

# TEST LEADS

## Digital Low Resistance Ohmmeters



- Extensive range of lead types and lengths from the leader in low resistance testing
- Wide variety of Kelvin clips, C-clamps, dual points and individual leads
- Used with a multitude of Megger DLROs from 2A to 600A output
- Contacts, bonding, battery straps, graphite electrodes, motor windings, and many more applications

Megger, the leader in low resistance testing, uses a Kelvin-style test method to accurately take low resistance readings. In order to take accurate readings, the potential measurement is taken inside of the current injection

points. Therefore, either a current lead in tandem with a separate potential lead or a “duplex” lead set is required. A wide variety of lead sets is available and it may be possible to design custom leads to suit special applications.

### INDIVIDUAL TEST LEADS

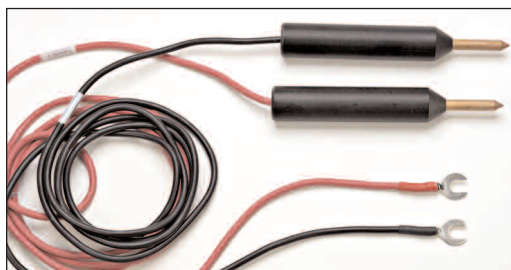
#### Potential Lead Set

Used in combination with 242041 current leads. Separates the C and P connections

**Termination:** Hand spikes

**Will fit:** DLRO10HD, DLRO10, DLRO10X, 247000, 247001, 247002, 247100, 247101, BT51

Cat. No.	Length
242021-7	7 ft (2 m)
242021-18	18 ft (5.5 m)
242021-30	30 ft (9 m)



Cat. No. 242021-7

#### Current Clip Lead Set

Used in combination with 242021 potential leads. Separates the C and P connections

**Current:** 10 A

**Termination:** Terminal clips

**Will fit:** DLRO10HD, DLRO10, DLRO10X, 247000, 247001, 247002, 247100, 247101, BT51

Cat. No.	Length
242041-7	7 ft (2 m)
242041-18	18 ft (5.5 m)
242041-30	30 ft (9 m)



Cat. No. 242041-18

**Current Clip Lead Set**

This lead set is for current only and employs clamps with a notched anvil to ensure a solid connection. A potential lead set is also required to complete the Kelvin pair.

**Current:** 100 A

**Termination:** Clamps

**Will fit:** 247100, 247101

Cat. No.	Length
242144-16	16 ft (4.9 m)
242144-26	26 ft (8 m)



Cat. No. 242144-16

**DUPLEX TEST LEADS**

**Helical Spring Point Leads**

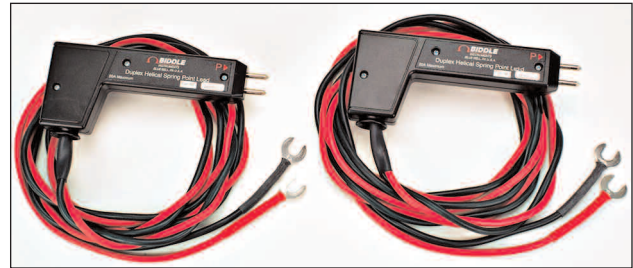
Handspikes with spring loaded tips that compress and rotate to ensure good contact. Spacing between P and C probe tips is 0.4 in. (10 mm).

**Current:** 10 A

(Maximum current capacity 20 A for C/N EV6111-022, 10 A for longer lead lengths)

**Will fit:** 247100, 247101, DLRO10HD, DLRO10, DLRO10X

Cat. No.	Length
242011-7	7 ft (2 m)
242011-18	18 ft (5.5 m)
242011-30	30 ft (9 m)
EV6111-022	8 ft (2.5 m)
EV6111-023	20 ft (6 m)



Cat. No. 242011-7

**Duplex Hand Spikes**

Duplex hand spikes with spring loaded tips. One probe has LEDs that operate with the DLRO10 for connection indication and live warning. The DLRO10X can indicate test limit pass/fail. Spacing between P and C probe tips is 0.23 in. (6 mm).

**Current:** 10 A

**Will fit:** DLRO10HD, DLRO10, DLRO10X

Cat. No.	Length
EV6111-503	4 ft (1.2 m)
EV6111-517	8 ft (2.5 m)
EV6111-518	4 ft (1.2 m)



Cat. No. EV6111-503 (DH4)

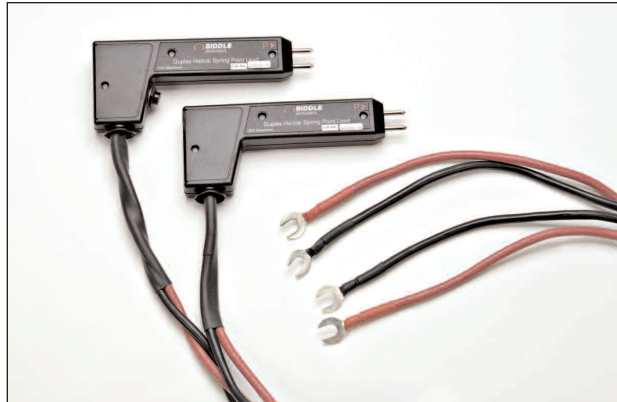
**Helical Hand Spikes with Spring Points and Current Pushbutton Switch**

Hand spikes with a switch and spring-loaded tips that compress and rotate to ensure good contact. Depressing the momentary contact switch will start the current flow. The spacing between P and C probes is 0.4 in. (10 mm).

**Current:** 10 A

**Will fit:** DLRO10, DLRO10X, 247000, 247001, 247002, 247101, 247102

Cat. No.	Length
242009-18	18 ft (5.5 m)



Cat. No. 242009-18

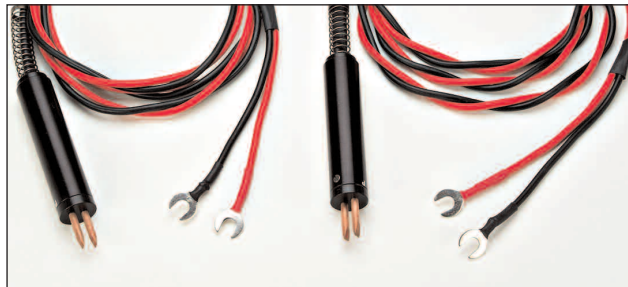
**Heavy Duty Fixed Point Hand Spikes**

Economical, light weight and built for durability. Spikes are not spring loaded. Spacing between C and P probe tips is 0.35 in. (9 mm).

**Current:** 10 A

**Will fit:** DLRO10HD, DLRO10, DLRO10X, 247000, 247001, 247002, 247100, 247101, BT51

Cat. No.	Length
242002-7	7 ft (2 m)
242002-18	18 ft (5.5 m)
242002-30	30 ft (9 m)



Cat. No. 242002-7

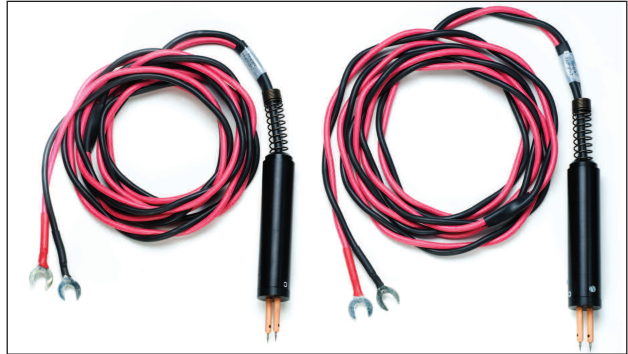
**Replaceable Needle Points**

These fine-tipped replaceable points are ideal for smaller parts and surfaces. Both of the P and C points are replaceable and are mounted in easy-to-hold handles.

**Current:** 10 A

**Will fit:** DLRO10HD, DLRO10, DLRO10X, 247000, 247001, 247002

Cat. No.	Length
242003-7	7 ft (2 m)



Cat. No. 242003-7

**Heavy Duty C-Clamps**

Kelvin clamps, current passes through the C-clamp and screw thread, the potential passes through a four-point anvil insulated from the clamp.

**Current:** 100 A

**Clamp Capacity:** 4 in. (10 cm)

**Will fit:** 247100, 247101 DLRO200\*, DLRO600\* (\*only to 100 A)

Cat. No.	Length
242104-2-16	16 ft (5 m)
242104-2-26	26 ft (8 m)



Cat. No. 242104-2-16

**Heavy Duty C-Clamps (continued)**

Kelvin clamps, current passes through the C-clamp and screw thread, the potential passes through a four-point anvil insulated from the clamp.

**Current:** 10 A

**Clamp Capacity:** 2 in. (5 cm)

**Will fit:** DLRO10HD, DLRO10, DLRO10X, 247000, 247001, 247002, 247100, 247101, BT51

Cat. No.	Length
242004-7	7 ft (2 m)
242004-18	18 ft (5.5 m)
242004-30	30 ft (9 m)



Cat. No. 242004-18

**Kelvin Clips**

Kelvin clips, current connection to one jaw, potential connection to other jaw. Easy connection to cables and small wires.

**Current:** 10 A

**Will fit:** DLRO10HD, DLRO10, DLRO10X, 247000, 247001, 247002, 247100, 247101, BT51

Cat. No.	Length	Jaw Capacity
241005-7*	7 ft (2 m)	0.5 in. (1.3 cm)
242005-7**	7 ft (2 m)	0.5 in. (1.3 cm)
242006-7	7 ft (2 m)	1.5 in. (4 cm)
242006-18	18 ft (5.5 m)	1.5 in. (4 cm)
242006-30	30 ft (9 m)	1.5 in. (4 cm)

\*Gold plated

\*\*Silver plated



Cat. No. 241005-7

**High Current Lead Sets**

Lead set consists of pair of flexible high current capacity (600 A cont.) leads, together with a separate pair of lightweight potential leads.

Current leads are fitted with heavy duty spring clamps. Jaw capacity of clamps: 2.4 in. (60 mm)

Potential leads fitted with smaller HD crocodile clips. Jaw capacity of clips: 0.9 in. (22 mm)

**Current:** 600 A

**Termination:** Clamps

**Will fit:** DLRO200, DLRO600

Cat. No.	Length
EV6220-755	16 ft (5 m)
EV6220-756	33 ft (10 m)
EV6220-757	50 ft (15 m)
EV6220-787	16 ft (5 m)



Cat. No. EV6220-755

**Wind Turbine Lightning Protection Test Lead Set**

Specially designed for measuring resistance of lightning protection circuit between wind turbine blade tip to ground.

*(Available through Megger U.S. Authorized Stocking Distributors.)*

**Current:** 10 A

**Will fit:** DLRO10, DLRO10X, BT51

**Cat. No.** 1000-809

**Termination**

Kelvin clip and hook ends on HD cable reel with friction brake

DH2 lead with duplex hand spikes and hook end



Cat. No. 1000-809

**Length**

328 ft (100 m)

16 ft (5 m)



**Ordering Information for Individual Test Leads**

Cat. No.	Type	Termination	Length	Current	DLRO10HD	DLRO10	DLRO10X	247000	247001	247002	247100	247101	DLRO200	DLRO600	BT51
242021-7	Potential	Hand Spikes	7 ft. (2 m)	N/A	■	■	■	■	■	■	■*	■*			■
242021-18	Potential	Hand Spikes	18 ft. (5.5 m)	N/A	■	■	■	■	■	■	■*	■*			■
242021-30	Potential	Hand Spikes	30 ft. (9 m)	N/A	■	■	■	■	■	■	■*	■*			■
242041-7	Current	Terminal Clips	7 ft. (2 m)	10 A	■	■	■	■	■	■	■*	■*			■
242041-18	Current	Terminal Clips	18 ft. (5.5 m)	10 A	■	■	■	■	■	■	■*	■*			■
242041-30	Current	Terminal Clips	30 ft. (9 m)	10 A	■	■	■	■	■	■	■*	■*			■
242144-16	Current	Clamps	16 ft (5 m)	100 A						■	■	■			
242144-26	Current	Clamps	26 ft (8 m)	100 A						■	■	■			

**Ordering Information for Duplex Test Leads**

Cat. No.	Termination	Length	Current	DLRO10HD	DLRO10	DLRO10X	247000	247001	247002	247100	247101	DLRO200	DLRO600	BT51
242011-7	Helical Hand Spikes with Spring Points	7 ft. (2 m)	10 A	■	■	■	■	■	■	■***	■***			
EV6111-022		8 ft. (2.5 m)	10 A	■	■	■								■
242011-18		18 ft. (5.5 m)	10 A	■	■	■	■	■	■	■***	■***			
EV6111-023		20 ft. (6 m)	10 A	■	■	■								■
242011-30		30 ft. (9 m)	10 A	■	■	■	■	■	■	■	■	■		
EV6111-503*	Duplex Hand Spikes	4 ft. (1.2 m)	10 A	■	■	■								
EV6111-517*		8 ft. (2.5 m)	10 A	■	■	■								
EV6111-518*		4 ft. (1.2 m)	10 A		■	■								
242009-18	Helical Hand Spikes with Spring Points and Current Push-button Switch	18 ft. (5.5 m)	10 A		■	■	■	■	■	■***	■***			
242002-7	Fixed-Point Hand Spikes	7 ft. (2 m)	10 A	■	■	■	■	■	■	■***	■***			■
242002-18		18 ft. (5.5 m)	10 A	■	■	■	■	■	■	■***	■***			■
242002-30		30 ft. (9 m)	10 A	■	■	■	■	■	■	■***	■***			■
242003-7	Replaceable Needle Points	7 ft. (2 m)	10 A	■	■	■	■	■	■					
242104-2-16	2 in. (5 cm) Heavy-Duty C-Clamps	16 ft. (5 m)	100 A							■	■	■		
242104-2-26		26 ft. (8 m)	100 A							■	■	■		
242004-7		7 ft. (2 m)	10 A	■	■	■	■	■	■	■***	■***			■
242004-18		18 ft. (5.5 m)	10 A	■	■	■	■	■	■	■***	■***			■
242004-30	30 ft. (9 m)	10 A	■	■	■	■	■	■	■***	■***			■	
242165S	C-Clamp + Hand Spikes	165+7 ft. (50+2 m)	10 A				■	■	■	■***	■***			
241005-7*	0.5 in. (1.3 cm) Kelvin Clips	7 ft. (2 m)	10 A	■	■	■	■	■	■	■***	■***			■
242005-7**		7 ft. (2 m)	10 A	■	■	■	■	■	■	■***	■***			■
242006-7	1.5 in. (4 cm) Kelvin Clips	7 ft. (2 m)	10 A	■	■	■	■	■	■	■***	■***			■
242006-18		18 ft. (5.5 m)	10 A	■	■	■	■	■	■	■***	■***			■
242006-30		30 ft. (9 m)	10 A	■	■	■	■	■	■	■***	■***			■
EV6220-755	Current Leads with HD Clips and Separate Potential Leads with Clips	16 ft. (5 m)	600 A										■	■
EV6220-756		33 ft. (10 m)	600 A									■	■	
EV6220-757		50 ft. (15 m)	600 A									■	■	
EV6220-787		16 ft. (5 m)	600 A									■	■	
1000-809	Kelvin clip and hook ends on HD cable reel with friction brake	328 ft. (100 m)	10 A		■	■								■
(See Note)		DH2 leads with duplex hand spikes and hook end	16 ft. (5 m)	10 A		■	■							■
1001-035	DH7 duplex handspikes	8 ft (2.5 m)	600 V	■										

\* Gold plated

\*\* Silver plated

\*\*\*Can be used with the 10A module

Note: Cat. No. 1000-809 is available through Megger U.S. Authorized Stocking Distributors.

---

**UK**  
Archcliffe Road, Dover  
CT17 9EN England  
T +44 (0) 1 304 502101  
F +44 (0) 1 304 207342  
UKsales@megger.com

**UNITED STATES**  
4271 Bronze Way  
Dallas, TX 75237-1019 USA  
T 1 800 723 2861 (USA only)  
T +1 214 333 3201  
F +1 214 331 7399  
USsales@megger.com

**OTHER TECHNICAL SALES OFFICES**  
Täby SWEDEN, Norristown USA,  
Sydney AUSTRALIA, Toronto CANADA,  
Trappes FRANCE, Kingdom of BAHRAIN,  
Mumbai INDIA, Johannesburg SOUTH  
AFRICA, and Chonburi THAILAND

**ISO STATEMENT**  
Registered to ISO 9001:2000 Cert. no. 10006.01  
**DLRO\_TL\_DS\_USen\_V04**  
www.megger.com  
Megger is a registered trademark

# DLRO TEST LEADS

## Digital Microhmmeter

### DUPLEX PROBES



#### **6111-022 DH1**

2.5m/8 inch Duplex handspikes (2 incl.) with helical sprung contacts.

#### **6111-023 DH2**

6m/20 inch as DH1 but only 1 included

#### **6111-024 DH3**

9.0m as DH1 but only 1 included

#### **Description**

Duplex handspikes with sprung loaded tips that both compress and rotate, to ensure good contact. Maximum current capacity 20 A for DH1, 10 A for longer lead lengths.

10mm spacing between P and C tips on each probe.

#### **Will fit:**

BT51, 247000 series, DLRO10 and DLRO10X



#### **6111-503 DH4**

1.2m Duplex handspikes (2 off), one with indicator lights

**6111-517 DH5** - as DH4, 2.5m

**6111-518 DH6** - as DH4, 600 V rated

#### **Description**

Duplex handspikes with sprung loaded tips. One probe has lights that operate with the DLRO10 for connection indication and live warning. With the DLRO10X, can indicate test limit pass/fail.

Maximum current capacity 10 A.

6mm spacing between P and C tips on each probe.

#### **Will fit:**

BT51 (not using indicator lights)

247000 series (not using indicator lights)

DLRO10 and 10X (DH4 supplied as standard)

#### **Spare parts**

25940-012 Replacement tips for DH4, 5 & 6 handspikes - needle

25940-014 Replacement tips for DH4, 5 & 6 handspikes - serrated

**242003-7 Heavy duty fixed point hand spikes - replaceable tips**

2m leads

**242002-30 Heavy duty fixed point hand spikes**

9m leads

**Description**

Lightweight and built for durability. Spikes are not spring loaded.

Rated 10 A.

9mm spacing between C and P probe tips.

**Spare parts****5119** Replaceable needle points.**Will fit:**

BT51, DLRO10, DLRO10X and 247000 series.

**242002-7 Heavy duty fixed point hand spikes**

2m leads

**242002-30 Heavy duty fixed point hand spikes**

9m leads

**Description**

Lightweight and built for durability. Spikes are not spring loaded.

Rated 10 A.

9mm spacing between C and P probe tips.

**Will fit:**

BT51, DLRO10, DLRO10X and 247000 series.

**KELVIN CLIPS AND CLAMPS****241005-7 Kelvin Clips**

2m leads - gold plated clips

**Description**

Kelvin clips, current connection to one jaw, potential connection to other jaw. Clips have 1.3 cm. jaw capacity. Easy connection to cables and small wires.

Rated to 10 A.

Gold plated clips for good contact and reduction in thermal EMFs

**Will fit:**

BT51, DLRO10, DLRO10X and 247000 series



**242005-7 Kelvin Clips**

2m leads - Silver plated clips

**Description**

Kelvin clips, current connection to one jaw, potential connection to other jaw. Clips have 1.3 cm. jaw capacity. Easy connection to cables and small wires.

Rated to 10 A.

**Will fit:**

BT51, DLRO10, DLRO10X and 247000 series

**242006-7 Kelvin Clips**

2m leads

**242006-18 Kelvin Clips**

5.5m leads

**242006-30 Kelvin Clips**

9m leads

**Description**

Kelvin clips, current connection to one jaw, potential connection to other jaw. Clips have 4 cm. jaw capacity. Easy connection to cables and small wires.

Rated to 10 A.

**Will fit:**

BT51, DLRO10, DLRO10X and 247000 series.

**242004-7 Heavy duty C-clamps**

2m leads

**242004-18 Heavy duty C-clamps**

5.5m leads

**242004-30 Heavy duty C-clamps**

9m leads

**Description**

Kelvin clamps, current passes through the C-clamp and screw thread, the potential passes through a four point anvil insulated from the clamp.

Clamps have a capacity of 5 cm and current rating of 10 A.

**Will fit:**

BT51, DLRO10, DLRO10X and 247000 series.

**242104-2-16 Heavy duty C-clamps**

5m leads

**242104-2-26 Heavy duty C-clamps**

8m leads

**Description**

Kelvin clamps, current passes through the C-clamp and screw thread, the potential passes through a four point anvil insulated from the clamp.

Clamps have a capacity of 10 cm and current rating of 100 A.

**Will fit:**DLRO200 and DLRO600 **only to 100A.**

247120

---

**SEPARATE CURRENT AND POTENTIAL LEADS****242041-7 Current clip leadset**

2m leads

**242041-18 Current clip leadset**

5.5m leads

**242041-30 Current clip leadset**

9m leads

**Description**

Used in combination with 242021 potential leads.

Separates the C and P connections.

Rated 10 A.

**Will fit:**

BT51, DLRO10, DLRO10X and 247000 series.

**242021-7 Potential spike leadset**

2m leads

**242021-18 Potential spike leadset**

5.5m leads

**242021-30 Potential spike leadset**

9m leads

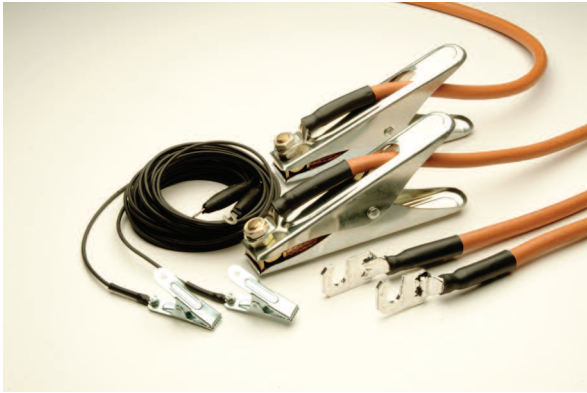
**Description**

Used in combination with 2420041 current leads.

Separates the C and P connections.

**Will fit:**

BT51, DLRO10, DLRO10X and 247000 series.

**HIGH CURRENT LEADSETS****6220-755 5m Lead set**

2 x 50 mm<sup>2</sup> current leads with clamps and 2 x potential leads with clips.

**6220-787 5m Lead set**

as above but 25mm<sup>2</sup> cable fitted.

**Description**

Lead set consists of pair of flexible high current capacity (600 A cont.) leads, together with a separate pair of light-weight potential leads.

Current leads are fitted with heavy duty sprung clamps (60 mm jaw capacity).

Potential leads fitted with smaller HD crocodile clips 22 mm jaw capacity).

**Will fit:**

DLRO200 (6220-755 supplied as standard)

DLRO600 (6220-755 supplied as standard)

DLRO200-115 (6220-787 supplied as standard)

**6220-756 10m Lead set**

2 x 70mm<sup>2</sup> current leads with clamps and 2 x potential leads with clips.

**6220-757 15m Lead set**

2 x 95mm<sup>2</sup> current leads with clamps and 2 x potential leads with clips.

**Description**

Lead set consists of pair of flexible high current capacity (600 A cont.) leads, together with a separate pair of light-weight potential leads.

Current leads are fitted with heavy duty sprung clamps (60 mm jaw capacity).

Potential leads fitted with smaller HD crocodile clips 22 mm jaw capacity).

**Will fit:**

DLRO200 (6220-755 supplied as standard)

DLRO600 (6220-755 supplied as standard)

# DLRO test leads fitted with duplex Connectors

## DLRO test leads



- Carry one lead set and swap terminations
- Simple push and twist for a quick change
- Lockable twist cap secures the leads
- Four terminal 10 A test lead system
- Warning / Indicator lights for DLRO10 range
- Extension leads available

### DESCRIPTION

Duplex connect test lead system for use with any Megger 10 A DLRO and BT51 instruments

The Megger DLRO duplex connect four terminal test lead system is designed to provide the most cost effective and convenient way to provide the user with all of the test lead terminations and lead lengths required for the many different applications encountered in low resistance testing.



At the centre of this unique test lead system is a bespoke connector allowing terminations such as kelvin clips or duplex test probes to be changed as required. There are two connector versions, one being fitted with indicator LEDs that operate with the DLRO10 range of instruments. The indicator LEDs provide enhanced safety and convenience with indications as follows:

#### DLRO10, DLRO10X, DLRO10HD and DLRO10HDX

- Warning of connection to hazardous live voltage (Not DLRO10X, warning is given on the display)
- When continuity is made
- When a test complete and measurement is on instrument display

#### DLRO10X adds

- Indication of pass / fail to user set test limits

All of these important indications are therefore seen near the point of connection without needing to view the instrument display. There is even a 6 m extension lead to provide the ultimate in flexibility.

### SAFETY WARNINGS

These safety warnings must be read and understood before the instrument is used.

Always refer to the user manual of the instrument being used with these test leads.

Do not touch the universal connector during test or while connected to hazardous voltages.

Whenever possible, circuits should be de-energised before testing.

If it is impossible to de-energise the circuit, (e.g. high voltage batteries cannot be switched off while their connections are tested) the user must be aware of the dangers. The instrument terminals will become live when connected to the circuit. Therefore when used on hazardous voltages the Megger terminal cover (available separately) must be used. See the accessories section of this user guide.

When running any test, or when attached to a test load, do not undo the modular connections. Isolate both test leads before changing any part of the modular leadset.

These test leads on their own not safety CAT rated due to the bare hook terminations. However when fitted with insulating instrument terminal covers and a suitably rated test termination the overall safety CAT rating will be the lowest of the ratings between the instrument, the terminal covers and the test termination.



For example if used with a DLRO10HD fitted with terminal cover part number 1002-390 and a pair of DP1-C duplex probes the safety rating of the complete system will be CAT III 300 V. However if the test terminations were changed to KC1-C Kelvin clips the safety rating would drop to <30 V as the KC1-C are un-rated.

**Testing inductive circuits can be hazardous:**

- After testing an inductive load there will be an amount of energy stored in the inductance. This energy is released in the form of a discharge current. Disconnecting an inductive load while current is still flowing will cause a high voltage arc, which is a danger to both the user and the item under test
- The DLRO connector lit lead sets are fitted with a 'test in progress lamp' associated with the TEST button which indicates that current is flowing in the C1-C2 loop. For testing large inductive resistances the current carrying leads should be connected securely to the item under test before starting the test
- It is not recommended that duplex handspikes be used to carry out tests on inductive loads. If inadvertently using the handspikes on an inductive load, the L1 lamp on the handspikes will flash amber while discharge current flows, thereby duplicating the function of the 'I' lamp on the instrument. It is important to maintain contact until the L1 light stops flashing amber and turns green indicating the end of the test

**This product is not intrinsically safe. Do not use in an explosive atmosphere.**

**Do not operate the test leads or connect to any external system if any visible signs of damage are apparent or if they have been stored for prolonged periods in unfavourable conditions.**

**Inspection**

Before each use of the test leads, perform a thorough visual inspection to confirm that their condition is good, with no damaged or broken insulation.

The Measurement Category rating of the measurement system is that of the lowest rated component. If any part of the measurement leads is un-rated, the instrument is safe for connection only up to 30 V.

**DLRO test leads fitted with duplex Connectors**

DLRO test leads

**APPLICATION**

**DUPLEX CONNECT SYSTEM – COMPONENT PARTS**

**CONNECT TEST LEADS WITH INDICATOR LIGHTS**



These duplex test leads are single test leads supplied without terminations.

	Test Lead (1 supplied)	Order part number:
TL1.5-CL	1.5 m connect lit	1006-456
TL3-CL	3 m connect lit	1006-458
TL6-CL	6 m connect lit	1006-459

Lead resistances - C hook termination to connector

1.5m lead (1 off)	20 m ohm
3m leads (1 off)	30 m ohm
6m leads (1 off)	40 m ohm

**Description**

These duplex test leads are fitted with hook terminations for connecting to an instrument and a connector plug equipped with ultra-bright LED indicator lights viewable from any direction.

Test connection terminations are supplied separately.

The duplex connector incorporates a locking ring to prevent test connections being pulled off in use.

Indicator lights operate with DLRO10, DLRO10X and DLRO10HD via third connection plug. The function of these indicator lights are listed at the beginning of this document in the introduction.

**These leads are designed to fit:**

- DLRO10
- DLRO10X
- DLRO10HD
- DLRO10HDX



**CONNECT TEST LEADS WITHOUT INDICATOR LIGHTS**

**CONNECT EXTENSION LEAD**



These duplex test leads are single test leads supplied without terminations.

	Test Lead (1 supplied)	Order part number:
TL1.5-C	1.5 m connect	1006-452
TL3-C	3 m connect	1006-454
TL6-C	6 m connect	1006-455

EL6-C	Extension Lead 6 m connect (1 supplied)	1006-460
Lead resistance	40 m ohm	

Lead resistances - C hook termination to connector

1.5m lead (1 off)	20m ohm
3m leads (1 off)	30m ohm
6m leads (1 off)	40m ohm

**Description**

These duplex test leads are fitted with hook terminations for connecting to an instrument and a Connex plug. Test connection terminations are supplied separately. The duplex connector incorporates a locking ring to prevent test connections being pulled off in use.

**These leads are designed to fit:**

- DLRO10
- DLRO10X
- DLRO10HD
- DLRO10HDX

**There are separate versions available to fit the BT51 as follows:**

	Test Lead (1 supplied)	Order part number:
TL3-C-BT51	3m connect for BT51	1007-023
TL6-C-BT51	6m connect for BT51	1007-024

**Description**

This 6 m long duplex connect extension lead is designed to extend the duplex connect test leads that are without indicator lights.

More than one extension lead can be used to create even longer test lead lengths. However the overall lead resistance must be taken into account. The higher the overall loop resistance, including the test piece, the lower the maximum test current available will be.

Any 10 A DLRO instrument fitted with a pair of 3 m test leads and any test lead terminations (duplex probes or kelvin clips) can have up to 2 x 6 m extension leads used and still be able to supply 10 A test current. This is because the overall resistance of this combination is below the 100 m ohm lead resistance maximum specified.

**These extension leads are designed to fit any of these test leads:**

- TL1.5-C
- TL3-C
- TL3-C-BT51
- TL6-C
- TL6-C-BT51

Note: These extension leads will not fit any of the leads fitted with indicator lights

**LEAD TEST CONNECTION TERMINATIONS  
AVAILABLE – SOLD INDIVIDUALLY**

**DUPLEX CONNECT PROBE**



DP1-C  
Duplex Probe 1 - connect      Order part number: 1006-450

**Description**

Duplex connect handspike with sprung loaded tips fitted with a connector socket for easy connection to any connector test lead. Replaceable probe tips have hardened needle points, gold plated for excellent low resistance contact. Tips are sprung to provide 1.3 kg of force using stainless steel springs. Ideal for general applications where a good reliable connection is required on none coated or corroded surfaces. To further limit the possibility of damage to test piece waffle tip, sometimes referred to a serrated tips are available as an option.

**Maximum current rating**      10 A

**Connector to probe tip resistance**  
14 m ohm

**Probe spacing between P and C tips:**  
6 mm

**Will fit**      Any duplex connect test lead and extension lead

**Safety**      CAT III 600 V only when suitable terminal covers are used

**Spare / optional parts**      **Order part number:**  
Replacement needle tips      2003-551  
Waffle / serrated tips      25940-014

**DUPLEX CONNECT TWIST PROBE**



DTP1-C  
Duplex Twist Probe 1 - Connect      Order part number: 1006-449

**Description**

Duplex connect handspike with sprung twisting tips fitted with a connector socket for easy connection to any connect test lead. As the probe is pressed onto the test piece the tips compress and twist at the same time providing 2.4 kg of spring force. Probe tips are hardened and tempered before four equal-spaced flats are ground to provide a square shape tip, making these probes ideal for cutting through surface coatings or corrosion on test piece for a good contact.

To assist reliability the probes internal electrical connections are assisted by using an innovative volute spring eliminating the need for a separate current carrying brad.

**Maximum current rating**      10 A

**Connector to probe tip resistance**  
14 m ohm

**Probe spacing between P and C tips:**  
10 mm

**Will fit**      Any Duplex Connex test lead and extension lead

**Safety**      <30 V only

**CONCENTRIC DUPLEX CONNECT PROBE**



CP1-C  
Concentric Probe 1 - connect Order part number: 1006-448

**Description**

Duplex connect concentric handspike with sprung loaded potential tip fitted with a connector socket for easy connection to any connector test lead.

The C connection is made via an outer hardened and tempered steel crown with two contact points or tips.

The replaceable central potential probe tip has a hardened needle point, gold plated for excellent low resistance contact. The P tip is sprung to provide 1.3kg of force and uses a stainless steel spring.

Ideal for general applications where a good reliable connection is required on none coated or corroded surfaces. The long probe length and small diameter makes this probe ideal for reaching deeply recessed terminal screws. There are also applications where connection to rivet heads or screw/bolt heads are required. To further limit the possibility of damage to test piece waffle tip, sometimes referred to a serrated tip is available as an option.

**Maximum current rating** 10 A

**Connector to probe tip resistance**  
10 m ohm

**Probe tip spacing:**  
Between two outer C tips 7.6 mm  
P tip central between two C tips with 3.8 mm spacing

**Probe dimensions:**  
From finger guard to tip 110 mm  
Diameter is tapered from 14 mm nearest the finger guard to 11 mm at tip crown

**Will fit** Any duplex connect test lead and extension lead

**Safety** <30 V only

**Spare / optional parts** **Order part number:**  
Replacement P needle tip 2003-551  
Waffle / serrated P tip 25940-014

**HEAVY DUTY KELVIN CLIP**



KC1-C  
Kelvin Clip 1 - connect Order part number: 1006-447

**Description**

Duplex connect Kelvin Clip 1 is a heavy duty clip for general purpose applications.

**Maximum current rating** 10 A

**Connector to probe tip resistance**  
14 m ohm

**Clip capacity:** 40 mm

**Will fit** Any duplex connect test lead and extension lead

**Safety** <30 V only

## LARGE TOUCH PROOF INSULATED CLIP – ADJUSTABLE JAW OPENING



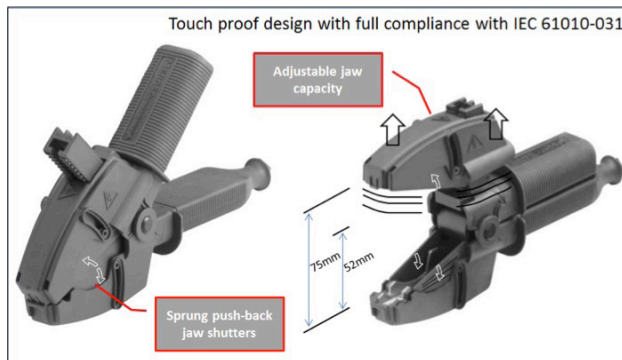
KC2-C

Kelvin Clip 2 - connect

Order part number: 1006-451

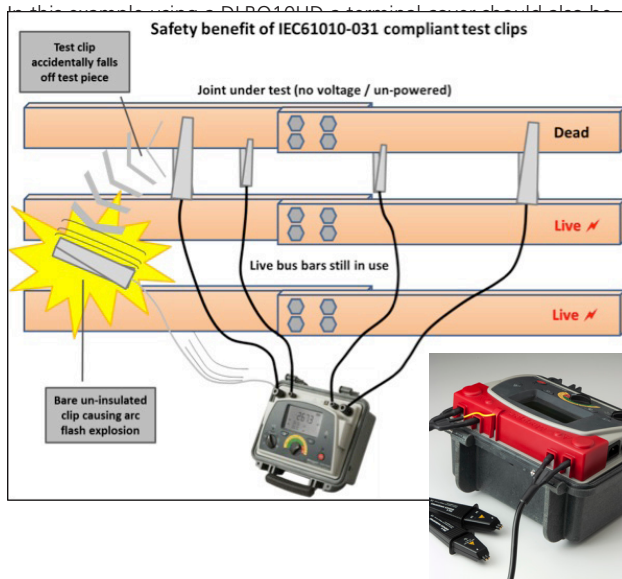
### Description

Duplex connect Kelvin Clip 2 is a fully insulated touch proof clip for applications where a high safety rating is required.



<b>Maximum current rating</b>	20 A
<b>Connector to clip resistance</b>	10m ohm
<b>Clip capacity:</b>	52 mm to 75 mm with sliding jaw
<b>Will fit</b>	Any duplex connect test lead and extension lead
<b>Safety</b>	CAT IV 600 V

The actual safety CAT rating in use will always be the rating of the lowest part of the complete system. For example if used with a DLRO10 without terminal covers the system will be unrated and must not be connected to live voltages above 30 V.



## DLRO test leads fitted with duplex Connectors

DLRO test leads

## COMPLETE DUPLEX CONNECT LEAD SETS AVAILABLE

### PROBE LEAD-SETS



DH1-C

3M Duplex Handspike lead set, with connect (x2)

Order part number: 1006-442

### Description

Two wire, four terminal duplex twist probe lead set 3m long.

#### Consists of the following:

DTP1-C	Duplex Twist Probe	2 off
TL3-C-BT51	3m lead connect	2 off
Total leadset loop resistance		80m ohm

#### Will fit:

- BT51
- BT51 120V



DH2-C

6m / 20' version of DH1-C above but only 1 included

Order part number: 1006-443

### Description

Single duplex twist probe lead - 6m long.

#### Consists of the following:

DTP1-C	Duplex Twist Probe	1 off
TL6-C-BT51	6m lead connect	1 off
Total resistance - 1 lead + 1 probe		50m ohm

#### Will fit:

- BT51
- BT51 120V



**DH4-C**

Two wire, four terminal duplex probe lead set - 1.5 m  
One lead fitted with indicator lights.  
Order part number: 1006-444

**Description**

Two wire, four terminal duplex probe lead set 1.5 m long. One lead fitted with indicator lights.

**Consists of the following:**

DP1-C	Duplex Probe	2 off
TL1.5-C	1.5 m connect lead	1 off
TL1.5-CL	1.5 m connect lead with indicator lights	1 off
Total leadset loop resistance		48m ohm

**Will fit:**

- DLRO10
- DLRO10X
- DLRO10HD
- DLRO10HDX



**DH4-CHDC**

Order part number: 1006-463  
As DH4-C but supplied with DLRO10HD terminal Cover for CATIII 300 V rating

**DH5-C**

Order part number: 1006-445  
as DH4-C but 3m long

**KELVIN CLIP LEAD-SETS**



**KC1-TL3-C**

KL1-C Kelvin Clip 3m Lead set - connect (x2)  
Order part number: 1006-462

**Description**

Two wire, four terminal kelvin clip lead set 3m long.

**Consists of the following:**

KC1-C	Kelvin clip	2 off
TL3-C	3m connect lead	1 off
TL3-CL	3m connect lead with indicator lights	1 off
Total leadset loop resistance		88m ohm

**Will fit:**

- DLRO10
- DLRO10X
- DLRO10HD
- DLRO10HDX



**KC2-TL3-C**

KL2-C Insulated Kelvin Clip - Test Lead 3 m connect (x2)  
Order part number: 1006-461

**Description**

Two wire, four terminal insulated kelvin clip lead set 3m long.

**Consists of the following:**

KC2-C	Insulated kelvin clip	2 off
TL3-C	3 m connect lead	1 off
TL3-CL	3 m connect lead with indicator lights	1 off



## DLRO test leads fitted with duplex Connectors

DLRO test leads

Total leadset loop resistance 80m ohm

### Will fit:

- DLRO10,
- DLRO10X
- DLRO10HD
- DLRO10HDX

### ORDERING INFORMATION

Description	Order Code	Description	Order Code
<b>Duplex connect system</b>		<b>Complete duplex connect lead sets</b>	
Component parts - one of each supplied		DH1-C	
TL1.5-CL		Two wire, four terminal duplex twist probe lead set - 3m 1006-442	
Connect test leads with indicator light - 1.5 m	1006-456	DH2-C	
TL3-CL		Single duplex twist probe lead - 6m 1006-443	
Connect test leads with indicator light - 3 m	1006-458	DH4-C	
TL6-CL		Two wire, four terminal duplex probe lead set - 1.5 m	
Connect test leads with indicator light - 6 m	1006-459	One lead fitted with indicator lights. 1006-444	
TL1.5-C		DH4-CHDC	
Connect test lead without indicator light - 1.5 m	1006-452	Two wire, four terminal duplex probe lead set 1.5 m long	
TL3-C		One lead fitted with indicator lights	
Connect test lead without indicator light - 3 m	1006-454	DLRO10HD terminal Cover 1006-463	
TL6-C		DH5-C	
Connect test lead without indicator light - 6 m	1006-455	Two wire, four terminal duplex probe lead set - 3 m	
TL3-C-BT51		One lead fitted with indicator lights. 1006-445	
Connect test leads for BT51 - 3 m	1007-023	<b>Kelvin clip lead-sets</b>	
TL6-C-BT51		Two wire, four terminal kelvin clip lead set - 3 m 1006-462	
Connect test leads for BT51 - 6 m	1007-024	Two wire, four terminal insulated kelvin clip lead set - 3 m	
EL6-C		1006-461	
Connect Extension Lead - 6 m	1006-460		
<b>Lead test connection terminations available</b>			
Terminations sold individually			
DP1-C Duplex connect probe	1006-450		
DTP1-C Duplex connect twist probe	1006-449		
CP1-C Concentric duplex connect probe	1006-448		
KC1-C Heavy duty kelvin clip	1006-447		
KC2-C Insulated connect Kelvin clip	1006-451		

**SALES OFFICE**  
**Megger Limited**  
 Archcliffe Road Dover  
 CT17 9EN England  
 T +44 (0) 1304 502101  
 E UKsales@megger.com

**DLROTestLeads\_DS\_en\_V06**  
**www.megger.com**  
**ISO 9001**  
 The word 'Megger' is a registered trademark

**Megger**<sup>®</sup>