



- RE>Act mode enhanced accuracy and safety
- PI predictor function (PIp)
- Measures up to 20 TΩ
- Up to 3 mA noise rejection
- Safety rated up to CAT IV 600 V to 3000 m
- Unique dual-case design – additional user protection
- Operates from battery or AC mains supply
- Rapid charge Li-ion battery

#### DESCRIPTION

The Megger range of 5, 10 and 15 kV insulation testers are known worldwide for their rugged dependability, long service life and accurate, reliable measurements. The extensive range of models means that there will always be a perfect match for your requirements. One common feature across the whole range is the Megger, 'no compromise' approach to safety. The Megger level of safety will always go further than simply complying with the relevant safety standards.

Another common feature is the **intuitive colour custom display**, with its ability to work in extreme environments and unbeatable viewing angle.

The range starts with the **MIT** (Megger Insulation Tester) models. These instruments provide an excellent level of noise immunity, test performance, and safety.

For customers requiring higher capacitance charge rates (testing long cables), working in electrically noisy environments (e.g. transmission voltages), remote operation, or data storage, the **S1** models are the ideal solution.

Once the best level has been selected, the only remaining choice is the maximum test voltage required.

The **Essential** models come in either 5 kV or 10 kV, whilst **Advanced** and **Expert** come in either 5, 10 or 15 kV instruments.

Please see the selection chart on page 2 of this data sheet for more detailed information on the differentiating features across the range.

#### ESSENTIAL

**MIT515/2 (5 kV)**  
**MIT1015 (10 kV)**



Scan the QR-code  
for information

The Essential models are perfect for performing 'go/no go' testing; no need to record test results; working in tough locations; using under 10 kV test voltage.

#### ADVANCED

**MIT525/2 (5 kV)**  
**MIT1025/2 (10 kV)**  
**MIT1525/2 (15 kV)**



Scan the QR-code  
for information

The Advanced models are an ideal choice if, in addition to the above, you need to record test results, transfer results to software/mobile app (via USB or Bluetooth LE), and want the benefits of more diagnostic insulation testing. The Advanced range also adds additional noise immunity for power distribution environments, and the ability to either increase or decrease the output current.

#### EXPERT

**S1-568/2 (5 kV)**  
**S1-1068/2 (10 kV)**  
**S1-1568/2 (15 kV)**



Scan the QR-code  
for information

The Expert range combines everything from the Essential and Advanced ranges. If you work in extreme environments, even 765 kV switch yards, want the additional safety and convenience of remote operation via a USB cable, and full control of the output current, this is the choice for you.

		= New feature for 2025		
		MIT515/2 MIT1015	MIT525/2 MIT1025/2 MIT1525/2	S1-568/2 S1-1068/2 S1-1568/2
FEATURE		ESSENTIAL	ADVANCED	EXPERT
Test capability	High Guard Terminal performance	■	■	■
	IR	■	■	■
	IR(t)	■	■	■
	PI Polarisation Index	■	■	■
	PI Predictor	■	■	■
	DAR Dielectric Absorption Ratio	■	■	■
	DD Dielectric Discharge		■	■
	Ramp test		■	■
	RE>Act mode	■	■	■
	PDC test		■	■
Test voltage	Max. voltages available	5 kV or 10 kV	5 kV, 10 kV or 15 kV	5 kV, 10 kV or 15 kV
Charging and burn mode current	Default maximum current	3 mA	3 mA	6 mA
	User selectable max. current values	N/A	1 mA, 3 mA, 6 mA (6 mA only from mains supply)	1 mA, 2 mA, 3 mA 4 mA, 5 mA, 6 mA (6 mA from internal battery and mains supply)
Noise immunity	Max. noise current with measurement within accuracy spec.	3 mA (LV and MV <45 kV)	6 mA (HV <230 kV)	8 mA (EHV <1000 kV)
	Adaptive filter			■
	Negative current handling	■	■	■
	Averaging filter			■
Safety	CAT IV 1000 V		15 kV	15 kV
	CAT IV 600 V	■	■	■
	Hazardous peak voltage detection during IR measurement	■	■	■
Data storage / features	On board - time stamped		■	■
	Temperature value stored		■	■
	Humidity value stored			■
Communications	Test result transfer via wired USB		■	■
	Test results transfer via wireless Bluetooth LE		■	■
	Test result live streaming via wired USB		■	■
	Test result live streaming via wireless Bluetooth LE		■	■
	Remote control via wired USB			■
Display	New custom colour display	■	■	■
Accessories	Carry all holdall	■	■	■
	Deeper lid pouch	■	■	■
Software support	CertSuite Asset Lite <b>FREE</b>		■	■
	CertSuite Asset compatible		■	■
	Power DB Lite <b>FREE</b>		■	■
	Power DB Advance or Pro support		■	■

### 5 kV and 10 kV

## Insulation Resistance Testers

### INSTRUMENT PRODUCTIVITY AND ACCURACY

This is a focus of the MIT and S1-Series, offering rapid charge batteries and operation from an AC source when the battery is flat or low. An intuitive user interface ensures no lost time remembering how to use the tester. Simplicity of operation is achieved with two rotary switches and a large backlight display which enables multiple measurement information to be displayed simultaneously. A graphical quick start guide is provided inside the lid of each model to assist first time users and has QR code links to the online User Guide.

Measurement accuracy is of high importance for any insulation resistance measurement. It is particularly important to ensure that the accuracy is maintained up to higher IR values that are required by some applications. The Essential range provides an excellent  $\pm 5\%$  accuracy all the way up to 1 T $\Omega$  at 5,000 V or 2 T $\Omega$  at 10,000 V. Always check that your expected range of measurements sits within the accuracy range capability of your selected instrument.

### PI PREDICTOR FUNCTION (PIP) PATENTED

The Polarisation Index test can be time consuming, with a 10 minute test (30 mins on 3 phase) and with multiple items to test, any time saved is a bonus. PIP does just that. The PI predictor function uses the first part of the IR curve to predict the rest at 5 minutes into the test. The PIP can start as early as 3 minutes into the test and will stop when it is confident in the prediction.

### RE>ACT TEST MODE PATENT APPLIED FOR

This ground breaking feature will revolutionise the reliability of your measurements. When insulation testing it is essential that any re-absorption current from the insulation under test is fully discharged before starting the test. Remaining absorption current, depending on polarity, can result in IR measurements that are falsely high or low, with the potential to incorrectly pass any failing insulation. The RE>Act mode not only measures this reabsorption current but also provides an indication to the user of the impact it will have on the instruments' measurement range and accuracy.



For more detailed information please refer to the application note "Reliable DC insulation measurements using RE>Act", available on [www.megger.com/support](http://www.megger.com/support) or Scan the QR code

### SAFETY FEATURES

The list of safety features is quite extensive and include the following:

Safety of operation is built in, all 5 kV and 10 kV models are safety rated to CAT IV 600 V up to 3000 m altitude.

**Dual case.** The whole range feature a dual case design with a tough outer case to protect the tester from knocks and drops and a fire retardant inner case. The case IP rating prevents moisture and dust ingress when storing or carrying the instrument. The lids have velcro-on pouches ensuring that leads remain with the instrument at all times. Case lids are removable for improved access to the terminals.

**Voltage warnings.** The entire range also feature a multitude of voltage warnings to help ensure user safety. In fact there are five levels of warnings. Before testing has started the instrument will provide these warnings:

- **Level 1:** Live voltage above 30 V applied
- **Level 2:** 75 % of the instruments noise limit exceeded, check filter settings
- **Level 3:** 100 % of instruments noise limit exceeded warning and test inhibited
- **Level 4:** External voltage overheating discharge resistors disconnect
- **Level 5:** The fifth warning is a unique one. During testing in high noise environments induced noise surges can result in extremely high voltages being applied to the instrument. In the event that these voltages are higher than the instruments reinforced insulation limits the instrument will halt the test to reduce terminal voltage and warn the user not to touch the instrument.

**RE>Act** adds two important safety features. Firstly, it removes the possibility to pass insulation that should have been failed, and secondly, it can also be used to monitor discharge following a test. This means the user can ensure that a dangerous return voltage will not occur.

**Test leads.** The supplied test leads are double insulated with clamps rated at 3 kV, equivalent to 6 kV single insulation for the medium clip leadset and 5 kV equivalent to 10 kV single insulation for the large clip.

**Non-detachable test clips.** All test leads feature non-detachable test clips for additional safety, and 4 mm HV insulated plugs that lock into the instrument, again for additional safety.

## 5 kV and 10 kV Insulation Resistance Testers

### EASE OF USE

Preset voltage ranges are provided in insulation test mode.

#### Preconfigured diagnostic tests include:

Polarisation Index (PI), Dielectric Absorption Ratio (DAR) on all models.

### APPLICATIONS

Applications for the Essential range of insulation testers is wide and varied. Here is short example list, but this is not exhaustive.

#### Suitable for varied testing reasons:

- During manufacture, as part of quality inspection or safety checking prior to shipment
- Prior to product/asset shipment to provide benchmark measurements
- On site inspection, comparing to benchmark results, to ensure everything is good before installation
- Checking after installation of a new asset
- During maintenance to drive predictive maintenance
- Following repair prior to powering up

#### Suitable for varied environments:

- Production line
- On construction sites
- Industrial locations
- Power distribution

#### Suitable for many assets, the list is endless:

- Cables of all types
- Power transformers
- Measurement transformers
- Circuit breakers
- Motors
- Generators
- Bushings

### SPECIFICATIONS

#### AC voltage (auto-ranging)

MIT515/2, MIT1015: 90-264 V rms,  
47- 63 Hz 100 VA

**Battery charge time:** 2.5 hours deep discharge,  
2 hours normal discharge

**Battery voltage:** 10.8 V, 5.2 Ah Li-ion batteries,  
meet IEC 62133:2003

#### Battery life

MIT515/2: 6 hours (typical) continuous  
testing at 5 kV with a  
100 MΩ load

MIT1015: 4.5 hours (typical) continuous  
testing at 10 kV with a  
100 MΩ load

**Auto power off:** Instrument turns off  
after a few minutes if not used  
to conserve battery life

**30 min quick charge:** 1 hour operation at 5 kV with  
a 100 MΩ load

#### Test voltage

MIT515/2: 250 V, 500 V, 1000 V, 2500 V,  
5000 V, User defined test voltage.

MIT1015: 500 V, 1000 V, 2500 V, 5000 V,  
10000 V, User defined test  
voltage.

#### User defined test voltage

MIT515/2: 40 V to 1 kV in 10 V steps

MIT1015: 40 V to 1 kV in 10 V steps

**Test voltage accuracy:** +4%, -0%, ±10 V nominal test  
voltage at 1 GΩ load  
(0 °C to 30 °C)

**Resistance range:** 10 kΩ to 15 TΩ @ 5 kV,  
10 kΩ to 20 TΩ @ 10 kV,

**Re<Act:** Reabsorption current  
measurement nominal accuracy.  
Operational up to 30 V external  
applied.

#### Accuracy

##### MIT515/2 accuracy (23 °C) from 1 MΩ to

	5000 V	2500 V	1000 V	500 V	250 V
±5%	1 TΩ	500 GΩ	200 GΩ	100 GΩ	50 GΩ
±20%	10 TΩ	5 TΩ	2 TΩ	1 TΩ	500 GΩ

## 5 kV and 10 kV

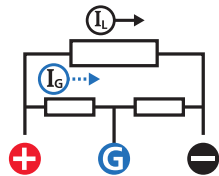
### Insulation Resistance Testers

#### MIT1015 accuracy (23 °C) from 1 MΩ to

	10 kV	5000 V	2500 V	1000 V	500 V
±5%	2 TΩ	1 TΩ	500 GΩ	200 GΩ	100 GΩ
±20%	20 TΩ	10 TΩ	5 TΩ	2 TΩ	1 TΩ

#### Guard terminal performance

When measuring an insulation resistance of 100 GΩ at 5000 V the tester can guard out current I<sub>G</sub> at least 5000 times the insulation test current I<sub>L</sub> with a maximum additional resistance error of 1%.



**Display analogue:** 100 kΩ to 10 TΩ

#### Digital:

MIT515/2 10 kΩ to 10 TΩ

MIT1015 10 kΩ to 20 TΩ

#### Short circuit / charge current

3 mA @ 5 kV, 10 kV

**Insulation test alarm:** 100 kΩ to 10 GΩ

#### Capacitor charge

MIT515/2 <3 s/μF at 3 mA to 5 kV

MIT1015 <5 s/μF at 3 mA to 10 kV

#### Capacitor discharge

MIT515/2 <250 ms/μF to discharge from 5 kV to 50 V

MIT1015 <250 ms/μF to discharge from 10 kV to 50 V

#### Capacitance range

With test voltage set above 500 V 10 nF to 25 μF

#### Capacitance measurement accuracy

±10% ±5 nF

**Current range** 0.01 nA to 6 mA

**Current accuracy** ±5% ±0.2 nA at all voltages (20 °C)

#### Interference

MIT515/2: 3 mA from 450 V to 5 kV

MIT1015: 3 mA from 960 V to 10 kV

**Voltmeter range** 30 V to 660 V AC or DC, 45 Hz – 65 Hz

**Voltmeter accuracy** ±3%, ±3 V

**Timer range** Up to 99 minutes 59 seconds, 15 second minimum setting

**Test modes** IR, IR(t), DAR, PI

#### ENVIRONMENTAL

**Maximum altitude** 3000 m (5 kV, 10 kV)

**Operating temperature range** -20 °C to 50 °C

**Storage temperature range** -25 °C to 65 °C

**Humidity** 90% RH non-condensing at 40 °C

**IP rating** IP65 (lid closed), IP40 (lid open)

**Safety** CAT IV 600 V to 3000 m altitude

**Dimensions** L 315 x W 285 x H 181 mm

#### Weight

5 kV, 10 kV 4.5 kg

15 kV 6.3 kg

#### TEST LEADS SUPPLIED

The MIT515/2 and MIT1015 are supplied with test leads that are compliant with the requirements of IEC 61010-031:2008.

The 5 kV models are supplied with one 3 m lead-set with medium sized clips.

The 10 kV models are supplied with two 3 m lead-sets, one with medium sized clips and the other with large clips with insulation suited to 10 kV use.

These leads are designed based on Megger's extensive knowledge of insulation testing using the latest technology. The leads are in compliance with IEC61010-31:2008, which requires a fully insulated clip design.

#### MEDIUM INSULATED TEST CLIP 3 M X 3 LEADSET – 5 KV AND 10 KV

These test leads are supplied as standard on MIT515/2 and the MIT1015.

These clips are designed for clamping on larger diameter test pieces but where space is at a premium.

The insulation is designed only to protect the user from the output of Megger 5 kV and 10 kV (set below 6 kV) insulation resistance testers. The clips cannot in any circumstance be relied on to protect the user from live AC systems above 600 V AC, r.m.s. in a CAT IV environment.

**Cable insulation rating:** 12 kV DC (marked on cable)

**Cable type:** Flexible dual insulated silicon (inner insulation layer coloured white to highlight damage).

## 5 kV and 10 kV

### Insulation Resistance Testers

#### LARGE INSULATED TEST CLIP 3 M X 3 LEADSET

These test leads are supplied as standard on the MIT1015. These clips are designed for clamping on to larger diameter test pieces. The insulation is designed only to protect the user from the output of Megger 5 kV and 10 kV insulation resistance testers. The clips cannot in any circumstance be relied on to protect the user from live AC systems above 600 V AC, r.m.s. in a CAT IV environment.



**10 kV lead set Cable insulation rating:** 12 kV DC (marked on cable)  
**Cable type:** flexible dual insulated silicon (inner insulation layer coloured white to highlight damage)

The design of the lead sets is intended to facilitate connection to a variety of de-energised systems for the purpose of making insulation resistance measurements. In all cases it is the responsibility of the user to employ safe working practices and verify that the system is safe before connection. Even isolated systems may exhibit significant capacitance, which will become highly charged during the application of the insulation test. This charge can be lethal and connections, including the leads and clips, should never be touched during the test. The system must be safely discharged before touching connections.

#### DESIGNED FOR EVERYDAY USE

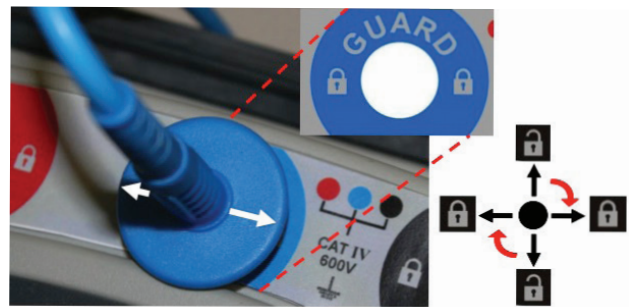
Test leads are a key component of any precision instrument and safety, long life, and the ability to provide reliable connections to a variety of test pieces found in everyday applications are of the utmost importance. Megger design test leads for both safety and practical operation.

#### LOCKING HV INSULATED PLUGS / NON-REMOVABLE TEST CLIPS

All Megger 5 kV and 10 kV insulation testing test leads are fitted with unique locking HV plugs and non-removable test clips.

This reduces the likelihood of a plug or clip inadvertently losing electrical connection and the capacitance of a long cable remaining lethally charged.

With the arrows on the plug finger guard horizontal on the instrument as shown to lock. Twist 90° to unlock. In addition, for the same reason, the test clips are not removable from the test lead.

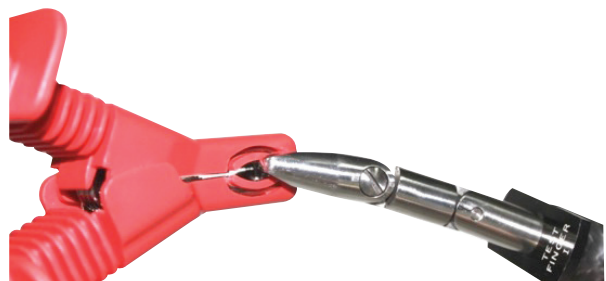


#### PRACTICAL INSULATION DESIGN

Moving jaw fingers maintain the clips touch proof safety when the clip is closed but flex back to allow the metal teeth of the clip to contact test piece unimpeded when in use.

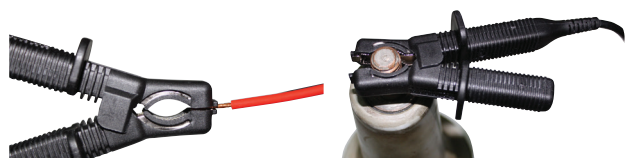


Megger clip being tested with IEC standard test finger for creepage and clearance.



#### PRACTICAL JAW DESIGN

Curved jaws allow reliable connection around test pieces and flat jaw tips provide excellent connection and gripping of individual wires.



More detailed information can be found on the 5 kV and 10 kV insulation tester lead sets application note. [Click here or scan the QR code.](#)

## The ESSENTIAL range

### 5 kV and 10 kV

## Insulation Resistance Testers

### ORDERING INFORMATION

Description	Part number	Description	Part number
MIT515/2-UK ESSENTIAL 5kV IRT PIP	1016-079	<b>Included accessories</b>	
MIT515/2-EU ESSENTIAL 5kV IRT PIP	1016-080	Power lead	1008-017
MIT515/2-US ESSENTIAL 5kV IRT PIP	1016-081	Calibration certificate	
MIT515/2-AU ESSENTIAL 5kV IRT PIP	1016-082	<b>Lead sets</b>	
MIT515/2-CN ESSENTIAL 5kV IRT PIP	1016-083	Lead set 3kV 3 x 3 m, with medium clips	1008-022
MIT515/2-BR ESSENTIAL 5kV IRT PIP	1016-621	Lead set HV 3 x 3 m, with medium and large clips (MIT1015 only)	1002-534
MIT1015-UK ESSENTIAL 10kV IRT PIP	1016-089	<b>1 kV test lead sets</b>	
MIT1015-EU ESSENTIAL 10kV IRT PIP	1016-090	Fused test probe and clip lead set	1002-913
MIT1015-US ESSENTIAL 10kV IRT PIP	1016-091	Control circuit test set	6220-822
MIT1015-AU ESSENTIAL 10kV IRT PIP	1016-092		
MIT1015-CN ESSENTIAL 10kV IRT PIP	1016-093		
MIT1015-BR ESSENTIAL 10kV IRT PIP	1016-623		

### OPTIONAL HV TEST LEAD SETS

Description	Part number	Description	Part number
<b>HV test leads sets</b>	<b>(MIT515/2, MIT1015 only)</b>	<b>Screened HV test lead sets</b>	<b>(MIT515/2, MIT1015 only)</b>
These test leads may also be supplied in non-standard lengths to suit a particular application / requirement. <a href="#">Contact Megger</a> for a quotation, minimum order quantities may apply.		1 x 15 m, with 5 kV screened uninsulated small clips	6311-080
3 x 3 m with large clips (MIT1015 only)	1002-534	3 m, 10 kV screened uninsulated small clips	6220-834
3 x 5 m with large insulated clips	1002-645	10 m, 10 kV screened uninsulated small clips	6220-861
3 x 8 m with large insulated clips	1002-646	15 m, 10 kV screened uninsulated small clips	6220-833
3 x 10 m with large insulated clips	1002-647	<b>Other</b>	
3 x 15 m with large insulated clips	1002-648	CB101 5 kV Calibration Box	6311-077
3 x 3 m with medium clips	1008-002	UKAS calibration certificate	1000-047
3 x 5 m with medium insulated clips	1002-641		
3 x 8 m with medium insulated clips	1002-642		
3 x 10 m with medium insulated clips	1002-643		
3 x 15 m with medium insulated clips	1002-644		

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ISO 9001  
The word 'Megger' is a registered trademark

**Megger**<sup>®</sup>

# Diensten van EURO-INDEX

**EURO-INDEX is fabrikant van BLAUWE LIJN en importeur/distributeur van diverse A-merken test- en meetinstrumenten. Wij leveren naast instrumenten ook de diensten om het gebruik hiervan in uw bedrijfsvoering te optimaliseren. Dit omvat uiteraard onderhoud, reparatie en kalibratie van instrumenten, maar ook kennisdeling via de EURO-INDEX Academy en verhuur van meetinstrumenten.**

## Geautoriseerd Service Centrum

EURO-INDEX is van de meeste merken in ons assortiment een Geautoriseerd Service Centrum. Dit betekent dat uw instrumenten worden behandeld door technici die zijn opgeleid door de fabrikant en beschikken over de juiste gereedschappen en software. Er worden uitsluitend originele onderdelen toegepast en de garantie van uw instrument blijft intact, net als de certificering (ATEX, EN50379, etc.).

## Kalibratielaboratorium

Ons moderne service- en kalibratielaboratorium beschikt over een RvA accreditatie naar NEN-EN-ISO/IEC 17025. Deze accreditatie geldt voor grootheden, zoals gespecificeerd in de scope bij [accreditatienummer K105](#).



**Kijk voor een overzicht van al onze diensten op [euro-index.nl/diensten](http://euro-index.nl/diensten)**

## KWS®

KWS® is een unieke kalibratieformule voor uw test- en meetinstrumenten met periodiek onderhoud en kalibratie tegen vaste, lage kosten.

Uw kalibratiecertificaten zijn digitaal beschikbaar via Mijn KWS (gratis webportaal en app) en door de QR-code te scannen van de kalibratiesticker op het instrument.

## Verhuur van meetinstrumenten

Er zijn diverse situaties waarbij huren handig is:

- U heeft tijdelijk extra toestellen nodig.
- Uw eigen meetinstrument wordt onderhouden en/of gekalibreerd.
- U moet een eenmalige meting verrichten.

## EURO-INDEX Academy

- Trainingen (individueel en klassikaal)
- Cursussen, infosessies en workshops
- Demonstratie- en instructievideo's
- Whitepapers



Servicebalie



Onderhoud, reparatie en kalibratie



Cursussen en workshops



Kalibratielaboratorium

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