

Four-quadrant Power Voltage Variation Simulator-Battery Simulator and DC Voltage Source APSxxD series

Datasheet



In Compliance with

- | | |
|------------------------------|------------------------------|
| > ISO 7637-2 | > Peugeot B21 7110 July 2005 |
| > ISO 16750-2 | > Ford EMC-CS-2009rev1 |
| > BMW 600 13.0 (T1) | > Ford ES-XW7T-1A278-AC |
| > BMW 600 13.0 (T2) | Oct 2003 |
| > BMW GS 95002 (2010) | > Volvo STD 515-0003 2008 |
| > BMW GS 95003-2 | > SMTC 3800001 2014 |
| > BMW GS 95024-2-1 2010 | > MBN 10284-4 2011 |
| > GB 28046.2 | > MBN 10 284-2 2008 |
| > GMW3172 July 2010 | > Mazda MES PW 67600 |
| > GMW3172 June 2015 | > JEELY J7110982A 2016 |
| > VW TL82066 2006-11 | > QFPT2800001 2011 |
| > VW 80000 2013-06 | > FIAT 7-Z0441 |
| > Peugeot B21 7110 July 2008 | > FIAT 7-Z0444 April 2008 |

Introduction

The APS xxD series are equipped with a four-quadrant bipolar amplifier, which is capable of generating voltage dips, short interruptions and multiple voltage variations phenomenon and simulating various voltage variation phenomenon tested and obtained on wiring harness. It can be used as battery supply simulation and DC voltage source. During testing in test lab, APS xxD series can replace vehicle battery. Pulse 2b, Pulse 4, sine wave noise and other complicated voltage variation tests can be conducted by APS xxD series simulator, which is greatly suitable for conductive transient tests in accordance with standard ISO 7637/16750. It can simulate multiple battery supply waveforms as per international standards and multiple automotive manufacture standards. Meanwhile, as a powerful DC source, it can supply power for DUT during automotive transient pulse test, which covers all four supply voltage categories (48 V, 42 V, 24 V and 12 V).

Features

- > 5.7" color touch screen
- > Four-quadrant bipolar amplifier
- > Automatic voltage drop compensation
- > Built-in waveform generating modules
- > Testing voltage up to 80 V
- > Powerful DC voltage source
- > Bandwidth up to 300 kHz
- > Amplification of external simulated input waveform
- > Testing current up to 100 A
- > High impulse current capacity
- > Low output impedance
- > Conform to voltage variation testing level requirement as per ISO 16750-2 and Pulse 4 and P 2b testing requirement as per ISO 7637-2.
- > Pre-programmed test routines to simulate various power supply waveforms
- > Simulate various power supply waveforms, e.g. superimposed noise
- > Ethernet and RJ45 port for PC remote control and test report documentation and print

Application Areas

- > Automotive
- > Military
- > Avionics
- > Communication

General Data

| | |
|------------------------------------|---|
| Output Voltage | Max. 80 V |
| Output Current | Max. 100 A |
| Analog Signal Input | BNC |
| Sense Signal Input | BNC |
| Source impedance | 10 mΩ ~ 200 mΩ or without inner impedance |
| Voltage Compensation Resolution | ±0.1 V |
| Max. Compensated Voltage | 4 V |
| Voltage Deviation | > 90%, recovery time < 10 μs |
| Voltage Fluctuation | Ur < 0.2V P-P, min. frequency: 400 Hz |
| Rise Time | < 3 μs |
| Sine Signal Output | Frequency up to 300 kHz (subject to Vpp and output current of waveform) |
| External Signal Input | 0 ~ ±10 V (according to actual device configuration) |
| Output | DUT supply: high current connector |
| Serial Port | LAN Ethernet and RJ45 |
| Enlarging Scale of External Signal | 1:10 |
| Supply voltage | AC 220 V, ±10%, 45 Hz -65 Hz |
| Ambient Temperature | 15 °C ~ 35 °C |
| Dimension | APS 60xD:19"/8U APS 80xD:22U |
| Weight | Approx. 40 kg |

Accessories

Test Cable, Power Wire, Grounded Wire, Fuse and User Manual

Options

1. PC control software (AUTO Lab)

Support windows XP and Windows 7; easy to use; beautiful and intuitive UI; Users can complete customized test sequence easily with various operation functions and standard library.

Any other waveforms except for standard library can be self-defined by users.

Capable of Recognizing automatically or manually the testing devices connected with AUTO Lab and configured automatically.

Test report function based on template helps user to generate testing report flexibly.

2. Output voltage 40 V can be customized.

3. Other negative voltage levels (except for D, E, F, G, H, I) are available on customers' request.

Technical Data

APS 60E10D+DCP 60E10D

| | |
|-----------------|---------------------------|
| Output Voltage | -15 V - +60 V |
| Output Current | Max. 10 A, continuous |
| Peak Current | 20 A for 200 ms |
| Frequency Range | DC - 150 kHz, full signal |

APS 80E10D

| | |
|-----------------|---------------------------|
| Output Voltage | -15 V - +80 V |
| Output Current | Max. 10 A, continuous |
| Peak Current | 20 A for 200 ms |
| Frequency Range | DC - 150 kHz, full signal |

APS 60F20D+DCP 60F20D

| | |
|-----------------|---------------------------|
| Output Voltage | -20 V - +60 V |
| Output Current | Max. 20 A, continuous |
| Peak Current | 40 A for 200 ms |
| Frequency Range | DC - 150 kHz, full signal |

APS 80F20D

| | |
|-----------------|---------------------------|
| Output Voltage | -20 V - +80 V |
| Output Current | Max. 20 A, continuous |
| Peak Current | 40 A for 200 ms |
| Frequency Range | DC - 150 kHz, full signal |

APS 60E30D+DCP 60E30D

| | |
|-----------------|---------------------------|
| Output Voltage | -15 V - +60 V |
| Output Current | Max. 30 A, continuous |
| Peak Current | 60 A for 200 ms |
| Frequency Range | DC - 150 kHz, full signal |

APS 80E30D

| | |
|-----------------|---------------------------|
| Output Voltage | -15 V - +80 V |
| Output Current | Max. 30 A, continuous |
| Peak Current | 60 A for 200 ms |
| Frequency Range | DC - 150 kHz, full signal |

APS 60F30D+DCP 60F30D (AC110V)

| | |
|-----------------|---------------------------|
| Output Voltage | -20 V - +60 V |
| Output Current | Max. 30 A, continuous |
| Peak Current | 60 A for 200 ms |
| Frequency Range | DC - 150 kHz, full signal |

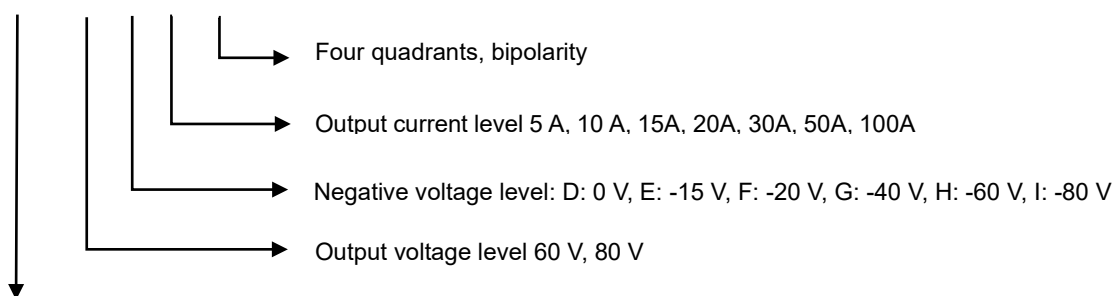
APS 80E50D

| | |
|-----------------|---------------------------|
| Output Voltage | -15 V - +80 V |
| Output Current | Max. 50 A, continuous |
| Peak Current | 100 A for 200 ms |
| Frequency Range | DC - 150 kHz, full signal |

| APS 80F100D | |
|-----------------|---------------------------|
| Output Voltage | -20 V - +80 V |
| Output Current | Max. 100 A, continuous |
| Peak Current | 200 A for 200 ms |
| Frequency Range | DC - 150 kHz, full signal |

Naming Rules:

APS 80 E 50 D



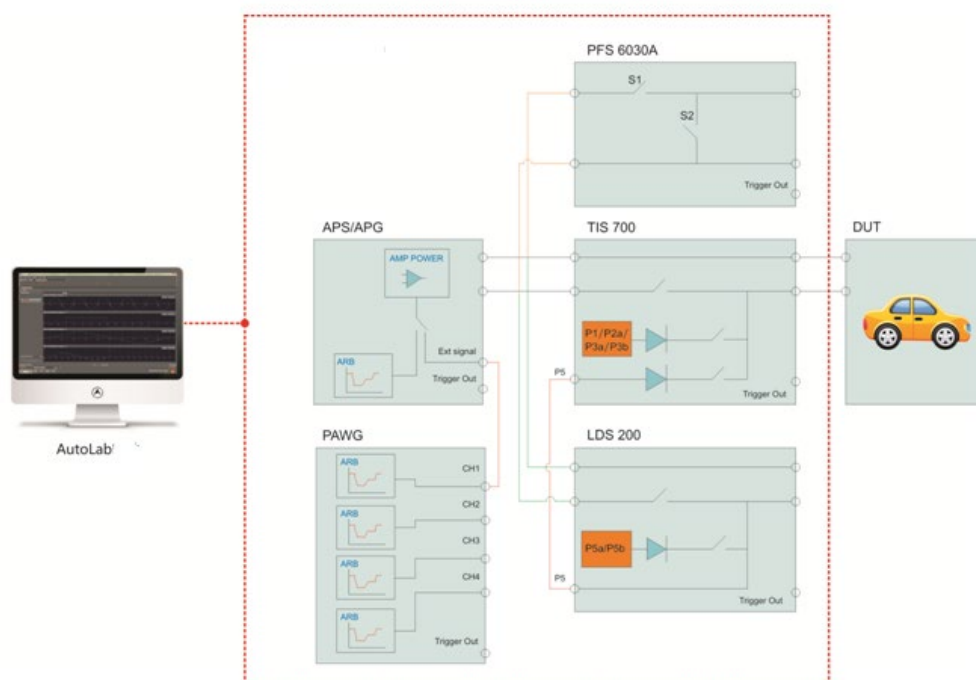
*) For some of the devices under test (e.g. motor equipment, exhaust fans, wipers, air conditioners, etc.) or DUTs with large capacitive storage accessories, there is a large amount of inrush current. This inrush current is 3-10 times of normal current or even greater. If customers can't decide inrush current value, our company's CTM series current test modules can be used to test the working current value, so that you can choose a more appropriate APS series of products.

**) APGxx series Unipolarity output voltage range of the APS is 0 to 60 V and the output current range is 0 to 400 A. The Max output frequency of sinusoidal signal is 30 kHz; Its power consumption is large enough to meet most of the test requirements

APSxx series Unipolarity output voltage range of the APS is 0 to 60 V and the output current range is 0 to 30 A. The Max output frequency of sinusoidal signal is 30 kHz;

APSxxD series is a four-quadrant power supply. The maximum output voltage of the product is 80 V. The product line meets the 48 V test system. The sinusoidal signal output frequency up to 300 kHz.

The test connection diagram:





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