

### MANUAL CHANGEOVER ASSEMBLIES, RATED UP TO 630A

Manual Changeover Switch Assemblies (MCO) are designed for permanent and temporary installations, to switch from a permanent mains supply to a stand-by generator (or alternative mains supply) should the permanent mains fail. Upon restoration of the permanent supply, the switch can be manually changed back to permanent mains power.

Manual changeover switches are a simple, cost effective method of providing back-up power to installations where a loss of supply for a short duration is acceptable. If the loss of supply must be limited to the minimum time period, the installation of a Blakley Automatic Mains Failure assembly should be considered (see separate data sheet).

#### Enclosure

Manual Changeover Switch assemblies are housed in robust, wall mounting, sheet steel enclosures of seam welded construction, providing protection to IP55. Enclosures incorporate a projecting rain roof, side hinged padlockable doors and removable gland plates in the underside for incoming and outgoing cables. Enclosures are protected against corrosion by a high quality, outdoor finishing system comprising of a zinc phosphate pre-treatment followed by electrostatically applied and oven dried polyester powder paint, shade Dark Admiralty Grey (BS 4800 shade 18B25). If assemblies are to be installed in corrosive atmospheres, enclosures can be fabricated from stainless steel. Please contact us for further details. Heavy duty, galvanized stands and crash frames are available for free-standing applications.

#### Changeover Equipment

Fitted with a 4P manual changeover switch rated from 100A to 630A. The changeover switch feeds heavy duty outgoing terminals, which are mounted in a segregated section of the enclosure. The changeover switch is mechanically interlocked to ensure both incoming supplies cannot feed the outgoing terminals at the same time. The switch operating handle is located behind a padlockable door.

#### Terminations

Both incoming supplies terminate directly on to the changeover switch terminals, which are separately shrouded. The outgoing connections are made on to heavy duty terminals. Switchgear and terminals are located behind screw fixed shield plates. Please refer to the general arrangement drawings for guidance on the quantity and cross section of cables that can be terminated.

Manual Changeover switches complement our range of Generator Connection Points, details of which are overleaf.

#### Standard Part Numbers

Part No.	Type Ref.	Rating	Enclosure	Dimensions	Weight
S141470	MCO/I100-4P/IP55	100A	Steel, IP55	735W x 667H x 253D	45kg
S141471	MCO/I160-4P/IP55	160A	Steel, IP55	735W x 667H x 253D	45kg
S141472	MCO/I250-4P/IP55	250A	Steel, IP55	735W x 667H x 253D	45kg
S141468	MCO/I400-4P/IP55	400A	Steel, IP55	980W x 1064H x 336D	90kg
S141469	MCO/I630-4P/IP55	630A	Steel, IP55	980W x 1064H x 336D	90kg



S141468 400A TP&N  
Manual Changeover Assembly



S141468 400A MCO Assembly with  
outgoing inset panel removed



S141468 400A MCO with incoming and  
outgoing inset panels removed

# Generator Connection Points with Controlled Access to Connectors

When an installation is to be provided with a stand-by generator, if quick connection is required, a Generator Connection Point (GCP) should be installed. GCPs incorporate single-pole drain power connectors rated at 500A or 800A, which mate with suitable cable mounted single-pole source connectors fed from the generator.

To provide greater security against accidental or unauthorised withdrawal or insertion of connectors, the powerlock connectors are mounted behind a padlockable door which provides controlled access. A segregated termination chamber for the permanent mains outgoing connection is also provided.

## General Arrangement

The GCP enclosure is fabricated from mild steel, protected against corrosion by a high quality, outdoor finish comprising of a zinc phosphate pre-treatment followed by electrostatically applied and oven dried polyester powder paint, shade Dark Admiralty Grey (BS 4800 shade 18B25). For equipment that is to be installed in a corrosive atmosphere, enclosures can be fabricated from different grades of stainless steel.

The upper outgoing termination chamber is protected to IP55 and houses a set of 5 no. 500A (S070072) or 5 no. 800A (S070075) copper connection bars fitted with M12 stud terminals. The chamber has a removable rear access plate and a top gland plate for the outgoing permanent cables. The gland plate can be replaced by a projecting canopy.

The lower chamber is provided with a side hinged, padlockable door and is fitted with 5 no. 500A (S070072) or 5 no. 800A (S070075) single pole drain connectors (which are connected to the upper termination chamber). The lower chamber has an open "letterbox" slot in the underside for cable entry. The door can be closed with 5 no. single pole source connectors inserted into the drains.

Enclosure dimensions: 965 x 668 x 248mm (H x W x D).

## Options

Higher rating GCPs with multiple power connectors per phase can be provided. We also supply a range of manual and automatic changeover switches to work in combination with Generator Connection points.

For additional safety, GCPs can also be fitted with sequentially interlocked single pole connectors rated at 800A (also compatible with 500A source connectors), which require the earth to be mated first, followed by neutral, L1, L2 and L3. To disconnect the supply the sequence is reversed with the earth being removed last.

Part No	Type Ref	Rating
S070072	GCP/500	500A
S070075	GCP/800	800A
S070079	GCP/800/SEQUENTIAL	500A & 800A

Please note: the largest cable that can be terminated in a cable mounted single pole connector is 300mm<sup>2</sup>.



S070072 - Generator Connection Point, 500A



S070075 - Generator Connection Point, 800A



Optional sequential SP connectors which must be connected / disconnected in sequence (earth is first in and last out)