

Electrical Test & Measurement Instruments





SWT 32 SERIES

High Voltage Surge Tester

A Surge Wave Tester (SWT) is used for detection and location of faults in underground cables and cable drums by injecting high-voltage impulse surges that interact with impedance discontinuities at fault points. The equipment provides a selectable voltage range, is available in different models with higher energy delivering capacity, and can be equipped with optional arc and burn modules to suit various fault conditions.

It is further employed for pre-location of faults using a Motwane cable fault pre-locator, where electrical reflection techniques such as Time Domain Reflectometry (TDR), Impulse Current Method (ICM), and Arc Reflection Method (ARM) are used for estimation of the distance to the fault.

Finally, the system is used for pinpointing of the exact fault location using a Motwane surge wave receiver comprising a microphone and headphones. The surge-induced arc at the fault produces acoustic signals and ground vibrations, which are detected for accurate identification of the fault location.

Features

- ✓ Output voltage selectable in three ranges 8, 16, 32 kV
- ✓ High energy of 1000 Joules and optional 2000 Joules.
- ✓ Full energy delivering capacity at each select range.
- ✓ Continuously variable output voltage from 0 to 100 % of selected range
- ✓ Optimized surge energy for switchable capacitors values for each range.
- ✓ Pre-location of cable fault distance with suitable pre-locator unit in ICM mode.
- ✓ Easy to connect with arc reflection filter and pre-locate fault distance in SIM mode.
- ✓ Pin-pointing location of cable faults by acoustic method.
- ✓ Automatic discharging facility of cable under test, in case of power failure or after switching off.
- ✓ Fully protected operation with safety interlocks.
- ✓ Continued operation for an extended period during pinpointing and handling of difficult cable faults.
- ✓ Rugged construction and easy to carry on site.

Applications

- Detects and locates faults in underground cables and cable drums using high-voltage surge impulses
- Pre-locates faults using a pre locator with electrical reflection methods: TDR, ICM, and ARM
- Pinpoints exact fault location using a surge wave receiver through acoustic (thumping) method via surge-induced arc sound detection

32 kV HIGH VOLTAGE SURGE TESTER

Specifications		SWT 32	SWT 32S	SWT 32D	SWT 32DS	SWT 32CPT	SWT 32CPTS	SWT 32DPT	SWT 32DPTS		
Impulse Mode											
Voltage range (kV)		0 - 8/0 - 16/0 - 32									
Single Impulse		YES									
Auto Impulse		1.5/3/6 seconds									
Energy at each range (J)		1000		2000		1000		2000			
ARM module		NO	YES	NO	YES	NO	YES	NO	YES		
DC test mode		NO	NO	NO	NO	YES	YES	YES	YES		
Voltage range (kV)		NA				0-32					
Current (mA)		NA				20					
Burn Mode (Optional)											
Burn Current (mA) at 8kV		NA				300					
Burn Current (mA) at 16kV		NA				150					
Burn Current (mA) at 32kV		NA				75					
Sheath test (Optional)		NO				YES					
Voltage (kV)		NA				0-8					
Current (mA)		NA				75					
General Parameters											
Input Power Supply					230V AC ± 10%						
Power Frequency					50Hz or 60Hz ± 5%						
Operating temperature					-10 °C to +55 °C						
IP rating					IP21						
Approximate Weight in KG		113	120	132	140	155	165	190	200		
Approximate size (L x W x H) in mm		540X435X650	540X630X650	635X520X740	635X520X740	635X520X740	590X630X720	590X630X720	690X635X720		
Standard Accessories											
High Voltage cable	5 m	Rexin cover			YES						
Mains cable	10 m	Product Manual			YES						
Earth cable	5 m										
Note : 1) Standard warranty : 12 months 2) Cable of other lengths shall be available as per requirement. 3) Handles and wheels are not considered in mentioned size. 4) Size and weight may increase for optional features, as well as custom built features. 5) Picture are for illustration purposes only. 6) Specification can be changed without any notice.											

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