ADX
Automated Static Motor Analyzer

Megger
Baker Instruments

- **Complete range of essential tests to determine motor health, analyze trends, and find faults.**
- **These include high voltage tests for surge, PD,**
- **DC insulation resistance (IR, DA, PI), and DC HiPot (standard, step, or ramp).**
- **Plus, low voltage testing for winding resistance, inductance, and capacitance.**
- **Test voltages from 4 kV to 15 kV (and up to 40 kV coupled with a Megger Baker PPX).**

DESCRIPTION

The ADX family includes models designed to perform tests up to 15 kV. The four main options include 4 kV, 6 kV, 12 kV, and 15 kV. These analyzers can be coupled with PPX to increase test voltages to 30 kV or 40 kV for tests on high voltage motors, coils, and generators.

The Megger Baker ADX is used for motor winding, coil, assembled motor, and generator testing. It can be used by Original Equipment Manufacturers, Industrial Maintenance Engineers, Motor Repair Shops, and Service Engineers working on equipment in the field for verification, validation, fault finding, and research, or to serve as part of a maintenance program.

Tests Performed:

- Winding Resistance
- Inductance
- Capacitance
- Insulation Resistance
- Dielectric Absorption (DA)
- Polarization Index (PI)
- DC HiPot
- DC Step-Voltage
- DC Continuous Ramped
- Surge analysis with EAR+™
- Partial Discharge on Surge

FEATURES

- Detachable IEC61010-compliant HV/LV Kelvin test leads
- PowerDB Dashboard secure cloud-based analysis software
- 10.4-inch daylight viewable touch screen
- Industrial IP68 Waterproof Silicone Keyboard
- Choice of Manual, Automatic, or Sequence testing
- Screen-level context sensitive help
- Adaptable search capability
- Asset management tools
- Configurable Route based testing
- Pulse-to-Pulse and Line-to-Line Error Area Ratio analysis
- Import existing databases from AWA and DX
- Android operating system
- 2 x USB ports and ethernet connection
- HDMI port for duplicating screens
- Wi-Fi enabled
- Foldable viewing stand

BENEFITS

- Asset-centric approach provides opportunities for turnkey testing.
- Sequence mode leverages the approach for fully automatic testing.
- Data analysis features identify service needs and reduce down time.
- Remote asset configuration via PowerDB Dashboard frees the ADX for testing needs.
- Separating Asset from Installation opens opportunities for data analysis.
- Battery backup allows transport between assets without needing to shut down.

ADX
Automated Static Motor Analyzer

Megger
Baker Instruments

DATA STORAGE, ANALYSIS, REPORT GENERATION, AND MANAGEMENT

All test results are saved and stored locally on the ADX, and are automatically synchronized with the cloud-based application PowerDB Dashboard for users with internet connection.

Test results can be analyzed through Dashboard. Comparing current and historical data can reveal downward trends and other issues, indicating when action should be taken to service assets and avoid unplanned downtime.

The built-in Report Generator provides on-board test result viewing that can be sent directly to a printer. Reports can be printed from the ADX wirelessly to a networked printer, or directly via a USB-connected printer. Data can be accessed securely through PowerDB Dashboard to view and download reports in either MS Word or PDF. Data can also be exported in other formats such as CSV.

The ADX can function as an off-line system, utilizing PowerDB Print Engine software to create, edit, and print reports on a local computer. Data is transferred via ADX export to a USB drive, uploaded to a local computer, and edited as an MS Word document.

ADX software allows users to easily create, view, and edit assets, test configurations, installations, and routes. The asset-centric approach provides administrators and management with all the tools needed to set up a turnkey environment, simplifying the asset testing process for operators.

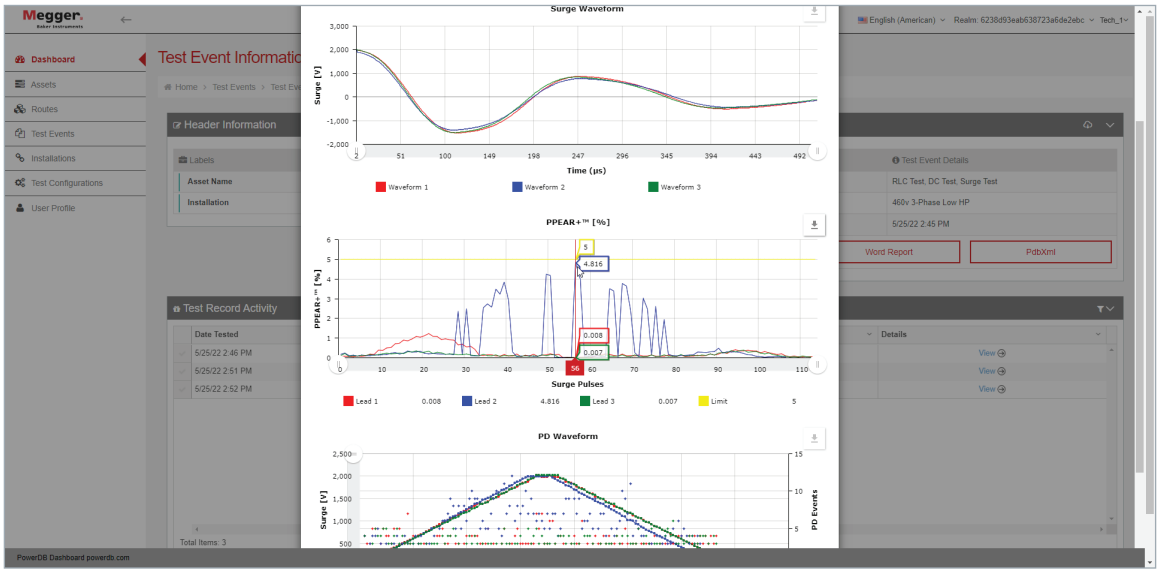
Asset configuration can be done directly on the ADX or remotely via PowerDB Dashboard. The integrated system allows access through any internet-connected device to create and edit assets, test configurations, installations, and routes. No matter where the changes are made, they are automatically synchronized between the ADX and PowerDB Dashboard via internet connection.

EASE OF USE

The ADX has a large, 10.4-inch touch screen. The industrial-grade, daylight-viewable color display was designed to work in all environments. The user interface features large, intuitive icons for easy touch operation—even when an operator is wearing insulated electrical gloves.

ADDITIONAL KEY FEATURES

- High-definition graphical user interface displays surge test waveforms.
- Displays DC HiPot results.
- Displays hundreds of coil waveforms for quick analysis.
- Stores reference waveforms for comparison coil testing.
- Secure cloud-based data storage
- Ability to create and edit assets and test configurations remotely through PowerDB Dashboard
- Internal battery backup secures data due to unexpected power loss.



ADX
Automated Static Motor Analyzer

Megger
Baker Instruments

SPECIFICATIONS

Hardware and system specifications

Parameter	Value
Weight	46.3 lbs. (21 kg)
Dimensions (W x D x H)	18 x 23 x 8.5 in (457 x 584 x 216 mm)
Internal memory	RAM 2GB DDR3
Internal storage	8GB MMC and 480GB SSD Drive
Processor speed	1.0 Ghz (Quad core)
User interface	Capacitive touch screen, mouse, keyboard, stylus
Platform	Android
Display	10.4-in touch screen
Resolution	XGA 1024 x 768
Wi-Fi	802.11 a/b/g/n Dual Band 2.4 / 5 GHz
Ethernet	Gigabit 10/100/1000 Mbps
USB flash drive	USB 2.0
Battery Backup	4+ hours standby time

Languages supported

User interface and documentation localization

Language	Regional Translations
English	
French	Europe
Spanish	Europe and Latin America
Portuguese	Europe and Brazil
German	
Czech	
Polish	*Available soon*
Russian	
Chinese	Traditional and Simplified

Instrument rating summary

Parameter	Variant	Value
Internal and operating environment		Pollution degree 2
Operating altitude		≤ 3,000 m (9,842 ft)
Operating temperature		5–40° C (41–104° F)
Operating humidity		≤ 80% RH for temperature up to 31°C (88° F), decreasing linearly to 50% RH at 40° C (104° F)
Storage temperature *Ensure that the unit has sufficient time to warm to ambient temperature before operating after storing the unit in a colder area.*		0–60° C (32–140° F)
Storage humidity		Less than 95% non-condensing
IP Rating		IP40
Mains Power Input		90–264 VAC, 47–63 Hz, 2.5 A, CAT II 300 V
Maximum generated voltage Peak voltage for AC or DC test	ADX4	Nominal 100 V–4 kV
	ADX6	Nominal 100 V–6 kV
	ADX12	Nominal 100 V–12 kV
	ADX15	Nominal 100 V–15 kV
Standard Kelvin 4-wire test leads voltage rating		16 kV DC peak
Maximum input voltage rating		See Caution below

CAUTION

The ADX must be connected only to isolated, de-energized circuits. Connection to live circuitry can expose personnel to severe electrical shock risk, permanently damage tester, and void warranty. Refer to chapter 1 of the ADX User Guide, "General Operating and Safety Information" for complete information on safely connecting and operating the unit.

ADX
Automated Static Motor Analyzer

Megger
Baker Instruments

DC IR and HiPot test specifications

Parameter	Variant	Value
Voltage accuracy		± 2% ± 5 V
Maximum output current		1.2 mA
Displayed current resolution		1 nA
Current measurement resolution		16 pA
Current accuracy	Test voltage 0–2 kV	± 4% ± 5 nA
	Test voltage 2–4 kV	± 4% ± 10 nA
	Test voltage 4–8 kV	± 4% ± 25 nA
Overcurrent trip settings		Adjustable to 1.2 mA
IR measurement range		100 kΩ–1 TΩ

Surge test specifications

Parameter	Variant	Value
Nominal surge capacitance		100 nF
Typical surge energy		11.25 J at 15 kV
Typical short circuit current		700 A
Repetition rate		4 Hz nominal
Minimum inductance	4 kV	70 µH
	6 kV	100 µH
	12 kV	120 µH
	15 kV	170 µH
Voltage accuracy		±10%

Surge with Partial Discharge (PD) test specifications

Parameter	Value
Inception and extinction voltages (PDIV, PDEV)	Measured per IEC 61934
Repetitive inception and extinction voltages (RPDIV, RPDEV)	Measured per IEC 61934
Programmable PD threshold range (Resolution to 0.1 mV)	1.0–999 mV
PD time scaling	1.024–26,400 µs

Resistance test specifications

Parameter	Value
Measurement range	0.001 mΩ–100 KΩ
4-wire measurement	Yes
Maximum test current	10 A
Accuracy	±2% ±0.25 mΩ

Capacitance test specifications

Parameter	Value
Measurement range	0.01 nF–50 µF
4-wire measurement	Yes
Test frequency	4000 Hz
Accuracy	±5% ±1 nF

Inductance test specifications

Parameter	Value
Measurement range	0.01 µH–10 H (120 Hz) 0.01µH–200 mH (1000 Hz)
4-wire measurement	Yes
Test frequency	120, 1000 Hz
Accuracy	±5% ±5 µH

ADX
Automated Static Motor Analyzer

Testing and safety standards compliance

Standard	Topic
IEC 61326-1 Ed. 2.0 2012-07	Electrical equipment for measurement, control, and laboratory use - EMC requirements – Table 1.
FCC 47CFR: Part 15 Subpart B: 2020	Unintentional Radiators
ICES-003 Issue 7, October 2020	Limits and Methods of Measurement to Information Technology Equipment (including Digital Apparatus).
IEC 61010-031:2015	Safety requirements for electrical equipment for measurement, control, and laboratory use. Safety requirements for hand-held probe assemblies for electrical measurement and test.
IEC 61010-2-034:2017	Safety requirements for electrical equipment for measurement, control, and laboratory use. Particular requirements for measurement equipment for insulation resistance and test equipment for electric strength.
IEC 62133-2:2017	Safety Test Standard of Li-Ion
CISPR 11:2009 +A1:2010, Class A	Radiated Emissions and AC Mains Conducted Emissions
IEC 61000-3-2:2014	Harmonics
IEC 61000-3-3:2013	Flicker
IEC 61000-4-2:2009	Electro-Static Discharge Immunity Test
IEC 61000-4-3:2010	Radiated, Radio-Frequency, Electromagnetic Immunity
IEC 61000-4-4:2012	Electrical Fast Transient/Burst Immunity Test
IEC 61000-4-5:2006	Immunity to Surges
IEC 61000-4-8:2010	Power Frequency Magnetic Field Immunity Test
IEC 61000-4-11:2004	Voltage Dips/Interruptions Immunity Test

ACCESSORIES

Remote Test Status Indication Lights with E-Stop

Accessory box for ADX equipment stop with a button press.

Also displays flashing red light when actively testing and green light when no testing is in progress.

Foot switch

You can connect the optional footswitch to the Megger Baker ADX host or auxiliary units; it works in parallel with the Start (PTT) button.

The footswitch enables hands-free use of the unit and gives you additional operating position options.

ADX
Automated Static Motor Analyzer

ORDERING INFORMATION

Description	kV	Name	Part no.
Standard ADX with DC Insulation Resistance (IR, DA, PI), DC HiPot (standard, Step, Ramp), and Surge tests only.	4 kV	ADX 4	1013-911
	6 kV	ADX 6	1013-912
	12 kV	ADX 12	1013-913
	15 kV	ADX 15	1013-914
RLC ADX with RLC (low voltage Resistance, Inductance, and Capacitance), DC Insulation Resistance (IR, DA, PI), DC HiPot (standard, Step, Ramp), and Surge tests.	4 kV	ADX-4-RLC	1013-916
	6 kV	ADX-6-RLC	1013-917
	12 kV	ADX-12-RLC	1013-918
	15 kV	ADX-15-RLC	1013-919
RLC-PD ADX with RLC (low voltage Resistance, Inductance, and Capacitance), DC Insulation Resistance (IR, DA, PI), DC HiPot (standard, Step, Ramp), Surge, and Partial Discharge tests.	4 kV	ADX-4-RLC-PD	1013-920
	6 kV	ADX-6-RLC-PD	1013-921
	12 kV	ADX-12-RLC-PD	1013-922
	15 kV	ADX-15-RLC-PD	1013-923
RLC-PD-PPI ADX with RLC (low voltage Resistance, Inductance, and Capacitance), DC Insulation Resistance (IR, DA, PI), DC HiPot (standard, Step, Ramp), Surge, and Partial Discharge tests. Includes Power Pack Interface.	4 kV	ADX-4-RLC-PD-PPI	1013-925
	6 kV	ADX-6-RLC-PD-PPI	1013-926
	12 kV	ADX-12-RLC-PD-PPI	1013-927
	15 kV	ADX-15-RLC-PD-PPI	1013-928

ACCESSORIES

Description	Part No.	Description	Part no.
Footswitch Operators initiate tests using the foot switch rather than the ADX front panel test switch during coil testing.	1014-110	**Megger Baker Test Status Indication** Light Equipment Stop (TSIL-ES) Remote accessory box for ADX equipment stop with a button press. Also displays flashing red light when actively testing and green light when no testing is in progress.	1014-109
ADX Standard Test Lead Set	1014-106		
ADX Custom Test Lead Set	1014-107		
Pelicase	1014-115	ADX Test Lead - 15 kV Black	1014-117
ADX Backpack	1014-114	ADX Keyboard	1014-111
ADX Test Lead - 15 kV Red and labeling kit	1014-116	ADX Front Cover	1014-112

For complete Megger Baker Instruments EU declarations of conformity visit:
https://megger.com/company/aboutus/legal/eu-dofc

SALES OFFICE
Megger Baker Instruments
4812 McMurry Avenue
Fort Collins, CO 80525, USA
T: +1 970-282-1200
E: baker.sales@megger.com

ADX_DS_EN_v4
www.megger.com
ISO 9001

Megger
Baker Instruments