DSR 400 Series

Dropout, Surge, Ripple Simulator and AC/DC Voltage Source

- Complete single-box solution for DO 160 Section 16 (115V, 14VDC, 28VDC) and MIL STD 704
- Includes library of 3000+ pre-entered Automotive and Aviation Standards' test routines
- Operate as a free-standing system using the included monitor, keyboard and mouse, or control via LAN
- Very easy to modify existing tests or build new test sequences
- Can function as a controller or node in a larger test system via built-in LAN and GPIO controls
- Models with 80A or 160A continuous output current available

Key Performance Capabilities:

4-Quadrant -- Can source and sink current

±400V -- Supply for 12V - 48V DC systems and 115V - 240V AC systems

50 kHz Sine -- DC ripple tests for many standards

3mΩ DC source impedance -- better than ISO 7637-2 requirements

Supports ground reference and supply offset testing required for ISO 16750-2 Sect. 4.8 and other similar standards

AE Techron's DSR 400 Series systems provide complete, single-box solutions for immunity testing. This includes a simple-to-use yet powerful standards waveform generator, an industry-standard arbitrary waveform generator, plus an industry-leading power supply technology. They come with an extensive library of tests for many automotive and aviation standards.

Both models of the DSR 400 Series are 4-quadrant, allowing them to source and sink current. The DSR Series has power in reserve; each model provides continuous DC power as rated, and is able to provide 5X rated power for in-rush testing up to 200 ms, as is required in DO 160 Section 16.

Pre-entered tests for the following standards:

Industry Standards

ANSI ASAE EP455 (Feb03)
IEC 6100-4-16
IEC 6100-4-19
ISO 7637-2 (2014) (E)
ISO 16750-2 (2023)
ISO 21780:2020
ISO 21848
JASO D 001-94 (1994-03-31)
MIL STD 461G
MIL STD 704F
SAE J1113-2 JUL2004
SAE J1113-11-202303 MAR2023
SAE J2139-201412 DEC2014
SAE J2628-201806 JUN2018

Manufacturer Specific Standards

Airbus ABD0100.1.8 Issue E
Airbus ABD0100.1.8.1 Issue C
Audi I EE-32 (2006-06)
BMW GS 95003-2 (2010-01)
BMW GS 95024-2-1 (2010-01)
BMW GS 95024-2-2 (2011-01)
Boeing-D6-16050-5-C
Boeing-D6-36440E
Case New Holland ENS0310 (12-2-2010)
Chrysler CS-11809 (2009-05-29)
Chrysler CS-11979 (2010-04-13)
Claas CN 05 0215 (2004-12)
Cummins 14269 (06201-028)
Cummins 14387 (102020-119)
DAF BSL-003 (1998-12)
DAF BSL-006 (2009-04)
Daimler Chrysler DC-10842 (2003-12)
Daimler Chrysler PF-9326 Change D
DO160G
Fiat 9-90110 Issue 13 (2007-03)
Ford CS-2009.1
Ford FMC1278
General Motors GMW3172_H (July 2010)
General Motors GMW3172_I
Harley-Davidson EG-812-22613
Honda 30AA
Honda 7794Z-SAAA-000 (28.12.2004)
Hyundai ES 39110-00 (2005-08)
Hyundai ES 95400-10 (2007-11-14)
Hyundai ES 96100-02 (2006-11-16)
JLR-EMC-CS v1 Amendment 4 (Nov 2013)
Mazda MES PW67600 (1995-07)
MIL STD 461G
MIL-HDBK-704-8
Mitsubishi ES-X82010 Rev Q (2007-01)
Mitsubishi ES X82115 Rev C (2009-03)
Nissan 28400NDS02 Rev 3 (1999-07)
Nissan 28400NDS03 Rev 3 (2005-08)
Nissan 28401NDS02 Rev 4 (2008-08)
Toyota TSC70212G (2007-06)
Volkswagen VW 80101 (2009-03)
Volkswagen VW 80000 (2009-10)
Volkswagon VW TL 820 66

DSR 400-80

Voltage Output Range: –400V to +400V Max
Output Current: 0A to 80A continuous
Peak Current: 150A for 200 ms
Bandwidth (-3dB): DC to 50 kHz
Source Impedance: 3 mΩ + 3 µH
Supply Voltage: Single-phase 208V ±10%, 30A, 50/60 Hz; 230V/240V ±10%, 30A version available
Dimensions (HxWxD): 34.55 x 22.22 x 30.29 inches (87.76 x 56.44 x 76.94 cm)
Weight: Approximately 225 lbs. (102 kg)

DSR 400-160

Voltage Output Range: –400V to +400V
Output Current: 0A to 160A continuous
Peak Current: 300A for 200 ms
Bandwidth (-3dB): DC to 50 kHz
Source Impedance: 3 mΩ + 3 µH
Supply Voltage: 3-phase 208V ±10%, 30A, 50/60 Hz; 400V ±10%, 30A version available
Dimensions (HxWxD): 48.55 x 22.22 x 30.29 inches (123.32 x 56.44 x 76.94 cm)
Weight: Approximately 325 lbs. (147 kg)

Common Data (all models)

Operation: 4-quadrant, bi-polar operation
Output Rise Time: <30 µS
Remote Control: GPIO, LAN
Cooling: Internal forced-air fans
Protection: Over/under voltage, over current, over temperature
Trigger: Automatic repeat, manual trigger, external trigger via GPIO or LAN
Input, Signal In: BNC connector; **LAN:** Ethernet connector
Output, DUT Supply +/-: High-current connectors; **Signal Output:** BNC connector; **LAN:** Ethernet connector
Waveforms: Sine wave sweep, ripple (cranking), DC source, triangle wave, square wave, sawtooth wave
Control Functions: Trigger, fixed loop, variable loop, template playback, GPIO output, LAN output
Operating Environment,
Temperature: 10°C to 50°C (50°F to 122°F), Maximum Output Power de-rated above 30°C (86°F).
Humidity: 70% or less, non-condensing
Atmospheric Pressure: 86 kPa (860 mbar) to 106 kPa (1,060 mbar)

CE 230V & 400V versions of this product bear the CE mark

AE Techron Sales Representative