

New Power Cluster Socket Assemblies, 230V / 400V

Power Cluster Combination Socket Assemblies are the ideal solution when multiple industrial sockets are required in close proximity. They are fully wired and tested factory built assemblies requiring a single mains incoming connection, which simplifies installation and minimises on-site activity. The standard range of Power Cluster socket assemblies has now been expanded to include versions without transformers.

The new assemblies comprise of robust, wall mounting, slim line, steel enclosures with a durable powder coated paint finish, shade Dark Admiralty Grey. Power Clusters receive a single incoming supply cable and incorporate either an incoming switch or an incoming RCCB rated up to 100A. Power Clusters are fitted with 230V or 400V sockets to BS EN 60309-2, which are rated at 16A, 32A and 63A with MCB and RCD protection, as required. Sockets to other standards can be fitted, including 13A and data outlets. See page 4 for the Power Cluster Plus range, which incorporate integral transformers to supply 110V, 42V or 24V sockets.

Standard Configurations

See page 2 for the range of standard configurations. We are able to manufacture Power Clusters with virtually any combination of sockets and protection, including interlocked sockets.

IP Ratings

Sockets rated at 16A and 32A are available in ratings of IP44 or IP67. Sockets rated at 63A are all rated at IP67. The overall ingress ratings of Power Cluster assemblies are IP44 if any IP44 sockets are fitted or IP55 if all sockets are rated to IP67. Higher overall IP ratings can be supplied to order. The switchgear fitted to Power Clusters is mounted behind hinged polycarbonate windows.

Enclosures

Power Cluster enclosures are very sturdy and are fabricated from steel with a minimum thickness of 1.5mm. As standard a high quality, external grade paint finish is applied to enclosures and special finishes can be applied when environments are very corrosive. Enclosures can also be made from stainless steel. Welded-on wall mounting brackets are incorporated, which allows enclosures to be fixed without the need to remove the lid, thereby reducing the risk of compromising the IP rating during the installation process.

Switchgear

Most switchgear is Schneider brand, although some other European makes are used, due to the diverse range of devices required. All RCDs incorporate switched neutrals to ensure neutral earth faults are isolated locally. MCBs have a short circuit rating of 10kA and RCBOs a short circuit rating of 6kA. Other ratings can be provided. All overcurrent devices have "C" type trips.



Part No. S171041, 100A 4P Switch, 3 x 32A 400V, 3 x 32A 230V & 3 x 16A IP44 Sockets with RCBOs



Part No. S171086, 100A 4P Switch, 1 x 16A 400V, 2 x 32A 230V and 1 x 16A IP67 Socket with RCBOs



Part No. S171001, 63A 2P RCCB, 6 x 16A IP44 Sockets with MCB Protection

Standard Part Numbers and Specifications, IP44 Power Cluster Socket Assemblies												
Part No.	Type Reference	Incoming Device	No. of Sockets per Assembly (# = all IP67)								Dimensions W x H x D (plus wall lugs and socket projection)	Approx. Weight, kgs
			230V, 2P+E				400V, 3P+N+E					
			16A	32A	63A#	125A#	16A	32A	63A#	125A#		
Incoming Main RCCB (30mA sensitivity), Sockets Individually Protected by SP or TP MCB, TYPE “C”												
S171001	PCA/1/RCCB-63/0001/IP44	RCCB 63A 30mA DP	6								300 x 350 x 150	9
S171002	PCA/1/RCCB-63/0002/IP44			3								9
S171003	PCA/3/RCCB-63/0003/IP44	RCCB 63A 30mA 4P	1	1			1					9
S171004	PCA/3/RCCB-63/0004/IP44		1	1				1				9
S171005	PCB/1/RCCB-63/0005/IP44	RCCB 63A 30mA DP	3	3							300 x 500 x 150	12
S171006	PCB/1/RCCB-63/0006/IP44		1	1	1							12
S171007	PCB/3/RCCB-63/0007/IP44	RCCB 63A 30mA 4P	2	3			1					12
S171008	PCB/3/RCCB-63/0008/IP44		3	1				1				12
S171009	PCB/3/RCCB-63/0009/IP44		1	1				2				12
S171010	PCB/3/RCCB-63/0010/IP44							1	1			12
Incoming Main Switch, Sockets Individually Protected by RCBO or MCB / RCCB (all 30mA sensitivity)												
S171028	PCA/1/I63/0028/IP44	Switch 63A DP	6								300 x 350 x 150	9
S171029	PCA/1/I63/0029/IP44			3								9
S171030	PCA/3/I63/0030/IP44	Switch 63A 4P	1	1			1					9
S171031	PCA/3/I63/0031/IP44		1	1				1				9
S171036	PCA/3/I63/0036/IP44							2				9
S171032	PCB/1/I63/0032/IP44	Switch 63A DP	3	3							300 x 500 x 150	12
S171033	PCB/1/I63/0033/IP44		1	1	1							12
S171034	PCB/3/I63/0034/IP44	Switch 63A 4P	2	2			1					12
S171035	PCB/3/I63/0035/IP44		3	1				1				12
S171037	PCD/1/I100/0037/IP44	Switch 100A DP	12								600 x 500 x 150	20
S171038	PCD/1/I100/0038/IP44		6	6								20
S171039	PCD/1/I100/0039/IP44		3	3	2							20
S171040	PCD/3/I100/0040/IP44	Switch 100A 4P		12								20
S171041	PCD/3/I100/0041/IP44		3	3				3				20
S171042	PCD/3/I100/0042/IP44		2	2			1	1	1			20
S171043	PCD/3/I100/0043/IP44		3	3	1				1			20
S171044	PCD/3/I100/0044/IP44						1	2	1			20

Standard Part Numbers and Specifications, IP55 Power Cluster Socket Assemblies												
Incoming Main RCCB (30mA sensitivity), Sockets Individually Protected by SP or TP MCB, TYPE “C”												
S171053	PCA/1/RCCB-63/0053/IP55	RCCB 63A 30mA DP	2								300 x 350 x 150	9
S171054	PCA/1/RCCB-63/0054/IP55			2								9
S171055	PCA/3/RCCB-63/0055/IP55	RCCB 63A 30mA 4P	1				1					9
S171056	PCA/3/RCCB-63/0056/IP55				1			1				9
S171057	PCB/1/RCCB-63/0057/IP55	RCCB 63A 30mA DP	4								300 x 500 x 150	12
S171058	PCB/1/RCCB-63/0058/IP55			2	2							12
S171059	PCB/3/RCCB-63/0059/IP55	RCCB 63A 30mA 4P	1	2			1					12
S171060	PCB/3/RCCB-63/0060/IP55			2	1				1			12
S171061	PCB/3/RCCB-63/0061/IP55			1	1				2			12
S171062	PCB/3/RCCB-63/0062/IP55								1	1		
Incoming Main Switch, Sockets Individually Protected by RCBO or MCB / RCCB (all 30mA sensitivity)												
S171080	PCA/1/I63/0080/IP55	Switch 63A DP	2								300 x 350 x 150	9
S171081	PCA/1/I63/0081/IP55				2							
S171082	PCA/3/I63/0082/IP55	Switch 63A 4P	1				1					9
S171083	PCA/3/I63/0083/IP55				1				1			9
S171088	PCA/3/I63/0088/IP55								2			9
S171084	PCB/1/I63/0084/IP55	Switch 63A DP	4								300 x 500 x 150	12
S171085	PCB/1/I63/0085/IP55			2	2							12
S171086	PCB/3/I63/0086/IP55	Switch 63A 4P	1	2			1					12
S171087	PCB/3/I63/0087/IP55			2	1				1			12
S171089	PCB/3/I63/0089/IP55				1					1		
S171090	PCD/1/I100/0090/IP55	Switch 100A DP	8								600 x 500 x 150	20
S171091	PCD/1/I100/0091/IP55			4	4							20
S171092	PCD/1/I100/0092/IP55			2	2	2						20
S171093	PCD/3/I100/0093/IP55	Switch 100A 4P		8								20
S171094	PCD/3/I100/0094/IP55			3	3			1	1			20
S171095	PCD/3/I100/0095/IP55			3	3				2			20
S171096	PCD/3/I100/0096/IP55			2	2			1	1	1		20
S171097	PCD/3/I100/0097/IP55			2	2	1				1		

Standard Power Cluster Enclosures

The standard range of Power Clusters is based on three sizes of enclosure, reference PCA, PCB and PCD. These enclosure references form the first part of a Power Cluster type reference, as detailed on the adjacent page, for example:

PCA/1/RCCB-63/0001/IP44

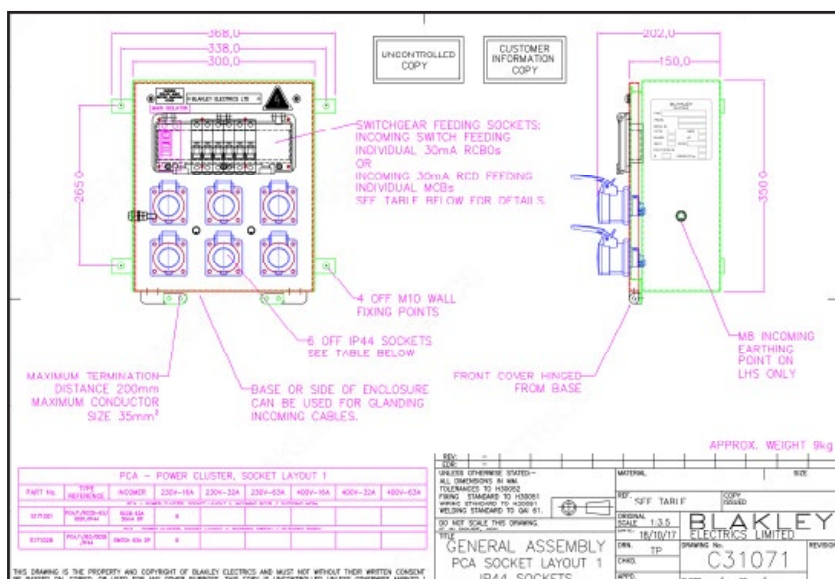
PCB/3/I63/0086/IP55

PCD/3/I100/0041/IP44

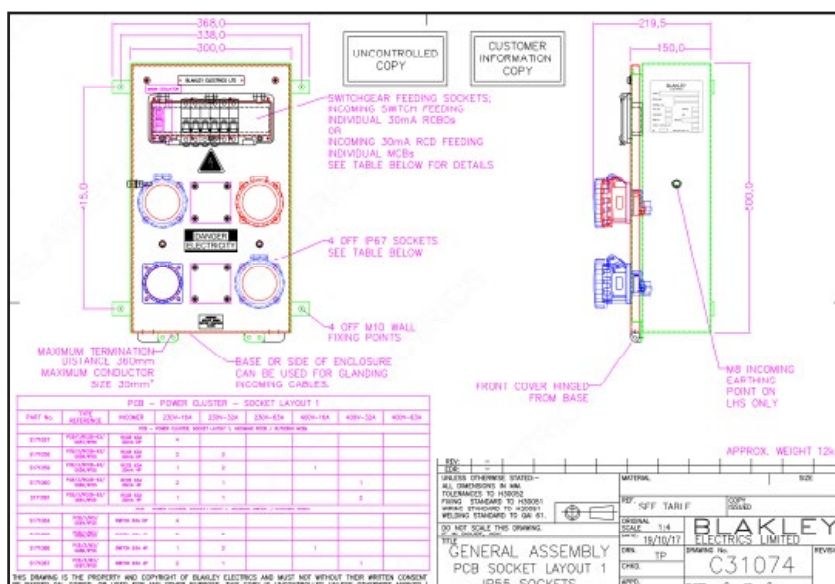
Dimensions

Alongside are General Arrangement drawings of three Power Clusters, each utilising one of the standard enclosures. The dimensions of the basic enclosures can be applied to all models with the same enclosure reference. Dimensional drawings are also available from the Power Cluster section of our website.

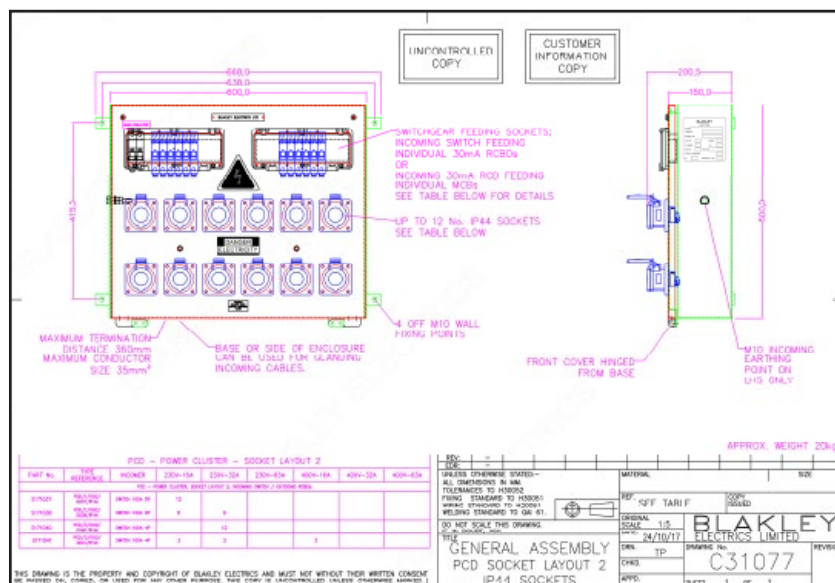
Power Cluster Enclosure ref. PCA



Power Cluster Enclosure ref. PCB



Power Cluster Enclosure ref. PCD



Non-Standard Power Clusters

In addition to standard Power Clusters, we are also able to make versions fitted with different combinations of sockets and protection. If you require a special Power Cluster please advise the following details:

- Rating of Incoming Device (typically 32A, 63A, 100A or 125A, 2P or 4P)
- IP rating (overall ratings of IP44 or IP55 are offered as standard but higher ratings can be supplied)
- RCD Protection (on the incomer or sockets can be protected in groups or individually)
- Number of sockets to BS EN 60309-2 (standard ratings are 16A, 32A, 63A and 125A; 230V or 400V; 3P, 4P or 5P; IP44 or IP67). 13A sockets and data sockets can also be fitted.
- Specific enclosure requirements (standard enclosures are made from steel but they can be fabricated from different grades of stainless steel; special paint finishes can also be offered)
- Any specific size requirements or cable entry points

If you require Power Clusters with integral transformers feeding 110V, 42V and 24V sockets, please refer to our Power Cluster Plus range on Page 4 of this data sheet.

Power Cluster Plus

Power Cluster Plus assemblies are similar to our standard multi-voltage Power Clusters but also incorporate integral transformers to feed 110V, 42V or 24V sockets. The adoption of a composite, factory built multi-voltage assembly, fed from a single supply, results in a substantial reduction in on-site labour and materials.

Power Cluster Plus assemblies are designed for installation where LV, RLV and even SELV supplies are all required in close proximity. Such locations include Paper Mills, Water and Sewage Treatment Works, Food Processing, Pharmaceutical production, Car Plants, Power Stations, etc.

BS7671:2018 permits a supply voltage tolerance of -6% to +10%. Any variation in the voltage connected to the primary of the integral transformer will proportionally vary the secondary voltages and also alter the inrush current characteristics. To address the impact of supply voltage variations, voltage tapplings can be incorporated into the primary winding of the transformer. We would be pleased to quote for transformers with primary tapplings.

A range of standard Power Cluster Plus assemblies fitted with 400V, 230V and 110V sockets is available, which will suit many applications. Power Cluster Plus assemblies can also be made to order and examples are shown below, including Mobile Power Clusters, which can be an economic solution for existing installations.



Part Number S170225

Standard Power Clusters			
Part No.	Enclosure	Mains Isolator	Distribution
S170220	Steel to IP54, Dark Admiralty Grey, #	63A 4P	1 no. 32A 5P 400V socket protected by a 32A TP MCB + 30mA 4P RCD. 1 no. 16A 3P 230V socket protected by a 16A 30mA MCB / RCD. 1 no. 10A SP MCB feeding an integral 2 kVA, 230:110V transformer, which feeds 1 no. 16A 3P 110V socket via a 16A DP MCB.
S170225	Steel to IP54, Dark Admiralty Grey #	100A 4P	1 no. 63A 5P 400V socket protected by a 63A TP MCB + 30mA 4P RCD. 1 no. 32A 3P 230V socket protected by a 32A 30mA MCB / RCD. 1 no. 16A 3P 230V socket protected by a 16A 30mA MCB / RCD. 1 no. 16A SP MCB feeding an integral 3.5 kVA, 230:110V transformer, which feeds 1 no. 32A 3P 110V socket and 1 no. 16A 3P 110V, protected by 32A and 16A DP MCBs respectively.
# The overall rating of the assembly is IP44 due to the use of splash proof sockets.			

Examples of Non-Standard Power Cluster Plus Assemblies



Blakley Part Number A7291448



Blakley Part No. A7292293



Blakley Part No. A7290897