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Киргизия (996)312-96-26-47

Магнитогорск (3519)55-03-13 Москва (495)268-04-70 Мурманск (8152)59-64-93 Набережные Челны (8552)20-53-41 Нижний Новгород (831)429-08-12 Новокузнецк (3843)20-46-81 Новосибирск (383)227-86-73 Омск (3812)21-46-40 Орел (4862)44-53-42 Оренбург (3532)37-68-04

Россия (495)268-04-70

Пенза (8412)22-31-16

Пермь (342)205-81-47 Ростов-на-Дону (863)308-18-15 Рязань (4912)46-61-64 Самара (846)206-03-16 Санкт-Петербург (812)309-46-40 Саратов (845)249-38-78 Севастополь (8692)22-31-93 Симферополь (3652)67-13-56 Смоленск (4812)29-41-54 Сочи (862)225-72-31 Ставрополь (8652)20-65-13 Сургут (3462)77-98-35 Тверь (4822)63-31-35 Томск (3822)98-41-53 Тула (4872)74-02-29 Тюмень (3452)66-21-18 Ульяновск (8422)24-23-59 Уфа (347)229-48-12 Хабаровск (4212)92-98-04 Челябинск (351)202-03-61 Череповец (8202)49-02-64 Ярославль (4852)69-52-93

Казахстан (772)734-952-31

https://leitenberger.nt-rt.ru/ || bge@nt-rt.ru

### **ELECTRIC AND ELECTRONIC CIRCUIT TESTERS**

- Our testing units are the real deal when it comes to testing electrical components and shortening the test and diagnostic time in the workshop.
- The application possibilities are manifold: Assemblies up to 48 volt can be precisely examined, for example.
- Thanks to the integrated lighting\* in our testing units, dark test points are optimally illuminated.
- The infinitely resettable short-circuit fuse with 7.5 A ensures accident-free working.
- Our testing units allow users to perform the following tasks in the workshop, regardless of whether the component is built-in or disassembled:
- Continuity tests on wiring harnesses, switches or fuses.
- Detect faulty ground connections without time-consuming voltage drop test.
- Measure DC voltage, pulsed voltage and voltage peaks.
- Depending on the device version, the polarity of the tested components is signalled both optically via LED or LC display and acoustically via two different signal tones.
- The standardised cable length of 6 m ensures that our testing units can also easily reach and test trailer lights or trailer sockets.
- The test devices AZ 172, AZ 173, AZ 174\_V2 and AZ 175 were developed exclusively for vehicle electrics applications. They are not suitable for measurements and use on the onboard electronics and on the control unit.
- Depending on device. Details are provided with the individual devices

# MULTIFUNCTION CIRCUIT TESTERS FOR AUTOMOTIVE ELECTRICAL SYSTEMS



item number : AZ 174 (070201\_1)

- For quick and easy troubleshooting and diagnosis of 12 V vehicle electrical system and 48
   V partial vehicle electrical system
- Colour-illuminated LCD display, resolution 0.1 V
- Integrated lighting (2 LEDs) for optimal illumination of the test area
- Error diagnostics of electrical components
- Polarity detection with red/green LED display
- Automatic detection and display of DC voltage or clocked voltage

- Quick functional test without removal of the components
- Fast function test of the removed components (via auxiliary earth terminal)
- Voltage or ground can be applied to the test probe via the rocker switch
- e.g. for operating electronic components such as relays, fuel pumps, electric window motor, switches, lamps etc.
  - e.g. for continuity testing of switches, relays, diodes, fuses, wiring harnesses etc.
- Detection of poor ground connections, optically and acoustically
- Changing acoustic signalling depending on polarity
- Acoustic signal, can be switched off
- Fully insulated auxiliary mass with 0.5 m cable
- Resettable thermal fuse (7.5 A) (no loss of time due to cooling)
- Measurement range: 0 48 V/DC
- 01 48 V clocked, 5 Hz 500 kHz
- Supply voltage: 9 48 V/DC
- Connection cable 6 m with battery clamps
- Stainless steel test probe
- All individual parts are available as spare parts
- Quality product made in Germany

- 1 test device, 6 m connection cable with battery clamps (20 ft) long
- 1 auxiliary clamp with 0.50 m (20 in.) lead
- in solid plastic case

# MULTIFUNCTION CIRCUIT TESTERS FOR AUTOMOTIVE ELECTRICAL SYSTEMS (9 - 48 V)



#### item number:

AZ 176 (070205 1)

- The ideal testing unit for quick and easy troubleshooting and diagnosis of 12 V vehicle electrical system and 48 V partial vehicle electrical system
- Colour display with three digits, resolution 0.1 V
- Integrated lighting (2 LEDs) for optimal illumination of the test area
- Modes:
- voltage and mass measurement
- Peak-to-peak measurement
- Voltage minimum
- Voltage maximum
- Limit value setting (for measurement of clocked voltages)
- Error diagnostics of electrical components
- Polarity detection with red/green LED display
- Quick functional test without removal of the components
- Fast function test of removed components (via auxiliary earth terminal)
- Voltage or ground can be applied to the test probe via the rocker switch,
- e.g. for operating electronic components such as relays, fuel pumps, electric window motor, switches, lamps etc.
- e.g. for continuity testing of switches, relays, diodes, fuses, wiring harnesses etc.
- Detection of poor ground connections, optically and acoustically

- Changing acoustic signalling depending on polarity
- Acoustic signal can be switched off
- Fully insulated auxiliary mass with 0.5 m cable
- Resettable thermal fuse (7.5 A) (no loss of time due to cooling)
- Measurement range: 0 48 V/DC
- 01 48 V clocked, 5 Hz 500 kHz
- Supply voltage 9 48 V/DC
- Connection cable 6 m with battery clamps
- Stainless steel test probe
- Interchangeable test probe for optional extension with commercially available test and inspection components
- Particularly suitable for current and new vehicles with 48 volt vehicle electrical system or partial vehicle electrical system
- All individual parts are available as spare parts
- Quality product made in Germany

- 1 test device, 6 m connection cable with battery clamps (20 ft) long
- 1 auxiliary clamp with 0.50 m (20 in.) lead
- in solid plastic case

### MULTIFUNCTION TESTER, 9 TO 48 V



#### item number:

AZ 175\_MK (070204\_2)

- Multifunction tester, (9–48 V) with different test modes, voltage and resistance measurement
- Including extensive accessories, specially designed for automotive application
- Particularly suitable for current and new vehicles with 48 volt vehicle electrical system or partial vehicle electrical system
- For quick and easy troubleshooting and diagnosis of 12 V vehicle electrical system and 48
   V partial vehicle electrical system
- Two-line LCD display
- Integrated lighting (2 LEDs) for optimal illumination of the test area
- Modes
- voltage and mass measurement
- Output of voltage, clocked voltage and mass via the measuring tip
- Voltage minimum
- Voltage maximum
- Limit setting/measurement
- Error diagnostics of electrical components
- Polarity detection by red/green LED and by displaying "GND" for ground or voltage value
- Automatic detection and display of DC voltage or clocked voltage
- Quick functional test without removal of the components
- Fast function test of removed components (via auxiliary earth terminal)
- Voltage or ground can be applied to the test probe via the membrane keyboard
- e.g. for operating electronic components such as relays, fuel pumps, electric window motor, switches, lamps etc.
- e.g. for continuity testing of switches, relays, diodes, fuses, wiring harnesses
   etc.

- Detection of bad ground connections, acoustically and optically via bar graph
- Changing acoustic signalling depending on polarity
- Acoustic signal can be switched off
- Fully insulated auxiliary mass with 0.5 m cable
- Resettable thermal fuse (7.5 A) (no loss of time due to cooling)
- Measurement range: 0 48 V/DC
- 01 48 V clocked, 5 Hz 500 kHz
- Supply voltage: 9 48 V/DC
- Connection cable 6 m with battery clamps
- Stainless steel test probe
- With exchangeable test probe for optional extension with commercially available test and inspection components
- Self test function
- All individual parts are available as spare parts
- Quality product made in Germany

- 1 tester with test tip and 6 m connection cable with battery clamps
- 1 auxiliary clamp with 0.50 m (20 in.) cable
- 1 insulated extension cable, length 0.60 m (24 in.)
- 1 alligator clip, fully insulated
- 1 cable puncturer (for intrusive contact)
- 1 test tip, needle-shaped (back probing probe)
- 1 "mini" test tip, needle-shaped with cable puncturing adapter (back probing probe)
- Packaged in solid plastic case

# MULTIPURPOSE TESTER FOR VEHICLE ELECTRICAL SYSTEMS EMPLOYING POWER INPUTS FROM 9 TO 48 V



#### item number:

AZ 175 (070204 1)

- Multifunction tester, (9–48 V) with different test modes, voltage and resistance measurement
- Particularly suitable for current and new vehicles with 48 volt vehicle electrical system or partial vehicle electrical system
- For quick and easy troubleshooting and diagnosis of 12 V vehicle electrical system and 48
   V partial vehicle electrical system
- Two-line LCD display
- Integrated lighting (2 LEDs) for optimal illumination of the test area
- Modes:
- voltage and mass measurement
- Output of voltage
- clocked voltage and mass via the measuring tip
- Voltage minimum
- Voltage maximum
- Limit setting/measurement
- Error diagnostics of electrical components
- Polarity detection by red/green LED and by displaying "GND" for ground or voltage value
- Automatic detection and display of DC voltage or clocked voltage

- Quick functional test without removal of the components
- Fast function test of removed components (via auxiliary earth terminal)
- Voltage or ground can be applied to the test probe via the membrane keyboard
- e.g. for operating electronic components such as relays, fuel pumps, electric window motor, switches, lamps etc.
- e.g. for continuity testing of switches, relays, diodes, fuses, wiring harnesses etc.
- Detection of bad ground connections, acoustically and optically via bar graph
- Changing acoustic signalling depending on polarity
- Acoustic signal can be switched off
- Fully insulated auxiliary mass with 0.5 m cable
- Resettable thermal fuse (7.5 A) (no loss of time due to cooling)
- Measurement range: 0 48 V/DC
- 01 48 V clocked, 5 Hz 500 kHz
- Supply voltage: 9 48 V/DC
- Connection cable 6 m with battery clamps
- Stainless steel test probe
- With exchangeable test probe for optional extension with commercially available test and inspection components
- Self test function
- All individual parts are available as spare parts
- Quality product made in Germany

- 1 tester with test probe and battery connecting lead with clamps, 6.00 m (20 ft) long
- 1 auxiliary clip with 0.50 m (20 in.) lead
- supplied in a solid plastic case

# MULTIPURPOSE INSPECTION LAMP FOR USE ON 12...24 V ELECTRICAL SYSTEMS



item number:

AZ 173 (070106)

- Application area 12 ... 24 V
- Integrated lighting for optimal illumination of the test area
- Error diagnostics of electrical components
- Polarity detection with red/green LED display
- Quick functional test without removal of the components
- Fast function test of removed components (via auxiliary earth terminal)
- Voltage or ground can be applied to the test probe via the rocker switch
- e.g. for operating electronic components such as relays, fuel pumps, electric window motor, switches, lamps etc.
- e.g. for continuity testing of switches, relays, diodes, fuses, wiring harnesses etc.
- Detection of poor ground connections
- Changing acoustic signalling depending on polarity
- Fully insulated auxiliary mass with 0.5 m cable
- Resettable thermal fuse (7.5 A) (no loss of time due to cooling)
- Connection cable 6 m with battery clamps
- Stainless steel test probe
- All individual parts are available as spare parts
- Quality product made in Germany

- 1 circuit tester
- 1 battery connecting lead 6.00 m (20 ft) with clamps
- 1 negative auxiliary clip

#### SPARE PARTS

PN 006 (121215) tip

# MULTIPURPOSE INSPECTION LAMP FOR USE ON ELECTRICAL SYSTEMS (6 - 24 V)



### item number: AZ 172 (070105)

#### DESCRIPTION

- Application area: 6 ... 24 V
- Error diagnostics of electrical components
- Polarity detection with red/green LED display
- Quick functional test without removal of the components
- Fast function test of removed components (via auxiliary earth terminal)
- Voltage or ground can be applied to the test probe via the rocker switch,
- e.g. for operating electronic components such as relays, fuel pumps, electric window motor, switches, lamps etc.
- e.g. for continuity testing of switches, relays, diodes, fuses, wiring harnesses etc.
- Detection of poor ground connections
- Fully insulated auxiliary mass with 0.5 m cable
- Resettable thermal fuse (7.5 A) (no loss of time due to cooling)
- Connection cable 6 m with battery clamps
- Stainless steel test probe
- All individual parts are available as spare parts
- Quality product made in Germany

#### SCOPE OF DELIVERY

- 1 circuit tester
- 1 battery connecting lead 6.00 m (20 ft) with clamps
- 1 negative auxiliary clip

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Сочи (862)225-72-31
Ставрополь (8652)20-65-13

Казахстан (772)734-952-31

Сургут (3462)77-98-35 Тверь (4822)63-31-35 Томск (3822)98-41-53 Тула (4872)74-02-29 Тюмень (3452)66-21-18 Ульяновск (8422)24-23-59 Уфа (347)229-48-12 Хабаровск (4212)92-98-04 Челябинск (351)202-03-61 Череповер (8202)49-02-64 Ярославль (4852)69-52-93

Киргизия (996)312-96-26-47

Россия (495)268-04-70