

Electrical Test & Measurement Instruments





Features

- ✓ Output voltage selectable ranges up to 6kV
- ✓ High energy output (500, 750, 1000 Joules)
- ✓ Full energy delivering capacity at each select range
- ✓ Single & Auto Impulse (4 & 6 seconds interval)
- ✓ Pre-location of cable fault distance with suitable pre-locator unit in ICM mode
- ✓ Pin-pointing location of cable faults by acoustic method
- ✓ LT Network from 1.1 kV up to 6.6 kV

SWT 4, SWT 6 SERIES

Low Voltage Surge Wave 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.

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

Technical Details

LV SURGE WAVE TESTER

Specifications	SWT 4	SWT 6	SWT 6DC	
Impulse Mode				
Voltage range (kV)	0 - 2/0-4	0 - 3/0 - 6		
Single Impulse	YES			
Auto Impulse	4/6 seconds			
Energy at each range (J)	500	750	1000	
ARM module (Optional)	No	No	Yes	
DC test mode	No	No	Yes	
Voltage (kV)	NA		0 - 12	
Current (mA)	NA		10	
Burn Mode (Optional)				
Burn Current (mA) at 3kV	NA		200mA	
Burn Current (mA) at 6kV	NA		100mA	
General Parameters				
Input Power Supply	230V AC ± 10%			
Power Frequency	50Hz or 60Hz ± 5%			
Operating temperature	0°C to +55°C			
IP rating	IP21			
Approximate Weight in KG	50	60	80	
Approximate size (L x W x H) in mm	465 X 305 X 480	485 X 350 X 530	550 x 630 x 700	
Standard Accessories				
30kV High Voltage cable in meter	5 meter			
Mains cable in meter	5 meter			
Earth cable in meter	5 meter			
Rexin cover	Yes			

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 | 5) Picture are for illustration purposes only | 6) Specifications can be changed without any notice

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