

**MARTINDALE**  
ELECTRIC

*Keeping You Safe*

# Socket testing

## Product catalogue

From the pioneers  
of socket testing



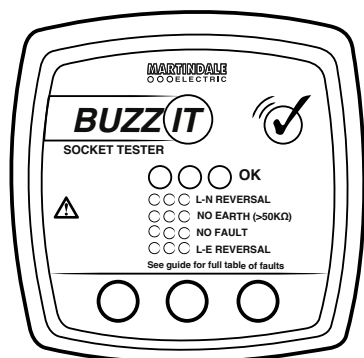
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# Socket testers



The extensive range of Martindale socket testers offer testing capability in a wide variety of domestic, commercial and industrial applications. Our simple socket testers give trade professionals a safe and reliable method of first-line testing standard 13 Amp outlet sockets. The advanced socket testers have further measurement functions, such as earth loop impedance indication to aid further fault diagnosis.

Industrial socket testers for both single and 3-phase systems are available alongside a dedicated EV charger testing unit. These fast and effective solutions are used as service tools for flagging up unsafe conditions prior to carrying out work on electrical systems and equipment.

| Simple & Advanced                     | Simple (page 5) |       |       |       | EVSE (page 6) | Advanced (page 9) |       |       |       |
|---------------------------------------|-----------------|-------|-------|-------|---------------|-------------------|-------|-------|-------|
| Selection guide                       | CP501           | CP520 | BZ101 | BZ701 | BZ820-EV      | EZ165             | EZ365 | EZ664 | EZ668 |
| Indicates a functional socket         | ✓               | ✓     | ✓     | ✓     | ✓             | ✓                 | ✓     | ✓     | ✓     |
| Detect line neutral reversal          | ✓               | ✓     | ✓     | ✓     | ✓             | ✓                 | ✓     | ✓     | ✓     |
| Detect presence of earth              | ✓               | ✓     | ✓     | ✓     | ✓             | ✓                 | ✓     | ✓     | ✓     |
| Display range of earth loop impedance |                 |       |       |       |               | ✓                 | ✓     | ✓     | ✓     |
| High/Low Voltage indication           |                 |       |       |       | ✓             | ✓                 | ✓     | ✓     | ✓     |
| Polarity swap touch test              |                 |       |       | ✓     |               |                   | ✓     |       | ✓     |
| 30mA RCD trip check                   |                 |       |       |       |               |                   | ✓     |       | ✓     |
| Test lead connection (4mm)            |                 |       |       |       |               |                   |       | ✓     | ✓     |
| Earth test point (for telecoms test)  |                 | ✓     |       |       |               |                   |       |       |       |

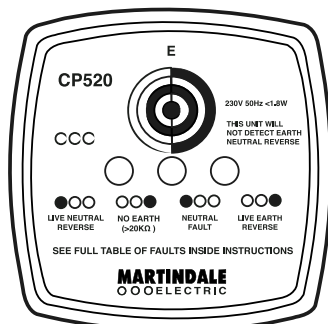
| Industrial (page 13) | Single phase  |       | Three phase |       |
|----------------------|---------------|-------|-------------|-------|
| Selection guide      | CP201 / BZ201 | CP301 | PC104       | PC105 |
| Voltage 200-250V     | ✓             |       |             |       |
| Voltage 55-0-55V     |               | ✓     |             |       |
| Voltage 380-440V     |               |       | ✓           | ✓     |
| 16A Version          | ✓             | ✓     | ✓           | ✓     |
| 32A Version          | ✓             | ✓     | ✓           | ✓     |
| 63A Version          |               |       | ✓           | ✓     |

# Simple socket testers

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# Simple socket testers



Our simple socket testers give trade professionals a safe and reliable method of testing power outlet sockets. These devices offer fast and effective indication of functional sockets, detection of line/neutral reversal, and detection of earth presence. Simple socket testers are ideal for use as a first-line indicator to identify potentially unsafe installations and wiring faults.

We provide electricians with quick and easy socket wiring testing on the job. These socket testers offer visual or visual and audible indication, and a robust design. Read more about our simple socket testers below.



## CP501

### Classic Check Plug

The UK's most popular check plug, offering quick and easy testing of power outlet sockets.

- Classic check plug for ensuring correct wiring of 13A sockets
- Identifies 28 fault conditions with super bright LEDs
- Sculpted shape for easy removal
- Plug induces less than 5mA of earth leakage



## CP520

### Socket Tester with Earth Test Point

The traditional Martindale socket tester, developed with the telecoms and broadband industries.

- Approved by the telecoms and broadband industry
- Ideal for fibre optic network testing
- 4mm earth connection for a banana plug to guarantee good earth
- Sensitive earth detection socket



## BZ101

### Buzz-IT Check Plug with Sounder

The Buzz It socket tester is a fast and simple solution for checking 13A socket wiring.

- Audible buzzer for instant pass indication
- Ideal for checking sockets in hard-to-access locations
- Suited to checking sockets that are not easily visible
- Can be used as a basic fuse finder



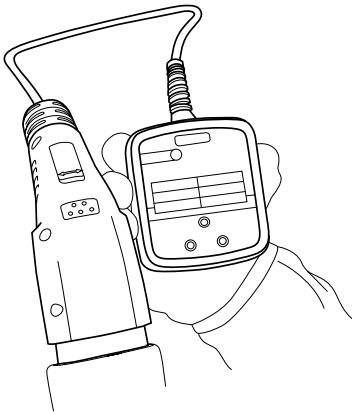
## BZ701

### Socket Tester with Mains Polarity Check

The BZ701 socket tester includes additional mains polarity and voltage level checks.

- Quick and easy mains socket testing
- Incoming supply cross polarity
- High / low voltage indication
- Red / green LEDs and buzzer
- Indicates 28 fault conditions

# EV socket testers



For first-line functional checks of domestic and commercial EV charge points, the BZ820-EV EVSE socket tester is the ideal solution. Performing similar tests to a standard socket tester, correct charger operation is indicated via a combination of LED status indicators and an audible alert - allowing rapid confirmation of functionality.



## BZ820-EV

### EVSE Socket Tester (Type 2)

The BZ820-EV detects 28 wiring fault conditions and also checks the voltage supply level. It is the ideal first-line tool for checking EV chargers.

- Quick & easy EVSE socket testing
- LEDs and buzzer indicate 28 fault conditions
- High / low supply voltage indication
- Type-2 plug connects directly to the EVSE charging point
- Fast and easy testing for the correct wiring of L, N and PE
- The 4-position switch simulates CP mode A, B, C and E



The BZ820-EV connects to an EVSE charging point using a Type 2 connector. The integral CP mode slider switch enables the simulation of various vehicle states: No vehicle connected (A), vehicle connected but not ready to charge (B), and vehicle connected and ready to charge (C). Mode C is used for testing. The additional "E" (error) setting simulates failure of the CP signal, which should cause the charger to inhibit charging.

# Simple & EV socket testers specification

| FUNCTION                          | CP501                         | BZ101 | CP520          | BZ701                   |
|-----------------------------------|-------------------------------|-------|----------------|-------------------------|
| ELECTRICAL                        |                               |       |                |                         |
| Operating voltage                 | 230V                          |       |                |                         |
| Operating frequency               | 30-70Hz                       |       |                | 50Hz                    |
| Power consumption                 | <2W                           | <3W   | <2W            | <2.5W                   |
| Power                             | from mains                    |       |                |                         |
| High / low voltage indication     | -                             |       |                | <195V ± 5% / <270V ± 5% |
| GENERAL                           |                               |       |                |                         |
| Dimensions                        | 65 x 80 x 59mm                |       | 65 x 65 x 47mm | 65 x 80 x 59mm          |
| Weight                            | 65g                           |       |                | 93g                     |
| ENVIRONMENTAL                     |                               |       |                |                         |
| Temperature (Operating & Storage) | -10°C to 40°C, at max. 60% RH |       |                |                         |
| Pollution degree                  | 2                             |       |                |                         |
| Altitude                          | <2000m                        |       |                |                         |
| SAFETY                            |                               |       |                |                         |
| Conforms to                       | BS EN 61010-1, CAT II 300V    |       |                |                         |

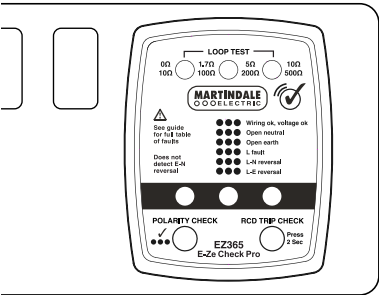
| FUNCTION                              | BZ820-EV                                                               |
|---------------------------------------|------------------------------------------------------------------------|
| <b>ELECTRICAL</b>                     |                                                                        |
| Nominal operating voltage             | 230V AC rms                                                            |
| Operating frequency                   | 50Hz                                                                   |
| Power consumption                     | <2.5W                                                                  |
| Power                                 | from socket under test                                                 |
| Standby                               | after approx. 10 minutes                                               |
| Voltage low indication (L1)           | <195V ± 5%                                                             |
| Voltage high indication (L1)          | >270V ± 5%                                                             |
| Earth neutral voltage high indication | >30V nominal                                                           |
| Socket / test lead colours            | L, N, PE in 3-wire cable                                               |
| <b>GENERAL</b>                        |                                                                        |
| Dimensions                            | 91(L) x 80(W) x 38(D)mm                                                |
| Weight                                | 120g                                                                   |
| <b>ENVIRONMENTAL</b>                  |                                                                        |
| Location                              | Indoor & outdoor use in dry weather conditions only                    |
| Altitude                              | up to 2000m                                                            |
| Operating environment                 | -10°C to 40°C at max. 85%RH                                            |
| Mains supply voltage fluctuations     | ± 10%                                                                  |
| Overvoltage category                  | CAT III 300V                                                           |
| Pollution degree                      | 2                                                                      |
| <b>SAFETY</b>                         |                                                                        |
| Conforms to                           | Conforms to BS EN 61010-1:2010+A1:2019 Class II, Reinforced insulation |
| <b>EMC</b>                            |                                                                        |
| Conforms to                           | BS EN 61326-1                                                          |

# Advanced socket testers

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# Advanced socket testers



Our advanced socket testers are improved indicators for identifying potentially unsafe installations and wiring faults. These fast and effective solutions are used as service tools for flagging up unsafe conditions prior to carrying out work on electrical systems and equipment, or installing new appliances.

The advanced socket tester range gives a safe and reliable method of testing 13A outlets. The range includes models which additionally check mains levels, check for supply line-neutral reversal, and perform a non-trip earth loop test with value indication. Alongside standard plugs, some models offer alternative connection via standard test leads - ideal for testing at light fittings, spurs and terminals.

| Selection guide                       | EZ165 | EZ365 | EZ664 | EZ668 |
|---------------------------------------|-------|-------|-------|-------|
| Indicates a functional socket         | ✓     | ✓     | ✓     | ✓     |
| Detect line-neutral reversal          | ✓     | ✓     | ✓     | ✓     |
| Detect presence of earth              | ✓     | ✓     | ✓     | ✓     |
| Display range of earth loop impedance | ✓     | ✓     | ✓     | ✓     |
| High /Low Voltage indication          | ✓     | ✓     | ✓     | ✓     |
| Polarity swap touch test              |       | ✓     |       | ✓     |
| 30mA RCD trip check                   |       | ✓     |       | ✓     |
| Test lead connection (4mm)            |       |       | ✓     | ✓     |

# Advanced socket testers

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## EZ165

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Detect socket wiring faults, check mains voltage, and verify earth wiring.

- Efficient mains socket polarity and earth testing
- Ensures safety disconnection devices are working properly
- Indicates earth resistance value in 6 discrete ranges from less than  $1.7\Omega$  to  $500\Omega$
- Robust design, sculpted for easy removal



## EZ365

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The EZ365 offers a range of testing abilities in addition to wiring fault condition detection.

- Detect serious fault conditions not identifiable by normal socket testers
- Easy touch pad activation
- Incoming supply polarity swap touch test (L-NE reversal)
- RCD trip test



## EZ664

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The EZ664 gives socket testing flexibility, connecting via 13A plugs or via 4mm leads for light fittings, fused spurs and terminals.

- Quick & easy mains socket testing
- 4mm leads or 13A plug
- Non-trip earth loop impedance test
- High/low voltage indication



## EZ668

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The EZ668 has the functionality of the EZ664 with RCD trip and mains polarity testing added.

- Quick & easy mains socket testing
- 4mm leads or 13A plug
- Non-trip earth loop impedance test
- Incoming supply cross polarity test
- High/low voltage indication
- Audible indication
- RCD trip test

# Advanced socket testers specification

| FUNCTION                              | EZ165                                                   | EZ365                                         | EZ664                     | EZ668 |
|---------------------------------------|---------------------------------------------------------|-----------------------------------------------|---------------------------|-------|
| ELECTRICAL                            |                                                         |                                               |                           |       |
| Nominal operating voltage             | 230V AC rms                                             |                                               |                           |       |
| Operating frequency                   | 50Hz                                                    |                                               |                           |       |
| Power consumption                     | <2.5W                                                   |                                               |                           |       |
| Power                                 | from mains socket under test                            |                                               | from socket or test leads |       |
| Standby                               | after approx. 10 minutes                                |                                               |                           |       |
| Non-trip earth loop impedance ranges  | 0 - 1.7 - 5 - 10 - 100 - 200 - 500Ω                     |                                               |                           |       |
| Earth loop threshold accuracy         | ± (10% + 0.3Ω)*                                         |                                               |                           |       |
| Voltage low indication                | <195V ± 5%                                              |                                               |                           |       |
| Voltage high indication               | >270V ± 5%                                              |                                               |                           |       |
| Earth neutral voltage high indication | >30V nominal                                            |                                               |                           |       |
| Open earth indication                 | >500Ω ± 10%                                             |                                               | -                         |       |
| RCD test current at 195V              | -                                                       | 30mA                                          | -                         |       |
| Duration of RCD test current          | -                                                       | 300ms                                         | -                         |       |
| Polarity                              | -                                                       | cross polarity (L-NE swap at incoming supply) | -                         |       |
| GENERAL                               |                                                         |                                               |                           |       |
| Dimensions                            | 65 x 80 x 59mm                                          |                                               | 91 x 80 x 38mm            | -     |
| Weight                                | 93g                                                     |                                               | 120g                      | -     |
| ENVIRONMENTAL                         |                                                         |                                               |                           |       |
| Temperature (Operating & Storage)     | -10°C to 40°C, at max. 60% RH                           |                                               |                           |       |
| Altitude                              | up to 2000m                                             |                                               |                           |       |
| Pollution degree                      | 2                                                       |                                               |                           |       |
| SAFETY                                |                                                         |                                               |                           |       |
| Conforms to                           | BS EN 61010-1, CAT II 300V, Class II, Double insulation |                                               |                           |       |
| EMC                                   |                                                         |                                               |                           |       |
| Conforms to                           | BS EN 31326-1                                           |                                               |                           |       |

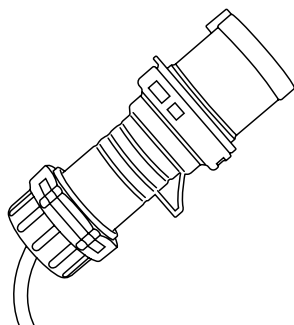
\* Measurement accuracy can be affected by highly inductive or capacitive loads distributed on the supply

# Industrial socket testers

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# Industrial socket testers



This is a complete range of industrial socket testers for single and 3 phase systems; encompassing the CP series for single-phase industrial sockets, and the PC series for 3-phase supplies.

Used as service tools prior to installing new machinery and equipment, Martindale's industrial socket testers provide a fast and effective solution for identifying potentially unsafe installations, as well as wiring faults at power outlets. Our industrial socket testers allow electricians to identify a range of fault conditions and possible fault combinations, offering an essential first line indicator to maintenance teams.

| Selection guide    | Single phase |       | Three phase |       |       |
|--------------------|--------------|-------|-------------|-------|-------|
|                    | CP201 /BZ201 | CP301 | PC104       | PC105 | PC107 |
| Voltage 200-250V   | ✓            |       |             |       |       |
| Voltage 110V       |              | ✓     |             |       |       |
| Voltage 360 - 440V |              |       | ✓           | ✓     |       |
| Voltage 360 - 480V |              |       |             |       | ✓     |
| 16A Version        | ✓            | ✓     | ✓           | ✓     |       |
| 32A Version        | ✓            | ✓     | ✓           | ✓     |       |
| 63A Version        |              |       | ✓           | ✓     |       |
| 30A 7H (C/US)      |              |       |             |       | ✓     |
| cTUVus certified   |              |       |             |       | ✓     |

# Industrial socket testers



## BZ201

### 230V Industrial Check Plug

A 230V industrial version of the classic Check Plug with buzzer. Available for both 16A and 32A applications.

- Audible and visual indication
- Tests 230V 16A or 32A sockets
- Identifies 28 fault conditions
- Can be used as a basic fuse finder
- High /low supply voltage check



## CP201

### 230V Industrial Check Plug

Available for 16A and 32A supplies, the CP201 identifies a range of possible fault combinations.

- Industrial version of the classic check plug
- Tests 230V 16A or 32A sockets
- Identifies 28 fault conditions
- High /low supply voltage check



## CP301

### 110V Industrial Check Plug (CT)

This is a 110V centre tapped industrial socket tester, with models for 16A or 32A supplies.

- Instantly checks sockets on 110V centre tapped circuits
- Identifies 7 fault conditions
- Ideal for industrial or site installations
- Yellow 16A 3 pin plug to BS EN 60309 (BS 4343)



## PC104

### 4 Pin 3-Phase Industrial Check Plugs

The PC104 is a 3-phase industrial socket tester available in models for 16A, 32A and 63A supplies.

- 4 pin configuration
- 6 wiring condition checks
- Complies with CAT III 300V
- Available for 16A, 32A and 63A supplies



## PC105

### 5 Pin 3-Phase Industrial Check Plugs

The PC105 is a 3-phase industrial socket tester available in models for 16A, 32A and 63A supplies.

- 5 pin configuration
- 7 wiring condition checks
- Available for 16A, 32A and 63A supplies



## PC107-30

### 3-Phase Socket Tester

Available for 30A supplies, the PC107 identifies a range of possible fault conditions.

- 3-Phase industrial socket tester
- Tests CEE 30A 7H (C /US) sockets
- 5 pin configuration
- 480V 30A

# Industrial socket testers specification

| FUNCTION                              | CP201-16 / BZ201-16                                      |  | CP201-32 / BZ201-32                  |
|---------------------------------------|----------------------------------------------------------|--|--------------------------------------|
| ELECTRICAL                            |                                                          |  |                                      |
| Nominal operating voltage             | 230V AC rms                                              |  |                                      |
| Operating frequency                   | 50Hz                                                     |  |                                      |
| Power consumption                     | <2.5W                                                    |  |                                      |
| Power                                 | from socket under test                                   |  |                                      |
| Standby                               | after approx. 10 minutes                                 |  |                                      |
| Voltage low indication                | <195V ± 5%                                               |  |                                      |
| Voltage high indication               | >270V ± 5%                                               |  |                                      |
| Earth neutral voltage high indication | >30V nominal                                             |  |                                      |
| GENERAL                               |                                                          |  |                                      |
| Plug type                             | 16A, 3-pin plug to BS EN IEC 60309-1                     |  | 32A, 3-pin plug to BS EN IEC 60309-1 |
| Dimensions                            | 91(L) x 80(W) x 38(D)mm                                  |  |                                      |
| Weight                                | 195g                                                     |  |                                      |
| ENVIRONMENTAL                         |                                                          |  |                                      |
| Location                              | Indoor & outdoor use in dry weather conditions only      |  |                                      |
| Altitude                              | up to 2000m                                              |  |                                      |
| Operating environment                 | -10°C to 40°C at max. 85%RH                              |  |                                      |
| Mains supply voltage fluctuations     | ± 10%                                                    |  |                                      |
| Overvoltage category                  | CAT III 300V                                             |  |                                      |
| Pollution degree                      | 2                                                        |  |                                      |
| SAFETY                                |                                                          |  |                                      |
| Conforms to                           | BS EN 61010-1, CAT III 300V, Class II, double insulation |  |                                      |
| EMC                                   |                                                          |  |                                      |
| Conforms to                           | BS EN61326-1, BS EN61326-2-2                             |  |                                      |

| FUNCTION                          | CP301-16                                                               |                                          | CP301-32 |
|-----------------------------------|------------------------------------------------------------------------|------------------------------------------|----------|
| ELECTRICAL                        |                                                                        |                                          |          |
| Operating voltage                 | 110V AC rms (55V-0-55V centre tapped only)                             |                                          |          |
| Operating frequency               | 30-70Hz                                                                |                                          |          |
| Power consumption                 | <09W                                                                   |                                          |          |
| Power                             | from socket under test                                                 |                                          |          |
| GENERAL                           |                                                                        |                                          |          |
| Plug type                         | 16A, 3-pin plug to BS EN 60309 (BS 4343)                               | 32A, 3-pin plug to BS EN 60309 (BS 4343) |          |
| Dimensions                        | 65 x 65 x 47mm (check plug body)                                       |                                          |          |
| Weight                            | 195g                                                                   |                                          |          |
| ENVIRONMENTAL                     |                                                                        |                                          |          |
| Location                          | Suitable for indoor use and outdoor use in dry weather conditions only |                                          |          |
| Temperature (Operating & Storage) | -10°C to 40°C, at max. 60% RH                                          |                                          |          |
| Pollution degree                  | 2                                                                      |                                          |          |
| SAFETY                            |                                                                        |                                          |          |
| Conforms to                       | BS EN 61010-1, CAT II 300V, Class II, double insulation                |                                          |          |
| EMC                               |                                                                        |                                          |          |
| Conforms to                       | BS EN61326-1                                                           |                                          |          |

# Industrial socket testers specification

| FUNCTION              | PC104-3 / PC105-3                                                       | PC107-30                                                        |
|-----------------------|-------------------------------------------------------------------------|-----------------------------------------------------------------|
| ELECTRICAL            |                                                                         |                                                                 |
| Input voltage range   | 360 to 440V AC (Phase to Phase)                                         | 360V - 480V +/- 10% AC (Phase to Phase)                         |
| Input frequency       | 50Hz or 60Hz                                                            |                                                                 |
| Input current         | I <sub>L1</sub> = I <sub>L2</sub> = I <sub>L3</sub> = 15mA max          |                                                                 |
| ENVIRONMENTAL         |                                                                         |                                                                 |
| Location              | Suitable for indoor use, and outdoor use in dry weather conditions only |                                                                 |
| Altitude              | Up to 2000m                                                             |                                                                 |
| Operating Temperature | 0°C to + 40°C                                                           |                                                                 |
| Humidity              | ≤ 80%RH up to 31°C, decreasing linearly to 50%RH at 40°C                |                                                                 |
| Ingress Protection    | IP40                                                                    |                                                                 |
| Pollution Degree      | 2                                                                       |                                                                 |
| GENERAL               |                                                                         |                                                                 |
| Power                 | From circuit under test                                                 |                                                                 |
| Dimensions            | 152(L) x 81(W) x 35(D)mm                                                |                                                                 |
| Weight                | 240g approx (without plug)                                              |                                                                 |
| Includes              | Instructions                                                            |                                                                 |
| SAFETY                |                                                                         |                                                                 |
| Conforms to           | BS EN 61010-1:2010+A1:2019, CAT III 300V<br>Class II Double Insulation  | UL 61010-1, UL 1436, CAT III 300V<br>Class II Double Insulation |
| EMC                   |                                                                         |                                                                 |
| Conforms to           | BS EN 61326-1, BS EN 61326-2-2                                          | FCC 47 Part 15 exempt                                           |

# About Martindale Electric



For over 95 years, Electrical safety has been fundamental to us at Martindale. As leaders in Safe Isolation, we offer the most comprehensive range of electrical test equipment. Backed by an extensive, easy-to-navigate resource hub to support your work at every stage.

We are committed to developing, manufacturing and supplying safe, compliant, reliable solutions while ensuring genuine value for money. Martindale Electric has become one of the most trusted brands in electrical safety testing, with a reputation for providing innovative, durable and time-saving electrical measurement solutions.

Martindale products are backed up by a high standard of after-sales support, local service and calibration via our UKAS accredited laboratory.

## Our product categories



Safe isolation



PAT testing



Socket testing



Installation



Industrial



Environmental

## Innovation over the years

### Socket testers

The pioneers of socket testers and the first advanced socket tester as defined by the HSE

### Safe isolation

The definitive voltage indicator and proving unit together with unique locking off solutions

### Insulation testing

The first tester for hazardous environments

### PAT testers

The smallest and lightest handheld PAT

### Loop testing

The first automatic non-trip, plug-in loop tester displaying all readings

### Test tools

The first low cost fuse finder, self-proving voltage detectors

## Certification

We work tirelessly to ensure our products meet current regulations and every product we supply delivers excellent quality and performance to keep people safe.

GAMBICA is the Trade Association for Instrumentation, Control, Automation and Laboratory Technology in the UK.

Joint Accreditation System of Australia and New Zealand is an independent third party accreditation body, providing internationally recognised accreditation (similar to UKAS in the UK).





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[martindale-electric.co.uk](http://martindale-electric.co.uk)



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Ver G1-0

