



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 MOT-WARE 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)		0°C – 99.9°C (ASTM D877 requires oils to be with in 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 0.1°C	
Voltage Rise Time		Power supply Line voltage 85 to 265 VAC	
		Line frequency 50/60 Hz	
0.5 kV/s, 2.0 kV/s or 3 kV/s depending on selected test		Interface USB	
standard and 0.5 kV/s up to 10kV/s in custom test		Printer Inbuilt Thermal Printer	
Voltage Rise Time Accuracy	Better than 5%	Protection	
Voltage Resolution	0.1 kV	Dual safety micro switches on Chamber cover and Zero start	
Accuracy	≤ ±1kV	Emergency Stop	
Trip time		Open Ground Protection	
		Auto Trip and Reset	
Tripping current	≤10mA	Display TFT Color Display	
Vessels 400 ml (standard) Carefully designed test vessels manufactured from the most chemical resistant clear polymer on the market provides tried and tested reliable test results. 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		Operating temperature range and humidity	
		-10°C to 60°C	
		<90% RH	
		Non-condensing conditions	
		IP Rating IP 40	
		Safety Designed in accordance with IEC61010-1:2010 AMD:2016	
		EMC IEC 61326	
		■ Dimensions 655 mm(L) x 325 mm(W) X 385 mm(H)	
		■ Weight 35 Kg (Approx.)	
		■ Language English	

Technical Details

OTS A Series

	Sr. No.	Test Name	Initial Stand Time in Sec	Intermediate Stand Time in Sec	Stirring Time in Sec	Rate of Rise	No. of Test	
						kV / Sec		
	1.	BS 5730A	60	NA	NA	2	*2	
	2.	BS 5730	60	NA	NA	2	1	
	3.	BS 5874	300	120	120	5	6	
	4.	NFC 27	300	120	120	5	6	
	5.	OCT 6581	300	120	120	5	6	
	6.	AS 1767	300	120	120	5	6	
	7.	IP 295	300	120	120	5	6	
	8.	IEC 60156 Rev.2.0. 1995	300	120	Continuous	2	6	
120								
No								
	9.	IEC 60156 Revised std.3.0. 2018	300	120	Continuous	2	6	
No								
	10.	IEC 60156 Revised std. 2018 (I)	300	60	Continuous	2	10	
	11.	ASTM D1816-12	180	60	60	0.5	5	
	12.	IS 6792-92	300	120	Continuous	2	6	
120								
No								
	13.	IS 6792-18	300	120	Continuous	2	6	
No								
	14.	IS 6792-23	300	60	Continuous	2	10	
	15.	STAS 286	600	120	60	2	6	
	16.	BS 148	300	120	120	5	6	
	17.	VDE 0370	300	120	120	5	6	
	18.	CE 1344	300	120	120	5	6	
	19.	SABS 555	300	120	120	5	6	
	20.	STA 8286	300	120	120	5	6	
	21.	UNE 21	600	240	60	2	6	
	22.	ASTM D877-19	140	60	0	3	5	
	23.	5 Min Test	60	30	30	1	3	
2								
	24.	Withstand A	Programmable	Rise voltage @2kV/sec till the set limit and withstand for 60Sec, if withstood				
for 60sec report pass if not report fail								
	25.	Withstand B	Programmable	Rise voltage @2kV/sec till the set limit and withstand for 60Sec if test is pass				
rise the voltage till breakdown report both values Withstood Voltage								
and Breakdown Voltage								

Technical Details

OTS A Series

		Programmable	Programmable	Programmable	Programmable	Programmable
26.	Custom 1 to 10	Selectable 999	Selectable 999	continuous selectable up to 999 No	Selectable 5KV	Selectable up to 24

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 (1mm, 2mm, 2.5mm, 2.54mm, 4mm)	1 No each.
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.