

## Contents

<b>1. Operator instructions</b>	<b>8</b>
1.1 Important notes	8
1.2 Safety instructions	8
1.3 Further information	8
<b>2. Operation</b>	<b>9</b>
2.1 Diagnostics Software Selection (DSA)	9
2.2 ESI[tronic]	9
2.3 Diagnostic Device Configuration (DDC)	9
2.4 Vehicle Identification	9
2.5 Control Unit Identification	9
2.6 Displaying actual values	9
2.7 Measuring module	9
2.7.1 Multimeter	9
2.7.2 Oscilloscope	9
2.7.3 Diagnostics oscilloscope	9
<b>3. Softkeys</b>	<b>10</b>

## 1. Operator instructions

### 1.1 Important notes

Important notes on the agreement pertaining to copyright, liability and warranty, about the user group and obligation on the part of the contractor, are available in the separate instructions entitled "Important notes and safety instructions" on Bosch test equipment. These are to be read thoroughly before using, connecting and operating the product and they must be observed.

### 1.2 Safety instructions

All safety instructions are available in the separate instructions "Important notes and safety instructions" on Bosch test equipment. These are to be read thoroughly before using, connecting and operating the product and they must be observed.

### 1.3 Further information

Further information can be found in the separate document entitled "Product Description" on the KTS module concerned.

KTS-module	Produktbeschreibung
KTS 520 / 550	1 689 979 857
KTS 530 / 540 / 570	1 689 979 987
KTS 650	1 689 979 856

## 2. Operation

The control unit diagnostic function is fully menu-controlled.

### 2.1 Diagnostics Software Selection (DSA)

DSA enables you to:

- Start Bosch applications such as control unit diagnostics (automatic start also applies)
- Configure interface settings
- Select language for DSA and Bosch applications.
- Install software.
- Release component test and vehicle-specific information.
- Update customer and vehicle data.
- Close Bosch applications.

Further information is available in the DSA online Help.

### 2.2 ESI[tronic]

ESI[tronic] enables you to:

- Call-up vehicle fault finding instructions.
- Run a control unit diagnostics routine.

ESI[tronic] must be installed on the PC/Laptop and released. Extra costs apply in this case.

Further information is available in the ESI[tronic] online Help.

### 2.3 Diagnostic Device Configuration (DDC)

DDC enables you to configure and activate KTS modules. Further information is available in the DDC online Help.

### 2.4 Vehicle Identification

Vehicle identification is part of both the ESI[tronic] software or the control unit diagnostics function. Vehicle identification per se occurs on switchover between ESI[tronic] and control unit diagnostics. The process is described in the online Help.

### 2.5 Control Unit Identification

Control Unit Identification is described in the online Help about control unit diagnostics.

### 2.6 Displaying actual values

The display of actual values is described in the online Help about control unit diagnostics.

### 2.7 Measuring module

A number of different functions are provided.

Function	KTS 520	KTS 530	KTS 540	KTS 550	KTS 570	KTS 650
1 channel multimeter	X	X	X	X	X	X
2 channel multimeter	–	–	–	X	X	X
1 channel oscilloscope	–	–	–	X	X	X
2 channel oscilloscope	–	–	–	X	X	X
2 channel diagnostics oscilloscope	–	–	–	–	X	–

#### 2.7.1 Multimeter

The 1 channel/2 channel multimeter enables you to measure voltage, current and resistance measurements.

#### 2.7.2 Oscilloscope

The 1 channel/2 channel oscilloscope enables you to record voltage or current signals. Current signals are recorded via transducers or measuring shunt.

Pulse time, duration, pulse duty ratio and frequency are displayed in numerical format. The control unit diagnostics module will also display the selected actual value numerically. The trigger signal can be selected by trigger source and mode.
















#### 2.7.3 Diagnostics oscilloscope

The 2 channel diagnostics oscilloscope enables you to record signals from the control unit diagnostics operation. Pins 1 to 3 and Pins 6 to 15 are available as inputs. Operation of the 2 channel diagnostics oscilloscope corresponds to that of the 2 channel oscilloscope.

### 3. Softkeys

Summary of the most frequently used softkeys.

	Choose internal help		Notes
	Choose Multiplexer menu		Multimeter measuring range
	Save displayed values/functions		Direct control unit selection <sup>4)</sup>
	Info on various topics		General control unit search <sup>4)</sup>
	Choose measuring module		Control unit group search <sup>4)</sup>
	View saved time graph		Enter characters
	Choose Configuration menu		Delete selected characters
	Select control unit		Select
	Open SIS (ESI[tronic])		Control unit overview
	Delete		Back
	Yes		Contents
	No		Print topic
	Measured values as time graph <sup>1)</sup>		View safety instructions
	Stretch view		Forward one hour
	Start <sup>2)</sup>		Back one hour
	Stop <sup>2)</sup>		Back one minute
	Switch to next actuator		Forward one minute
	Page forward within a saved graph <sup>3)</sup>		Install printer
	Page back within a saved graph <sup>3)</sup>		Delete log
	Reduce value		Repeat
	Increase value		Sorting in the OBD program
	Automatic range adjustment		View list in OBD program
	Open DDC		Min/Normal/Max actual value display
			Multimeter selection screen

	Zero calibration, resistance measurement
	Measurement of diode voltage (CH 1)
	Continuity test, no-load position open (CH 1)
	Open circuit test, no-load position closed (CH 1)
	Time graph (measured values plotted in graph form)
	Triggering performed by positive or negative flank
	Y-voltage deflection, channel 1
	Y-voltage deflection, channel 2
	Trigger level setting
	Trigger level decrease
	Trigger level increase
	Y-voltage deflection setting
	X deflection for time curve
	Display setting (normal, split, 1st. channel, 2nd. channel)
	Acquire-Mode switchover ( Auto, MIN/MAX, Sample)

- 1) Press the "Time graph" softkey to view the actuals in graph form. Select the actuals using the arrow keys (hardkeys). Press the down-arrow key to move to an actual, for example, the left-arrow key to select and highlight it, and the right-arrow key to deselect it. Between 1 and a maximum of 4 actuals can be selected and displayed one underneath the other in list form or, by pressing the "Time graph" softkey, in graph form.
- 2) Press the "Time graph" softkey to automatically launch the graph view of the measured values, press the "Stop" softkey to cancel it and the "Start" softkey to return to it.
- 3) Use the "Page back/Page forward" softkeys to view the recorded signals again and evaluate them. The recording time is around 2 minutes, meaning the memory always holds the last two minutes of recorded signals.
- 4) In the "General search / Group search / Direct selection" views the softkey always displays the next search mode. The current search mode is shown in the header (so if the "Group search" softkey icon is displayed the "General search" mode is active, for example).