PRODUCT DATASHEET

FMVSS305

Safely Measures High Voltages during EV & Hybrid Testing with Built-in Data Recorder

APPLICATIONS

- Automotive Safety
- EV / Hybrid Vehicles
- Aerospace Testing

Compact and flexible, the FMVSS305 test unit can be used independently with manually operated switches or integrated with SLICE or TDAS data acquisition systems using standard DTS communication and power interfaces with DataPRO Software.

The FMVSS305 is a high-voltage isolation measurement system for electric and hybrid vehicle testing. It provides a safe and reliable way to capture battery and drive system voltages up to ±1,200 volts. The unit is designed to be used standalone or seamlessly integrated into SLICE or TDAS data acquisition systems via DataPRO Software.

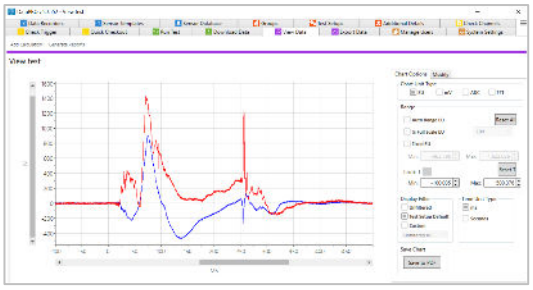
The standard 19-pin COMM interface includes Ethernet communication, start, event, and status signals. The FMVSS305 features manual resistance test switches, along with a straightforward connection to external voltmeters and pendants, making it ideal for a variety of high-energy test environments.

Features

- Durable, rugged, and reliable; factory tested to 100 g
- Fully isolated voltage monitoring outputs with 1,000:1 dividers
- Banana sockets and 10-pin 2B Lemo connectors to connect external voltage monitoring devices
- FMVSS305-compliant manually operated test switches
- 15-volt nominal input power via DTS standard 4-pin 2B Lemo
- DTS standard Comm/Control interface via 19-pin 2B Lemo
- Built-in SLICE6 data acquisition system records measurements during dynamic testing
- Internal super capacitor for short-term power backup
- LED status indicators for HV inputs, system power, and SLICE6
- Industry standard Ethernet communications 10/100BaseT/Tx
- Compatible with DTS standard SLICE PRO mounting plates

Software

DataPRO is a powerful set-up, control, and data viewing software. The intuitive user interface is designed to help test engineers create, control, and manage every aspect of a test. DataPRO makes it easy to access complete sensor and hardware details, plus share test information via standalone or centralized SQL databases. Key features include an integrated off-line test builder, advanced diagnostics tools, support for EQX, ISO MME and other data exchange file formats, multiple viewing options, and automatic report generation.



Specifications

PHYSICAL	
Size:	262 x 90 x 110 mm (10.32 x 3.54 x 4.33 in)
Weight:	2.7 kg (5.95 lb)
Mounting Method:	10 Integral threaded mounting holes M6 x 1 Threads (Use M6 x 10mm bolts)
Connectors:	LEMO, Amphenol, Banana

ENVIRONMENTAL	
Operating Temp.:	10-40°C (50-104°F)
Shock:	100 g peak, 12 msec half sine
Electrical Protection:	ESD (8kV)

MAIN POWER INPUT	
Connector:	LEMO 2B, 4 pin
Voltage Range:	12.5-16.9 VDC
Current:	1.0 amp (max)
Protection:	Reverse polarity; over- and undervoltage; overcurrent

INTERNAL POWER BACKUP	
Type:	Super Capacitor
Charge Time (max):	190 seconds
Backup Time (typical):	10 seconds

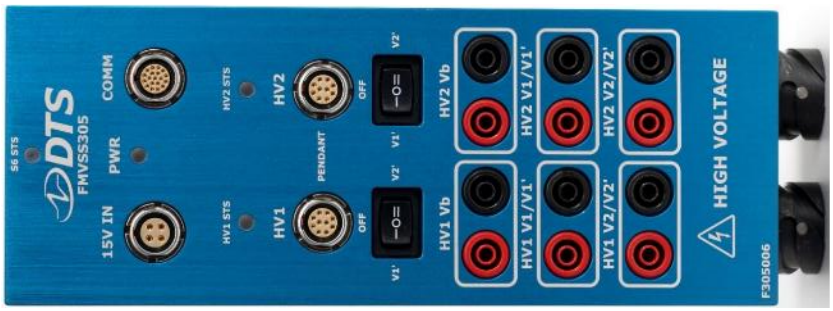
COMMUNICATION	
Connector:	LEMO 2B, DTS Standard “COM”, 19 pin
Event Input:	Isolated, contact closure.
Start Record Input:	0-5 V
Status Output Signal:	0-5 V, 20 mA
Communications:	Ethernet 10/100BaseT/Tx
Ethernet Isolation:	Transformer

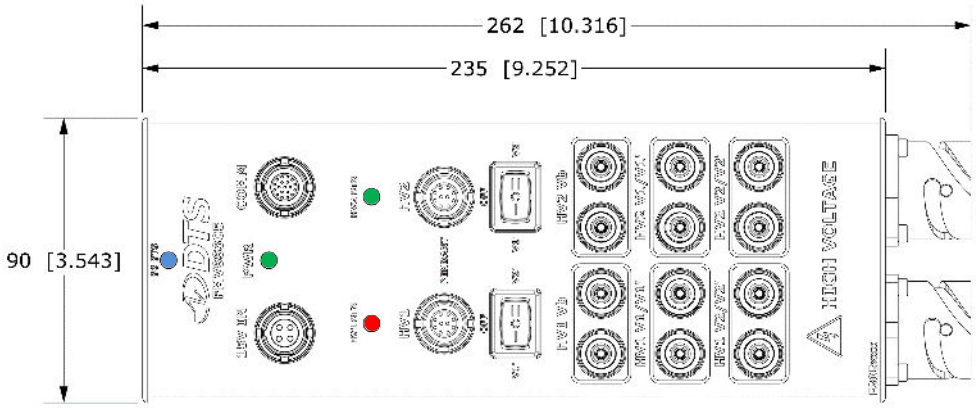
HIGH VOLTAGE INPUTS (2 PER UNIT)	
Input Connector:	Amphenol, 4-pin
Pin Functions:	HV+, HV-, Chassis (each connector)
Isolated Input Range:	±1,200 volts
Input Impedance:	14M Ohms (nominal)
Isolation Method:	Galvanic and Optical
Resistance Test Mode:	Activated by Rocker Switches (See User’s Manual for more information)

ISOLATED VOLTAGE MONITOR OUTPUTS	
Connectors:	Banana, Lemo 2B 10 pin
Scale Factor:	1.0mV per Volt (1,000 Vin = 1.00 Vout)
Output Impedance:	<10 Ohms
Accuracy:	±1%

INTERNAL DATA ACQUISITION	
Type:	DTS SLICE6
Number of Channels:	6
Compatibility:	Works with all DTS DAS families
Input Range:	±2.5 volts
Communications:	Ethernet 10/100BaseT/Tx
Control Software:	DataPRO
For More Information:	See SLICE6 Datasheet

STATUS INDICATORS	
Power:	Red, Yellow, Green
HV1 and HV2:	Red when input is >48V. Green when <40V.
SLICE6 (S6 STS):	Red, Green, Blue (See SLICE6 User’s Manual for more information)





The LED indicators make it easy to see when the system has sufficient power, whether high voltage is present, and the status of the built-in SLICE6 data acquisition system.

CONTACT US

Phone: +1 562 493 0158
Email: sales@dtsweb.com
Web: www.dtsweb.com

DTS
www.dtsweb.com