

DPA 60 C / DPA 75 C

BAUR Oil Breakdown Voltage Testers



The standard in oil testing

- Fully automatic testing of the breakdown strength in compliance with international and national standards
- Suitable for mineral or silicone oils and ester liquids
- Reliable, reproducible measurement results using the latest measurement technology
- Designed for mobile use on site as well as for daily continuous operation in laboratories

The BAUR DPA 60 C and DPA 75 C oil breakdown voltage testers measure the electrical breakdown strength of insulating liquids fully automatically. Test sequences can be accomplished easily and fully automatically in compliance with all international and national standards. With reliable, informative test results it is possible to determine the exact condition of the insulating material and initiate any necessary measures, e.g. preparation of transformer oil.

The high precision of the BAUR oil breakdown voltage testers is based on a tried and tested and very accurate test voltage measurement principle performed directly on the HV part of the device, as well as the permanent monitoring of the voltage slew (RBM). The especially short switch-off time after a breakdown counteracts the contamination of the oil sample, thus ensuring reliable reproducibility of the measurement results.

The DPA 60 C and DPA 75 C oil breakdown voltage testers are designed especially for mobile use and for daily continuous operation in laboratories. The robust and sophisticated design guarantees safe and failure-free operation for several hundred thousands of oil sample measurements.

Features

- Test voltages up to 60 kV_{rms} or 75 kV_{rms}
- Reliable, reproducible measurement results across multiple measurements thanks to short switch-off time < 10 μs
- Clear breakdown detection by means of very precise measurement principle performed directly in the HV part and RBM technology
- Fully automatic test sequences for 18 common test standards around the globe and quick test
- Easy creation of user-specific test sequences
- Built-in sensor for measuring the temperature of the insulating liquid
- Precise adjustment of standard electrode distances
- Automatic self-test with HV output voltage test each time you start
- EMC screen for preventing damage to electronic devices nearby
- Comprehensive safety concept, incl. high voltage shutdown through hood contacts
- User interface available in 13 languages
- Ergonomic operating unit with oil-proof membrane keyboard, easy to read LCD colour display and integrated printer
- Operation by:
 - Mains voltage
 - External power supply via 12 V connection especially for automobile battery
 - Integrated rechargeable battery (option)
- Automatic reading of measurement results and creation of measurement logs in PDF format or as text file with BAUR oil tester data management software ITS Lite*
 - Management of measurement results for multiple oil testers possible
 - Customised layout of measurement logs

* Free download at www.baur.eu

Technical data

General		Insulating oil testing	
Input voltage	90 – 264 V (50/60 Hz) or DC 12 V	Output voltage	DPA 60 C: 0 - 60 kV _{rms} symmetrical DPA 75 C: 0 - 75 kV _{rms} symmetrical
Power consumption	max. 70 VA	Voltage slew rate	0.5 - 10 kV/s
Rechargeable battery (option)	Lead-acid battery, 2 x 6 V / 6.5 Ah	Switch-off time	< 10 µs
Battery life (option)	Approx. 8 hours (self-sufficient operation)	Voltage slew monitoring	Real Breakdown Monitoring (RBM)
Display	LCD colour display (320 x 240)	Accuracy	DPA 60 C: 0 – 60 kV ±1 kV DPA 75 C: 0 – 75 kV ±1 kV
Data interface	<ul style="list-style-type: none"> ▪ USB 2.0 (type B plug) ▪ BAUR Report Manager external USB interface (type A plug) 	Resolution	0.1 kV
Printer	Matrix printer, 24 characters, 57 mm plain paper	Internal temperature recording of the oil sample	0 - 99°C
Ambient temperature (operational)	-10°C to +55°C	Temperature resolution	1°C
Storage temperature	-20°C to +60°C	Test standards	ASTM D1816:2012 1 mm, ASTM D1816:2012 2 mm, ASTM D1816/97, ASTM D877/D877M:2013 PA, ASTM D877/D877M:2013 PB, BS EN 60156, CEI EN 60156, CSSR RVHP:1985, IEC 60156:1995, IRAM 2341:1972, JIS C2101:2010, PN 77/E-04408, SEV EN 60156, UNE EN 60156, NF EN 60156, SABS EN 60156, VDE 0370 Part 5:1996, AS 1767.2.1
Humidity	Non-condensing	User-specific test sequences	10
Dimensions (W x H x D)	476 x 372 x 340 mm (closed) 476 x 635 x 420 mm (open)		
Weight	Approx. 27 kg (without battery) Approx. 29 kg (with battery)		
Degree of protection	IP 32		
Safety and EMC	CE-compliant in accordance with Low Voltage Directive (2014/35/EC), EMC Directive (2014/30/EC), EN 60068-2-ff Environmental testing		
Software available in	German, English, French, Spanish, Portuguese, Italian, Russian, Czech, Polish, Dutch, Chinese (CN), Chinese (TW), Korean		

Standard delivery includes

- BAUR DPA 60 C or DPA 75 C oil breakdown voltage tester incl. integrated plain paper printer
- 1 x test vessel (test standard acc. to choice)
DPA 60 C: Synthetic test vessel
DPA 75 C: Glass test vessel
- Magnetic stirrer
- Lifting stick for magnetic stirrer
- Setting gauge
- Carrying strap
- Mains supply cord
- User manual

Options

- Integrated lead-acid battery 2 x 6 V / 6.5 Ah (cannot be upgraded)
- Protective bag
- Transport case
- Magnetic stirrer
- Lifting stick for magnetic stirrer
- Setting gauges, 1 / 2 / 2.5 / 2.54 / 4 / 5 mm
- Face pin wrench for disassembling the test vessel
- Paper roll for printer, 57 mm width, Ø 30 mm
- Ink ribbon (blue) for printer
- Test vessels 0.4 litre made of glass or synthetic material according to IEC 60156 Fig. I or Fig. II, ASTM D1816 or ASTM D877
- Pairs of electrodes for test vessels according to IEC 60156 Fig. I or Fig. II, ASTM D1816 or ASTM D877
- BAUR Report Manager – External USB interface for measurement data management

Available test vessels 0.4 litre (Glass or synthetic material, with lid)



Test vessel according to IEC 60156 Fig. I



Test vessel according to IEC 60156 Fig. II



Test vessel according to ASTM D877



Test vessel according to ASTM D1816