



Reyrolle
Protection
Devices

7XG22 2RMLG, 8W&10W Test Blocks

Catalogue Sheet

Energy Management

SIEMENS

7XG22 – 2RMLG, 8W & 10W

Catalogue Sheet



Description

The 7XG22 range of Test Blocks, housed within an Epsilon enclosure, offers facilities for monitoring and secondary injection testing of power system protection schemes in conjunction with the appropriate multi-fingered test plug.

The 2RMLG Test Block has 14 pairs of spring loaded contacts which are linked to a terminal block positioned at the rear of the enclosure.

The 8W and 10W Test Blocks are of identical construction to the 2RMLG but with 8 or 10 pairs of contacts respectively.

The 2RMLG07 is coded to only accept the 2RMLB-S7 Test Plug which has connection terminals 21, 23, 25 & 27, internally – For typical application see Fig 4.

The 2RMLG08 is coded to only accept the 2RMLB-S8 Test Plug which has internal pairs 1&3, 5&7, 9&11 and 15&17 shorted together internally – For typical applications see Figs 5, 6, 7 & 8.

The 2RMLG09 is coded to only accept the 2RMLB-S9 Test Plug which has internal pairs 1-3-5-7, and 17-19 shorted together internally.

Each pair of contacts is normally closed completing the circuit through the test block when the associated protection equipment is in use.

For testing purposes the test block can be accessed by removing the front cover. The 2RMLG 01 has a metallic probe attached to the front cover assembly which when withdrawn open circuits the 2 contacts at position 13 and 14.

The main dc auxiliary supply to the protection scheme or relay can be wired to this circuit to prevent inadvertent tripping of the protection circuit after removal of the cover and during the test procedure.

The 2RMLG 02/07/08/09 do not include the above facility and contacts 13 and 14 are normally closed. These contacts must not be used for current circuits, as the

relevant contact finger on the 2RMLB test plug is shorter in this position.

The short test finger in position 13-14 on the 2RMLB will open contacts 13-14 in the test block after the other fingers have made contact in all other positions.



Fig 1 & 2.

Note: It is important that the sockets in the test plug (2RMLBS-1) which correspond to the current transformer secondary windings are linked prior to the test plug being inserted into the test block.

This will ensure that the current transformer secondary windings are short circuited prior to disconnection from the protection scheme or relay (as shown in Figure 3). If the dc auxiliary supply is to be used during testing it can be linked using the sockets in the test plug.

Operation of the contacts can be monitored by connecting the test equipment to the protection scheme or relay with the even numbered sockets of the test plug. If a number of 2RMLG test blocks are connected to a relay it is recommended that the dc supply be routed through each of them to safeguard against inadvertent operation.

Mechanical Specification

The 2RMLG, 8W and 10W are a size E2 unit in the Epsilon range of enclosures. The overall dimensions and panel fixing details are shown in Figure 10.

The rear terminal block has 28 terminals each with an M4 screw outlet for the attachment of external wiring, fitted with 'L' shaped pre-insulated ring tongue terminations.

2RMLB-S series Multi-fingered test plugs

The 2RMLB-S series are inserted into the 2RMLG test socket and is securely retained by means of two knurled screws. The 2RMLB-S1 test plug incorporates 28 test sockets, each socket accepting a shrouded or plain 4mm diameter plug.

2RMLB S7 with Shorting Contacts

The 2RMLB-S7 is similar to the 2RMLB-S1 with shorted contact pairs 21-23-25-27 and is coded to be used with the MMLG07 Test Socket only.

2RMLB S8 with Shorting Contacts

The 2RMLB-S8 is similar to the 2RMLB-S1 with shorted contact pairs 1-3, 5-7, 9-11, 15-17 and is coded to be used with the 2RMLG08 Test Socket only.

2RMLB S9 with Shorting Contacts

The 2RMLB-S9 is similar to the 2RMLB-S1 with shorted contact pairs 1-3-5-7, 9-11, 17-19, 21-23-25-27 and is coded to be used with the 2RMLG09 Test Socket only.

Precautions

BEFORE inserting a Test Plug into a Test Socket carrying current transformer secondary circuits.

ENSURE that the Test Plugs corresponding to the current transformer circuits are short-circuited.

This is to ensure the current transformer secondary circuits are not inadvertently open-circuited during insertion of the last plug.

BEFORE inserting a Test Plug to measure current.

ENSURE that the ammeter is on the correct range and that it is connected to its test leads

Connections

The connections will depend upon the scheme and details must be obtained from the appropriate diagrams. If it is necessary to use the d.c. auxiliary supply during testing, then a test link may be fitted across the sockets in the Test Plug.

Technical Information

High Voltage withstand

Insulation

IEC 255-5: 1977

2RMLG 01/02/07/08/09 8W & 10W	5kV rms for 1 minute between all case terminals connected together and the case earth terminal.
	5kV rms for 1 minute between any contact pair and either adjacent alternate contact pair, provided the intermediate contact pair is not used
	2kV rms for 1 minute between any contact pair and either adjacent contact pair
2RMLG 01 only 8W & 10W	1kV rms for 1 minute between terminals 13 and 14 when the cover is removed (e.g. opening the auxiliary supply or trip circuit).
2RMLB-S1	As 2RMLG 01 plus 2kV rms for 1 minute between incoming and outgoing contacts when inserted
2RMLB-S7	As above with the exception of terminals 21, 23, 25 & 27 which are permanently shorted together
2RMLB-S8	As above with the exception of terminal pairs 1&3, 5&7, 9&11, 15&17 which are permanently shorted together as pairs
2RMLB-S9	As above with the exception of terminal pairs 1-3-5-7, 17-19 which are permanently shorted together as pairs

Current and Voltage withstand

2RMLG 01/02/07/08 8W & 10W 2RMLBS1-S9	All contact circuits rated at 20A continuously or 400A for 1s, ac or dc.
	300V ac or dc maximum service voltage.

Atmospheric environment

Temperature

IEC 255-6: 1988	Storage and transit - 25°C to +70°C
	Operating -25°C to +55°C
IEC 68-2-1: 1990	Cold
IEC 68-2-2: 1974	Dry Heat

Humidity

IEC 68-2-3: 1969	56 days at 93% RH and +40°C
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Enclosure Protection

IEC 529: 1989	IP50 (dust protected)
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Mechanical environment

Vibration

IEC 255-21-1: 1988	Response Class 2
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EMC compliance

89/336/EEC	These products have been classified as electromagnetically benign and are therefore excluded from the European Community EMC Directive. (89/336/EEC)
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**TYPICAL APPLICATION OF THE 2RMLG01 / 2RMLG02 TEST SOCKET AND
2RMLB-S1 TEST PLUG**

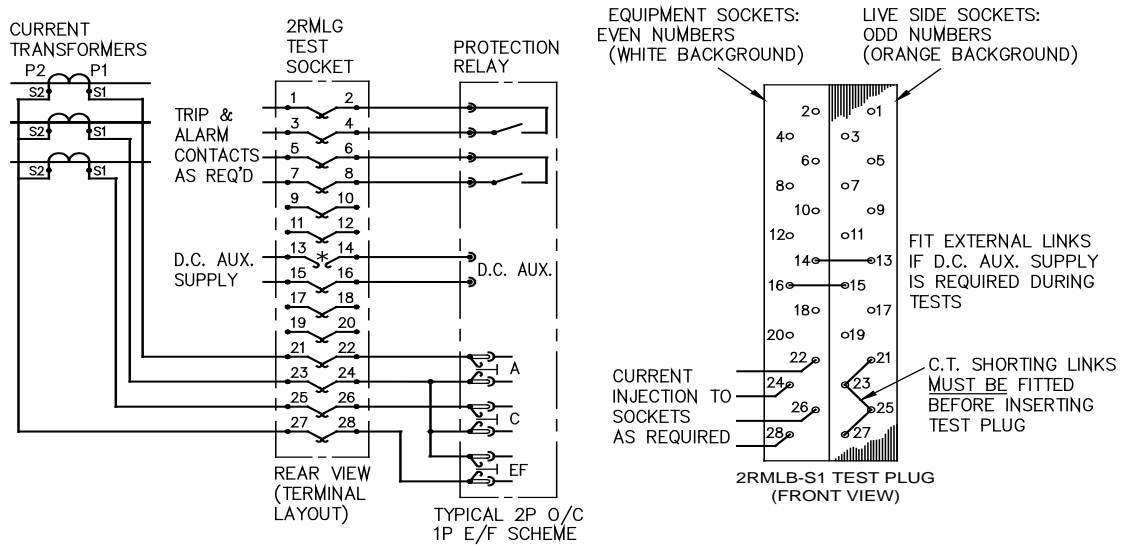


Fig 3.

*2RMLG01 13/14 OPEN CCT WHEN COVER REMOVED AND OTHER POSITIONS CONNECTED.
2RMLG02 13/14 CONNECTED AS PER OTHER POSITIONS.

**TYPICAL APPLICATION OF THE 2RMLG07 TEST SOCKET
AND 2RMLB-S7 TEST PLUG**

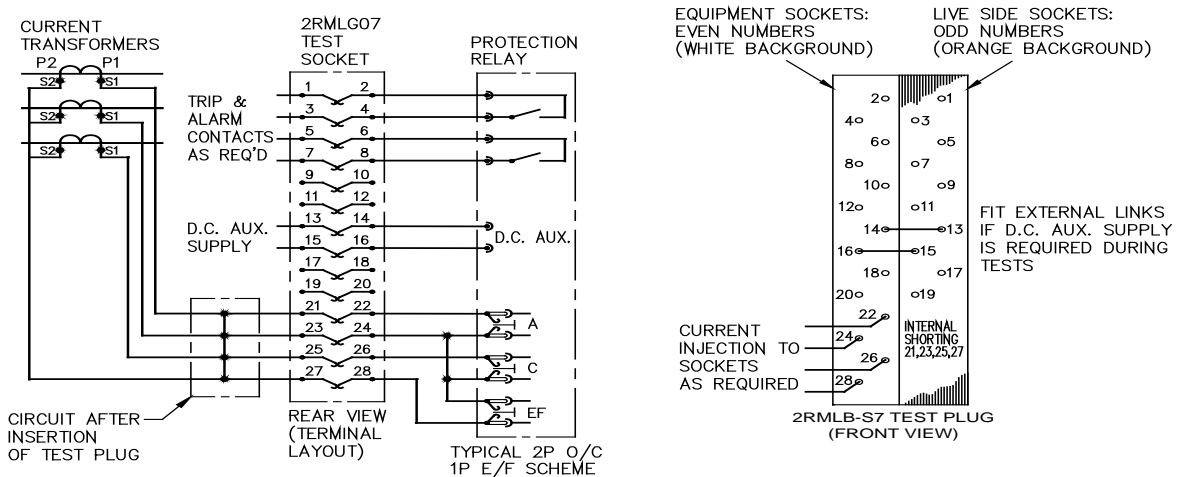


Fig 4.

**2RMLG08 TEST SOCKET TEST POINTS AND SHORTING
ARRANGEMENT WITH 2RMLB-S8 TEST PLUG INSERTED**

- [SHORTED TEST POINTS
- o TEST INJECTION/MONITOR POINT

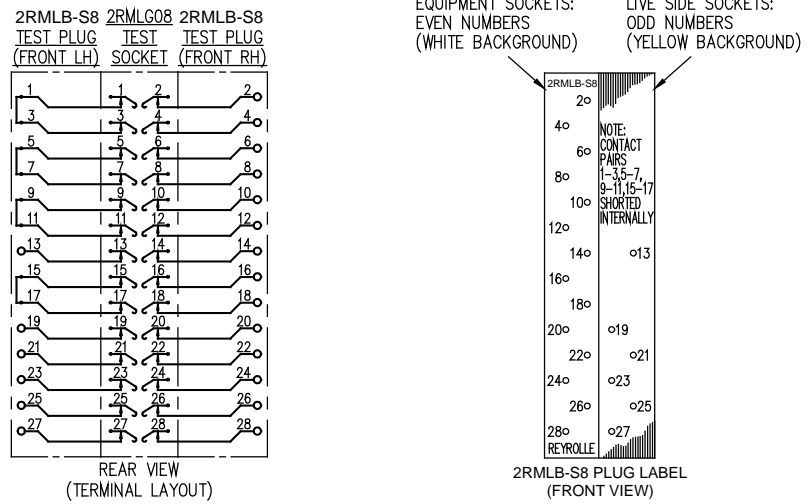


Fig 5.

**TYPICAL APPLICATION OF THE 2RMLG08 TEST
SOCKET AND 2RMLB-S8 TEST PLUG**

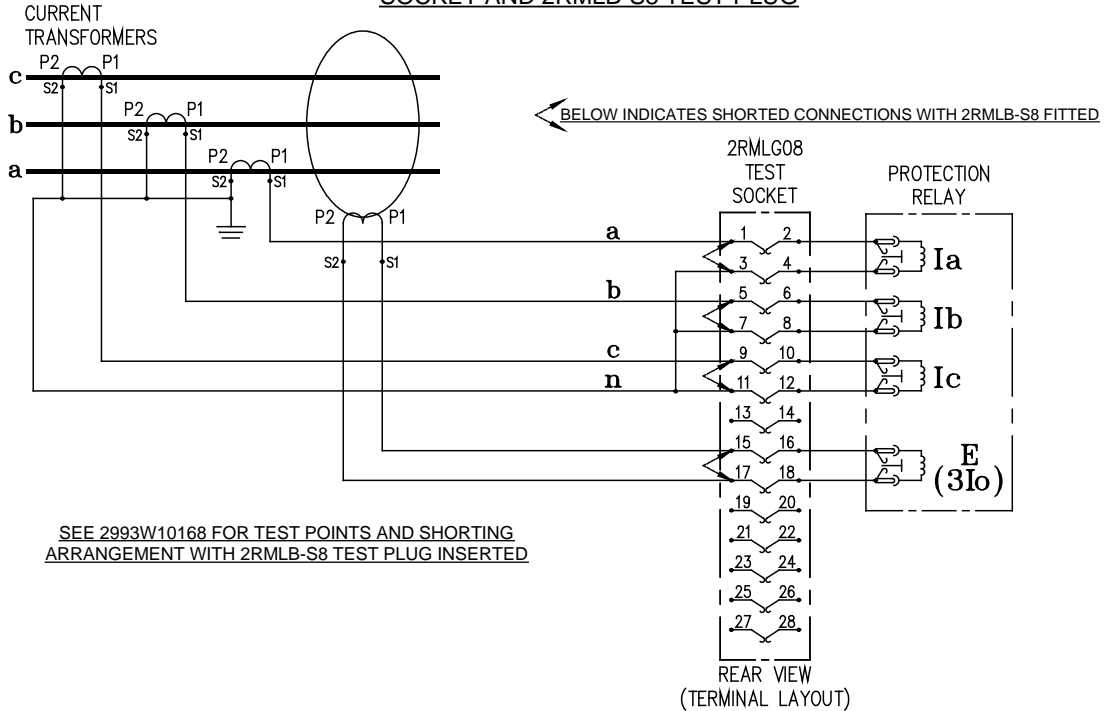


Fig 6.

TYPICAL APPLICATION OF THE 2RMLG08 TEST SOCKET
AND 2RMLB-S8 TEST PLUG

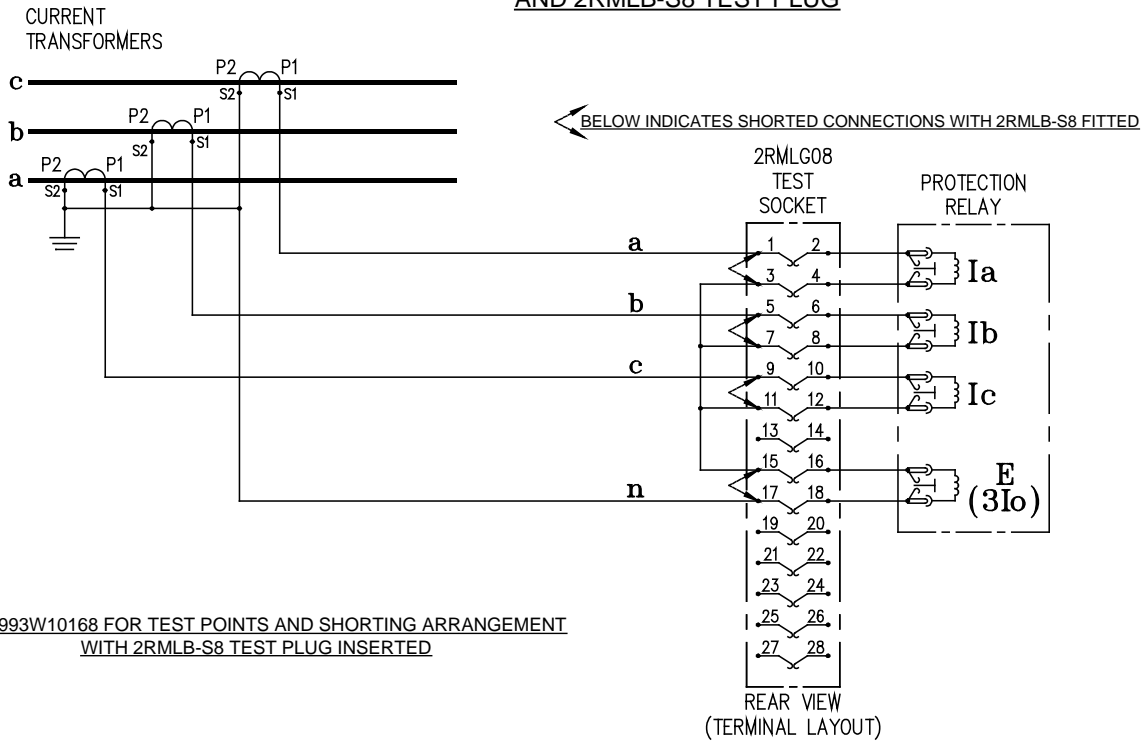
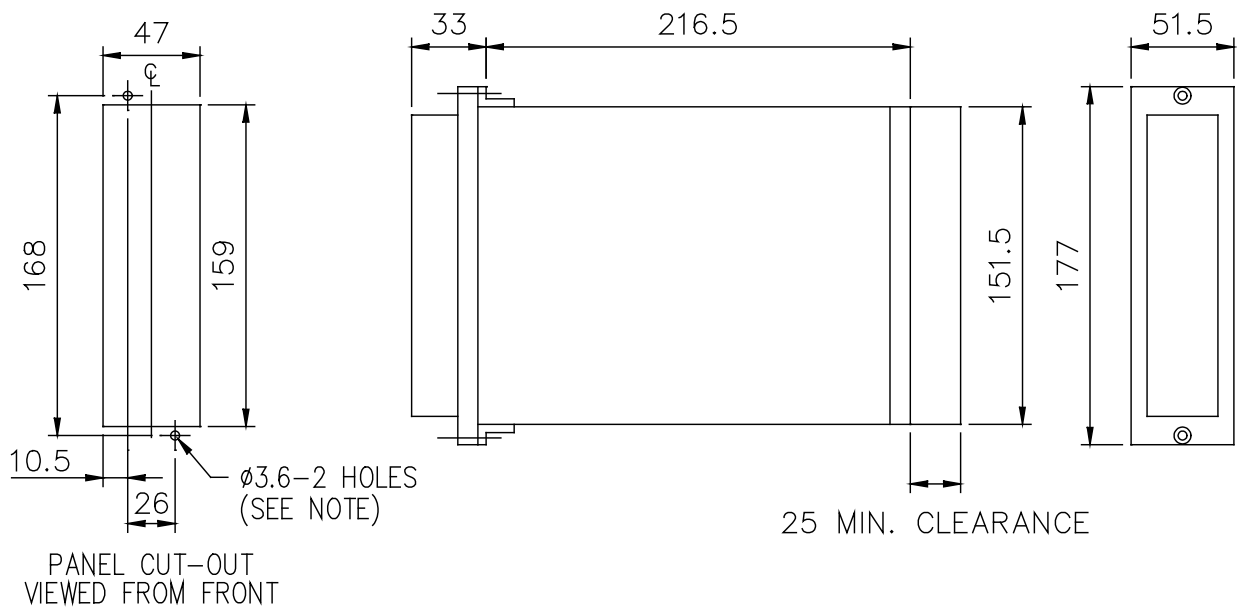


Fig 7.

OUTLINE AND DRILLING DRAWING FOR 2RMLG TEST SOCKETS IN EPSILON E2 CASE



NOTE:
THE Ø3.6 HOLES ARE FOR M4 THREAD FORMING (TRILOBULAR) SCREWS. THESE ARE SUPPLIED AS STANDARD AND ARE SUITABLE FOR USE IN FERROUS/ALUMINIUM PANELS 1.6mm THICK AND ABOVE. FOR OTHER PANELS, HOLES TO BE M4 CLEARANCE (TYPICALLY Ø4.5) AND RELAYS MOUNTED USING M4 MACHINE SCREWS, NUTS AND LOCKWASHERS (SUPPLIED IN PANEL FIXING KIT).

Fig 9.

TYPICAL APPLICATION OF THE 2RMLG08 TEST SOCKET AND 2RMLB-S8 TEST PLUG

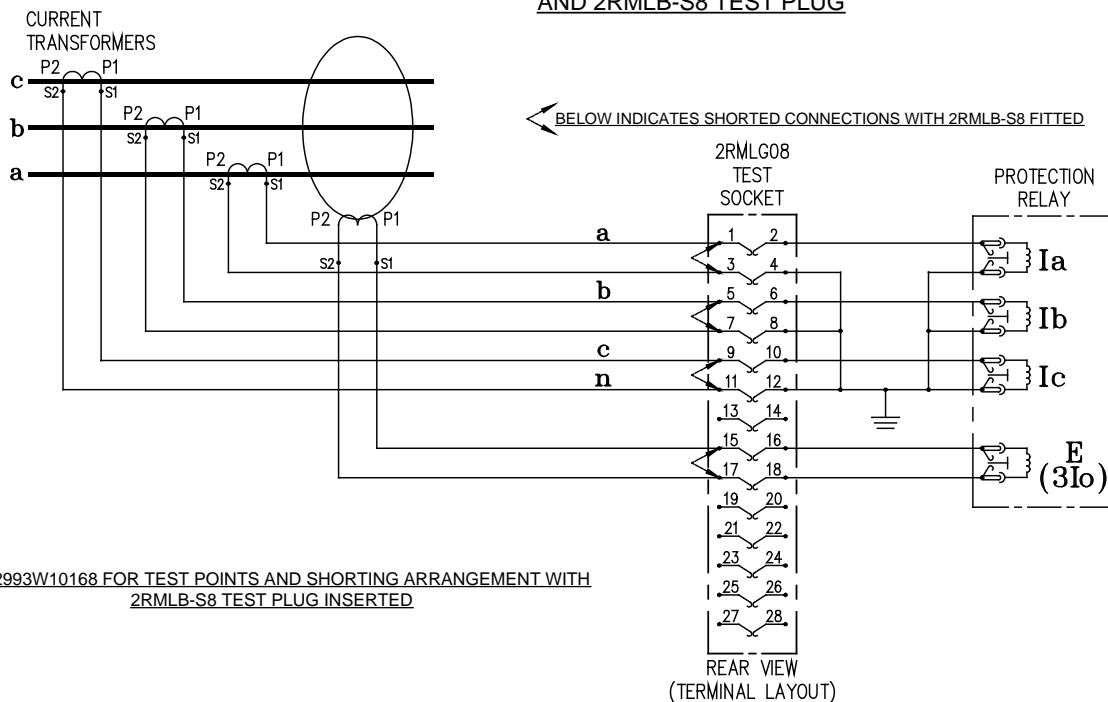


Fig 8.

Ordering Information

Product description	Variants	Order No.
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Test Modules – 2RMLG

Modular case test components (MLG).

Category

Ancillary equipment

Ancillary equipment

Modular case test components

Test component type

Test modules (MLG)

Component type

Test module in size E2 case (2RMLG01)

Test module without open circuit facility between terminals 13 and 14 when cover removed (2RMLG02)

Test module with automatic CT shorting (2RMLG07)

Test module with automatic CT shorting (2RMLG08)

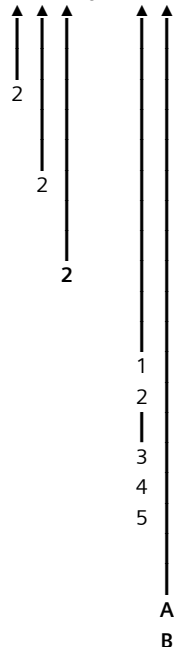
Test module with automatic CT shorting (2RMLG09)

Mounting

E2 Case Vertical

E2 Case Horizontal

7 X G 2 2 2 0 - □ □ A 0 0 - 0 A A 0



Test plugs – 2RMLB

Modular case test components (MLB).

Category

Ancillary equipment

Ancillary equipment

Modular case test components

Test component type

Test modules (MLG)

Component type

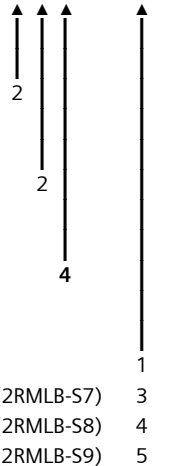
Multi finger test plug complete with leads (2RMLB-S1)

Multi finger test plug complete with leads and internal shorting links (2RMLB-S7)

Multi finger test plug complete with leads and internal shorting links (2RMLB-S8)

Multi finger test plug complete with leads and internal shorting links (2RMLB-S9)

7 X G 2 2 4 0 - □ A A 0 0 - 0 A A 0



Test plugs are coded to fit, and should only be used with the appropriate test block

Test Modules and Plugs – 8W & 10W

Modular case test components.

Category

Ancillary equipment

Ancillary equipment

Modular case test components

Test component type

Test modules & plugs

Component type

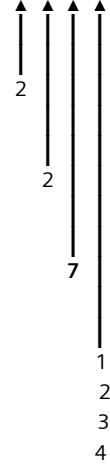
8 way test module

8 way test plug

10 way test module

10 way test plug

7 X G 2 2 7 □ - 0 A A 0 0 - 0 A A 0



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Siemens Protection Devices Limited

P.O. Box 8

North Farm Road

Hebburn

Tyne & Wear

NE31 1TZ

United Kingdom

Phone: +44 (0)191 401 7901

Fax: +44 (0)191 401 5575

E-mail: marketing.spdl.qb@siemens.com

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For enquires please contact our Customer Support Center

Phone: +49 180/524 8437 (24hrs)

Fax: +49 180/524 24 71

E-mail: support.energy@siemens.com

www.siemens.com/protection

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