

IP66 Distribution Boards, In Detail

Blakley Electrics produces a standard range of IP66, heavy duty distribution boards for permanent installations, designed to meet the requirements of BS EN 61439-3. All boards incorporate Schneider Acti 9 Isobar P pan assemblies, from 4 way to 24 way, with incomers rated at 125A, 200A or 250A.

Enclosure Construction

Enclosures are manufactured from heavy gauges of mild steel and incorporate removable top and bottom gland plates. All distribution boards have side hinged doors, which are key lockable and padlockable. Enclosures have a high quality, external grade, painted finish, which is a 5 stage process including degreasing, zinc phosphate pre-treatment and an electrostatically applied, polyester powder top coat, shade Dark Admiralty Grey. The finishing system has been independently tested in accordance with the requirements of BS EN 61439-4, section 8.2.9.2 "Verification of resistance to corrosion in a heavily polluted atmosphere". Other shades of top coat and finishing systems are available to order.

Where the atmosphere is corrosive (high humidity, coastal or chemically laden) enclosures can be fabricated from stainless steel, which is available in different grades, such as 304 and 316L. We would expect enclosures made from stainless steel to have a practical working life of 20 years, providing there is a reasonable level of routine maintenance (greasing hinges, repairing damage, etc).

Enclosure IP Ratings

Distribution boards have an IP66 rating. The definition of this rating is:

- First 6: Total protection against dust
- Second 6: Protection against swamping with water

The IP66 enclosure design has been independently type tested.

Supply Voltages

We offer IP66 distribution boards for single-phase (230V, SP&N) and three-phase (400V, TP&N) installations.

SP&N Distribution Boards

We offer three sizes of single-phase distribution board: 10 way, 14 way and 18 way; all have a 125A DP incoming main switch and now incorporate Isobar P pans, which accept PoN RCBOs. Kits are available to enable outgoing ways to have a switched neutral.

Current Ratings – TP&N

Three phase boards are available with three ratings of incoming 4P switch: 125A, 200A and 250A. Alternative incoming devices, such as MCCBs or CBRs, are supplied to order.

Outgoing Ways – TP&N

All boards incorporate Schneider Acti9 MCB Isobar P pan assemblies, which have a conditional short circuit withstand rating of 25kA and are available with the following number of TP outgoing ways: 4W, 6W, 8W, 12W, 16W, 18W and 24W. Pan assemblies also accept SP, DP and 4P MCBs and any combination of MCB can be fitted. Acti9 MCBs are manufactured in accordance with BS EN 60898 and are available in current ratings from 1A to 63A, Type B, C or D. Please note: if any outgoing ways are to incorporate a switched neutral (using DP or 4P MCBs), a distributed neutral kit has to be fitted. SP&N PoN RCBOs to BS EN 61009-1 can also be accommodated, in a range of current ratings up to 45A.

Outgoing Ways, TP&N, Multi-Service Units

Multi-Service distribution boards also incorporate Schneider Acti9 MCB Isobar P pan assemblies with the addition of extra DIN rail fitted above the pan. The installer can fit a variety of control, measurement or protection devices, including time clocks, light sensitive switches, movement detectors, contactors, RCDs, MCBs rated up to 100A (fed from terminal blocks fitted within the pan) and kilowatt hour meters, space permitting.



IP66 Distribution Board, 200A,
12W, TP&N



Distribution Board, 125A,
4 way, TP&N, IP66



Distribution Board, 125A, IP66,
12 way, TP&N with DIN rail

Distribution Boards, In Detail

Multi-service units are available with the same current rating incomers as standard MCB boards (125A, 200A and 250A) and are available with 4W, 8W, 12W or 16W pans. The amount of spare DIN rail provided in each board, in total, is as follows:

4W	-	2 x 72mm (8 x SP devices)
8W	-	2 x 127mm (14 x SP devices)
12W	-	2 x 180mm (20 x SP devices)
16W	-	2 x 216mm (24 x SP devices)

SP devices are 18mm wide. Schneider offer a very wide range of DIN rail mounted devices but equipment of any make can be fitted.

Spreader Box

All three ratings of distribution board can be fitted with a spreader box at the top and / or bottom. The usual purpose of a spreader box is to increase the cabling distance from the gland plate to the terminals of the incoming switch. Spreader boxes are a factory fitted option and are supplied with a bolt-on front cover.

Extension Chamber

Extension chambers are designed to house additional control or protection devices. All sizes of boards and multi-service units can be fitted with extension chambers at the top or bottom. Extension chambers are supplied with DIN rail and all ways are blanked off. They are fitted with a side hinged, key lockable and padlockable door. Extension chambers are a factory fitted option. The amount of DIN rail provided in each chamber is as follows:

125A	-	1 x 360mm (20 x SP ways)
200A	-	1 x 360mm (20 x SP ways)
250A	-	1 x 432mm (24 x SP ways)

Meter Chamber – TP&N

A meter chamber enables the total amount of electricity supplied from a distribution board to be recorded (in kWh). Meter chambers incorporate a polyphase, non-MID approved, kilowatt hour meter and associated CTs, auxiliary fusing, etc. The meter is a multi-function device with a pulsed output, which also displays, volts, amps, PF, etc. The incoming cables are glanded on the meter chamber and the installer passes the conductors through the CTs and terminates on to the main switch. There are three sizes / ratings of chamber with kWh meter:

125A	-	Pre-wired with meter and 3 x 125:5 ratio CTs
200A	-	Pre-wired with meter and 3 x 200:5 ratio CTs
250A	-	Pre-wired with meter and 3 x 250:5 ratio CTs

Meter chambers incorporate a side hinged, key lockable and padlockable door (the meter is located behind the door). Meter chambers are a factory fitted option.

Please note: the maximum cross section of cable that can be accommodated in a standard meter chamber is 120mm². Larger cables can be accommodated to order, as can different types of meter, including smart meters.

Rain Canopies

Rain canopies are available for all current ratings of distribution board. They are a factory fit option.

Cable Termination, Weights and Dimensions

Please see the chart on data sheet DDS010 for the dimensions, weights and cable termination capacity of standard distribution boards, multi-service distribution boards, extension chambers, meter chambers and spreader boxes.



Distribution Board, 200A, 12 way, TP&N, IP66; Inset Panel Removed



Spreader Box for 125A, TP&N, Distribution or Multi Service Board



Extension Chamber for 125A, IP66, TP&N, Distribution or Multi Service Board



Meter Chamber for 125A, IP66, TP&N, Distribution or Multi Service Board