

## APPLICATIONS

- Automotive Safety
- EV / Hybrid Vehicles
- Aerospace Testing

## FMVSS305

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



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.

## Features

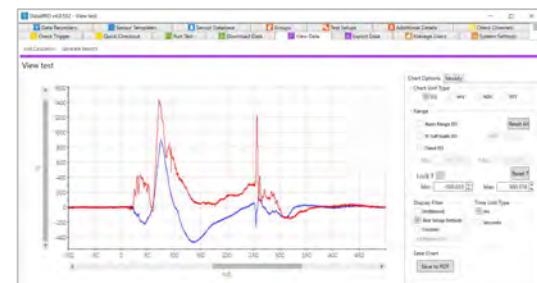
- Durable, rugged, and reliable; factory tested to 100 g
- Fully isolated voltage monitoring outputs with 1,000:1 dividers
- Banana sockets and 10-pin 2B Lemo connectors to connect external voltage monitoring devices
- FMVSS305-compliant manually operated test switches
- 15-volt nominal input power via 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

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  $\pm 1,200$  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.

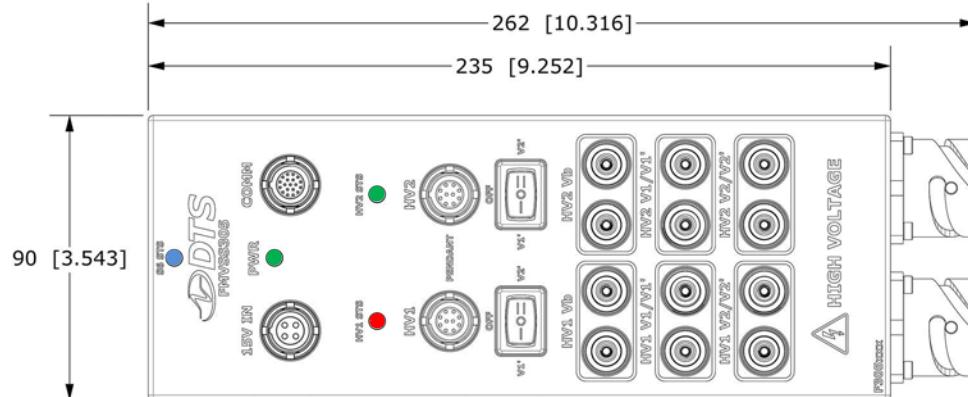
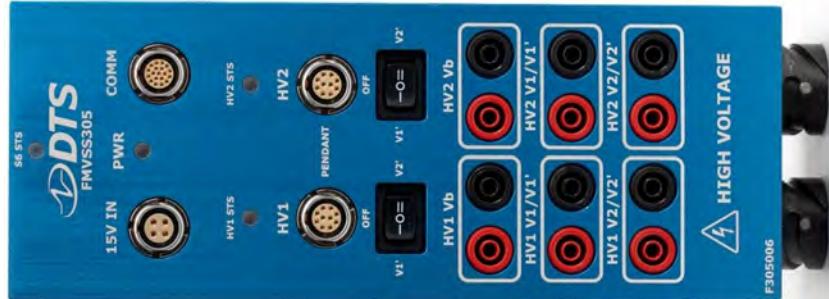
## Software

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		HIGH VOLTAGE INPUTS (2 PER UNIT)	
Size:	262 x 90 x 110 mm (10.32 x 3.54 x 4.33 in)	Input Connector:	Amphenol, 4-pin
Weight:	2.7 kg (5.95 lb)	Pin Functions:	HV+, HV-, Chassis (each connector)
Mounting Method:	10 Integral threaded mounting holes M6 x 1 Threads (Use M6 x 10mm bolts)	Isolated Input Range:	±1,200 volts
Connectors:	LEMO, Amphenol, Banana	Input Impedance:	14M Ohms (nominal)
ENVIRONMENTAL		Isolation Method:	Galvanic and Optical
Operating Temp.:	10-40°C (50-104°F)	Resistance Test Mode:	Activated by Rocker Switches (See User's Manual for more information)
Shock:	100 g peak, 12 msec half sine		
Electrical Protection:	ESD (8kV)		
MAIN POWER INPUT		ISOLATED VOLTAGE MONITOR OUTPUTS	
Connector:	LEMO 2B, 4 pin	Connectors:	Banana, Lemo 2B 10 pin
Voltage Range:	12.5-16.9 VDC	Scale Factor:	1.0mV per Volt (1,000 Vin = 1.00 Vout)
Current:	1.0 amp (max)	Output Impedance:	<10 Ohms
Protection:	Reverse polarity; over- and undervoltage; overcurrent	Accuracy:	±1%
INTERNAL POWER BACKUP		INTERNAL DATA ACQUISITION	
Type:	Super Capacitor	Type:	DTS SLICE6
Charge Time (max):	190 seconds	Number of Channels:	6
Backup Time (typical):	10 seconds	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
COMMUNICATION		STATUS INDICATORS	
Connector:	LEMO 2B, DTS Standard "COM", 19 pin	Power:	Red, Yellow, Green
Event Input:	Isolated, contact closure.	HV1 and HV2:	Red when input is >48V. Green when <40V.
Start Record Input:	0-5 V	SLICE6 (S6 STS):	Red, Green, Blue (See SLICE6 User's Manual for more information)
Status Output Signal:	0-5 V, 20 mA		
Communications:	Ethernet 10/100BaseT/Tx		
Ethernet Isolation:	Transformer		
CALIBRATION		CALIBRATION	
Calibration Supplied:	ISO/IEC 17025 (Accredited), Measurements traceable to SI	Calibration Supplied:	ISO/IEC 17025 (Accredited), Measurements traceable to SI
Service Options:	OEM, On-site, and Service Contracts available	Service Options:	OEM, On-site, and Service Contracts available



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.

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