

## Free-standing, IP56, MCB Boards with Sun Canopies

Blakley Electrics specialises in the design and manufacture of outdoor distribution equipment. Many of our outdoor distribution products supply temporary installations, whether for a major construction project, the Olympic Games or a military field hospital. However, we also manufacture equipment for permanent outdoor installation, which could be in a dockyard, in a water treatment works or even in a desert. A recent project included a range of IP56 rated switchboards, including plinth mounted MCB boards with sun canopies, which were destined for an outdoor installation in the Middle East.

The MCB board designs were developed from our standard range of IP66 MCB boards but incorporated mains incomers rated up to 630A feeding twin distribution compartments. Some distribution compartments incorporated MCB pan assemblies with each pan protected by a dedicated 250A MCCB. Other distribution compartments incorporated hard wired, 100A 4P outgoing ways with variable RCD protection, fed directly from the main incomer. The compartments with pan assemblies also incorporated additional DIN rail, enabling control and protection devices to be accommodated now or added in the future. The main switchgear within the assemblies was Schneider brand with variable RCD protection provided by our own MRCD series of device.

The assemblies were uprated for operation in an ambient temperature of 50°C. Due to the heating effect of direct sunlight on switchgear enclosures, overhanging sun canopies were provided to protect the assemblies from the effects of intense, overhead sunlight (the canopies are removed for shipping). The sun canopies are painted white to reflect the sunlight. In addition, because of the extreme diurnal temperature range, each compartment incorporated a thermostatically controlled anti-condensation heater.

The enclosures were fabricated from mild steel, seam welded with a powder coat finish, shade Light Stone (BS 381C 361). Prior to painting, all enclosure parts were degreased in an acid bath and then pre-treated by immersion in zinc phosphate. The five stage process should result in a usable life of 10 years in a typical outdoor environment. If the environment is particularly harsh or if an extended lifespan is required, enclosures can be fabricated from marine grade stainless steel, which should result in a life expectancy of over 20 years. Cable entry and exit was through the side and underside of the enclosure with the main enclosure mounted on to a plinth with external floor fixing bracketry (a typical assembly weighed 230kgs).

If you have a requirement for distribution equipment to be installed in a harsh outdoor environment, incorporating MCB or MCCB distribution devices, please contact the Blakley projects team who will be pleased to be of assistance.



A7293069 400A assembly, IP56 with sun canopy



A7293069 4P 400A main switch with 12 way MCB pan assembly and 3 x 100A MCB/MRCD outgoing ways.



Assembly also incorporates anti-condensation heaters