AVL DITEST

Precise results in record time.

AVL DITEST SCOPE

Precision automotive measurement device

FUTURE SOLUTIONS FOR TODAY

The quickest way to reliable results.

AVL DITEST SCOPE – AUTOMOTIVE MEASUREMENT UNITS

The number of electronic components in motor vehicles has multiplied tenfold over the last 15 years; they have become essential to the overall functioning of today's vehicles. Analysing these components is a complex and challenging task: the AVL DiTest Scope models 1200, 1400 and 8400 are the perfect precision measurement devices for the job. They guide the user through a professional fault diagnostics process in three simple steps. Being able to precisely locate faults will save you time and materials as you can pinpoint the exact component that needs to be replaced. AVL DiTEST – the best way to quickly and reliably detect vehicle faults.

INTELLIGENT MEASUREMENTS THAT SAVE YOU TIME, MONEY AND STRESS.

AVL DiTEST Scope – these intelligent workshop measurement systems enable fast andprofessional fault diagnostics, examining electronic components in order to identify the clear cause of an existing fault. Their robust technology and range of accessories guarantee precise measurement of various engine types as well as electronic vehicle components. Thanks to the device's user-friendly input and operating software, staff using the digital, high-resolution two-/four-channel Scope module for automotive signal measurements require no additional training. The AVL DiTEST Scope is a reliable and highly accurate device for your measurement needs.

STATE-OF-THE-ART HARDWARE:

- galvanic isolation between the measurement unit and PC prevents short circuiting
- differential measurement channels mean channels operate without cross-interference
- stimuli generator for active signal application
- active probe supply with colour guide aids connection of sensor cables
- automatic zero adjustment and degaussing
- guaranteed five-year measurement accuracy without the need for calibration
- automotive sensors
- stable and ultra-light magnesium housing with rubber protectors for challenging workshop environments.

SOPHISTICATED SOFTWARE:

- intuitive and self-explanatory operating system
- over 400 pre-configured measurement functions: obtain reliable results quickly and easily
- automatic sensor recognition with colour guide ensures setting and connection accuracy
- all measurements include step-by-step instructions, connection guides and detailed descriptions
- informative display and evaluation of curves thanks to automatic measurement range configuration
- direct reference curve comparison for immediate measurement review
- curve recording function to register signals.

GALVANIC ISOLATION BETWEEN DITEST SCOPE AND PC

Galvanic isolation prevents the AVL DiTest Scope components from short circuiting as a result of spark overs or ground loops. As such, ground loops which may occur when measurement units are connected to the mains (e.g. plug sockets) or a PC are avoided. This prevents damage to components within the vehicle or the measurement device.

Workshop application:

During troubleshooting, a battery charger is connected to the vehicle and the PC is plugged into the mains. In conventional measurement units, earthed charging devices and PC power supply lines result in a ground loop which can lead to erroneous measurements or component damage. Galvanic isolation prevents this from occurring.

DIFFERENTIAL MEASUREMENT CHANNELS

Differential channels allow each measurement to be taken at 40 MS/s using the entire measurement range. Each channel can be used independently, allowing electricity, resistance and voltage measurements to be carried out at the same time. Short circuits and erroneous measurements during the process can thus be avoided.

Workshop application:

In practical terms, this means that channel 1 could be used to measure battery voltage and channel 2 to measure the power voltage supplied to the lambda sensor heater. When non-differential measurement channels are used, incorrect polarity may result in short circuiting. AVL DiTEST Scope prevents this from happening.

THE COMPLETE SOLUTION:
AVL DITEST SCOPE 8400

Fully integrated four-channel measurement unit featuring touchscreen and infotainment testing. The Scope 8400 consists of a 'Rugged Windows 7 PC' with a fixed measurement unit and can be integrated into a networked workshop using SCPI commands. Test results can be accessed directly via the display using a simple user interface.

PRODUCT DESCRIPTION:

- galvanically isolated inputs
- four differential oscilloscope measurement channels, each at 40 MS/s
- touchscreen-operated measurement unit with intuitive GUI
- active probe supply with colour guide
- fully integrated infotainment test (Bluetooth, USB, Wi-Fi, video)
- Windows® 7 Tablet PC
- voltage measurement up to 500 V AC/DC
- current measurement from 1 mA to 1800 A AC/DC
- resistance measurement from 0.1 Ω to 10 MΩ
- pressure measurement from -1 bar to 100 bar
- temperature measurement from -20°C to 200°C
- fully-functional signal generator for voltages between -20 V and +40 V
- two integrated, high-resolution pressure sensors (e.g. for cylinder synchronisation on motorbikes)
- guided measurement steps for faultless diagnostics.

OUTSTANDING BASIC MODEL:
AVL DITEST SCOPE 1200

This two-channel measurement unit features only the most essential functions, offering easy handling and a high degree of mobility. Measurement results can be accessed by connecting the device to a PC or tablet.

PRODUCT DESCRIPTION:

- galvanically isolated inputs
- two differential oscilloscope measurement channels, each at 40 MS/s
- active probe supply with colour guide
- voltage measurement up to 600 V AC/DC
- current measurement from 1 mA to 1800 A AC/DC
- resistance measurement from 0.1 Ω to 10 MΩ
- resolution: Scope 14 bit, digital multimeter 16 bit
- full measurement range for each channel, sampling rate

THE PERFECT BALANCE:
AVL DITEST SCOPE 1400

Digital, high-resolution four-channel Scope module for automotive signal measurement. Measurement results can be accessed by connecting the device to a PC or tablet.

PRODUCT DESCRIPTION:

- galvanically isolated inputs
- four differential oscilloscope measurement channels, each at 40 MS/s
- active probe supply with colour guide
- over 400 pre-defined settings
- voltage measurement up to 600 V AC/DC
- current measurement from 1 mA to 1800 A AC/DC
- resistance measurement from 0.1 Ω to 10 MΩ
- SPI for synchronous serial data buses
- signal generator: 800 mA, -20 V to + 20 V, to 1 MS/s
- resolution: Scope 14 bit, digital multimeter 16 bit
- power supply through 14 V on-board system (cigarette lighter or car battery)
- full measurement range for each channel, sampling rate

ACCESSORIES FOR THE AVL DITEST SCOPE 1200 AND 1400

- cigarette lighter and vehicle battery supply

Secondary ignition measurement:

- -20°C to 200°C temperature sensor: precise and extremely fast (for compatible AC unit switching points)
- multisensor incl. stroboscope function
- -1 bar to 100 bar oil- and fuel-resistant pressure sensor

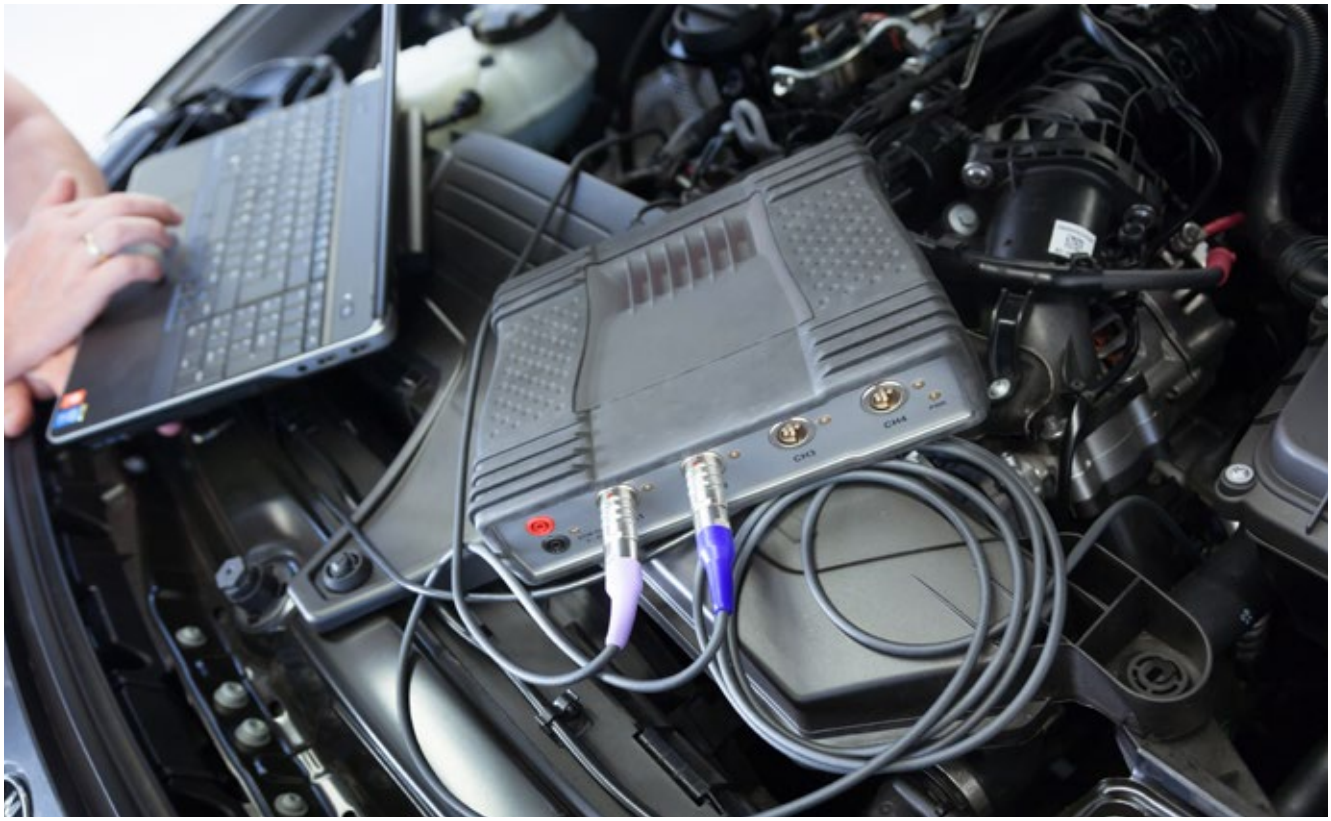
Current measurement probes

- current probe: 60A
- current probe: 600A
- current probe I100 Standard
- current probe I150 High End
- current probe I1800

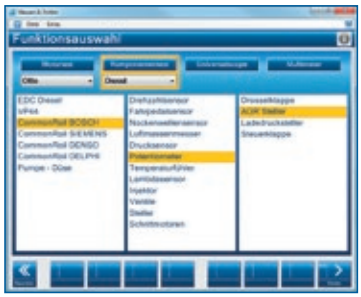
Secondary ignition measurement:

- trigger probe
- KV clip
- ignition adapter set

- AVL DiTEST DPM 800 relative cylinder pressure measurement.



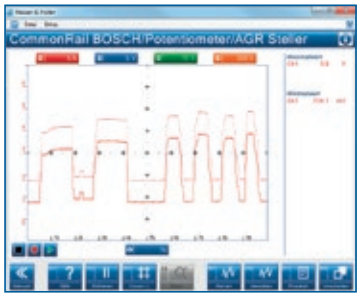
WE'LL HELP YOU GET THE RIGHT RESULTS



Menu helps you choose the right measurement with several industry-relevant pre-set procedures.

Colour guide in software and hardware guides the user through automatic sensor recognition.

Detailed explanations and measurement descriptions guide user through measurement adapter connection.



Automatic measurement configuration and accessible reference curves offer an immediate target performance comparison.

AVL DITEST SCOPE SOFTWARE.

The proven AVL DiTEST Scope software and user interface is intuitive for operators and can be used without specific training. All measurements include step-by-step instructions, connection guides and detailed descriptions. With automatic sensor recognition and a colour guide, the unit ensures that no connection or setting errors occur.

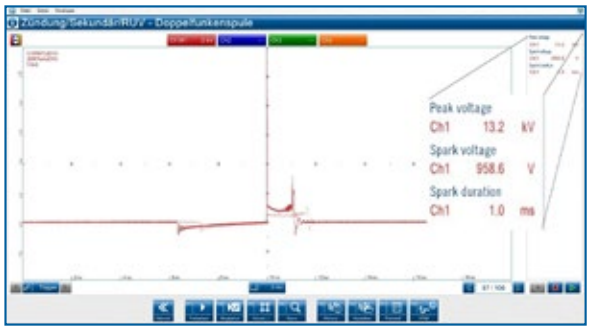
SOFTWARE FOR THE RIGHT RESULTS

- intuitive usability for a wide range of display and output devices
- designed for touchscreen operation
- reference curves (correct signals) for each pre-defined measurement scenario
- user-defined reference curves can be set and saved in just a few simple steps
- all settings pre-installed: no manual settings required
- over 400 pre-set measurement settings mean reliable results quickly and easily
- automatically scaled reference curve diagram allows measurements to be compared directly
- measurement recorder and management function allows previous results to be displayed and sequences re-played
- view up to 100 screens of your signal history
- play back recorded signals and send measurement signal curves
- different live data can be easily read in one go
- clear and exact information saves time.

DIAGNOSTICS IN THE FIELD

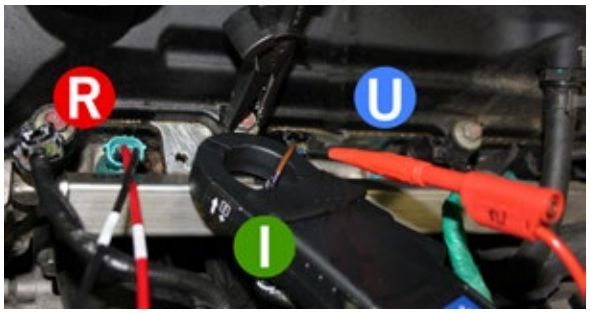
Each channel can be used independent of the others, which means that different measurements can be carried out at the same time. Galvanic isolation protects the measurement components from short circuiting as well as from spark overs and ground loops. This ensures that neither the vehicle nor the device's hardware is damaged during the procedure.

MEASUREMENT OF MODERN IGNITION SYSTEMS.



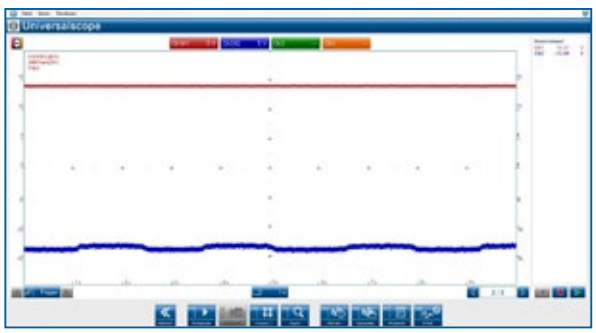
Measurement of modern ignition systems, no additional adapter needed. Immediate evaluation of all relevant nominal values (includes reference curve comparison).

MEASUREMENT OF RESISTANCE, VOLTAGE AND POWER CURVES FOR INJECTION VALVES.



Simultaneously measure resistance (curve and nominal value), voltage curve and current curve for injection valves.

SIMULTANEOUSLY MEASURE BATTERY VOLTAGE AND VOLTAGE SUPPLY TO LAMBDA SENSOR.



Oscilloscope display: battery voltage andlambda heater supply.

Multimeter display: battery voltage and lambda heater supply.

AVL DITEST – SCOPE PRODUCT PACKAGES

In order to meet your individual requirements, we offer three different product packages. Each measurement unit has been specially developed for demanding daily use in the workshop.

- Robust, waterproof and dust-proof
- Impact resistant
- Oil- and acid-proof

AVL DITEST SCOPE 8400 INCL. COMPLETE PC SET

AVL DiTEST Scope 8400 incl. PC
Mains adapter with power cord
USB cable
LAN cable
Video cable
2 x URD cable, red/black
2 x probe, red
2 x probe, black
2 x crocodile clamp, red
2 x crocodile clamp, black
Set of stimuli cables
Current probe I150 High End
Current probe I1800
Temperature sensor: -20°C to 200°C
Pressure sensor: -1 bar to 100 bar
2 x connection tube for two internal low pressure sensors (-0.8 to 2 bar)
Trigger probe
KV clip
CD manual
Device carry case
Packaging

AVL DITEST SCOPE 1400 INCL. COMPLETE STIMULI SET

AVL DiTEST Scope 1400 module
Mains adapter with power cord
Cigarette lighter and vehicle battery supply cable
USB cable
4 x URD cable
4 x probe, red
4 x probe, black
4 x crocodile clamp, red
4 x crocodile clamp, black
Set of stimuli cables
Current probe I150 High End
Current probe I1800
Temperature sensor: -20°C to 200°C
Pressure sensor: -1 bar to 100 bar
Trigger probe
KV clip
Secondary ignition adapter set
CD manual
Device carry case
Packaging

AVL DITEST SCOPE 1400 INCL. STIMULI

AVL DiTEST Scope 1400 module
Mains adapter with power cord
USB cable
4 x URD cable
4 x probe, red
4 x probe, black
4 x crocodile clamp, red
4 x crocodile clamp, black
Set of stimuli cables
Current probe I100
Current probe I1800
CD manual
Device carry case
Packaging

AVL DITEST SCOPE 1200

AVL DiTEST Scope 1200 module
Mains adapter with power cord
USB cable
2 x URD cable
2 x probe, red
2 x probe, black
2 x crocodile clamp, red
2 x crocodile clamp, black
Current probe: 600A
CD manual
Device carry case
Packaging

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