limit (UVL) | Setting range | V | 0.00 V to 84.00 V | 0.00 V to 210.00 V | 0.00 V to 525.00 V | 0.0 V to 787.5 V | 0.0 V to 1050.0 V | 0.0 V to 1575.0 V |
| Over current limit (OCL) | Setting range | Α | 0.00 A to 178.50 A | 0.00 A to 73.50 A | 0.000 A to 31.500 A | 0.000 A to 21.000 A | 0.000 A to 15.750 A | 0.000 A to 10.500 A |
| Under cuttent limit (UCL) | Setting range | Α | 0.00 A to 178.50 A | 0.00 A to 73.50 A | 0.000 A to 31.500 A | 0.000 A to 21.000 A | 0.000 A to 15.750 A | 0.000 A to 10.500 A |
| Power unit fail (PUF) | Operation | | Turn the output of | off. | | | | |
| Incorrect sensing connection protection (SENSE) | Operation | | Turn the output of | off. | | | | |
| Low AC input protection (AC-FAIL) | Operation | | Turn the output of | off. | | | | |
| Shutdown (SD) | Operation | | Turn the output of | off. | | | | |
| | Operation | | Over power limit. | | | | | |
| Power limit (POWER LIMIT) | Value (fixed) | | Approx. 102 % of | f rated output power | | | | |
| Other Functions | , | l | | | | | | |
| | Setting range | V/s | 0.01 to 160.00 | 0.01 to 400.00 | 0.1 to 1000.0 | 0.1 to 1500.0 | 0.1 to 2000.0 | 0.1 to 3000.0 |
| Voltage Slew Rate | Resolution | mV | 10 | 10 | 100 | 100 | 100 | 100 |
| | | A/s | 0.01 to 340.00 | 0.01 to 140.00 | 0.001 to 60.000 | 0.001 to 40.000 | 0.001 to 30.000 | 0.001 to 20.000 |
| Current slew rate | Setting range | 1 | | | - | | | |
| | Resolution | mA | 10 | 10 | 1 | 1 | 1 | 1 |
| Internal resistance | Setting range | Ω | 0.000 to 0.471 | 0.000 to 2.857 | 0.00 to 16.67 | 0.00 to 37.50 | 0.0 to 66.7 | 0.0 to 150.0 |
| | Resolution | mΩ | 1 | 1 | 10 | 10 | 100 | 100 |
| Front Panel | | | l | | | | | |
| Display | | | TFT-LCD, 5", 800 | | | | | |
| Voltage accuracy [0.1 % of Vo_rated] | ļ | mV | 80 | 200 | 500 | 750 | 1000 | 1500 |
| Current accuracy [0.2 % of lo_rated] | ļ | mA | 340 | 140 | 60 | 40 | 30 | 20 |
| Power accuracy [1 % of Po_rated] | | W | 50 | 50 | 50 | 50 | 50 | 50 |
| Voltage resolution | | V | 0.01 | 0.01 | 0.01 | 0.1 | 0.1 | 0.1 |
| Current resolution | | Α | 0.01 | 0.01 | 0.001 | 0.001 | 0.001 | 0.001 |
| Power resolution | | W | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Buttons | | | Menu, Local, Exi | t, Clear, Enter, Lock, | Current, Shift Output, | Numeric Keypad | | |
| Rotary knob | | | Turn the knob to | increase or decrease | the value. | | | |
| USB port | | | Type A USB con | | | | | |
| Programming and Measurement (Digital Interface) | 1 | | 2. 222 20 | | | | | |
| Output voltage programming range | 0 % to 105 % | V | 0 to 84 | 0 to 210 | 0 to 525 | 0 to 787.5 | 0 to 1050 | 0 to 1575 |
| Output current programming range | 0 % to 105 % | A | 0 to 178.5 | 0 to 73.5 | 0 to 325 | 0 to 21 | 0 to 15.75 | 0 to 10.5 |
| | | W | | | | | | |
| Output power programming range | 0 % to 102 % | - | 0 to 5100 | 0 to 5100 | 0 to 5100 | 0 to 5100 | 0 to 5100 | 0 to 5100 |
| Output voltage programming accuracy [0.1 % of Vo_rated] | 1 | mV | 80 | 200 | 500 | 750 | 1000 | 1500 |
| Output current programming accuracy [0.2 % of lo_rated] | 1 | mA | 340 | 140 | 60 | 40 | 30 | 20 |
| Output power programming accuracy [1 % of Po_rated] | ļ | W | 50 | 50 | 50 | 50 | 50 | 50 |
| Output voltage programming resolution | ļ | mV | 10 | 10 | 10 | 100 | 100 | 100 |
| Output current programming resolution | | mA | 10 | 10 | 1 | 1 | 1 | 1 |
| Output power programming resolution | | W | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Output voltage measurement accuracy [0.1 % of Vo_rated] | | mV | 80 | 200 | 500 | 750 | 1000 | 1500 |
| Output current measurement accuracy [0.2 % of lo_rated] | | mA | 340 | 140 | 60 | 40 | 30 | 20 |
| Output power measurement accuracy [1 % of Po_rated] | | W | 50 | 50 | 50 | 50 | 50 | 50 |
| Output voltage measurement resolution | | mV | 10 | 10 | 10 | 100 | 100 | 100 |
| Output current measurement resolution | <u> </u> | mA | 10 | 10 | 1 | 1 | 1 | 1 |
| Output power measurement resolution | <u> </u> | w | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 | 0.1 |
| Input Characteristics for PHU-C Series | I . | | 1 0.1 | 1 0.1 | 1 0.1 | 0.1 | 1 0.1 | 0.1 |
| | | | | | | | | |

| | | 1 | |
|---|----------------|----|--|
| Norminal input rating | | | Single Phase, 3-Phase, 200 V models: 180 Vac to 265 Vac (Covers 200 Vac / 230 Vac) |
| Input frequency range | | | 47 Hz to 63 Hz |
| Maximum input current | 200 Vac | Α | 32 A (L1, L2) |
| Inrush current | 200 Vac | Α | Less than 50 A |
| Maximum input power | | VA | 6000 |
| Power factor | Rated Power | | > 0.95 |
| Efficiency (*14) | 200 Vac | % | 86 to 94 |
| Hold-up time | | | 10 ms or greater |
| Input Characteristics for PHU-D Series | | | |
| Norminal input rating | | | 3-Phase, 400 V models: 342 Vac to 528 Vac (Covers 380/400/415/440/460/480 Vac) |
| Input frequency range | | | 47 Hz to 63 Hz |
| Maximum input current | 400 Vac | Α | 16 A (L1, L2) |
| Inrush current | 400 Vac | Α | Less than 25 A |
| Maximum input power | | VA | 6000 |
| Power factor | Rated Power | | > 0.95 |
| Efficiency (*14) | 400 Vac | % | 87 to 94 |
| Hold-up time | | | 10 ms or greater |
| Interface Capabilities | | 1 | · |
| USB | | | Type A: Host, Type B: Slave, Speed: 1.1/2.0, USB Class: CDC(Communications Device Class) |
| LAN | | | MAC Address, DNS IP Address, User Password, Gateway IP Address, Instrument IP Address, Subnet Mask |
| Isolated Analog Control Interface | | | V _{set} / I _{set} = 0 V to 5 V or 0 V to 10 V V _{mon} / I _{mon} = 0 V to 5 V or 0 V to 10 V |
| Factory Option | | | RS-232&485 or GPIB or CAN Bus or DeviceNet or Isolated Digital I/O |
| Isolated Analog Control Interface | 1 | 1 | 1.0 2.02.0 0.0 0.0 1.0 0.0 0.1 0.0 0.0 0.0 0.0 0 |
| Vout voltage programming | I | | 0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of rated V _{out} , or 0 V to 10 V Accuracy: ± 1 % of rated V _{out} |
| lout voltage programming | | | 0 % to 100%, 0 V to 5 V Accuracy: ± 1 % of rated l _{out} , or 0 V to 10 V Accuracy: ± 1 % of rated l _{out} |
| Pout voltage programming | | | 0 % to 100%, 0 V to 5 V Accuracy: ± 1 % of rated P _{out} , or 0 V to 10 V Accuracy: ± 1 % of rated P _{out} |
| Internal resistance voltage programming | | | 0 % to 100%, 0 V to 5 V Accuracy: ± 1 % of maximum R _{int} , or 0 V to 10 V Accuracy: ± 1 % of maximum R _{int} |
| | | | 0 V to 5 V or 0 V to 10 V, Accuracy: ± 1 %. |
| Output voltage monitor | | | 0 V to 5 V or 0 V to 10 V, Accuracy: ± 1 %. |
| Output current monitor | | | Voltage reference for 0 V to 5V or 0 V to 10V. |
| Reference voltage | | | |
| Alarm Input | | | Turn off the PHU output with a High (4.5 V to 5 V) Possible logic selections: |
| Output on/off control | | | Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open- circuit. |
| Alarm clear control | | | Clear alarms with a High (4.5 V to 5 V) |
| CV/CC/CP/ALM/PWR ON/OUT ON indicator | | | Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA |
| Environmental Conditions | | | |
| Operaing temperature | | | 0 °C to 50 °C |
| Storage temperature | | | -25 °C ~ 70 °C |
| Operating humidity | | | 20 % to 85 % RH; No condensation |
| Storage humidity | | | 90 % RH or less; No condensation |
| Altitude | | | Maximum 2000 m |
| General Specifications | | | |
| Weight | main unit only | kg | Less than 21 kg |
| Dimensions (W×H×D) | <u> </u> | mm | 442 mm × 130 mm × 675 mm |
| Cooling | | | Forced air cooling by internal fan |
| EMC | 1 | | Complies with the European EMC directive 89/336/EEC for Class A test and measurement products |
| Safety | <u> </u> | | Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking |
| Withstand voltage | | | Chassis and output terminal; chassis and AC input; AC input and output terminal: AC 1500 V or DC 2130 V 1 minute |
| Insulation resistance | | 1 | Chassis and output terminal; chassis and AC input; AC input and output terminal: 100 MΩ or more (DC 500 V) |
| | 1 | | 2 100 (BO 000 V) |

- Notes:

 *1 Minimum voltage is guaranteed to maximum 0.2 % of the rated output voltage.

 *2 Minimum current is guaranteed to maximum 0.4 % of the rated output current.

 *3 At 180 Vac to 265 Vac or 342 Vac to 528 Vac, constant load.

 *4 From No-load to Full-load, constant input voltage. Measured at the sensing point in Remote Sense.

 *5 For 80 V, 200 V models: Measure with JEITA RC-9131B (1:1) probe. For 500 V, 750 V, 1000 V and 1500 V models: Measured with (100:1) probe. *5 For 80 V, 200 V models: Measure with JEITA RC-9131B (1:1) probe. For 500 V, 750 V, 1000 V and 1500 V models: Measured with (1 *6 Measurement frequency bandwidth is 10 Hz to 20 MHz.
 *7 Measurement frequency bandwidth is 5 Hz to 1 MHz.
 *8 From 10 % to 90 % of rated output voltage, with rated resistive load.
 *9 From 90 % to 10 % of rated output voltage, with rated resistive load.
 *10 Time for output voltage to recover within 1 % of its rated output for a load change from 10 % to 90 % of its rated output current.
 Voltage set point from 10 % to 100 % of rated output.
 *11 For load voltage change, equal to the unit voltage rating, constant input voltage.
 *12 The ripple is measured at 20 % to 100 % output voltage and full output current.
 *13 For output power change from 10 % to 90 %, constant input voltage.
 *14 At rated output power.

| SPECIFICATIONS(PHU-10 kW Series) | | | | | | | | |
|--|------------------|-------------|--------------------|-----------------------|------------------------|---------------------|---------------------|---------------------|
| Model | _ | PHU | 80-340 | 200-140 | 500-60 | 750-40 | 1000-30 | 1500-20 |
| Rated output voltage (*1) | <u> </u> | V | 80 | 200 | 500 | 750 | 1000 | 1500 |
| Rated output current (*2) | | Α | 340 | 140 | 60 | 40 | 30 | 20 |
| Rated output power | | W | 10000 | 10000 | 10000 | 10000 | 10000 | 10000 |
| Output power ratio | | _ | 2.72 | 2.8 | 3 | 3 | 3 | 3 |
| Constant Voltage Mode | | | 1 • | | | | 100 | 450 |
| Line regulation (*3) [0.01 % of Vo_rated] | | mV | 8 | 20 | 50 | 75 | 100 | 150 |
| Load regulation (*4) [0.02 % of Vo_rated] | (+0) | mV | 16 | 40 | 100 | 150 | 200 | 300 |
| Ripple and noise (*5) | p-p (*6) | mV | 200 | 300 | 350 70 | 800 200 | 1600 350 | 2400 |
| Temperature coefficient | r.m.s. (*7) | mV | 16 | 40 | following 30 minutes | l . | 350 | 400 |
| Remote snese compensation voltage | 5 % of Vo rated | ppm/°C V | 4 | 10 | 25 | 37.5 | 50 | 75 |
| Tremote shese compensation voltage | Rated load | ms | 30 | 30 | 30 | 30 | 30 | 30 |
| Rise time (*8) | No load | ms | 30 | 30 | 30 | 30 | 30 | 30 |
| | Rated load | ms | 80 | 80 | 80 | 80 | 80 | 80 |
| Fall time (*9) | No load | ms | 1000 | 1000 | 1000 | 1200 | 1000 | 1200 |
| Transient response time (*10) | | ms | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Constant Current Mode | | | | | | | | -11- |
| Line regulation (*3) [0.05 % of lo_rated] | | mA | 170 | 70 | 30 | 20 | 15 | 10 |
| Load regulation (*11) [0.1 % of lo_rated] | | mA | 340 | 140 | 60 | 40 | 30 | 20 |
| Ripple and noise (*12) | r.m.s. (*7) | mA | 340 | 100 | 32 | 32 | 22 | 22 |
| Temperature coefficient | | ppm/°C | 100 ppm/°C from | rated output current, | following 30 minutes | warm-up. | I | |
| Protection Function | | | | | | | | |
| Output library and the street (OVD) | Setting range | V | 5.00 V to 88.00 V | 5.00 V to 220.00 V | 5.00 V to 550.00 V | 5.0 V to 825.0 V | 5.0 V to 1100.0 V | 5.0 V to 1650.0 V |
| Over voltage protection (OVP) | Setting accuracy | mV | 80 | 200 | 500 | 750 | 1000 | 1500 |
| 0 | Setting range | Α | 5.00 A to 374.00 A | 5.00 A to 154.00 A | 5.00 A to 66.00 A | 4.000 A to 44.000 A | 3.000 A to 33.000 A | 2.000 A to 22.000 A |
| Over current protection (OCP) | Setting accuracy | mA | 680 | 280 | 120 | 80 | 60 | 40 |
| Over power protection (OPP) | Setting range | W | 200 W to 11000 W | 200 W to 11000 W | 200 W to 11000 W | 200 W to 11000 W | 200 W to 11000 W | 200 W to 11000 W |
| Over power protection (OFF) | Setting accuracy | W | 100 | 100 | 100 | 100 | 100 | 100 |
| Over voltage limit (OVL) | Setting range | V | 0.00 V to 84.00 V | 0.00 V to 210.00 V | 0.00 V to 525.00 V | 0.0 V to 787.5 V | 0.0 V to 1050.0 V | 0.0 V to 1575.0 V |
| Under voltage limit (UVL) | Setting range | V | 0.00 V to 84.00 V | 0.00 V to 210.00 V | 0.00 V to 525.00 V | 0.0 V to 787.5 V | 0.0 V to 1050.0 V | 0.0 V to 1575.0 V |
| Over current limit (OCL) | Setting range | Α | 0.00 A to 357.00 A | 0.00 A to 147.00 A | 0.00 A to 63.00 A | 0.000 A to 42.000 A | 0.000 A to 31.500 A | 0.000 A to 21.000 A |
| Under cuttent limit (UCL) | Setting range | Α | 0.00 A to 357.00 A | 0.00 A to 147.00 A | 0.00 A to 63.00 A | 0.000 A to 42.000 A | 0.000 A to 31.500 A | 0.000 A to 21.000 A |
| Power unit fail (PUF) | Operation | | Turn the output of | ff. | | | | |
| Incorrect sensing connection protection (SENSE) | Operation | | Turn the output of | ff. | | | | |
| Low AC input protection (AC-FAIL) | Operation | | Turn the output of | off. | | | | |
| Shutdown (SD) | Operation | | Turn the output of | off. | | | | |
| Power limit (POWER LIMIT) | Operation | | Over power limit. | | | | | |
| | Value (fixed) | | Approx. 102 % of | rated output power | | | | |
| Other Functions | | • | | | | | | |
| Voltage Slew Rate | Setting range | V/s | 0.01 to 160.00 | 0.01 to 400.00 | 0.1 to 1000.0 | 0.1 to 1500.0 | 0.1 to 2000.0 | 0.1 to 3000.0 |
| | Resolution | mV | 10 | 10 | 100 | 100 | 100 | 100 |
| Current slew rate | Setting range | A/s | 0.1 to 680.0 | 0.01 to 280.00 | 0.01 to 120.00 | 0.01 to 80.00 | 0.001 to 60.000 | 0.001 to 40.000 |
| | Resolution | mA | 100 | 10 | 10 | 10 | 1 | 1 |
| Internal resistance | Setting range | Ω | 0.000 to 0.235 | 0.000 to 1.428 | 0.00 to 8.33 | 0.00 to 18.75 | 0.00 to 33.33 | 0.0 to 75.0 |
| Frank Parist | Resolution | mΩ | 1 | 1 | 10 | 10 | 10 | 100 |
| Front Panel Display | | 1 | TFT-LCD, 5", 800 |) nt v 490 nt | | | | |
| | | mV | 80 | 200 | 500 | 750 | 1000 | 1500 |
| Voltage accuracy [0.1 % of Vo_rated] Current accuracy [0.2 % of lo_rated] | | | | | | | | |
| Power accuracy [1 % of Po rated] | + | mA W | 680 100 | 280 100 | 120 100 | 80 100 | 60 100 | 40 100 |
| Voltage resolution | + | V | 0.01 | 0.01 | 0.01 | 0.1 | 0.1 | 0.1 |
| Current resolution | 1 | A | 0.01 | 0.01 | 0.001 | 0.001 | 0.001 | 0.001 |
| Power resolution | + | W | 1 | 1 | 1 | 1 | 1 | 1 |
| Buttons | | | | | Current, Shift Output, | l . | <u>'</u> | • |
| Rotary knob | | | | increase or decrease | | , pau | | |
| USB port | <u> </u> | | Type A USB con | | | | | |
| Programming and Measurement (Digital Interface) | • | | 1 | | | | | |
| Output voltage programming range | 0 % to 105 % | V | 0 to 84 | 0 to 210 | 0 to 525 | 0 to 787.5 | 0 to 1050 | 0 to 1575 |
| Output current programming range | 0 % to 105 % | Α | 0 to 357 | 0 to 147 | 0 to 63 | 0 to 42 | 0 to 31.5 | 0 to 21 |
| Output power programming range | 0 % to 102 % | W | 0 to 10200 | 0 to 10200 | 0 to 10200 | 0 to 10200 | 0 to 10200 | 0 to 10200 |
| Output voltage programming accuracy [0.1 % of Vo_rated] | | mV | 80 | 200 | 500 | 750 | 1000 | 1500 |
| Output current programming accuracy [0.2 % of lo_rated] | | mA | 680 | 280 | 120 | 80 | 60 | 40 |
| Output power programming accuracy [1 % of Po_rated] | | W | 100 | 100 | 100 | 100 | 100 | 100 |
| Output voltage programming resolution | | mV | 10 | 10 | 10 | 100 | 100 | 100 |
| Output current programming resolution | | mA | 10 | 10 | 1 | 1 | 1 | 1 |
| Output power programming resolution | | W | 1 | 1 | 1 | 1 | 1 | 1 |
| Output voltage measurement accuracy [0.1 % of Vo_rated] | | mV | 80 | 200 | 500 | 750 | 1000 | 1500 |
| Output current measurement accuracy [0.2 % of lo_rated] | | mA | 680 | 280 | 120 | 80 | 60 | 40 |
| Output power measurement accuracy [1 % of Po_rated] | | W | 100 | 100 | 100 | 100 | 100 | 100 |
| Output voltage measurement resolution | | mV | 10 | 10 | 10 | 100 | 100 | 100 |
| Output current measurement resolution | | mA | 10 | 10 | 1 | 1 | 1 | 1 |
| Output power measurement resolution | | W | 1 | 1 | 1 | 1 | 1 | 1 |
| • | • | • | • | | | | | |

| Seminal play rating 3 - Prisse. 200 V models: 160 Vas to 265 Vas (Covers 200 Vas (120 V | Input Characteristics for PHU-C Series | | | |
|--|---|----------------|----|---|
| Macroun rigad cultivari 200 Vac | Norminal input rating | | | 3-Phase, 200 V models: 180 Vac to 265 Vac (Covers 200 Vac / 230 Vac) |
| Maximum injud power | Input frequency range | | | 47 Hz to 63 Hz |
| Nationary liquid power | Maximum input current | 200 Vac | Α | 56 A (L1), 32 A (L2, L3) |
| Roter Power Roter Roter Power | Inrush current | 200 Vac | Α | Less than 100 A |
| Efficiency (*16) 200 Vasc % 88 to 94 | Maximum input power | | VA | 12000 |
| 10 ms or greater | Power factor | Rated Power | | > 0.95 |
| | Efficiency (*14) | 200 Vac | % | 86 to 94 |
| Nominal input raining | Hold-up time | | | 10 ms or greater |
| April Frequency range | Input Characteristics for PHU-D Series | • | | |
| Maximum input current | Norminal input rating | | | 3-Phase, 400 V models: 342 Vac to 528 Vac (Covers 380/400/415/440/460/480 Vac) |
| Number N | Input frequency range | | | 47 Hz to 63 Hz |
| Maximum injust power National Power | Maximum input current | 400 Vac | Α | 28 A (L1), 16 A (L2, L3) |
| Power factor Rated Power | Inrush current | 400 Vac | Α | Less than 50 A |
| Efficiency (*14) | Maximum input power | | VA | 12000 |
| Hold-up time 10 ms or greater | Power factor | Rated Power | | > 0.95 |
| Interface Capabilities | Efficiency (*14) | 400 Vac | % | 87 to 94 |
| USB Type A: Host, Type B: Stave, Speed: 1.1/2.0, USB Class: CDC(Communications Device Class) LAN MAC Address, DNS IP Address, Lest Password, Sateway IP Address, Instrument IP Address, Subnet Mask loated Analog Control Interface V _{wel} I _{lum} = 0 ∨ to 5 V or 0 V to 10 V V To 10 V V Factory Option R2-323&486 or GPIB or CAN Bus or DeviceNet or Isolated Digital I/O Isolated Analog Control Interface Votation of the Properties of | Hold-up time | | | 10 ms or greater |
| LAN | Interface Capabilities | .1 | | |
| Incidated Analog Control Interface | USB | | | Type A: Host, Type B: Slave, Speed: 1.1/2.0, USB Class: CDC(Communications Device Class) |
| Factory Option RS-2328485 or GPIB or CAN Bus or DeviceNet or Isolated Digital I/O | LAN | | | MAC Address, DNS IP Address, User Password, Gateway IP Address, Instrument IP Address, Subnet Mask |
| Solated Analog Control Interface | Isolated Analog Control Interface | | | V _{set} / I _{set} = 0 V to 5 V or 0 V to 10 V V _{mon} / I _{mon} = 0 V to 5 V or 0 V to 10 V |
| Vout voltage programming 0 % to 100 %, 0V to 5 V Accuracy; ± 1 % of rated V _{out} , or 0 V to 10 V Accuracy; ± 1 % of rated I _{vat} 0 % to 100 %, 0V to 5 V Accuracy; ± 1 % of rated I _{vat} 0 % to 100 %, 0V to 5 V Accuracy; ± 1 % of rated I _{vat} 0 % to 100 %, 0V to 5 V Accuracy; ± 1 % of rated I _{vat} 0 % to 100 %, 0V to 5 V Accuracy; ± 1 % of rated P _{out} , or 0 V to 10 V Accuracy; ± 1 % of rated P _{out} 1 % of rated P _{out} , or 0 V to 10 V Accuracy; ± 1 % of rated P _{out} , or 0 V to 10 V Accuracy; ± 1 % of rated P _{out} 1 % of rated P _{out} , or 0 V to 10 V Accuracy; ± 1 % of rated P _{out} , or 0 V to 10 V Accuracy; ± 1 % of maximum R _{out} 2 % to 100 %, 0V to 5 V Accuracy; ± 1 % of rated P _{out} , or 0 V to 10 V Accuracy; ± 1 % of rated P _{out} 2 % to 100 %, 0V to 5 V Accuracy; ± 1 % of rated P _{out} , or 0 V to 10 V Accuracy; ± 1 % of rated P _{out} 3 % to 100 %, 0V to 5 V Accuracy; ± 1 % of rated P _{out} , or 0 V to 10 V Accuracy; ± 1 % of rated P _{out} 4 % to 100 %, 0V to 5 V Accuracy; ± 1 % of rated P _{out} , or 0 V to 10 V Accuracy; ± 1 % of rated P _{out} 4 % to 100 %, 0V to 5 V Accuracy; ± 1 % of rated P _{out} 5 % to 100 %, 0V to 5 V of rated P _{out} , or 10 V to 10 V Accuracy; ± 1 % of rated P _{out} 6 % to 100 %, 0V to 5 V of rated P _{out} , or 10 V to 10 V Accuracy; ± 1 % of rated P _{out} 6 % to 100 %, 0V to 5 V of rated P _{out} , or 0 V to 10 V Accuracy; ± 1 % of rated P _{out} 7 % to 100 %, 0V to 5 V Accuracy; ± 1 % of rated P _{out} 8 % to 100 %, 0V to 5 V Accuracy; ± 1 % of rated P _{out} 9 % to 100 %, 0V to 5 V Accuracy; ± 1 % of rated P _{out} 9 % to 100 %, 0V to 5 V Accuracy; ± 1 % of rated P _{out} 9 % to 100 %, 0V to 5 V Accuracy; ± 1 % of rated P _{out} 9 % to 100 %, 0V to 10 V, Accuracy; ± 1 % of rated P _{out} | Factory Option | | | RS-232&485 or GPIB or CAN Bus or DeviceNet or Isolated Digital I/O |
| lout voltage programming 0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of rated I _{sub} or 0 V to 10 V Accuracy: ± 1 % of rated I _{out} 0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of rated P _{out} , or 0 V to 10 V Accuracy: ± 1 % of rated P _{out} 10 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of rated P _{out} , or 0 V to 10 V Accuracy: ± 1 % of rated P _{out} 10 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of maximum R _{et} 10 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of maximum R _{et} 10 V to 5 V or 0 V to 10 V, Accuracy: ± 1 % or 0 V to 10 V to | Isolated Analog Control Interface | .1 | | · |
| Pout voltage programming 0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of rated P _{out} . or 0 V to 10 V Accuracy: ± 1 % of rated P _{out} linternal resistance voltage programming 0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of maximum R _{oit} , or 0 V to 10 V Accuracy: ± 1 % of maximum R _{oit} Output voltage monitor 0 V to 5 V or 0 V to 10 V, Accuracy: ± 1 %. Reference voltage Voltage reference for 0 V to 10 V, Accuracy: ± 1 %. Voltage reference for 0 V to 10 V. Alarm Input Turn off the PHU output with a High (4.5 V to 5 V) Possible logic selections: Turn the put output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Clear alarms with a High (4.5 V to 5 V) CVICC/CP/ALM/PVR ON/OUT ON indicator Environmental Conditions Operating temperature 0 ° C to 50 ° C Storage temperature 0 ° C to 50 ° C Storage temperature 0 ° C to 50 ° C Storage humidity 0 % RH or less; No condensation Maximum 2000 m General Specifications main unit only kg Less than 30.5 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Forced air cooling by internal fan | Vout voltage programming | | | 0 % to 100 %, 0V to 5 V Accuracy: ± 1 % of rated V _{out} , or 0 V to 10 V Accuracy: ± 1 % of rated V _{out} |
| Internal resistance voltage programming 0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of maximum R _{int} , or 0 V to 10 V Accuracy: ± 1 % of maximum R _{int} 0 V to 5 V or 0 V to 10 V, Accuracy: ± 1 %. Output current monitor 0 V to 5 V or 0 V to 10 V, Accuracy: ± 1 %. Reference voltage 1 Voltage reference for 0 V to 5 V or 0 V to 10 V. Alarm Input 1 Turn off the PHU output with a High (4.5 V to 5 V) Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Alarm clear control CVC/CC/CP/ALM/PWR ON/OUT ON indicator Environmental Conditions Operating temperature 0 ° C to 50 ° C Operating temperature 0 ° C to 50 ° C Operating humidity 0 ° C to 50 ° C Operating humidity 0 ° C to 50 ° C Operating humidity 0 ° C to 50 ° C Maximum 2000 m Maximum 2000 m 42 Exercise than 30.5 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Forced air cooling by internal fan | lout voltage programming | | | 0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of rated I _{out} , or 0 V to 10 V Accuracy: ± 1 % of rated I _{out} |
| Internal resistance voltage programming 0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of maximum R _{int} , or 0 V to 10 V Accuracy: ± 1 % of maximum R _{int} 0 V to 5 V or 0 V to 10 V, Accuracy: ± 1 %. Output current monitor 0 V to 5 V or 0 V to 10 V, Accuracy: ± 1 %. Reference voltage Notage reference for 0 V to 5 V or 0 V to 10 V. Alarm Input Turn off the PHU output with a High (4.5 V to 5 V) Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Alarm clear control Circuit Alarm Reference for 0 V to 50 V or 0 V to 10 V. Circuit Alarm Reference for 0 V to 5 V or 0 V to 10 V. Alarm Input Alarm clear control Circuit Alarm Reference for 0 V to 5 V or 0 V to 10 V. Circuit Alarm Reference for 0 V to 5 V or 8 Not 5 V) Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Alarm clear control Circuit Alarm Reference for 0 V to 5 V or 0 V to 10 V. Circuit Alarm Reference for 0 V to 5 V or 0 V to 10 V. Circuit Alarm Reference for 0 V to 5 V or 0 V to 10 V. Possible logic selections: Turn the output with a High (4.5 V to 5 V) Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Circuit Alarm Reference for 0 V to 5 V or 0 V to 10 V. Circuit Alarm Reference for 0 V to 5 V or 0 V to 10 V. Circuit Alarm Reference for 0 V to 5 V or 0 V to 10 V. Circuit Alarm Reference for 0 V to 5 V or 0 V to 10 V. Circuit Alarm Reference for 0 V to 5 V or 0 V to 10 V. Circuit Alarm Reference for 0 V to 5 V or 0 V to 10 V. Circuit Alarm Reference for 0 V to 5 V or 0 V to 10 V. Circuit Alarm Reference for 0 V to 5 V or 0 V to 10 V. Circuit Alarm Reference for 0 V to 10 V. Circuit Alarm Reference for 0 V to 10 V. Circuit Alarm Reference for 0 V to 10 V. Circuit Alarm Reference for 0 V to 10 V. Circuit Alarm Reference | | 1 | | 0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of rated P _{out} , or 0 V to 10 V Accuracy: ± 1 % of rated P _{out} |
| Output current monitor O V to 5 V or 0 V to 10 V, Accuracy: ± 1 %. Reference voltage Voltage reference for 0 V to 5V or 0 V to 10V. Alarm Input Turn off the PHU output with a High (4.5 V to 5 V) Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Alarm clear control Ciear alarms with a High (4.5 V to 5 V) Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA. Environmental Conditions Operating temperature O C to 50 °C Storage temperature O C to 50 °C Storage humidity Operating humidity ON RH or less; No condensation Altitude Maximum 2000 m General Specifications Weight main unit only kg Less than 30.5 kg Dimensions (W*H*D) mm 442 mm × 130 mm × 675 mm Forced air cooling by internal fan | Internal resistance voltage programming | | | 0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of maximum R _{int} , or 0 V to 10 V Accuracy: ± 1 % of maximum R _{int} |
| Reference voltage Voltage reference for 0 V to 5V or 0 V to 10V. Alarm Input Turn off the PHU output with a High (4.5 V to 5 V) Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Alarm clear control Clear alarms with a High (4.5 V to 5 V) CV/CC/CP/ALM/PWR ON/OUT ON indicator Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA. Environmental Conditions Operating temperature 0 0 ° C to 50 ° C Storage temperature 0 0 ° C to 50 ° C Operating humidity 20 % to 85 ° RH; No condensation Storage humidity 90 % RH or less; No condensation Altitude 0 Maximum 2000 m General Specifications Weight main unit only kg Less than 30.5 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Forced air cooling by internal fan | Output voltage monitor | 1 | | 0 V to 5 V or 0 V to 10 V, Accuracy: ± 1 %. |
| Alarm Input Turn off the PHU output with a High (4.5 V to 5 V) Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Alarm clear control Clear alarms with a High (4.5 V to 5 V) CV/CC/CP/ALM/PWR ON/OUT ON indicator Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA. Environmental Conditions Operating temperature O 'C to 50 'C Storage temperature Operating humidity 20 % to 85 % RH; No condensation Storage humidity 90 % RH or less; No condensation Maximum 2000 m General Specifications Weight main unit only kg Less than 30.5 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Forced air cooling by internal fan | Output current monitor | | | 0 V to 5 V or 0 V to 10 V, Accuracy: ± 1 %. |
| Output on/off control Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Alarm clear control Clear alarms with a High (4.5 V to 5 V) Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA. Environmental Conditions Operaing temperature O °C to 50 °C Storage temperature O °C to 50 °C Operating humidity 20 % to 85 % RH; No condensation Storage humidity Altitude Maximum 2000 m General Specifications Weight main unit only kg Less than 30.5 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan | Reference voltage | | | Voltage reference for 0 V to 5V or 0 V to 10V. |
| Output on/off control Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Alarm clear control Clear alarms with a High (4.5 V to 5 V) Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA. Environmental Conditions Operaing temperature O ° C to 50 ° C Storage temperature Operating humidity Storage humidity Ogeneral Specifications Weight main unit only kg Less than 30.5 kg Dimensions (W×H×D) mm Maximum 200 m m Georeal Specifications Forced air cooling by internal fan | Alarm Input | | | Turn off the PHU output with a High (4.5 V to 5 V) |
| CV/CC/CP/ALM/PWR ON/OUT ON indicator Environmental Conditions Operaing temperature O ° C to 50 ° C Storage temperature O constructing humidity Storage humidity Storage humidity Attitude Maximum 2000 m General Specifications Weight main unit only Maximum 2000 m Maximum 2000 | Output on/off control | | | Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open- |
| Environmental Conditions Operaing temperature 0 °C to 50 °C Storage temperature -25 °C to 70 °C Operating humidity 20 % to 85 % RH; No condensation Storage humidity 90 % RH or less; No condensation Altitude Maximum 2000 m General Specifications Weight main unit only kg Less than 30.5 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan | Alarm clear control | | | Clear alarms with a High (4.5 V to 5 V) |
| Operaing temperature 0 ° C to 50 ° C Storage temperature -25 ° C to 70 ° C Operating humidity 20 % to 85 % RH; No condensation Storage humidity 90 % RH or less; No condensation Altitude Maximum 2000 m General Specifications Weight main unit only kg Less than 30.5 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan | CV/CC/CP/ALM/PWR ON/OUT ON indicator | | | Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA. |
| Storage temperature -25 °C to 70 °C Operating humidity 20 % to 85 % RH; No condensation Storage humidity 90 % RH or less; No condensation Altitude Maximum 2000 m General Specifications Weight main unit only kg Less than 30.5 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan | Environmental Conditions | | • | |
| Operating humidity 20 % to 85 % RH; No condensation Storage humidity 90 % RH or less; No condensation Altitude Maximum 2000 m General Specifications Weight main unit only kg Less than 30.5 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan | Operaing temperature | | | 0 °C to 50 °C |
| Storage humidity 90 % RH or less; No condensation Altitude Maximum 2000 m General Specifications Weight Weight main unit only kg Less than 30.5 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan | Storage temperature | | | -25 °C to 70 °C |
| Altitude Maximum 2000 m General Specifications Weight main unit only kg Less than 30.5 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan | Operating humidity | | | 20 % to 85 % RH; No condensation |
| General Specifications Weight main unit only kg Less than 30.5 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan | Storage humidity | | | 90 % RH or less; No condensation |
| Weight main unit only kg Less than 30.5 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan | Altitude | | | Maximum 2000 m |
| Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan | General Specifications | | | |
| Cooling Forced air cooling by internal fan | Weight | main unit only | kg | Less than 30.5 kg |
| | Dimensions (W×H×D) | | mm | 442 mm × 130 mm × 675 mm |
| EMC Complies with the European EMC directive 89/336/EEC for Class A test and measurement products | Cooling | | | Forced air cooling by internal fan |
| | EMC | | | Complies with the European EMC directive 89/336/EEC for Class A test and measurement products |
| Safety Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking | Safety | | | Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking |
| Withstand voltage Chassis and output terminal; chassis and AC input; AC input and output terminal: AC 1500 V or DC 2130 V 1 minute | Withstand voltage | | | Chassis and output terminal; chassis and AC input; AC input and output terminal: AC 1500 V or DC 2130 V 1 minute |
| Insulation resistance Chassis and output terminal; chassis and AC input; AC input and output terminal: 100 MΩ or more (DC 500 V) | Insulation resistance | | | Chassis and output terminal; chassis and AC input; AC input and output terminal: 100 MΩ or more (DC 500 V) |

- Notes:

 *1 Minimum voltage is guaranteed to maximum 0.2 % of the rated output voltage.

 *2 Minimum current is guaranteed to maximum 0.4 % of the rated output current.

 *3 At 180 Vac to 265 Vac or 342 Vac to 528 Vac, constant load.

 *4 From No-load to Full-load, constant input voltage. Measured at the sensing point in Remote Sense.

 *5 For 80 V, 200 V models: Measure with JEITA RC-9131B (1:1) probe. For 500 V, 750 V, 1000 V and 1500 V models: Measured with (100:1) probe.

 *6 Measurement frequency bandwidth is 10 Hz to 20 MHz.

 *7 Measurement frequency bandwidth is 5 Hz to 1 MHz.

 *8 From 10 % to 90 % of rated output voltage, with rated resistive load.

 *9 From 90 % to 10 % of rated output voltage, with rated resistive load.

 *10 Time for output voltage to recover within 1 % of its rated output for a load change from 10 % to 90 % of its rated output current.

 Voltage set point from 10 % to 100 % of rated output.

 *11 For load voltage change, equal to the unit voltage rating, constant input voltage.

 *12 The ripple is measured at 20 % to 100 % output voltage and full output current.

 *13 For output power change from 10 % to 90 %, constant input voltage.

 *14 At rated output power.

| Remote snese compensation voltage | 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V V 0.00 V to 220.50 A 0.00 A to 220.50 A at off. ut off. ut off. | 25 30 30 80 1000 1.5 45 90 48 4, following 30 minutes 7 5.00 V to 550.00 V 500 4 5.00 A to 99.00 A 180 7 300 W to 16500 W 150 7 0.00 V to 525.00 V 0.00 A to 94.50 A | 37.5 30 30 80 1200 1.5 30 60 48 warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A | 1000-45 1000 45 1000 3 1000 3 100 200 1600 350 50 30 80 1000 1.5 22.5 45 26 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.000 A to 47.250 A | • |
|--|--|--|---|---|---|
| Rated output current (*2) | 210 15000 2.8 20 40 300 40 300 40 om rated output voltage 10 30 30 80 1000 1.5 210 150 0m rated output curren V 5.00 V to 220.00 V 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V V 0.00 V to 210.00 V A 0.00 A to 220.50 A 1t off. ut off. ut off. ut off. ut off. ut off. | 90 15000 3 3 50 100 350 70 3, following 30 minutes 25 30 30 80 1000 1.5 45 90 48 1, following 30 minutes 7 5.00 V to 550.00 V 500 300 W to 16500 W 150 7 0.00 V to 525.00 V 0.00 A to 94.50 A | 60 15000 3 75 150 800 200 warm-up. 37.5 30 80 1200 1.5 30 60 48 warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.00 A to 63.00 A | 45 15000 3 100 200 1600 350 50 30 30 30 1000 1.5 22.5 45 26 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V 0.000 A to 47.250 A | 30 15000 3 15000 3 150 300 2400 400 400 75 30 30 80 1200 1.5 15 30 26 5.0 V to 1650.0 V 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Rated output power ratio | 15000 2.8 20 40 300 40 300 40 om rated output voltage 10 30 80 1000 1.5 105 210 150 0m rated output curren V 5.00 V to 220.00 V 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V V 0.00 V to 210.00 V A 0.00 A to 220.50 A 1t off. ut off. ut off. ut off. ut off. | 15000 3 3 50 100 350 70 3, following 30 minutes 25 30 80 1000 1.5 45 90 48 1, following 30 minutes 7 5.00 V to 550.00 V 500 150 300 W to 16500 W 150 7 0.00 V to 525.00 V 100 V to 525.00 V | 15000 3 75 150 800 200 warm-up. 37.5 30 80 1200 1.5 30 60 48 warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.00 A to 63.00 A | 15000 3 100 200 1600 350 50 30 30 30 1000 1.5 22.5 45 26 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.000 A to 47.250 A | 15000 3 150 300 2400 400 400 75 30 30 80 1200 1.5 15 30 26 5.0 V to 1650.0 V 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Dutput power ratio | 2.8 20 40 300 40 300 40 om rated output voltage 10 30 30 80 1000 1.5 105 210 150 om rated output curren V 5.00 V to 220.00 V 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V V 0.00 V to 210.00 V A 0.00 A to 220.50 A A 0.00 A to 220.50 A at off. at off. ut off. ut off. ut off. | 3 50 100 350 70 3, following 30 minutes 25 30 80 1000 1.5 45 90 48 4, following 30 minutes 7 5.00 V to 550.00 V 500 300 W to 16500 W 150 7 7 7 7 7 7 7 7 7 7 7 7 7 | 3 75 150 800 200 warm-up. 37.5 30 80 1200 1.5 30 60 48 warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.00 A to 63.00 A | 3 100 200 1600 350 50 30 30 80 1000 1.5 22.5 45 26 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V 0.000 A to 47.250 A | 3 150 300 2400 400 400 75 30 30 80 1200 1.5 15 30 26 5.0 V to 1650.0 V 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Constant Voltage Mode Line regulation (*3) [0.01 % of Vo_rated] | 20 40 300 40 300 40 300 40 300 30 30 30 30 80 1000 1.5 105 210 150 210 150 0m rated output curren V 5.00 V to 220.00 V 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V V 0.00 V to 210.00 V A 0.00 A to 220.50 A at off. at off. ut off. ut off. ut off. ut off. | 50 100 350 70 5, following 30 minutes 25 30 80 1000 1.5 45 90 48 1, following 30 minutes 7 5.00 V to 550.00 V 500 150 150 7 0.00 V to 525.00 V 10 0.00 V to 525.00 V | 75 150 800 200 warm-up. 37.5 30 30 1200 1.5 30 60 48 warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.00 A to 63.00 A | 100 200 1600 350 350 30 30 30 80 1000 1.5 22.5 45 26 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V | 150 300 2400 400 400 75 30 30 80 1200 1.5 15 30 26 5.0 V to 1650.0 V 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Line regulation (*3) [0.01 % of Vo_rated] | 40 300 40 300 40 300 40 300 10 30 30 80 1000 1.5 105 210 150 0m rated output curren V 5.00 V to 220.00 V 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V 0.00 V to 210.00 V A 0.00 A to 220.50 A 1 0.00 A to 220.50 A 1 off. 2 off. | 100 350 70 70 7, following 30 minutes 25 30 30 80 1000 1.5 45 90 48 1, following 30 minutes 7 5.00 V to 550.00 V 500 150 4 5.00 A to 99.00 A 180 7 100 V to 525.00 V | 150 800 200 warm-up. 37.5 30 30 80 1200 1.5 30 60 48 warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.00 A to 63.00 A | 200 1600 350 50 30 30 80 1000 1.5 22.5 45 26 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V | 300 2400 400 400 75 30 30 80 1200 1.5 15 30 26 5.0 V to 1650.0 V 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V |
| Load regulation ("4) [0.02 % of Vo_rated] | 40 300 40 300 40 300 40 300 10 30 30 80 1000 1.5 105 210 150 0m rated output curren V 5.00 V to 220.00 V 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V 0.00 V to 210.00 V A 0.00 A to 220.50 A 1 0.00 A to 220.50 A 1 off. 2 off. | 100 350 70 70 7, following 30 minutes 25 30 30 80 1000 1.5 45 90 48 1, following 30 minutes 7 5.00 V to 550.00 V 500 150 4 5.00 A to 99.00 A 180 7 100 V to 525.00 V | 150 800 200 warm-up. 37.5 30 30 80 1200 1.5 30 60 48 warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.00 A to 63.00 A | 200 1600 350 50 30 30 80 1000 1.5 22.5 45 26 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V | 300 2400 400 400 75 30 30 80 1200 1.5 15 30 26 5.0 V to 1650.0 V 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V |
| P-P (*6) | 300 40 300 10 30 30 30 80 1000 1.5 105 210 150 210 150 0m rated output curren V 5.00 V to 220.00 V 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V 0.00 V to 210.00 V 1 0.00 A to 220.50 A 1 0.00 A to 220.50 A 1 0.00 A to 220.50 A 1 toff. 1 ut off. 1 ut off. | 350 70 70 7, following 30 minutes 25 30 30 80 1000 1.5 45 90 48 48 4, following 30 minutes 7 5.00 V to 550.00 V 500 4 5.00 A to 99.00 A 180 7 300 W to 16500 W 150 7 0.00 V to 525.00 V 0.00 A to 94.50 A | 800 200 warm-up. 37.5 30 30 80 1200 1.5 30 60 48 warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.00 A to 63.00 A | 1600 350 50 30 30 80 1000 1.5 22.5 45 26 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V | 2400 400 400 75 30 30 80 1200 1.5 15 30 26 5.0 V to 1650.0 V 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V |
| Fipple and noise (*5) | 40 om rated output voltage 10 30 30 80 1000 1.5 105 210 150 om rated output curren V 5.00 V to 220.00 V 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V 0.00 V to 210.00 V A 0.00 A to 220.50 A 1 0.00 A to 220.50 A 1 off. 2 | 70 2, following 30 minutes 25 30 30 80 1000 1.5 45 90 48 4, following 30 minutes 7 5.00 V to 550.00 V 500 5.00 A to 99.00 A 180 7 300 W to 16500 W 150 7 0.00 V to 525.00 V 0.00 A to 94.50 A | 200 warm-up. 37.5 30 30 80 1200 1.5 30 60 48 warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.00 A to 63.00 A | 50 350 30 30 30 80 1000 1.5 45 22.5 45 26 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V 0.000 A to 47.250 A | 400 75 30 30 80 1200 1.5 15 30 26 5.0 V to 1650.0 V 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V |
| Temperature coefficient | om rated output voltage 10 30 30 80 1000 1.5 105 210 150 0m rated output curren V 5.00 V to 220.00 V 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V 0.00 V to 210.00 V A 0.00 A to 220.50 A 1 0.00 A to 220.50 A 1 off. | 25 30 30 30 80 1000 1.5 45 90 48 4, following 30 minutes 7 5.00 V to 550.00 V 500 4 5.00 A to 99.00 A 180 7 300 W to 16500 W 150 7 0.00 V to 525.00 V 0.00 A to 94.50 A | warm-up. 37.5 30 30 80 1200 1.5 30 60 48 warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.00 A to 63.00 A | 50 30 30 80 1000 1.5 22.5 45 26 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V | 75 30 30 80 1200 1.5 15 30 26 5.0 V to 1650.0 V 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V |
| Remote snese compensation voltage | 10 30 30 80 1000 1.5 105 210 150 150 0m rated output curren V 5.00 V to 220.00 V 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V 0.00 V to 220.50 A 1 0.00 A to 220.50 A at off. ut off. ut off. ut off. | 25 30 30 80 1000 1.5 45 90 48 4, following 30 minutes 7 5.00 V to 550.00 V 500 4 5.00 A to 99.00 A 180 7 300 W to 16500 W 150 7 0.00 V to 525.00 V 0.00 A to 94.50 A | 37.5 30 30 80 1200 1.5 30 60 48 warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.00 A to 63.00 A | 30 30 80 1000 1.5 22.5 45 26 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V | 30 30 80 1200 1.5 15 30 26 5.0 V to 1650.0 V 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Rated load ms 30 | 30 30 30 80 1000 1.5 105 210 150 150 0m rated output curren V 5.00 V to 220.00 V 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V 0.00 V to 210.00 V A 0.00 A to 220.50 A 1 0.00 A to 220.50 A 1 off. | 30 30 30 80 1000 1.5 45 90 48 t, following 30 minutes 500 500 500 500 500 180 300 W to 16500 W 150 000 V to 525.00 V | 30 30 80 1200 1.5 30 60 48 warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.00 A to 63.00 A | 30 30 80 1000 1.5 22.5 45 26 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V | 30 30 80 1200 1.5 15 30 26 5.0 V to 1650.0 V 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| No load | 80 1000 1.5 105 210 150 210 150 0m rated output curren V 5.00 V to 220.00 V 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V 0.00 V to 210.00 V A 0.00 A to 220.50 A 0.00 A to 220.50 A at off. ut off. ut off. init. | 80 1000 1.5 45 90 48 4, following 30 minutes 500 5.00 A to 99.00 A 180 300 W to 16500 W 150 7 0.00 V to 525.00 V 7 0.00 V to 525.00 V | 80 1200 1.5 30 60 48 warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.0 V to 787.5 V 0.00 A to 63.00 A | 80 1000 1.5 22.5 45 26 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V 0.000 A to 47.250 A | 80 1200 1.5 15 30 26 5.0 V to 1650.0 V 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V |
| Fall time (*9) | 1000 1.5 105 210 150 m rated output curren V 5.00 V to 220.00 V 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V 0.00 V to 210.00 V A 0.00 A to 220.50 A 1 0.00 A to 220.50 A at off. ut off. ut off. init. | 1000 1.5 45 90 48 t, following 30 minutes 500 5.00 A to 99.00 A 180 300 W to 16500 W 150 0.00 V to 525.00 V 0.00 V to 525.00 V | 1200 1.5 30 60 48 warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.00 A to 63.00 A | 1000 1.5 22.5 45 26 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V | 1200 1.5 15 30 26 5.0 V to 1650.0 V 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V |
| No load ms 1000 | 1.5 105 210 150 210 150 210 150 210 200 X 5.00 V to 220.00 V 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V V 0.00 V to 210.00 V A 0.00 A to 220.50 A 1 0.00 A to 220.50 A 2 t off. 2 t off. 2 t off. 2 trip in the control of the control | 1.5 45 90 48 t, following 30 minutes 5.00 V to 550.00 V 500 5.00 A to 99.00 A 180 300 W to 16500 W 150 0.00 V to 525.00 V 0.00 V to 525.00 V 0.00 A to 94.50 A | 1.5 30 60 48 warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.0 V to 787.5 V 0.00 A to 63.00 A | 1.5 22.5 45 26 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V | 1.5 15 30 26 5.0 V to 1650.0 V 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Constant Current Mode | 105 210 150 210 150 210 150 210 150 200 X 5.00 V to 220.00 V 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V V 0.00 V to 220.50 A A 0.00 A to 220.50 A at off. at off. ut off. ut off. | 45 90 48 4, following 30 minutes 5.00 V to 550.00 V 500 5.00 A to 99.00 A 180 300 W to 16500 W 150 7 0.00 V to 525.00 V 0.00 V to 525.00 V 0.00 A to 94.50 A | 30 60 48 warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.0 V to 787.5 V | 22.5 45 26 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V 0.000 A to 47.250 A | 15 30 26 5.0 V to 1650.0 V 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Line regulation (*3) [0.05 % of lo_rated] mA 255 | 210 150 om rated output curren V 5.00 V to 220.00 V 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V V 0.00 V to 220.50 A A 0.00 A to 220.50 A at off. ut off. ut off. ut off. | 90 48 48 47 5.00 V to 550.00 V 500 5.00 A to 99.00 A 180 7 300 W to 16500 W 150 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 | 60 48 warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.0 V to 787.5 V 0.00 A to 63.00 A | 45 26 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V | 30 26 5.0 V to 1650.0 V 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Load regulation (*11) [0.1 % of lo_rated] mA 510 Ripple and noise (*12) r.m.s. mA 510 Temperature coefficient ppm/°C 100 ppm/°C Protection Function | 210 150 om rated output curren V 5.00 V to 220.00 V 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V V 0.00 V to 220.50 A A 0.00 A to 220.50 A at off. ut off. ut off. ut off. | 90 48 48 47 5.00 V to 550.00 V 500 5.00 A to 99.00 A 180 7 300 W to 16500 W 150 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 7 | 60 48 warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.0 V to 787.5 V 0.00 A to 63.00 A | 45 26 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V | 30 26 5.0 V to 1650.0 V 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Ripple and noise (*12) | 150 om rated output curren V 5.00 V to 220.00 V 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V 0.00 V to 210.00 V A 0.00 A to 220.50 A 0.00 A to 220.50 A ut off. ut off. ut off. | 48 t, following 30 minutes 7 5.00 V to 550.00 V 500 5.00 A to 99.00 A 180 7 300 W to 16500 W 150 7 0.00 V to 525.00 V 7 0.00 A to 94.50 A | 48 warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.00 A to 63.00 A | 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V 0.000 A to 47.250 A | 5.0 V to 1650.0 V 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Temperature coefficient | om rated output current V | 1, following 30 minutes 1, 5.00 V to 550.00 V 500 5.00 A to 99.00 A 180 300 W to 16500 W 150 0.00 V to 525.00 V 0.00 A to 94.50 A | warm-up. 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.00 A to 63.00 A | 5.0 V to 1100.0 V 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V 0.000 A to 47.250 A | 5.0 V to 1650.0 V 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Protection Function | V 5.00 V to 220.00 V 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V 0.00 V to 220.50 A 0.00 A to 220.50 A at off. ut off. ut off. ut off. | 5.00 V to 550.00 V 500 5.00 A to 99.00 A 180 300 W to 16500 W 150 0.00 V to 525.00 V 0.00 V to 525.00 V | 5.0 V to 825.0 V 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.0 V to 787.5 V 0.00 A to 63.00 A | 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V 0.000 A to 47.250 A | 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Over voltage protection (OVP) Setting range V 5.00 V to 88.00 Setting accuracy mV 80 Over current protection (OCP) Setting range A 5.00 A to 561.0 Setting accuracy mA 1020 Setting range W 300 W to 16500 Setting accuracy W 150 Over voltage limit (OVL) Setting range V 0.00 V to 84.00 Under voltage limit (UVL) Setting range V 0.00 V to 84.00 Over current limit (OCL) Setting range A 0.00 A to 535.5 Under cuttent limit (UCL) Setting range A 0.00 A to 535.5 Power unit fall (PUF) Operation Turn the out Incorrect sensing connection protection (SENSE) Operation Turn the out Low AC input protection (AC-FAIL) Operation Turn the out Shutdown (SD) Operation Turn the out Power limit (POWER LIMIT) Operation Over power Value (fixed) Approx. 102 Other Functions Setting range A/s | 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V V 0.00 V to 220.50 A 0.00 A to 220.50 A at off. ut off. ut off. | 500 5.00 A to 99.00 A 180 300 W to 16500 W 150 0.00 V to 525.00 V 0.00 A to 94.50 A | 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.0 V to 787.5 V 0.00 A to 63.00 A | 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V 0.000 A to 47.250 A | 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Over voltage protection (OVP) Setting accuracy mV 80 | 200 A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V V 0.00 V to 220.50 A 0.00 A to 220.50 A at off. ut off. ut off. | 500 5.00 A to 99.00 A 180 300 W to 16500 W 150 0.00 V to 525.00 V 0.00 A to 94.50 A | 750 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.0 V to 787.5 V 0.00 A to 63.00 A | 1000 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V 0.000 A to 47.250 A | 1500 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Setting accuracy mV 80 | A 5.00 A to 231.00 A 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V V 0.00 V to 220.50 A 0.00 A to 220.50 A at off. ut off. ut off. | 180 180 180 100 W to 16500 W 150 100 V to 525.00 V 100 V to 525.00 V 100 O A to 94.50 A | 5.00 A to 66.00 A 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.0 V to 787.5 V 0.00 A to 63.00 A | 4.5 A to 49.500 A 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V 0.000 A to 47.250 A | 3 A to 33.000 A 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Setting accuracy | 420 W 300 W to 16500 W 150 V 0.00 V to 210.00 V V 0.00 V to 220.50 A 0.00 A to 220.50 A at off. ut off. ut off. | 180 7 300 W to 16500 W 150 7 0.00 V to 525.00 V 7 0.00 A to 94.50 A | 120 300 W to 16500 W 150 0.0 V to 787.5 V 0.0 V to 787.5 V 0.00 A to 63.00 A | 90 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V 0.000 A to 47.250 A | 60 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Setting range W 300 W to 16500 | W 300 W to 16500 W 150 V 0.00 V to 210.00 V V 0.00 V to 220.50 A 0.00 A to 220.50 A at off. ut off. ut off. ut off. | 7 300 W to 16500 W 150 7 0.00 V to 525.00 V 9 0.00 V to 525.00 V 1 0.00 A to 94.50 A | 300 W to 16500 W 150 0.0 V to 787.5 V 0.0 V to 787.5 V 0.00 A to 63.00 A | 300 W to 16500 W 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V 0.000 A to 47.250 A | 300 W to 16500 W 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Over power protection (OPP) Setting accuracy W 150 | 150 V 0.00 V to 210.00 V V 0.00 V to 220.50 A 0.00 A to 220.50 A 1 0.00 A to 220.50 A ut off. ut off. ut off. | 150 ' 0.00 V to 525.00 V ' 0.00 V to 525.00 V 0.00 A to 94.50 A | 150 0.0 V to 787.5 V 0.0 V to 787.5 V 0.00 A to 63.00 A | 150 0.0 V to 1050.0 V 0.0 V to 1050.0 V 0.000 A to 47.250 A | 150 0.0 V to 1575.0 V 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Over voltage limit (OVL) | V 0.00 V to 210.00 V V 0.00 V to 210.00 V A 0.00 A to 220.50 A A 0.00 A to 220.50 A at off. ut off. ut off. | 0.00 V to 525.00 V 0.00 V to 525.00 V 0.00 A to 94.50 A | 0.0 V to 787.5 V 0.0 V to 787.5 V 0.00 A to 63.00 A | 0.0 V to 1050.0 V 0.0 V to 1050.0 V 0.000 A to 47.250 A | 0.0 V to 1575.0 V 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Under voltage limit (UVL) | V 0.00 V to 210.00 V A 0.00 A to 220.50 A A 0.00 A to 220.50 A at off. ut off. ut off. | 0.00 V to 525.00 V 0.00 A to 94.50 A | 0.0 V to 787.5 V 0.00 A to 63.00 A | 0.0 V to 1050.0 V 0.000 A to 47.250 A | 0.0 V to 1575.0 V 0.000 A to 31.500 A |
| Over current limit (OCL) Setting range A 0.00 A to 535.5 Under cuttent limit (UCL) Setting range A 0.00 A to 535.5 Power unit fail (PUF) Operation Turn the out Incorrect sensing connection protection (SENSE) Operation Turn the out Low AC input protection (AC-FAIL) Operation Turn the out Shutdown (SD) Operation Turn the out Power limit (POWER LIMIT) Operation Over power Value (fixed) Approx. 102 Other Functions Setting range V/s 0.01 to 160.0 Resolution mV 10 Setting range A/s 0.1 to 1020.0 | A 0.00 A to 220.50 A 0.00 A to 220.50 A at off. ut off. ut off. ut off. | 0.00 A to 94.50 A | 0.00 A to 63.00 A | 0.000 A to 47.250 A | 0.000 A to 31.500 A |
| Under cuttent limit (UCL) Power unit fail (PUF) Incorrect sensing connection protection (SENSE) Low AC input protection (AC-FAIL) Shutdown (SD) Power limit (POWER LIMIT) Other Functions Voltage Slew Rate Setting range A 0.00 A to 535.5 Operation Turn the out Turn the out Operation Turn the out Operation Operation Over power Value (fixed) Setting range V/s Resolution mV 10 Setting range A/s 0.1 to 1020.0 | A 0.00 A to 220.50 A ut off. ut off. ut off. nit. | + | | | • |
| Power unit fail (PUF) Operation Turn the out | ut off. ut off. ut off. ut off. ut off. | 0.00 A 10 94.30 A | 0.00 A to 03.00 A | 0.000 A to 47.230 A | 0.000 A to 31.500 A |
| Incorrect sensing connection protection (SENSE) | ut off. ut off. ut off. nit. | | | | |
| Low AC input protection (AC-FAIL) Operation Turn the out | ut off. ut off. mit. | | | | |
| Shutdown (SD) | ut off. mit. | | | | |
| Operation Over power | nit. | | | | |
| Value (fixed) Approx. 102 | | | | | |
| Other Functions Voltage Slew Rate Setting range V/s 0.01 to 160.0 Resolution mV 10 Setting range A/s 0.1 to 1020.0 | 6 of rated output power | | | | |
| Voltage Slew Rate Resolution mV 10 | | | | | |
| Resolution | 0.01 to 400.00 | 0.1 to 1000.0 | 0.1 to 1500.0 | 0.1 to 2000.0 | 0.1 to 3000.0 |
| Setting range A/s 0.1 to 1020. | 10 | 100 | 100 | 100 | 100 |
| | 0.01 to 420.00 | 0.01 to 180.00 | 0.01 to 120.00 | 0.01 to 90.00 | 0.001 to 60.000 |
| Resolution mA 100 | 10 | 10 | 10 | 10 | 1 |
| Internal resistance Setting range Ω 0.000 to 0.15 | 0.00 to 0.95 | 0.00 to 5.56 | 0.00 to 12.50 | 0.00 to 22.22 | 0.0 to 50.0 |
| Resolution $m\Omega$ 1 | 10 | 10 | 10 | 10 | 100 |
| Front Panel | | | | | |
| Display TFT-LCD, 5 | 800 pt x 480 pt | • | | | |
| Voltage accuracy [0.1% of Vo_rated] mV 80 | 200 | 500 | 750 | 1000 | 1500 |
| Current accuracy [0.2% of lo_rated] mA 1020 | 420 | 180 | 120 | 90 | 60 |
| Power accuracy [1% of Po_rated] W 150 | 150 | 150 | 150 | 150 | 150 |
| Voltage resolution V 0.01 | 0.01 | 0.01 | 0.1 | 0.1 | 0.1 |
| Current resolution A 0.01 | 0.01 | 0.01 | 0.001 | 0.001 | 0.001 |
| Power resolution W 1 | 1 | 1 | 1 | 1 | 1 |
| | Exit, Clear, Enter, Lock | | Numeric Keypad | | |
| · · | to increase or decreas | e the value. | | | |
| USB port Type A USB Programming and Measurement (Digital Interface) | OTHECTOR | | | | |
| | 0 to 040 | 0 to 505 | 0 to 707 F | 0 to 4050 | 0 to 4575 |
| Output voltage programming range 0 % to 105 % V 0 to 84 | 0 to 210 | 0 to 525 | 0 to 787.5 | 0 to 1050 | 0 to 1575 |
| Output current programming range 0 % to 105 % A 0 to 535.5 Output power programming range 0 % to 102 % W 0 to 15300 | 0 to 220.5 0 to 15300 | 0 to 94.5 0 to 15300 | 0 to 63 0 to 15300 | 0 to 47.25 0 to 15300 | 0 to 31.5 0 to 15300 |
| Output voltage programming accuracy [0.1 % of Vo_rated] | 200 | 500 | 750 | 1000 | 1500 |
| Output current programming accuracy [0.1 % of vo_rated] mV 80 Output current programming accuracy [0.2 % of lo_rated] mA 1020 | 420 | 180 | 120 | 90 | 60 |
| Output power programming accuracy [0.2 % of io_lated] W 150 | 150 | 150 | 150 | 150 | 150 |
| Output voltage programming resolution mV 10 | 10 | 10 | 100 | 100 | 100 |
| Output current programming resolution mA 10 | 10 | 10 | 1 | 1 | 1 |
| Output power programming resolution W 1 | 1 | 1 | 1 | 1 | 1 |
| Output voltage measurement accuracy [0.1 % of Vo rated] mV 80 | 200 | 500 | 750 | 1000 | 1500 |
| Output current measurement accuracy [0.2 % of lo_rated] mA 1020 | 420 | 180 | 120 | 90 | 60 |
| Output power measurement accuracy [1 % of Po_rated] W 150 | 150 | 150 | 150 | 150 | 150 |
| Output voltage measurement resolution mV 10 | | | 100 | 100 | 100 |
| Output current measurement resolution mA 10 | 10 | 10 | | | + |
| Output power measurement resolution W 1 | 10 | 10 | 1 | 1 | 1 |

| Name Page | Input Characteristics for PHU-C Series | | | |
|---|--|----------------|-----|---|
| A | Norminal input rating | | | 3-Phase, 200 V models: 180 Vac to 265 Vac (Covers 200 Vac / 230 Vac) |
| Marcharm Hosp Age Marc | Input frequency range | | | 47 Hz to 63 Hz |
| Mammur mysip power September Septemb | Maximum input current | 200 Vac | Α | 56 A (L1, L2, L3) |
| Power febror Raised Proyers 200 Voc 5 50 to 96 | Inrush current | 200 Vac | Α | Less than 100 A |
| February (11-5) 200 Voc % % 50 to 64 | Maximum input power | | VA | 18000 |
| Modes prime | Power factor | Rated Power | | > 0.95 |
| Modes prime | Efficiency (*14) | 200 Vac | % | 86 to 94 |
| A-Phase, 400 V models: 342 Vac is 528 Vac Covers 380400415440460460 Vac) | | | | 10 ms or greater |
| Macman pay current 400 Vac | Input Characteristics for PHU-D Series | l . | | |
| Maximum input current | Norminal input rating | | | 3-Phase, 400 V models: 342 Vac to 528 Vac (Covers 380/400/415/440/460/480 Vac) |
| Maximum typu power | Input frequency range | | | 47 Hz to 63 Hz |
| Maximum injust power | Maximum input current | 400 Vac | Α | 28 A (L1, L2, L3) |
| Power factor | Inrush current | 400 Vac | Α | Less than 50 A |
| Power factor Rate of Power | Maximum input power | | VA | 18000 |
| Not-up time 10 ms or greater | | Rated Power | | > 0.95 |
| Medis-up time 10 ms or greater | | 400 Vac | % | 87 to 94 |
| Internal resistance voltage programming | | | | 10 ms or greater |
| Type A. Host, Type B. Slave, Speed: 1.1/2.0, USB Class: CDC(Communications Device Class) | Interface Capabilities | | | |
| ANA Caddress, DNS IP Address, User Password, Gateway IP Address, Instrument IP Address, Subnet Mask | | | | Type A: Host, Type B: Slave, Speed: 1.1/2.0, USB Class: CDC(Communications Device Class) |
| Factory Option RS-2328485 or GPIB or CAN Bus or DeviceNet or Isolated Digital I/O isolated Analog Control Interface Votat Votage programming Solut to 5 V Accuracy: ± 1 % of rated I _{loc} or 0 V to 10 V Accuracy: ± 1 % of rated I _{loc} Fout votage programming Solut votage programming Solut to 5 V Accuracy: ± 1 % of rated I _{loc} or 0 V to 10 V Accuracy: ± 1 % of rated I _{loc} Solution of the programming Solution of the Solutio | LAN | | | |
| Factory Option RS-2328485 or GPIB or CAN Bus or DeviceNet or Isolated Digital I/O isolated Analog Control Interface Votat Votage programming Solut to 5 V Accuracy: ± 1 % of rated I _{loc} or 0 V to 10 V Accuracy: ± 1 % of rated I _{loc} Fout votage programming Solut votage programming Solut to 5 V Accuracy: ± 1 % of rated I _{loc} or 0 V to 10 V Accuracy: ± 1 % of rated I _{loc} Solution of the programming Solution of the Solutio | Isolated Analog Control Interface | | | V _{set} / I _{set} = 0 V to 5 V or 0 V to 10 V V _{mon} / I _{mon} = 0 V to 5 V or 0 V to 10 V |
| Solated Analog Control Interface | | | | |
| Vout voltage programming 0 % to 100%, 0 V to 5 V Accuracy: ± 1 % of rated V _{out} , or 0~10 V Accuracy: ± 1 % of rated V _{out} 0 % to 100%, 0 V to 5 V Accuracy: ± 1 % of rated V _{out} , or 0~10 V to 10 V Accuracy: ± 1 % of rated V _{out} 1 % to 100%, 0 V to 5 V Accuracy: ± 1 % of rated V _{out} , or 0 V to 10 V Accuracy: ± 1 % of rated V _{out} 1 % to 100%, 0 V to 5 V Accuracy: ± 1 % of rated V _{out} , or 0 V to 10 V Accuracy: ± 1 % of rated V _{out} 1 % to 100%, 0 V to 5 V Accuracy: ± 1 % of rated V _{out} , or 0 V to 10 V Accuracy: ± 1 % of maximum R _{out} 2 % to 100%, 0 V to 5 V Accuracy: ± 1 % of maximum R _{out} , or 0 V to 10 V Accuracy: ± 1 % of maximum R _{out} 2 % to 100%, 0 V to 5 V Accuracy: ± 1 % of maximum R _{out} , or 0 V to 10 V Accuracy: ± 1 % of maximum R _{out} 3 % to 100%, 0 V to 5 V or 0 V to 10 V. Accuracy: ± 1 % 4 % of voltage reference for 0 V to 5 V or 0 V to 10 V. Accuracy: ± 1 % 5 % of voltage reference for 0 V to 5 V or 0 V to 10 V. 5 % or 0 V to 10 V. 5 % or 0 V to 10 V. 6 % or 0 V to 10 V. 6 % or 0 V to 10 V. 6 % or 0 V to 10 V. 7 **Unrace first for 0 V to 5 V or 0 V to 10 V. 8 **Auracy first for 0 V to 5 V or 0 V to 10 V. 9 **Contract for 0 V to 5 V or 0 V to 10 V. 1 **Contract for 0 V to 5 V or 0 V to 10 V. 1 **Contract for 0 V to 5 V or 0 V to 10 V. 1 **Contract for 0 V to 5 V or 0 V to 10 V. 1 **Contract for 0 V to 5 V or 0 V to 10 V. 2 **Contract for 0 V to 5 V or 0 V to 10 V. 2 **Contract for 0 V to 5 V or 0 V to 10 V. 2 **Contract for 0 V to 5 V or 0 V to 10 V. 3 **Contract for 0 V to 10 V. 4 **Contract for 0 V to 5 V or 0 V to 10 V. 4 **Contract for 0 V to 5 V or 0 V to 10 V. 5 **Contract for 0 V to 10 V. 5 **Contract for 0 V to 10 V. 6 **Contract for 0 V to 10 V. 6 **Contract for 0 V to 10 V. 6 **Contract for 0 V to 10 V. 7 **Contract for 0 V to 10 V. 7 **Contract for 0 V to 10 V. 8 **Contract for 0 V to 10 V. 8 **Contract for 0 V to 10 V. 8 **Contract for 0 V to 10 V to 0 V to 10 V. 9 **Contract for 0 V to 10 V to 0 V to 10 V. 9 **Contract for 0 V to 10 V to 10 | | 1 | l . | · |
| lout voltage programming 0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of rated load, or 0 V to 10 V Accuracy: ± 1 % of rated load, or 0 V to 10 V Accuracy: ± 1 % of rated load, or 0 V to 10 V Accuracy: ± 1 % of rated Post Internal resistance voltage programming 0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of rated Post Internal resistance voltage programming 0 % to 100 %, 0 V to 5 V Accuracy: ± 1 % of rated Post Internal resistance voltage monitor 0 V to 5 V or 0 V to 10 V, Accuracy: ± 1 % of maximum Resistance voltage voltage monitor 0 V to 5 V or 0 V to 10 V, Accuracy: ± 1 %. Reference voltage 0 V to 5 V or 0 V to 10 V, Accuracy: ± 1 %. Voltage reference for 0 V to 5 V or 0 V to 10 V. Alarm Input 1 Turn off the PHU outlif with a High (4.5 V to 5 V) Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HiGH (4.5 V to 5 V) or open-circuit. Alarm clear control Clear alarms with a High (4.5 V to 5 V) Environmental Conditions Operating temperature 0 0 °C to 50 °C Storage temperature 0 0 °C to 50 °C Storage temperature 0 0 °C to 50 °C Storage temperature 0 0 °C to 50 °C Maximum 2000 m Max | | | | 0 % to 100%, 0 V to 5 V Accuracy: ± 1 % of rated V _{cut} , or 0~10 V Accuracy: ± 1 % of rated V _{cut} |
| Pout voltage programming 0 % to 100 %, 0 V to 5 V Accuracy; ± 1 % of rated P _{out} or 0 V to 10 V Accuracy; ± 1 % of rated P _{out} 1 % to 100 %, 0 V to 5 V Accuracy; ± 1 % of maximum R _{et} , or 0 V to 10 V Accuracy; ± 1 % of maximum R _{et} 2 0 V to 5 V or 0 V to 10 V, Accuracy; ± 1 %. 2 0 V to 5 V or 0 V to 10 V, Accuracy; ± 1 %. 2 0 V to 5 V or 0 V to 10 V, Accuracy; ± 1 %. 3 0 V to 5 V or 0 V to 10 V, Accuracy; ± 1 %. 3 0 V to 5 V or 0 V to 10 V, Accuracy; ± 1 %. 4 2 Voltage enference for 0 V to 5 V or 0 V to 10 V. 4 3 Airm liput 1 2 Possible logic selections: 1 2 Turn off the PHU output with a High (4.5 V to 5 V) 2 Possible logic selections: 1 2 Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or spendicuit. 4 Airm clear control 2 Clear alarms with a High (4.5 V to 5 V) 2 CVIC/CIP/ALM/PWR ON/OUT ON indicator 3 Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA. 4 Environmental Conditions 4 O C to 50 °C 5 Operating humidity 4 O S to 85 % RH; No condensation 5 Operating humidity 5 One Res; No condensation 5 Altitude 5 Maximum 2000 m 5 Altitude 6 Maximum 2000 m 6 Altitude 7 Maximum 2000 m 7 Altitude 8 Maximum 2000 m 7 Altitude 8 Maximum 2000 m 7 Altitude 8 Maximum 2000 m 8 Altitude 8 Maximum 2000 m 8 Altitude 9 O S RH or less; No condensation 1 Altitude 1 Maximum 2000 m 1 Altitude 2 Or or less than 40 kg 1 Dimensions (W+H×D) 2 Or or less than 40 kg 2 Or or less than 40 kg 3 Or or less than 40 kg 4 Dimensions (W+H×D) 4 Altitude 4 Complies with the European EMC directive 89/336/EEC for Class A test and measurement products. 5 Or or polies with the European EMC directive 89/336/EEC for Class A test and measurement products. 5 Or or polies with the European Low Voltage Directive 73/23/EEC and carr | | | | |
| Internal resistance voltage programming 0 % to 100 %, 0 V to 5 V Accuracy; ± 1 % of maximum R _{est} or 0 V to 10 V Accuracy; ± 1 % of maximum R _{est} Output voltage monitor 0 V to 5 V or 0 V to 10 V, Accuracy; ± 1 %. 0 V to 5 V or 0 V to 10 V, Accuracy; ± 1 %. 0 V to 5 V or 0 V to 10 V, Accuracy; ± 1 %. 0 V to 5 V or 0 V to 10 V, Accuracy; ± 1 %. 0 V to 5 V or 0 V to 10 V, Occuracy; ± 1 %. 0 V to 5 V or 0 V to 10 V, Occuracy; ± 1 %. 0 V to 5 V or 0 V to 10 V, Occuracy; ± 1 %. 1 Voltage reference for 0 V to 5 V or 0 V to 10 V. 1 Variant fitting the PHU output with a High (4.5 V to 5 V) 1 Possible logic selections: 1 Turn off the PHU output with a High (4.5 V to 5 V) 1 Possible logic selections: 1 Turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. 2 Victor(CP)ALMPWR ON/OUT ON indicator 2 Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA. 2 Environmental Conditions 2 Operating humidity 3 O *C to 50 *C 3 Operating humidity 4 O *C to 50 *C 3 Storage temperature 5 O *C to 50 *C 4 Storage humidity 5 O *S to 85 % RH; No condensation 6 Maximum 2000 m 6 General Specifications 4 Weight 5 Maximum 2000 m 6 Maximum 2000 m 7 Occopiles with the European EMC directive 89/38/EEC for Class A test and measurement products. 8 Sefety 9 Occopiles with the European EMC directive 89/38/EEC for Class A test and measurement products. 9 Occopiles with the European EMC directive 80 Poly 23/25/EC and carries the CE-marking. 9 Occopiles with the European EMC directive 80 Poly 23/25/EC and carries the CE-marking. | | | | |
| Output voltage monitor Output current monitor Output on/off control Output on/o | | | | |
| Output current monitor Reference voltage O V to 5 V or 0 to 10 V, Accuracy: ± 1 %. Voltage reference for 0 V to 5 V or 0 V to 10 V. Alarm liput Possible logic selections: Turn of the PHU output with a High (4.5 V to 5 V) Possible logic selections: Turn be output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Alarm clear control Circuit. Alarm clear control Circuit. Alarm Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA. Environmental Conditions Operaing temperature O ° C to 50 ° C Operating humidity O ° C to 50 ° C O | | | | · |
| Reference voltage Voltage reference for 0 V to 5 V or 0 V to 10 V. Alarm Input Turn off the PHU output with a High (4.5 V to 5 V) Possible logic selections: Turn the pHU output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Alarm clear control CVCCC/PALM/PWR ON/OUT ON indicator Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA. Environmental Conditions Operaing temperature Operaing temperature Operaing humidity Operaing humid | | | | - |
| Alarm Input Turn off the PHU output with a High (4.5 V to 5 V) Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Alarm clear control Civc/C/C/ALMPWR ON/OUT ON indicator Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA. Environmental Conditions Operaing temperature O ° C to 50 ° C Storage temperature O ° C to 50 ° C Storage temperature O ° C to 50 ° C Storage humidity O ° S to 85 % RH; No condensation Altitude Maximum 2000 m General Specifications Weight main unit only kg Less than 40 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan EMC Compiles with the European EMC directive 89/336/EEC for Class A test and measurement products. Safety Withstand voltage Withstand voltage | | | | - |
| Output on/off control Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open-circuit. Alarm clear control Ciear alarms with a High (4.5 V to 5 V) CV/CC/CP/ALM/PWR ON/OUT ON indicator Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA. Environmental Conditions Operating temperature 0 °C to 50 °C Operating temperature 1 22 °C to 70 °C Operating humidity 20 % to 85 % RH; No condensation Storage humidity 40 Maximum 2000 m General Specifications Weight main unit only Maximum 2000 m Maximum 2000 m 442 mm × 130 mm × 675 mm Cooling EMC Complies with the European EMC directive 89/336/EEC for Class A test and measurement products. Safety Withstand voltage Withstand voltage Chassis and output terminal; chassis and AC input; AC input and output terminal: AC 1500 V or DC 2130 V 1 minute | | | | - |
| CVICC/CP/ALM/PWR ON/OUT ON indicator Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA. Environmental Conditions Operaing temperature Operating humidity Operating humidity Storage humidity Other of the service of the ser | | | | Possible logic selections: Turn the output on using a LOW (0 V to 0.5 V) or short-circuit, turn the output off using a HIGH (4.5 V to 5 V) or open- |
| Environmental Conditions Operaing temperature Operating humidity | Alarm clear control | | | Clear alarms with a High (4.5V to 5V) |
| Operaing temperature O "C to 50 "C Storage temperature O "C to 50 "C Storage temperature Operating humidity 20 % to 85 % RH; No condensation Storage humidity Maximum 2000 m General Specifications Weight main unit only kg Less than 40 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling EMC Complies with the European EMC directive 89/336/EEC for Class A test and measurement products. Safety Withstand voltage Withstand voltage Withstand voltage Chassis and output terminal; chassis and AC input; AC input and output terminal: AC 1500 V or DC 2130 V 1 minute | CV/CC/CP/ALM/PWR ON/OUT ON indicator | | | Photocoupler open collector output; Maximum voltage 30 V, maximum sink current 8 mA. |
| Storage temperature | Environmental Conditions | | | |
| Storage temperature | Operaing temperature | | | 0 °C to 50 °C |
| Storage humidity 90 % RH or less; No condensation Altitude Maximum 2000 m General Specifications Weight main unit only kg Less than 40 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan EMC Complies with the European EMC directive 89/336/EEC for Class A test and measurement products. Safety Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking. Withstand voltage Chassis and output terminal; chassis and AC input; AC input and output terminal: AC 1500 V or DC 2130 V 1 minute | | | İ | -25 °C to 70 °C |
| Storage humidity Altitude Maximum 2000 m General Specifications Weight main unit only kg Less than 40 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan EMC Complies with the European EMC directive 89/336/EEC for Class A test and measurement products. Safety Withstand voltage Withstand voltage Chassis and output terminal; chassis and AC input; AC input and output terminal: AC 1500 V or DC 2130 V 1 minute | Operating humidity | | | 20 % to 85 % RH; No condensation |
| Altitude Maximum 2000 m General Specifications Weight main unit only kg Less than 40 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan EMC Complies with the European EMC directive 89/336/EEC for Class A test and measurement products. Safety Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking. Withstand voltage Chassis and output terminal; chassis and AC input; AC input and output terminal: AC 1500 V or DC 2130 V 1 minute | | | | 90 % RH or less; No condensation |
| Weight main unit only kg Less than 40 kg Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan EMC Complies with the European EMC directive 89/336/EEC for Class A test and measurement products. Safety Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking. Withstand voltage Chassis and output terminal; chassis and AC input; AC input and output terminal: AC 1500 V or DC 2130 V 1 minute | | | | Maximum 2000 m |
| Dimensions (W×H×D) mm 442 mm × 130 mm × 675 mm Cooling Forced air cooling by internal fan EMC Complies with the European EMC directive 89/336/EEC for Class A test and measurement products. Safety Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking. Withstand voltage Chassis and output terminal; chassis and AC input; AC input and output terminal: AC 1500 V or DC 2130 V 1 minute | General Specifications | | | |
| Cooling Forced air cooling by internal fan EMC Complies with the European EMC directive 89/336/EEC for Class A test and measurement products. Safety Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking. Withstand voltage Chassis and output terminal; chassis and AC input; AC input and output terminal: AC 1500 V or DC 2130 V 1 minute | Weight | main unit only | kg | Less than 40 kg |
| EMC Complies with the European EMC directive 89/336/EEC for Class A test and measurement products. Safety Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking. Withstand voltage Chassis and output terminal; chassis and AC input; AC input and output terminal: AC 1500 V or DC 2130 V 1 minute | Dimensions (W×H×D) | | mm | 442 mm × 130 mm × 675 mm |
| Safety Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking. Withstand voltage Chassis and output terminal; chassis and AC input; AC input and output terminal: AC 1500 V or DC 2130 V 1 minute | Cooling | | | Forced air cooling by internal fan |
| Withstand voltage Chassis and output terminal; chassis and AC input; AC input and output terminal: AC 1500 V or DC 2130 V 1 minute | EMC | | | Complies with the European EMC directive 89/336/EEC for Class A test and measurement products. |
| | Safety | | | Complies with the European Low Voltage Directive 73/23/EEC and carries the CE-marking. |
| Insulation resistance Chassis and output terminal; chassis and AC input; AC input and output terminal: 100 MΩ or more (DC 500 V) | Withstand voltage | | İ | Chassis and output terminal; chassis and AC input; AC input and output terminal: AC 1500 V or DC 2130 V 1 minute |
| | Insulation resistance | | | Chassis and output terminal; chassis and AC input; AC input and output terminal: 100 MΩ or more (DC 500 V) |

- Notes:

 *1 Minimum voltage is guaranteed to maximum 0.2 % of the rated output voltage.

 *2 Minimum current is guaranteed to maximum 0.4 % of the rated output current.

 *3 At 180 Vac to 265 Vac or 342 Vac to 528 Vac, constant load.

 *4 From No-load to Full-load, constant input voltage. Measured at the sensing point in Remote Sense.

 *5 For 80 V, 200 V models: Measure with JEITA RC-9131B (1:1) probe. For 500 V, 750 V, 1000 V and 1500 V models: Measured with (100:1) probe.

 *6 Measurement frequency bandwidth is 10 Hz to 20 MHz.

 *7 Measurement frequency bandwidth is 5 Hz to 1 MHz.

 *8 From 10 % to 90 % of rated output voltage, with rated resistive load.

 *9 From 90 % to 10 % of rated output voltage, with rated resistive load.

 *10 Time for output voltage to recover within 1 % of its rated output for a load change from 10 % to 90 % of its rated output current.

 Voltage set point from 10 % to 100 % of rated output.

 *11 For load voltage change, equal to the unit voltage rating, constant input voltage.

 *12 The ripple is measured at 20 % to 100 % output voltage and full output current.

 *13 For output power change from 10 % to 90 %, constant input voltage.

 *14 At rated output power.