

SMART THUMP ST16

Portable Cable Fault Location System



- Delivers 1500 J at 8/16 kV thump
- 16-kV DC high voltage proof test and insulation resistance test
- Easy Go automatic sequence to proof test, prelocate and pinpoint
- Interprets test results for user
- 5.7 in. transfective color display
- Safe OP check
- USB interface

DESCRIPTION

The SMART THUMP ST16 Portable Cable Fault Locating System provides safe, efficient and extremely easy-to-use solutions for quickly identifying, prelocating and pinpointing various types of cable faults over a variety of power cables. The ST16 is developed to meet the requirements for typical low- and medium-voltage distribution cable fault location markets.

Circuit parameters include:

- System voltage from 4 to 25 kV
- Insulation EPR or XLPE
- Typical conductor sizes between #2 and 500MCM (34mm² to 250 mm²)
- Typical circuit lengths from a few hundred feet (100 m) up to 3 miles (17,000 ft or 5,000 m)

Typical end users include: operations department of power utility companies, electrical departments within municipalities including street light maintenance, private networks operators, high voltage electrical contractors, service companies, port authorities, mining, airports, military bases, and petrochemical.

The ST16 unit incorporates HDW's "E-Tray" technology, a concept that has been already proven in other products (EZ-Thump, EZ-Restore Overdrive, and TDR T3090) and which will be carried forward into new Megger products in the future. The E-Tray adds the unique capability to access and operate every function through an innovative and intuitive user interface, without the need to make adjustments and the software suggesting the next logical step.

APPLICATIONS

The SMART THUMP ST16 represents a new generation of advanced underground cable fault locating systems that require less training than a traditional thumper-only system. It is the only fault locator with built-in intelligence to interpret the results of the initial test sequence. The "turn & click" rotary button operation lets the user automatically proof test, pre-locate, and pinpoint the fault from one convenient control console. No adjustments are required. The unit automatically sets the thump voltage to minimize the stress applied to the cable. The ST16 features an automatic safety check to protect the user from incorrect or fault ground connections (F-Ohm).

The heavy-duty wheels of the unit are ideal for use in rough terrain. The ST16 is capable of being permanently installed in a vehicle (truck mount version).

FEATURES AND BENEFITS

This fully integrated system can be operated from either its internal battery/inverter, external 12 VDC or 120/230 VAC. Additional features are:

- "Quick-Steps" is especially convenient where operators may not be called upon to use the equipment on a regular basis
- "Expert Mode" provides up to 20 individual TDR features to the experienced user for optimum fault locating results
- Custom configurable menus for the TDR function
- DC testing up to 16 kV with insulation resistance indication
- Rugged, powder coated IP54 designed enclosure
- Safe Op check protects user from incorrect or fault ground connections (F-Ohm)
- Easy Go operation eliminates lengthy training
- Quick access to all components in case of service

SPECIFICATIONS

Impulse Generator (Thumper)

Operating modes:

- Arc Reflection Method (ARM®)
- ICE surge pulse (optional in NAFTA)
- Direct surge
- DC-HV proof test and resistance readout (Ω)
- Burning / Fault Conditioning
- Sheath fault test & pinpointing / Secondary Fault Locating (optional)

TDR

TDR mode and all prelocation functions (25000 ft, optional 100,000 ft)

Energy Output

- Dual stage: 1500 J @ 8 kV and 16 kV
- Proof test: 0 to 16 kV continuous
- Burn current: 60 mA max

Key Features

- Single-shot thump in ARM
- Built-in inductive type ARM filter
- 8 second thump cycle @ max output
- Automatic cable and system discharging

Display Features

- Transflective TFT color display, sunlight proof
- 5.7 in., 640 x 470 pixel resolution

Power Options

- 120/230 V, 60/50 Hz ac operation
- 12 V deep cycle marine battery with internal dc charger/inverter (standard)

SMART Features

- Entirely automatic test sequences includes proof test, prelocate, and pinpoint
- Automatic interpretation regarding type of fault (i.e. open, burnt in the clear, short)
- Automatic adjustment of thump voltage
- Automatic alphanumeric display of cable and fault distance

USB

- Host interface 2.0
- For trace export

Mounting and Enclosure

- Mounted on heavy-duty hand cart
- Rain tight cable coated enclosure IP54 (open)
- (Also available as vehicle-mount unit)

Digital "Analog" Meter

- Displayed on LCD screen

Environmental

- Operating Temperature: -20C to +50C; -4F to +122F
- Storage Temperature: -25C to +65C; -13F to +149F

IP Rating

- IP54 (with top open)

Weight

- 318 lbs (134 kg) includes hand cart, battery and inverter & 50ft o 9F HV / Ground Cable

Dimensions

- 1.6 x 2.5 x 1.1 in. (500 x 750 x 350 mm) W x H x D

ORDERING INFORMATION						
MODEL	ST16	--	WW	XX	YY	Z
SELECT MOUNTING OPTION	Cart Mount		M1			
	Cart Mount AC Only		M2			
	Vehicle Mount with Inverter		M3			
	Vehicle Mount w/o Inverter/Battery		M4			
	Remote interface, available only with vehicle mount		M5			
SELECT CABLE LENGTH	12ft Custom Cable			12		
	25ft Custom Cable			25		
	50ft Standard Cable			50		
SELECT CABLE TERMINATION	14mm Male MC with Hotline Clamps (NAFTA)				T1	
	10mm Female MC with Battery Clamps (CEE, ROW & CSA)				T2	
	14mm Male MC with Vise Grips (NAFTA)				T3	
	No Termination (UK)				T4	
***SELECT SOFTWARE OPTION	ICE (Surge pulse)					I
	Sheath fault testing / Secondary Fault Locating					H
	Sectionalizing Software (HDW Patent US B 6,683,459 B2)					S
***Selection of software option can be any combination						

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