

## Transformer Distribution Cubicles

We manufacture a standard range of Transformer Distribution Cubicles (TDC), which combine single-phase double-wound transformers with an integral MCB distribution arrangement. Transformers are rated from 2 to 10kVA and provide a 110 volt Reduced Low Voltage (RLV) output, with a maximum voltage to earth of 55V from either leg of the secondary winding. Please note: as the secondary winding incorporates two live lines (instead of live and neutral) protection has to be via double-pole overcurrent devices. Standard TDCs are available in vented wall mounting enclosures or non-vented floor standing enclosures. Data sheet TRDS010 describes the standard range.

When our standard TDCs do not meet the requirements of a project we can design and manufacture bespoke versions. Special requirements could relate to the transformer rating, the enclosure configuration, the number of outgoing ways or the level of protection required. We can also build TDCs fitted with three-phase windings or with dual voltage outputs such as 110V RLV and 24V SELV. The images alongside show typical examples of recently produced non-standard TDCs.

We also offer a range of TDCs which have London Underground (LUL) APR certification. These have been very widely installed across the LUL estate: in stations to supply our LV9 platform sockets or in depots to supply sockets used to maintain the fleet of rolling stock. Data sheet TRDS030 describes the LUL range of TDCs.

Although an RLV supply is recognised by the 18<sup>th</sup> Edition IET Wiring Regulations (BS7671) as providing an enhanced level of protection for users of hand held or portable equipment, the lower voltage to earth results in a lower fault current, which can prevent conventional overcurrent devices (MCBs) from clearing earth faults within the 5 second period specified in BS7671. The simplest solution to this issue is to incorporate 110V RCD protection on the transformer secondary. The outputs of our standard TDCs are protected by a single 110V RCCB with 300mA sensitivity. However, if required, we can protect each outgoing circuit with its own RCD, at a sensitivity of 30mA or 300mA. For Network Rail Third Rail areas we can incorporate a 110V version of our DC immune RCD to protect supplies to sockets installed in maintenance sheds or depots.

We also offer a range of 110V sockets to BS EN 60309-2, which are available in splashproof or watertight patterns, with optional RCD or RCBO. Please note that as plugs to BS EN 60309-2 do not incorporate fused pins, sockets must either be protected at source by an MCB that does not exceed the socket rating or sockets must incorporate integral overcurrent protection (RCBOs must be double-pole and suitable for 110V operation).

If you would like to discuss a possible application for a standard or non-standard TDC, please contact the Blakley Projects team.



Part A7030972R - incorporating a 20kVA transformer, 17 no. outgoing DP MCBs protected by a DC immune RCD.



Part A7031018 - incorporating a 10kVA transformer, 16 no. outgoing DP MCB / RCCB combinations



Part A7034425 - incorporating 2 no. 10kVA transformers housed in a double fronted free-standing enclosure

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