

# Distribution Boards, IP66, 110V, Double Pole, Equipped

Although developed to provide a safe working voltage for users of portable power tools and temporary lighting on construction sites, 110V Reduced Low Voltage (RLV) has been widely adopted by other industries as a means of increasing safety for users of portable equipment in fabrication shops, plant rooms, railway repair sheds, craft workshops and many other locations.

There are a number of ways of providing 110V power in permanent installations, including: (i) transformers fitted with integral socket outlets; (ii) TDC series assemblies comprising of transformers with multiple outgoing MCBs; (iii) transformers with hard wired outputs, supplying socket outlets via double-pole boards, as shown on this data sheet (transformers and sockets are shown on page 2).

As the output from an RLV transformer incorporates two live lines (instead of a line and neutral), all switchgear has to be double-pole. In addition, because of concerns with meeting the 5 second disconnection time on 110V RLV circuits, due to the relatively high earth loop impedance and low line to earth voltage (55V), RLV transformers, MCB boards and socket outlets are all offered with optional RCDs, which are designed to operate on a 110V supply. See Tech Data Sheet TDS10 for further details of RLV systems.

#### Enclosures

Distribution board enclosures feature side hinged key lockable and padlockable doors, top and bottom removable gland plates and external wall fixings. They are fabricated from heavy gauges of sheet steel with a high quality paint finish, which has been type tested to show compliance with BS EN 61439-4 for heavily polluted environments. The enclosure design has been independently type tested to prove compliance with IP66 and they can be fabricated from stainless steel when installation is in a corrosive atmosphere.

#### Switchgear

All standard 110V boards feature 100A DP incoming switches, which are capable of terminating conductors with a cross section of up to 50mm<sup>2</sup>. On the outgoing, we offer a choice of 6, 8 or 10 no. 16A Type "C" DP Schneider MCBs or 16A Type "C" 110V DP ABB RCBOs with a sensitivity of 30mA. A spare DP way is provided in each board, which can accept a DP MCB or RCBO rated up to 32A. Both types of outgoing device can terminate conductors with a cross section of up to 25mm<sup>2</sup>.

#### **Order References**

Part No.	Type No.	Distribution
S040392A	DB166/I100-2P/7W/C6-16/110V	6 no. 16A DP Type "C" MCBs
S040395A	DB166/I100-2P/7W/RCBO6-16/110V	6 no. 16A DP Type "C" RCBOs
S040393A	DB266/I100-2P/9W/C8-16/110V	8 no. 16A DP Type "C" MCBs
S040396A	DB266/I100-2P/9W/RCBO8-16/110V	8 no. 16A DP Type "C" RCBOs
S040394A	DB366/I100-2P/11W/C10-16/110V	10 no. 16A DP Type "C" MCBs
S040397A	DB366/I100-2P/11W/RCBO10-16/110V	10 no. 16A DP Type "C" RCBOs



110V DP MCB Boards Equipped with DP MCBs



S040392A 110V DP MCB Board, Equipped with 6 no. 16A DP Type "C" MCBs



S040393A 110V DP MCB Board, Equipped with 8 no. 16A DP Type "C" MCBs



S040394A 110V DP MCB Board, Equipped with 10 no. 16A DP Type "C" MCBs

MCB boards with different configurations can be supplied to order.

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## TH series Wall Mounting RLV Transformers, 2kVA to 10kVA, IP55

To complement our range of IP66 110V distribution boards we design and manufacture (i) IP55 transformers to provide a 110V Reduced Low Voltage supply and (ii) 110V socket outlets, with or without RCD protection, which can be supplied from the transformers via the 110V boards. For a full description of these products please refer to data sheet TRDS021. Also see data sheet TRDS010 for TDC series assemblies, which combine transformers and DP MCBs. We also offer IP44 transformers fitted with 16A and 32A 110V sockets and hard wired versions with MCB and RCD protection. Data sheet TRDS011 refers.

Detailed below are part numbers, etc., for our standard IP55 wall / floor mounting transformers. Transformer windings have a voltage ratio of 230:110, they are double-wound, continuously rated and manufactured in accordance with BS EN 61558 Parts 1, 2-4 and 2-23 (where applicable) but with an earthed secondary winding.

All transformer assemblies are housed in robust, steel enclosures, non-vented to IP55. Enclosures are supplied with wall mounting and floor fixing brackets. The secondaries are protected by either: (i) DP Type "C" MCBs; (ii) DP Type "C" MCBs with 300mA RCD; or (iii) DP Type "C" MCBs with 300mA Selective RCD (to discriminate with any RCDs fitted into 110V sockets). Although RCDs are current operated devices, we incorporate specific versions, which are designed to operate on a 110V RLV supply, in accordance with BS EN 61008-1.





Part No. S210365 - 2 kVA, 230:110CTE

Part No.	Type Number	Description
S210362	TH/1/2/C1/IP55	2 kVA continuous rating, 1 x 16A DP MCB on secondary.
S210365	TH/1/2/C1/RCD-300/IP55	2 kVA continuous rating, 1 x 16A DP MCB + 300mA RCD on secondary
S210368	TH/1/2/RCD-300S/IP55	2 kVA continuous rating, 1 x 16A DP MCB + 300mA Selective RCD on secondary.
S210363	TH/1/5/C1/IP55	5 kVA continuous rating, 1 x 50A DP MCB on secondary.
S210366	TH/1/5/C1/RCD-300/IP55	5 kVA continuous rating, 1 x 50A DP MCB + 300mA RCD on secondary.
S210369	TH/1/5/C1/RCD-300S/IP55	5 kVA continuous rating, 1 x 50A DP MCB + 300mA Selective RCD on secondary.
S210364	TH/1/10/C1/IP55	10 kVA continuous rating, 1 x 80A DP MCB on secondary.
S210367	TH/1/10/C1/RCD-300/IP55	10 kVA continuous rating, 1 x 80A DP MCB + 300mA RCD on secondary.
S210370	TH/1/10/C1/RCD-300S/IP55	10 kVA continuous rating, 1 x 80A DP MCB + 300mA Selective RCD on secondary.

Description

Surface Socket, 16A, 110V, 2P+E, IP44 c/w RCD

Surface Socket, 32A, 110V, 2P+E, IP44 c/w RCD

Surface Socket, 16A, 110V, 2P+E, IP66 c/w RCD

Surface Socket, 32A, 110V, 2P+E, IP66 c/w RCD

Surface Socket, 16A, 110V, 2P+E, IP44

Surface Socket, 32A, 110V, 2P+E, IP44

Surface Socket, 16A, 110V, 2P+E, IP67 Surface Socket, 32A, 110V, 2P+E, IP67

### Surface Mounting Sockets for 110V Installations

A range of 110V surface sockets to BS EN 60309-2, rated at 16A and 32A, with ingress protection to IP44 or IP66/67. Sockets are available with and without RCD protection. Please contact us for details of 110V sockets with the addition of DP MCB protection, which are required when the overcurrrent rating of the protective device supplying the socket circuit exceeds the rating of the socket i.e. when a 32A MCB feeds a circuit of 16A sockets.

16A/32A, 110V, 3P Sockets with 30mA RCD



16A/32A, 110V, 3P, Sockets



**Order References** 

Type No.

ERC/1/16/110V

ERC/1/32/110V

ERC/1/16/110/WT

ERC/1/32/110/WT

B513.1650T

B513.3250T

B518.1650T

B518.3250T

Part No.

S190392

S190393

S190394

S190395

S201071

S201082

S201182

S201183

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