V.A.G 1594D

Automotive measuring lead set

Instruction manual

1.1 Explanation of symbols

Some sections of this instruction manual use internationally known warning symbols, warning notes and general instructional symbols.
The individual symbols are explained below. Follow all instructions and safety rules.


Observe the instruction manual


Warning: dangerous electric voltage

Arrow showing direction


Pacemaker-wearers prohibited


Please note the following


For more information, see section …


Warning: General source of danger


Arrow to clarify compression


Audibly engage

1.2 Information regarding this manual

This automotive measuring lead set represents state-of-the-art technology. To ensure functionality, it must be operated in a proper and safe manner.

State-of-the-art

In the interests of quality assurance, we reserve the unrestricted right to proceed with technical mod ifications arising out of further developments in technology and product improvements, without prior notification.

Technical modifications

Read the instruction manual carefully before using the automotive measuring lead set.

Read the instruction manual

All handling necessary to ensure correct operation is described in the instruction manual.
No work methods other than those approved by the manufacturer may be used.

Handling

1.3 Operating principles

Our automotive measuring lead set has been developed specially for making contact with almost all plug connectors found in the automotive sector. With its numerous possible combinations, it is suitable for universal use. Many innovative details permit flexible and reliable fault diagnosis.

1.4 Safety instructions

Read the operating instructions.

Be careful when touching hot components: risk of burns.

Do not use the measuring lead set if any leads are faulty.

Do not allow leads to hang over the edge of the desk, work area, or counter or allow them to come into contact with hot manifolds or moving parts.

Always replace leads so they lie loosely in the carrying case. Make sure that they do not get jammed!

To reduce the risk of electrical shock, do not use the measuring lead set on wet surfaces or in the rain.

Only use the measuring lead set in the manner described in these operating instructions. Only use accessories approved by the manufacturer.

1.4 Safety instructions

Usage as described in Instruction manual

The automotive measuring lead set is intended exclusively for testing voltages and currents in the automotive sector. The tool must only be used for purposes which do not entail any risk to persons or machinery.

Improper use

The automotive measuring lead set must be used only as described in the operating instructions. Any modification of the automotive measureing lead set or other usage forms are the responsibility of the user.

Make sure that the automotive measuring lead set is in perfect condition and that it has all the functionality necessary to ensure safe operation.

Follow all health and safety regulations in the country of operation. Wear personal protection equipment.

Use of the tool by personnel that have not been trained and instructed is prohibited.

Make sure that automotive measuring lead set is used in a work area that is free from heat sources (max. 50°C / 122°F), corrosive liquids, oil, and grease.

The automotive measuring lead set must never be used in any areas where there is a risk of explosion.

Only use tools and accessories that do not show signs or wear or damage. Damaged tools or accessories can lead to serious injury.

The manufacturer accepts no liability for damage or injury caused by improper repair or use of non-original spare parts.

Warranty

Any incorrect use of the automotive measuring lead set resulting in damage to either the appliance or the vehicle nullifies the warranty.

Important notes for maintenance

In the event of any noticeable damage, the components must be replaced. Damaged components can lead to serious injury.

Use only genuine spare parts. Check contacts and connections for damage.

Service address

For further details please contact our service address:

TKR Spezialwerkezuge GmbH
Am Waldesrand 9-11
D-58285 Gevelsberg (Germany)

Phone: +49 2332 6660777
Email: info@tkrgroup.com
Web www.tkrgroup.com

2.1 Scope of supply - accessories

V.A.G 1594D

2.1.1

Instrucion manual

1 pc.

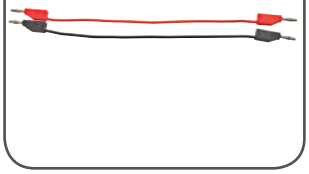
2.1.2

V.A.G 1594/48

Contact gauge

1 pc.

2.1.3



V.A.G 1594/19A

Extension lead

30 cm, 1 set

2.1.4

V.A.G 1594/47

Extension lead

200 cm, 1 set

2.1.5

V.A.G 1594/31A

Extension lead

400 cm, 1 pc.

2.1.6

V.A.G 1594/14A

Terminal clips

red and black, 1 pair

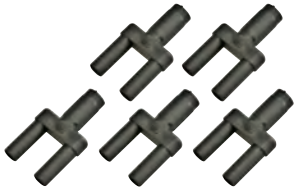
2.1.7

V.A.G 1594/13A

Test probes

red and black, 1 pair

2.1.8

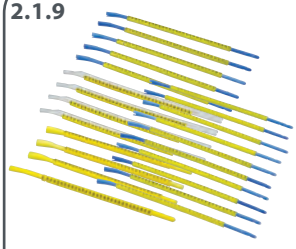


V.A.G 1594/49

Connector plugs

5 pc.

2.1.9



V.A.G 1594/50

Lead markers

1 set

2.1.10

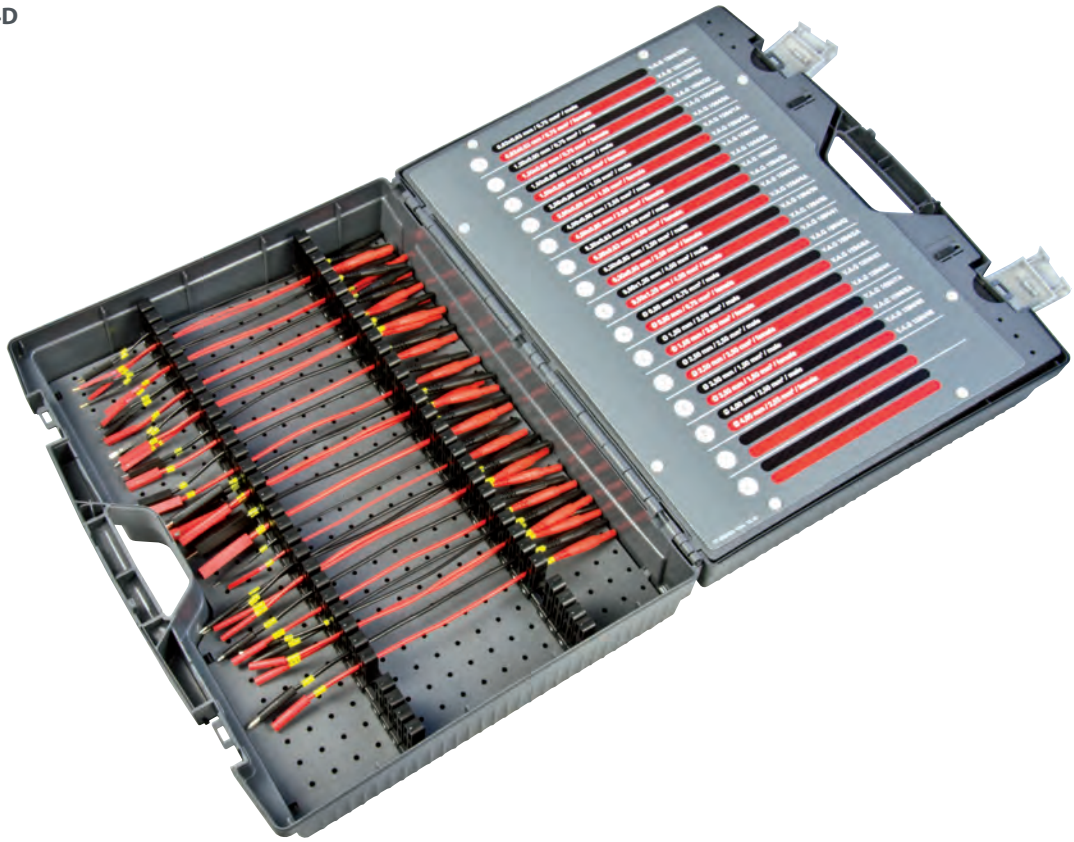
V.A.G 1630A

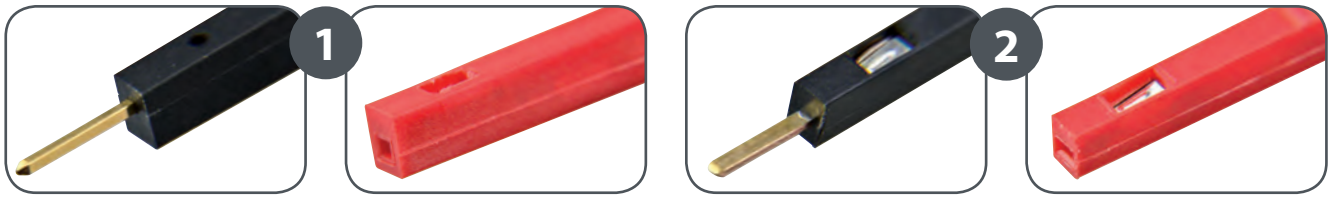
Resistor decade

1 pc.

2.2 Scope of supply - measuring leads

V.A.G 1594D



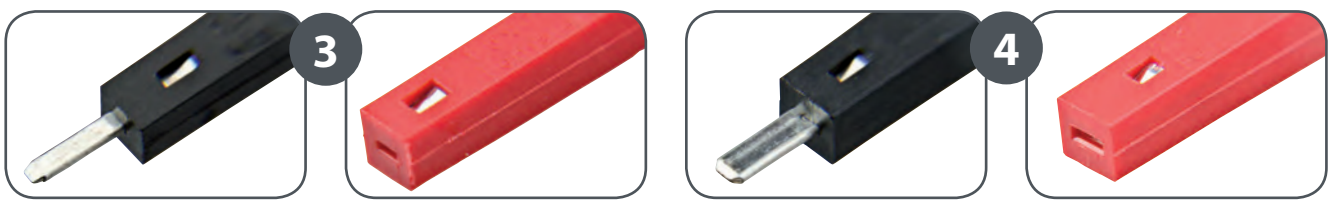


V.A.G 1594/28A
0.63 x 0.63 mm / 0.75 mm²
max. 3A
2 pc.

V.A.G 1594/29A
0.63 x 0.63 mm / 0.75 mm²
max. 3A
2 pc.

V.A.G 1594/32
1.20 x 0.60 mm / 0.75 mm²
max. 6A
2 pc.

V.A.G 1594/33
1.20 x 0.60 mm / 0.75 mm²
max. 6A
2 pc.

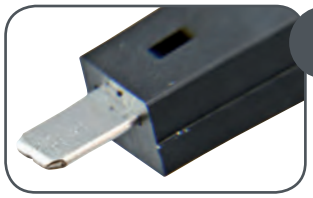


V.A.G 1594/30A
1.50 x 0.60 mm / 1.00 mm²
max. 10A
2 pc.

V.A.G 1594/34
1.50 x 0.60 mm / 1.00 mm²
max. 10A
2 pc.

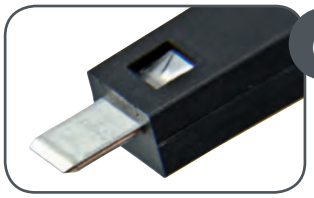
V.A.G 1594/1A
2.80x0.80 mm / 1.50 mm²
max. 13A
2 pc.

V.A.G 1594/2A
2.80x0.80 mm / 1.50 mm²
max. 13A
2 pc.



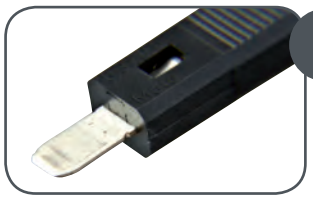
V.A.G 1594/35
4.80 x 0.80 mm / 2.50 mm²
max. 16A
1 pc.

V.A.G 1594/36
4.80 x 0.80 mm / 2.50 mm²
max. 16A
1 pc.

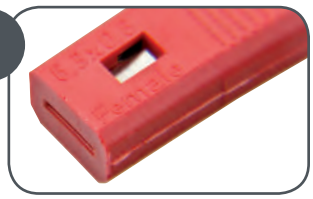


V.A.G 1594/37
5.20 x 0.63 mm / 2.50 mm²
max. 16A
1 pc.

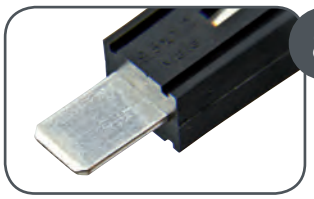
V.A.G 1594/38
5.20 x 0.63 mm / 2.50 mm²
max. 16A
1 pc.



V.A.G 1594/3A
6.30 x 0.80 mm / 2.50 mm²
max. 16A
2 pc.

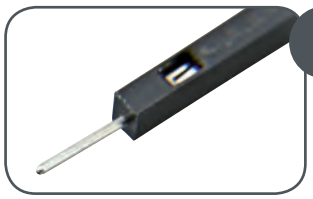


V.A.G 1594/4A
6.30 x 0.80 mm / 2.50 mm²
max. 16A
2 pc.



V.A.G 1594/39
9.50 x 1.20 mm / 4.0 mm²
max. 25A
1 pc.

V.A.G 1594/40
9.50 x 1.20 mm / 4.0 mm²
max. 25A
1 pc.



V.A.G 1594/41
Ø 0.80 mm / 0.75 mm²
max. 3A
1 pc.

V.A.G 1594/42
Ø 0.80 mm / 0.75 mm²
max. 3A
1 pc.

V.A.G 1594/5A
Ø 1.50 mm / 2.50 mm²
max. 6A
2 pc.

V.A.G 1594/6A
Ø 1.50 mm / 2.50 mm²
max. 6A
2 pc.

V.A.G 1594/43
Ø 2.50 mm / 2.50 mm²
max. 16A
1 pc.

V.A.G 1594/44
Ø 2.50 mm / 2.50 mm²
max. 16A
1 pc.

V.A.G 1594/7A
Ø 3.50 mm / 1.50 mm²
max. 10A
2 pc.

V.A.G 1594/8A
Ø 3.50 mm / 1.50 mm²
max. 10A
2 pc.

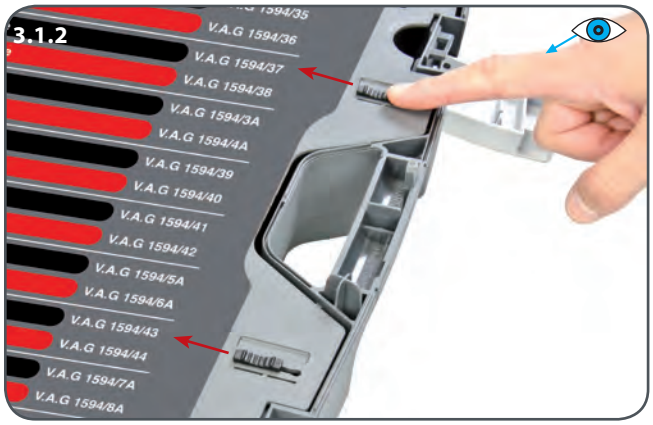
V.A.G 1594/45
Ø 4.00 mm / 2.50 mm²
max. 16A
1 pc.

V.A.G 1594/46
Ø 4.00 mm / 2.50 mm²
max. 16A
1 pc.

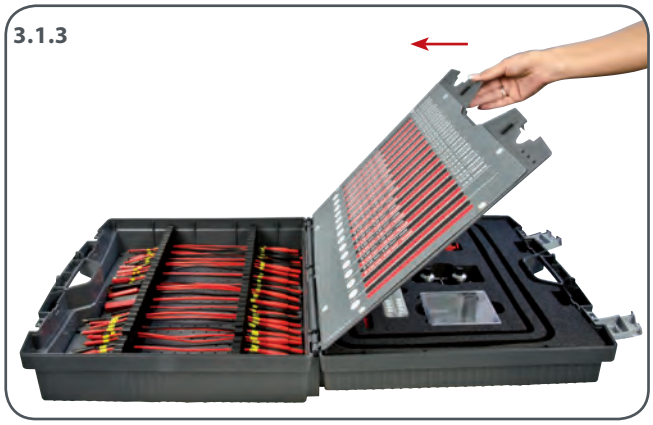
3.1 Open case

3.1.1

3.1.2

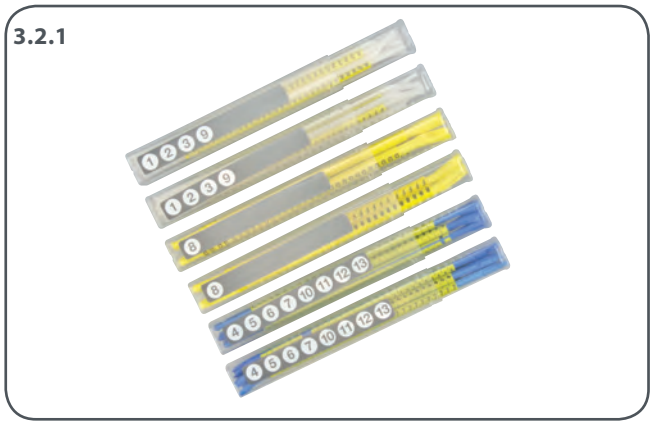


3.1.3

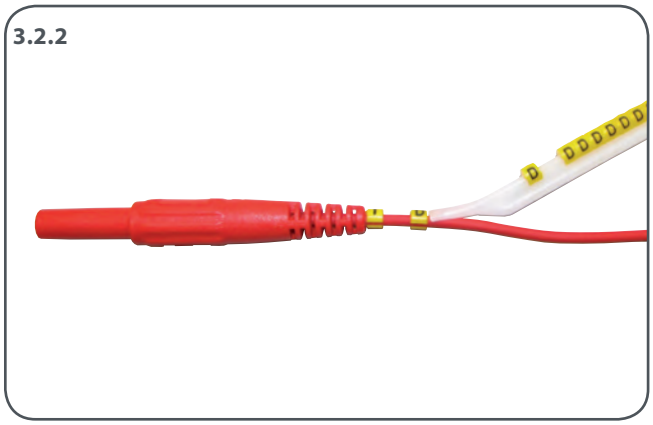


3.2 Positioning the lead marker

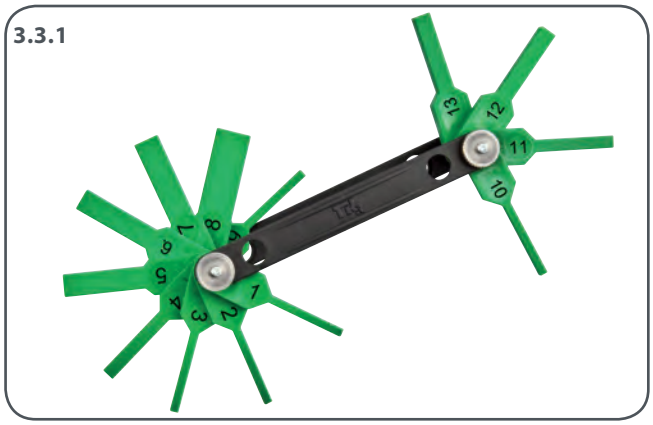
3.2.1

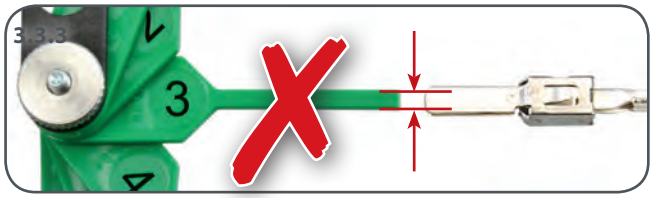


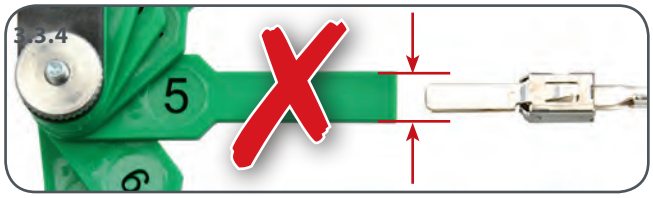
3.2.2

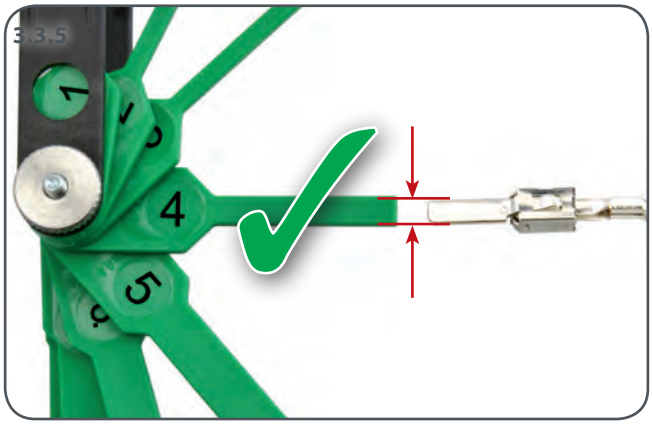


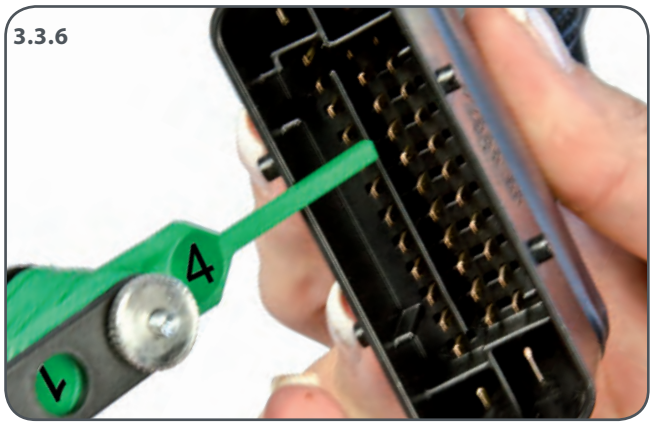
3.3 Determining the right measuring lead

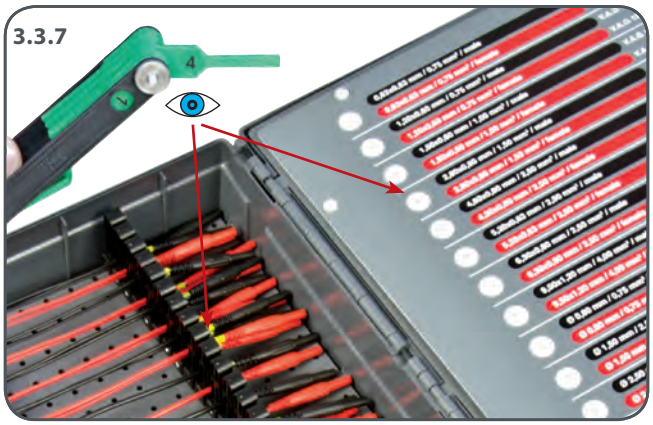












3.3.2
Judge the initial selection of the right gauge for the casing by eye.

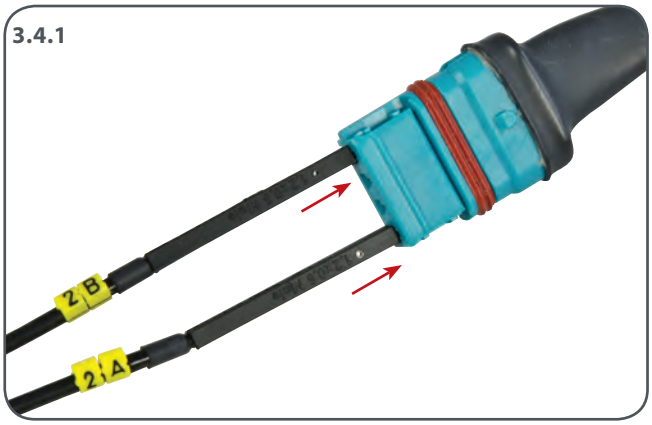
3.3.3 – 3.3.6
Check to make sure the correct gauge has been chosen.

3.3.7
The matching test lead set in each case is identified with the same number as that printed on the gauge selected.

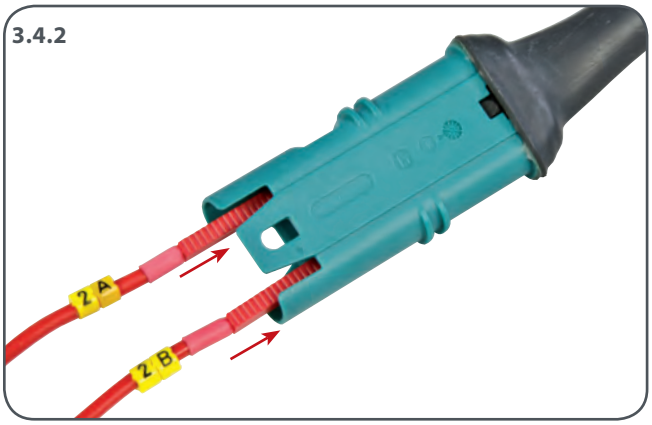
The letter on the lead is for the purpose of differentiation, where several test leads with the same number are being used at the same time.

3.4 Connecting with a Y-lead

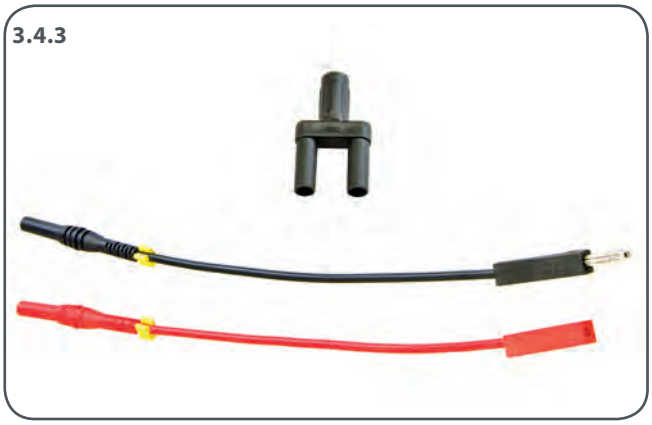
3.4.1



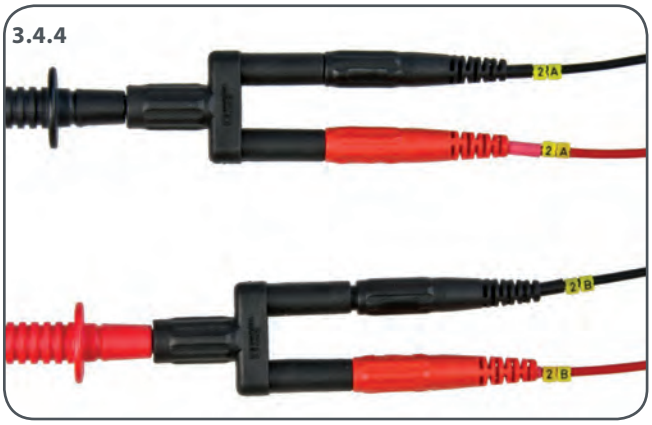
3.4.2



3.4.3



3.4.4



3.4.1
Socket-side connection

3.4.2
Plug-side connection

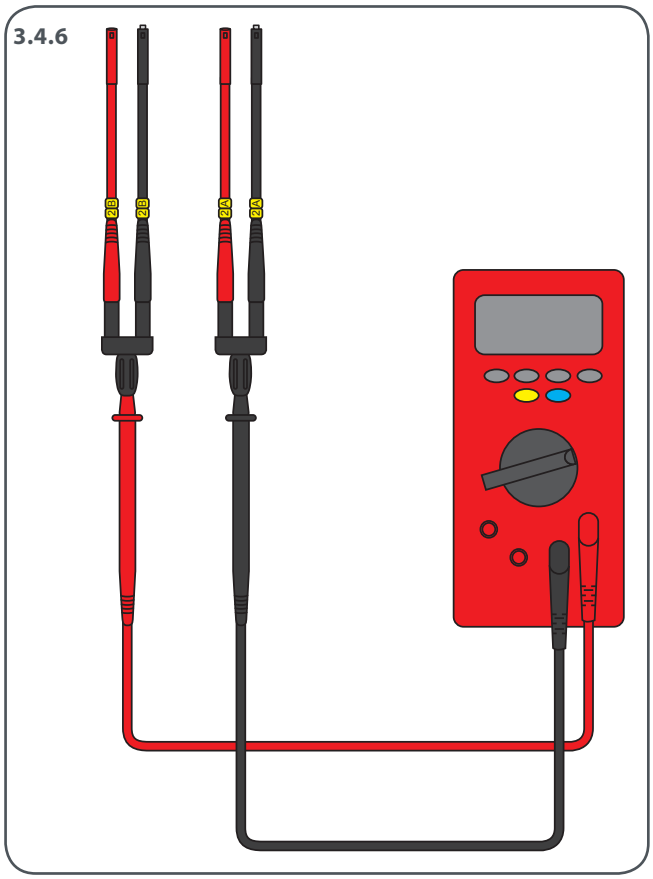
3.4.3, 3.4.4
T-pieces allow test leads to be connected to measuring leads. A Y-lead of this kind guarantees max. conductivity in the consumer path. The voltage measured is tapped off.

3.4.4
When using several test leads, always ensure that the leads marked A and B are correctly assigned.

3.4.5
Always connect the measuring instrument first – the bare ends of the leads must never come into accidental contact with the bodywork or other bare metal parts.

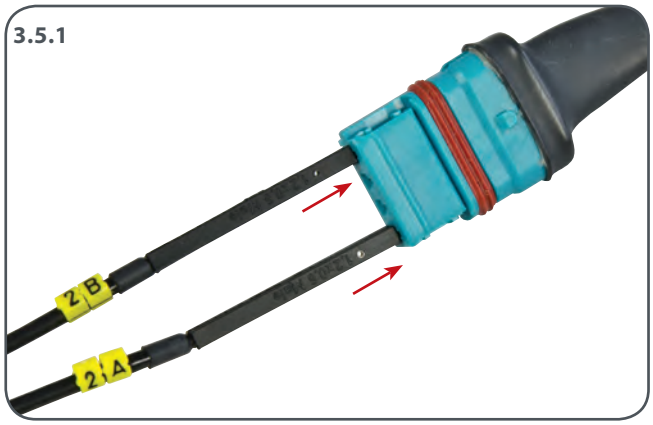
3.4.5

3.4.6



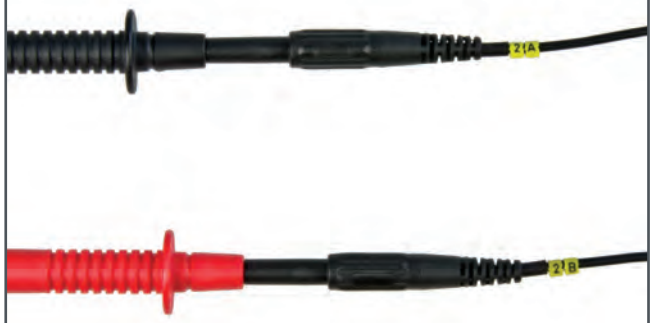
3.5 Connecting with an I-lead

3.5.1



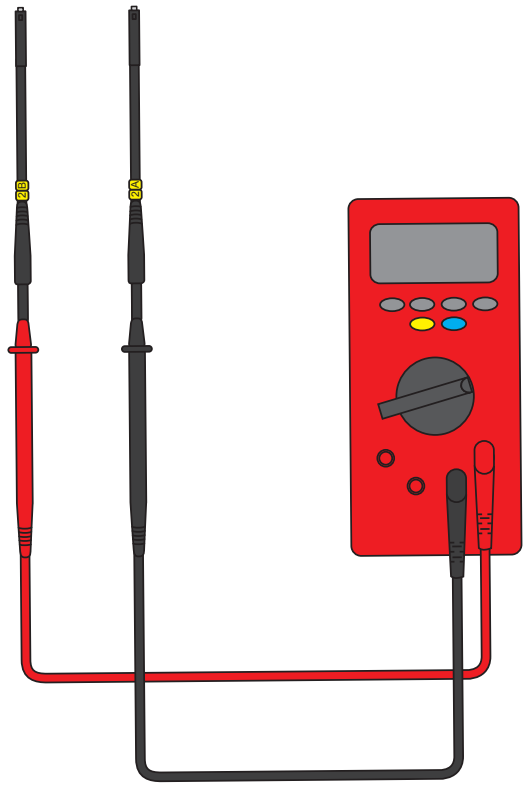
3.5.2

3.5.3



3.5.4

3.5.5



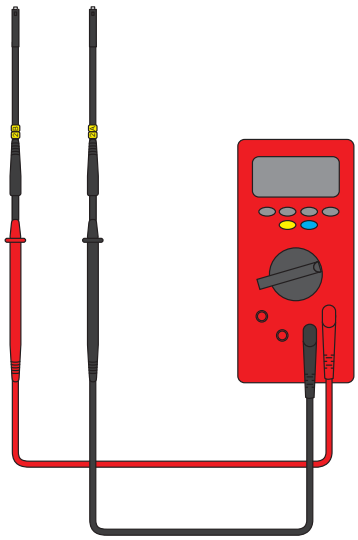
3.5.1
Socket-side connection

3.5.2 – 3.5.4
I-connection – test leads to measuring leads

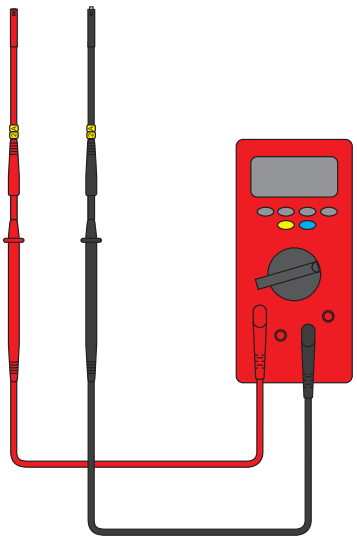
3.5.5
Always connect the measuring instrument first – the bare ends of the leads must never come into accidental contact with the bodywork or other bare metal parts.

3.6 Measurement instrument connectivity

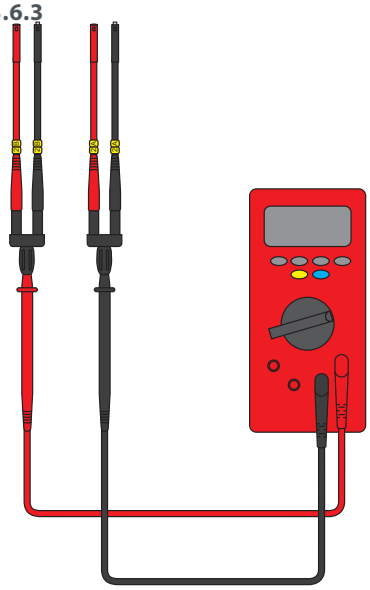
3.6.1



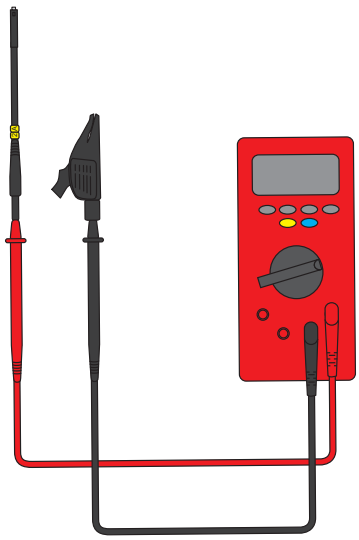
3.6.2



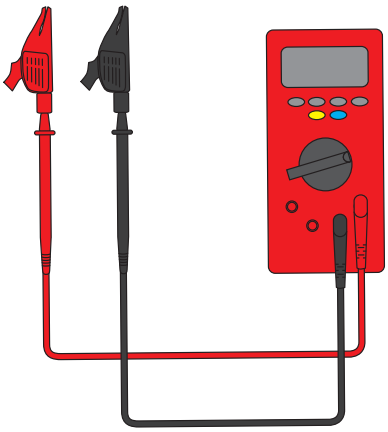
3.6.3



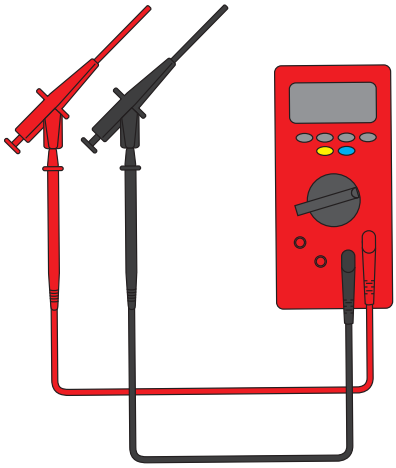
3.6.4



3.6.5



3.6.6



3.6.1
I-connector for voltage and resistance measurement

3.6.2
I-connector for current measurement

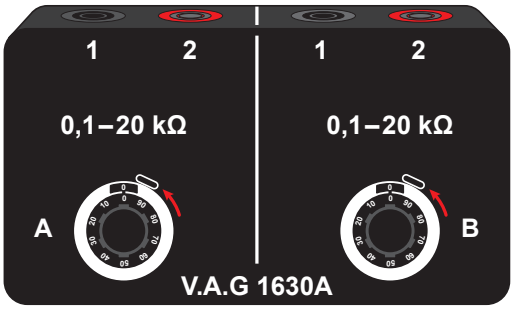
3.6.3
Y-connector for voltage measurement

3.6.4
Plug combination with respect to ground - predominantly for measuring voltage

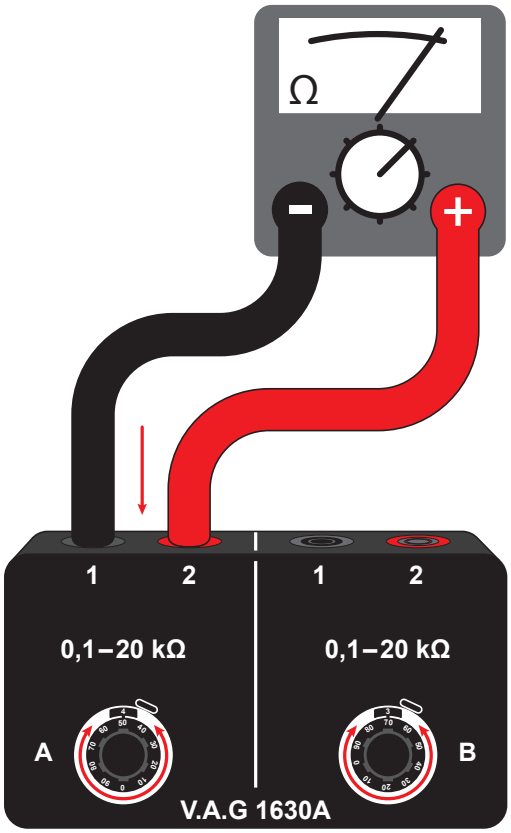
3.6.5, 3.6.6
Measurement instrument equipped with universal alligator clips for the widest variety of uses

3.7 Use of resistor decade

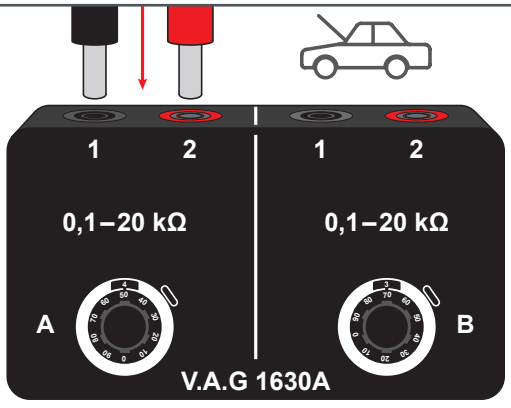
3.7.1



3.7.2



3.7.3



4.1 Spare parts

The individual items described in this guide are integral parts of the case and can be reordered as spare parts or additions to the set.
Test lead sets can be reordered as spare parts or as additions. This means that entire plug connectors with a number of identical contacts can be tested. Depending on the number of poles, as many test leads as required can be added. The case has spaces available for this purpose.

VW No.	Designation	Unit
V.A.G 1594/48	Contact gauge	1 pc.
V.A.G 1594/19A	Extension lead, black/red, 30 cm	1 set
V.A.G 1594/47	Extension lead, black/red, 2 m	1 set
V.A.G 1594/31A	Extension lead, black, 4 m	1 pc.
V.A.G 1630A	Resistor decade	1 set
V.A.G 1594/14A	Alligator clips, black/red	1 set
V.A.G 1594/13A	T-tap connectors, black/red	1 set
V.A.G 1594/49	Connector plugs	5 pc.
V.A.G 1594/50	Lead markers	1 set
V.A.G 1594/28A	Measuring leads, 0.63 x 0.63 mm, male	2 pcs.
V.A.G 1594/29A	Measuring leads, 0.63 x 0.63 mm, female	2 pc.
V.A.G 1594/32	Measuring leads, 1.20 x 0.60 mm, male	2 pc.
V.A.G 1594/33	Measuring leads, 1.20 x 0.60 mm, female	2 pc.
V.A.G 1594/30A	Measuring leads, 1.50 x 0.60 mm, male	2 pc.
V.A.G 1594/34	Measuring leads, 1.50 x 0.60 mm, female	2 pc.
V.A.G 1594/1A	Measuring leads, 2.80 x 0.80 mm, male	2 pc.
V.A.G 1594/2A	Measuring leads, 2.80 x 0.80 mm, female	2 pc.
V.A.G 1594/35	Measuring leads, 4.80 x 0.80 mm, male	2 pc.
V.A.G 1594/36	Measuring leads, 4.80 x 0.80 mm, female	2 pc.
V.A.G 1594/37	Measuring leads, 5.20 x 0.63 mm, male	2 pc.
V.A.G 1594/38	Measuring leads, 5.20 x 0.63 mm, female	2 pc.
V.A.G 1594/3A	Measuring leads, 6.30 x 0.80 mm, male	2 pc.
V.A.G 1594/4A	Measuring leads, 6.30 x 0.80 mm, female	2 pc.
V.A.G 1594/39	Measuring leads, 9.50 x 1.20 mm, male	2 pc.
V.A.G 1594/40	Measuring leads, 9.50 x 1.20 mm, female	2 pc.
V.A.G 1594/41	Measuring leads Ø 0.80 mm, male	2 pc.
V.A.G 1594/42	Measuring leads Ø 0.80 mm, female	2 pc.
V.A.G 1594/5A	Measuring leads Ø 1.50 mm, male	2 pc.
V.A.G 1594/6A	Measuring leads Ø 1.50 mm, female	2 pc.
V.A.G 1594/43	Measuring leads Ø 2.50 mm, male	2 pc.
V.A.G 1594/44	Measuring leads Ø 2.50 mm, female	2 pc.
V.A.G 1594/7A	Measuring leads Ø 3.50 mm, male	2 pc.
V.A.G 1594/8A	Measuring leads Ø 3.50 mm, female	2 pc.
V.A.G 1594/45	Measuring leads Ø 4.00 mm, male	2 pc.
V.A.G 1594/46	Measuring leads Ø 4.00 mm, female	2 pc.

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