



OTS 60A, 80A, 100A

Fully automatic insulating oil dielectric breakdown testing



OTS-A series is a fully automatic microprocessor-based Oil BDV Tester designed with advanced technologies to measure the electrical breakdown strength of insulating oil. OTS-A has a quick sensing ability to measure accurate breakdown voltage. OTS-A series is equipped with national & international standards for test sequences and it also has user-friendly customized test sequences. The large LCD display with keypad provides easy operation. It is provided with internal memory for 100 data storage & inbuilt thermal printer for the onsite report. As for safety, the OTS-A series has open ground detection feature to avoid damage. The molded oil test vessel is suitable to test Mineral, Ester & Synthetic Oil and it is provided with an adjustable electrode gap setting to conduct the test as per standards. The portable voltage checker is useful for onsite calibration verification.

OTS-A series has a Bluetooth connectivity module with Motware mobile app for remote access of testing data & storage in the cloud for further analysis & record purposes.

Features

- ✓ Upgraded Sequence as per IEC60156-2018
- ✓ Oil temperature measurement
- ✓ Easy externally adjustable locking electrode gap
- ✓ Fast precision breakdown detection
- ✓ Ultra-fast HV switch off time
- ✓ Suitable for mineral, ester and silicone oils
- ✓ QR code generation for identification
- ✓ Bluetooth connectivity
- ✓ RBM Test

Applications

Transformer oil is used as insulating medium in transformer, switchgear and other electrical apparatuses and it also acts as a coolant which dissipates (or to dissipate) heat of the transformer. In addition to these, insulating oil serves other purposes like, it helps to preserve the core and winding as these are fully immersed inside oil and another important purpose of Insulating oil is, it prevents direct contact of atmospheric oxygen with cellulose made of paper insulation used in windings, which is susceptible to oxidation. When insulating oil deteriorates due to aging / contamination which leads to catastrophic event due to flashover in insulation. The voltage withstands capability of oil which often is reduced (which often reduces) due to contamination like dirt, water ingress and foreign particles.

The Motwane's OTS-A series useful for Oil Testing in the following equipments:

- Power and Distribution Transformer
- Bushing
- Instrument Transformer
- Switchgear
- Capacitors

Technical Details

OTS A Series

Specification

Test Voltage		Temperature Measuring Range	
OTS60A 0 to 60 kV rms maximum (30 kV - 0 - 30 kV)		10°C to 65°C (ASTM D877 requires oils to be within 20°C and 30°C)	
OTS80A 0 to 80 kV rms maximum (40 kV - 0 - 40 kV)		(IEC 60156 required oil to be within 15°C and 25°C)	
OTS100A 0 to 100 kV rms maximum (50 kV - 0 - 50 kV)		Temperature sensor resolution 1°C	
Voltage Rise Time		Power supply Line voltage 85 to 265 VAC	
0.5 kV/s, 2.0 kV/s or 3 kV/s depending on selected test		Line frequency 50/60 Hz	
standard and 0.5 kV/s up to 10kV/s in custom test		Interface 2 x USB type-A (Flash drive, printer),	
Voltage Rise Time Accuracy Better than 5%		1 x USB type-B (Factory use)	
Voltage Resolution & Accuracy Up to 5 kV/s: 0.1 kV ± 1% ±2 digits		Internal printer Matrix impact printer	
		Protection	
		Dual safety micro switches on Chamber cover and Zero start	
		Emergency Stop	
Programmed Test Sequence		Open Ground Protection	
■ ASTM D 1816-12		Auto Trip and Reset	
■ ASTM D 877-19		Display TFT Color Display	
■ AS1767.2.1		Operating temperature range and humidity	
■ BS 5730a AD 30 kV		-10°C to 60°C	
■ BS 5730a AD 40 kV		<90% RH	
■ BS 5730a BCEF 22 kV		Non-condensing conditions	
■ BS 5730a BCEF 30 kV		IP Rating IP 40	
■ BS 148 / EN 60156		Safety Designed in accordance with IEC61010-1:2010 AMD:2016	
Vessels 400 ml (standard)		EMC IEC 61326	
Carefully designed test vessels manufactured from the most chemical resistant clear polymer on the market provides tried and tested reliable test results.		■ Dimensions 655 mm(L) x 325 mm(W) X 385 mm(H)	
Featuring precision electrode alignment and adjustment wheels that lock electrodes in position, the option of a 150 ml vessel for low volume oil samples is also available		■ Weight 35 Kg (Approx.)	
		■ Language English	

Technical Details

OTS A Series

Sr. No	Selected Test Spec.	Initial Stand Time (sec)	Intermediate Std Time (sec)	Stirring Time (sec)	Rate of rise of Test Voltage (kV/S)	Number of Tests.
1.	5 Min Test	60	30	30	1 or 2 selectable	3
2.	IEC 60156	300	160	Optional	2	6
3.	ASTMD 877	140	30	NA	3	5
4.	ASTMD 1816	180	60	Continuous	0.5	5
5.	UNE 21	600	240	60	2	6
6.	Custom	999	999	999	0.5 - 5	2 to 24
7.	IS 6792	300	120	120	2	6
8.	STAS 286	600	120	60	2	6
9.	BS 148	300	120	120	5	6
10.	VDE 0370	300	120	120	5	6
11.	CE 1344	300	120	120	5	6
12.	SABS 555	300	120	120	5	6
13.	STA 8286	300	120	120	5	6
14.	BS 5730A	60	60	NA	2	2
15.	BS 5874	300	120	120	5	6
16.	NFC 27	300	120	120	5	6
17.	OCT 6581'	300	120	120	5	6
18.	AS 1767	300	120	120	5	6
19.	IP 295	300	120	120	5	6

Sr. No	Selected Test Type	Initial Stand Time	Rate of Rise	Test Working
1.	WITH STAND A	0-999 Sec.	2 kV /S	Voltage increases to set value and remains for 60Sec if the sample withstands for 60Sec Report Withstood / PASS and if gets breakdown, Reports will show Fail and Breakdown voltage will stored and displayed.
2.	WITH STAND B / Bs5730	0-999 Sec.	2 kV /S	Voltage increase to set value and remains for 60secs after completion of 60sec increment voltage till breakdown occurs and reports both values withstood and BDV, If fails reports only Breakdown value.

Technical Details

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Including accessories

■ OIL CUP ASSEMBLY (NEW) FOR OTS (WITH SPRING AND LOCK)	1 Set
■ Spherical head electrodes	1 Set
■ Flat head electrodes	1 Set
■ GO NOGO Gauge (1 mm)	1 No.
■ GO NOGO Gauge (2mm)	1 No.
■ GO NOGO Gauge (2.5mm)	1 No.
■ GO NOGO Gauge (2.54mm)	1 No.
■ GO NOGO Gauge (4mm)	1 No.
■ Pointer Oil cup	1 No.
■ Pen Drive	1 No.
■ Magnetic Stirrer capsule	2 No.
■ Mains Power Cord	1 No.
■ Ground/Earth Leads	1 No.
■ USB cable	1 No.
■ Thermal Printer Paper Roll	2 No.
■ Carrying bag with accessories	1 No.
■ Instrument Carrying Case with Foam	1 No.
■ Fuse small 5A slow blow (Included inside the instrument)	2 Nos.
■ Instruction Manual for OTS-100A	1 No.
■ Test & Calibration Certificate	1 No.

OTS Vessel Preparation Guide in User Manual

If you wish to upgrade your existing OTS please contact your local Motwane Authorised Service Center for prices and availability

ORDERING INFORMATION

Product	Order Code
OTS 60A	1096Z7210
OTS 80A	1096Z8210
OTS 100 A	1096X8310
with Standard Accessories	

Note: Image & weight are subjected to change.