

# VOLTCRAFT

## VOLTCRAFT - RELIABLE AND PRECISE. SINCE 1982.

For more than 40 years, our product range has been dynamically adapting to the constant changes in the industry. We commit to offering first-class quality to our customers while delivering an excellent cost-performance ratio. This philosophy remains the cornerstone of Voltcraft's success.

## DSP SERIES 500W SINGLE CHANNEL OUTPUT DC POWER SUPPLY



Item no. 3368776 (DSP-8020)

Item no. 3451553 (DSP-15010)

Item no. 3451554 (DSP-30005)



TECHNICAL DATA

| Category                                  |                                                                                                                                                                                | DSP-8020<br>Item no. 3368776                 | DSP-15010<br>Item no. 3451553                | DSP-30005<br>Item no. 3451554                |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|
| Input characteristics                     | Supply voltage                                                                                                                                                                 | 100 - 240 V/AC                               | 100 - 240 V/AC                               | 100 - 240 V/AC                               |
|                                           | Input frequency                                                                                                                                                                | 45 - 65 Hz                                   | 45 - 65 Hz                                   | 45 - 65 Hz                                   |
|                                           | Input fuse                                                                                                                                                                     | 250 V, F10A                                  | 250 V, F10A                                  | 250 V/AC (F10A)                              |
| Rated output                              | Voltage                                                                                                                                                                        | 0 - 80 V                                     | 0 - 150 V                                    | 0 - 300 V                                    |
|                                           | Current                                                                                                                                                                        | 0 - 20 A                                     | 0 - 10 A                                     | 0 - 5 A                                      |
|                                           | Power                                                                                                                                                                          | 500 W                                        | 500 W                                        | 500 W                                        |
| Regulation (CV)                           | Load                                                                                                                                                                           | ≤20 mV                                       | ≤20 mV                                       | ≤30 mV                                       |
|                                           | Line                                                                                                                                                                           | ≤20 mV                                       | ≤20 mV                                       | ≤30 mV                                       |
| Regulation (CC)                           | Load                                                                                                                                                                           | ≤10 mA                                       | ≤10 mA                                       | ≤10 mA                                       |
|                                           | Line                                                                                                                                                                           | ≤10 mA                                       | ≤10 mA                                       | ≤10 mA                                       |
| Ripple & noise                            | Ripple & Noise (Noise bandwidth 20MHz, ripple bandwidth 1MHz, connect 10uF electrolytic capacitor in parallel with 0.1uF ceramic capacitor to the output terminal for testing) |                                              |                                              |                                              |
|                                           | Voltage (Vp-p)                                                                                                                                                                 | ≤50 mVp-p                                    | ≤150 mVp-p                                   | ≤300 mVp-p                                   |
|                                           | Current (rms)                                                                                                                                                                  | ≤20 mA                                       | ≤30 mA                                       | ≤30 mA                                       |
| Setting resolution                        | Voltage                                                                                                                                                                        | 10 mV                                        | 10 mV                                        | 10 mV                                        |
|                                           | Current                                                                                                                                                                        | 1 mA                                         | 1 mA                                         | 1 mA                                         |
| Readback resolution                       | Voltage                                                                                                                                                                        | 10 mV                                        | 10 mV                                        | 10 mV                                        |
|                                           | Current                                                                                                                                                                        | 1 mA                                         | 1 mA                                         | 1 mA                                         |
| Setting accuracy                          | Voltage                                                                                                                                                                        | ≤0.05%±20 mV                                 | ≤0.05%±20 mV                                 | ≤0.05%±200 mV                                |
|                                           | Current                                                                                                                                                                        | ≤0.05%±20 mA                                 | ≤0.05%±20 mA                                 | ≤0.05%±20 mA                                 |
| Readback accuracy                         | Voltage                                                                                                                                                                        | ≤0.05%±20 mV                                 | ≤0.05%±20 mV                                 | ≤0.05%±200 mV                                |
|                                           | Current                                                                                                                                                                        | ≤0.05%±20 mA                                 | ≤0.05%±20 mA                                 | ≤0.05%±20 mA                                 |
| Response time                             | Transient recovery time<br>(10 - 90 % rated load)                                                                                                                              | ≤5.0 ms                                      | ≤5.0 ms                                      | ≤5.0 ms                                      |
| Protective function                       | OVP                                                                                                                                                                            | 0 - 85 V/DC                                  | 0 - 155 V/DC                                 | 0 - 310 V/DC                                 |
|                                           | OCP                                                                                                                                                                            | 0 - 21 A                                     | 0 - 11 A                                     | 0 - 6 A                                      |
|                                           | OTP                                                                                                                                                                            | 85 °C                                        | 85 °C                                        | 85 °C                                        |
| Temperature coefficient of output         | Voltage                                                                                                                                                                        | 100 ppm/°C                                   | 100 ppm/°C                                   | 100 ppm/°C                                   |
|                                           | Current                                                                                                                                                                        | 200 ppm/°C                                   | 200 ppm/°C                                   | 200 ppm/°C                                   |
| Temperature coefficient of readback value | Voltage                                                                                                                                                                        | 100 ppm/°C                                   | 100 ppm/°C                                   | 100 ppm/°C                                   |
|                                           | Current                                                                                                                                                                        | 200 ppm/°C                                   | 200 ppm/°C                                   | 200 ppm/°C                                   |
| Display                                   | Display type                                                                                                                                                                   | 7.1 cm (2.8") color LCD display (IPS screen) | 7.1 cm (2.8") color LCD display (IPS screen) | 7.1 cm (2.8") color LCD display (IPS screen) |
|                                           | Resolution                                                                                                                                                                     | 240 × 320 pixels                             | 240 × 320 pixels                             | 240 × 320 pixels                             |
|                                           | Color                                                                                                                                                                          | 65536 color, TFT                             | 65536 color, TFT                             | 65536 color, TFT                             |
| Environment                               | Operating temperature                                                                                                                                                          | 0 to +40 °C                                  | 0 to +40 °C                                  | 0 to +40 °C                                  |
|                                           | Storage temperature                                                                                                                                                            | -20 to +60 °C                                | -20 to +60 °C                                | -20 to +60 °C                                |
|                                           | Operating humidity<br>(no condensation)                                                                                                                                        | 20 - 90 % RH                                 | 20 - 90 % RH                                 | 20 - 90 % RH                                 |
|                                           | Storage humidity<br>(no condensation)                                                                                                                                          | 20 - 90 % RH                                 | 20 - 90 % RH                                 | 20 - 90 % RH                                 |
|                                           | Height                                                                                                                                                                         | max. 2000 m                                  | max. 2000 m                                  | max. 2000 m                                  |

|       |                        |                                                     |                                                     |                                                     |
|-------|------------------------|-----------------------------------------------------|-----------------------------------------------------|-----------------------------------------------------|
|       | Cooling                | Fan cooling (temperature intelligent speed control) | Fan cooling (temperature intelligent speed control) | Fan cooling (temperature intelligent speed control) |
| Other | Communication port     | USB communication, compatible with SCPI             | USB communication, compatible with SCPI             | USB communication, compatible with SCPI             |
| Other | Dimensions (W x H x D) | 200 x 92 x 185 mm                                   | 200 x 92 x 185 mm                                   | 200 x 92 x 185 mm                                   |
| Other | Weight                 | approx. 1.5 kg                                      | approx. 1.6 kg                                      | approx. 1.6 kg                                      |

PACKAGE CONTENTS

Power cord // USB Cable // Fuse // Operating instructions // Safety hintsheet