

Diagnostic Solutions

FSA 7 series



MEASURING MODULE / OSCILLOSCOPE WITH EXTENSIVE SENSOR EQUIPMENT AND BUILT-IN SIGNAL GENERATOR



FSA 720:
HIGH QUALITY BASIC EQUIPMENT

FSA 740:
THE COMPLETE SYSTEM WITH EXTENDED APPLICATION SPECTRUM

FSA 740AU:
THE COMPLETE SOLUTION FOR VEHICLE DIAGNOSTICS, VEHICLE SYSTEM TESTING AND EMISSIONS TESTING

BENEFITS OF FSA 7 SERIES AT A GLANCE

- ▶ Extensive measuring module: handles everything from classic engine testing to vehicle component testing, including compression and battery testing without component expansion
- ▶ More than 50 preset component tests and vehicle-specific data (CompacSoft subscription required) presented in a fast and simple way to ensure high efficiency
- ▶ Connection, channels, range, time & trigger - all set by a mouse click
- ▶ Practical display of all actual values from the ECU diagnostics in the FSA software in conjunction with the KTS module
- ▶ Efficient troubleshooting, without the need to replace "on spec" parts with large sensor equipment and a free slot
- ▶ Easy to understand thanks to clear and well-arranged menu structure for measuring and testing
- ▶ Upgrade to the needs of your workshop: Extend the functional scope of your FSA 7 series with prefabricated Bosch Upgrade Kits
- ▶ Customer reports with green / yellow / red marks for easy explanation of the electrical system status
- ▶ Built-in signal generator for simulating sensor signals
- ▶ Save and recall stored waveforms in the database and create test reports for your customers

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DID YOU KNOW?

FSA 7 series is the high-quality, comprehensive measuring module perfect for your workshop's daily business. With FSA 7 series, diagnostics is made simple by the means of intuitive menu-guided steps, the component test and the signal generator.

FSA 7 series is not only an ideal solution for **classic engine testing** but also a perfect choice for **component testing** on affected parts without additional component expansion. Thanks to this feature, there is no need to replace "on spec" parts with large sensor equipment and a free slot, thus increasing the efficiency of your workshop.



Additionally, FSA 720/740 can be combined with the new and existing KTS 560/590 diagnostic devices for a practical display of actual values from the ECU diagnosis in the FSA software in conjunction with the KTS module.

To suit your workshop needs, FSA 720/740 is also expandable - e.g. with FSA – for testing electric and hybrid drives; with any BEA to for exhaust gas examinations.

Safe investment into the future because of the many equipment details:

- ▶ A powerful universal oscilloscope of the FSA 720/740 reaches up to 50 MSamples
- ▶ Sufficient reserves, also for the examination of future vehicle components
- ▶ More than 50 preset component tests (CompacSoft subscription required)
- ▶ Built-in signal generator for simulating sensor signals

FSA 7 series supports the workshop daily business in the following way:

- ▶ Diagnostics by means of sampling steps, the component test and signal generator
- ▶ Specific troubleshooting on affected parts is enabled by test sensors in the installed state
- ▶ Simple connection, channels, range, time & trigger all set by a simple mouse-click
- ▶ Battery discharge measurement up to 24 hours
- ▶ Alternator, charging and battery tests
- ▶ Pressure measurement using the built-in sensor
- ▶ Testing vehicle bus systems (e.g. CAN bus)
- ▶ Engine test capabilities
- ▶ An ignition coil for primary and secondary signals is available for analyzing the ignition system
- ▶ Charging and storing comparative curves: The digital multimeter can be used to measure voltage, resistance, current, temperature, pressure and vacuum, whereby the measurement curves and values are stored or transferred to a workshop PC

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TIMESAVING AND PRECISE TROUBLESHOOTING:

- ▶ Signal generator for testing sensors when installed
- ▶ For testing components when installed

BENEFITS TO THE WORKSHOP:

- ▶ Measurement module with extensive sensor equipment
- ▶ Concise and clearly arranged menu structure
- ▶ Test steps with optional vehicle-specific reference values*
- ▶ Around 50 preset component tests
- ▶ Practical display of actual values from the ECU diagnosis in the FSA software in conjunction with the KTS module
- ▶ Optional testing of electric and hybrid vehicles in conjunction with FSA 050

* CompacSoft[plus] subscription required

SCOPE OF DELIVERY AND EQUIPMENT DETAILS:

FSA 720	FSA 740	FSA 740	FSA 740 AU
<p>Order number: 0 684 010 500</p> <ul style="list-style-type: none"> ▶ Measuring module with sensor carrier ▶ Installation angle ▶ SystemSoft system software [plus] ▶ Connection cable Multi 1 / Multi 2 and B + / B- ▶ Connection cable, class 1/15 (Uni line IV) ▶ Transmitter 3 x KV + / Rt and 3 x KV- / Sw ▶ Trigger clamp ▶ Current measurement clamp 1000 A ▶ Strobe ▶ Oil temperature sensor ▶ Air pressure measurement with hose line 	<p>Order number: 0 684 010 740</p> <ul style="list-style-type: none"> ▶ Measuring module with sensor carrier ▶ SystemSoft [plus] ▶ Connection cable Multi 1 / Multi 2 and B + / B- ▶ Connection cable, class 1/15 (Uni-line IV) ▶ Transducer 3 x KV + / Rt and 3 x KV- / Sw ▶ Trigger clamp ▶ Current measurement clamps 1000 A and 30 A ▶ Strobe ▶ Oil temperature sensor ▶ Air pressure measurement with hose <p>In addition:</p> <ul style="list-style-type: none"> ▶ Trolley ▶ PC with operating system ▶ Monitor, mouse, keyboard (D / A), printer ▶ Remote control (transmitter and receiver) ▶ 2 x Y adapter ▶ Universal secondary transducer 	<p>Order number: 0 684 012 742</p> <ul style="list-style-type: none"> ▶ Measuring module with sensor carrier ▶ SystemSoft [plus] ▶ Connection cable Multi 1 / Multi 2 and B + / B- ▶ Connection cable, class 1/15 (Uni-line IV) ▶ Transducer 3 x KV + / Rt and 3 x KV- / Sw ▶ Trigger clamp ▶ Current measurement clamps 1000 A and 30 A ▶ Strobe ▶ Oil temperature sensor ▶ Air pressure measurement with hose ▶ Trolley ▶ PC with operating system ▶ Monitor, mouse, keyboard (D / A), printer ▶ Remote control (transmitter and receiver) ▶ 2 x Y adapter ▶ Universal secondary transducer <p>In addition:</p> <ul style="list-style-type: none"> ▶ Communication module KTS 560 / 590 	<p>Order number: 0 684 012 748</p> <ul style="list-style-type: none"> ▶ Measuring module with sensor carrier ▶ SystemSoft [plus] ▶ Connection cable Multi 1 / Multi 2 and B + / B- ▶ Connection cable, class 1/15 (Uni-line IV) ▶ Oil temperature sensor ▶ Air pressure measurement with hose ▶ Trolley ▶ PC with operating system ▶ Monitor, mouse, keyboard (D / A), printer ▶ Remote control (transmitter and receiver) ▶ Communication module KTS 560/590 <p>In addition:</p> <ul style="list-style-type: none"> ▶ Exhaust gas module BEA 055 ▶ Diesel module BEA070

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UPGRADE KIT FSA 740EM MEASUREMENT TECHNOLOGY (P/N 1687010380)

- ▶ Current clamp 1 000 A for starter test, generator test, compression and more. v. m.
- ▶ Current clamp 30A for testing of injector current, ignition coil current, quiescent current, among other things
- ▶ 2 Y adapters for simultaneous connection of multi and current clamps
- ▶ Air temperature sensor for checking the intake temperature sensor and for measuring the air temperature of the air conditioning system
- ▶ Liquid pressure kit for checking the fuel pressure of petrol engines

UPGRADE KIT FOR FSA 740EM: IGNITION (P/N 1687010381)

- ▶ Stroboscope
- ▶ Secondary adapter 3 x KV- / black
- ▶ Secondary adapter 3 x KV+ / red
- ▶ Secondary adapter KV loop for pencil ignition coils
- ▶ Test adapter with DEF switch for KV loop

TECHNICAL DATA	FSA 720	FSA 740	FSA 740 AU
Power requirement of power pack	90–264 VAC/47–63 Hz	90–264 VAC/47–63 Hz	90–264 VAC/47–63 Hz
Operating temperature range	5 °C to 40 °C	5 °C to 40 °C	5 °C to 40 °C
Dimensions (W x H x D)	550 x 210 x 200 mm	680 x 1785 x 670 mm	680 x 1785 x 670 mm
Weight	8kg	91kg	91kg
Universal oscilloscope			
Sampling rate	Max. 50 Ms/s	Max. 50 MS/s	Max. 50 MS/s
Two-channel operation	50 Ms/s	50 Ms/s	50 Ms/s
One-channel operation	50 Ms/s	50 Ms/s	50 Ms/s
Operating voltage	200 mV to 200 V	200 mV to 200 V	200 mV to 200 V
Current	2 mA - 30A (Probe 30A) 50A to 1000A (Probe 1000A)	2 mA - 30A (Probe 30A) 50A to 1000A (Probe 1000A)	2 mA - 30A (Probe 30A)* 50A to 1000A (Probe 1000A)*
Ignition scope			
Primary	20 V to 500 V	20 V to 500 V	20 V to 500 V
Secondary	5 KV to 50 KV	5 KV to 50 KV	5 KV to 50 KV
Signal generator			
Signal waveforms	Direct current, sinusoidal, delta, rectangle	Direct current, sinusoidal, delta, rectangle	Direct current, sinusoidal, delta, rectangle
Frequency	1 Hz to 1000 Hz	1 Hz to 1000 Hz	1 Hz to 1000 Hz
Pulse width adjustment range	10 % to 90 %	10 % to 90 %	10 % to 90 %
Amplitudes	-10 V to +12 V (against ground)	-10 V to +12 V (against ground)	-10 V to +12 V (against ground)
Current	max. 50 mA	max. 50 mA	max. 50 mA
Resolution	8 bit (256 shades)	8 bit (256 shades)	8 bit (256 shades)
Overload protection	Automatic	Automatic	Automatic