BLAKLEY ELECTRICS

CASE STUDY
DATA SHEET

GRP Cubicle for a Trackside Location, Double-sided and Equipped

We have recently been involved in a rail project where a single outdoor cubicle was required to house (i) a DNO service head and (ii) switchgear to supply points heating equipment, supplied from the DNO side of the cubicle. Although most cubicles that we manufacture are fabricated from steel or stainless steel, the requirement on this occasion was for the enclosure to be made from GRP, which we are also able to supply. A GA drawing of the complete assembly is on page 2.

Our heavy duty, GRP cubicles are designed for permanent outdoor installation in a hostile environment, where the non-conductive, insulated construction brings benefits of corrosion resistance and avoids the risk of any dangerous touch voltages in electrified areas.

The enclosure is Network Rail approved (PADS No.054/212175) and incorporates two fully segregated compartments: the rear compartment was supplied unequipped, apart from a thermostatically controlled heater, light and a marine plywood backboard, on which the DNO service head, CT chamber and meter are to be mounted (by others). The front compartment was equipped by us with switchgear, fusegear and a bus bar chamber, as outlined below.

The front “Network Rail” section was supplied with tails for connection to the rear “DNO” section (connection by others). The tails terminate in the Network Rail section in a 200A TP switch fuse, which feeds a 200A 4P DC Immune variable RCD. The RCD supplies a number of outgoing switch fuses, some with DC Immune RCD protection, via a 200A bus bar chamber. A small power distribution board was also incorporated, which supplies the thermostatically controlled heaters and lights fitted to both sections.

Enclosures are constructed from glass fibre encapsulated plywood with timber strengtheners. They are designed to withstand wind loading to BS6399: part 2 and snow loading (on the roof) of 2.5kn/m^2 (254kg per m^2). They meet the requirements of BS476: part 7 class 1 (surface spread of flame and retention of stability and integrity). Ingress protection is to IP54 (excluding vents). Enclosures are fitted with removable lifting brackets and stainless steel floor fixing points are incorporated within the base, mounted internally. The interior is finished in an off white resin wash and external surfaces are finished in a matt non-reflective paint, shade Goose Grey.

Each compartment is fitted with outward opening double doors with a padlockable handle. The doors are made from glass fibre encapsulated marine plywood with additional structural steel strengthening along the edges where the hinges, door stays and 3 point locking mechanisms attach. Hinges are stainless steel with tamper proof screws. Door stays hold doors open at 90°or 180°. The doors are fitted with compression seals and an overlapping centre seal.

If you have a possible requirement for a GRP cubicle, whether equipped or unequipped, for a Rail Project or for any other application, please contact our Projects Team who will be pleased to assist.

A7292221 GRP Pillar Equipped - Front View

A7292221 GRP Pillar - Front View
Equipped “Network Rail” Section

A7292221 GRP Pillar - Rear View
Unequipped “DNO” Section supplied with tails

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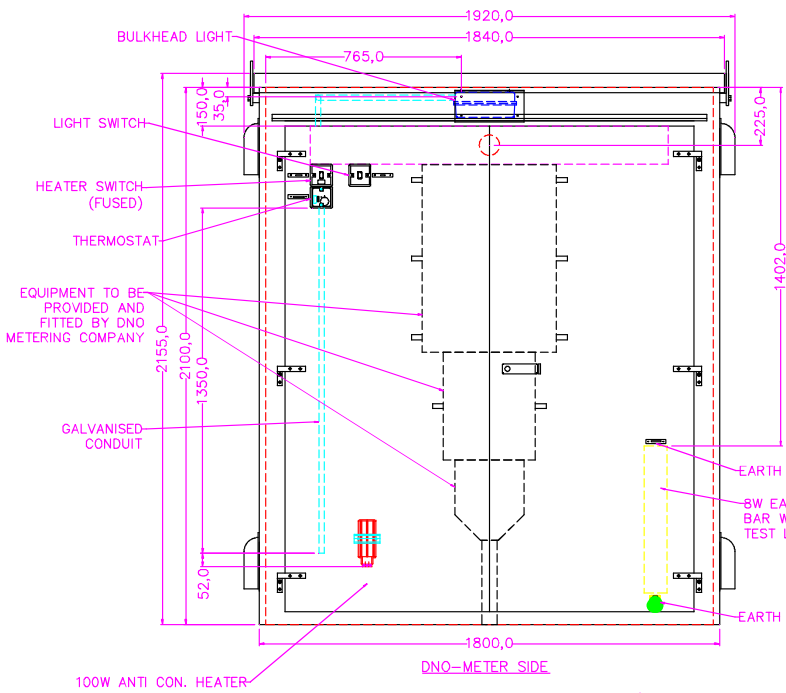
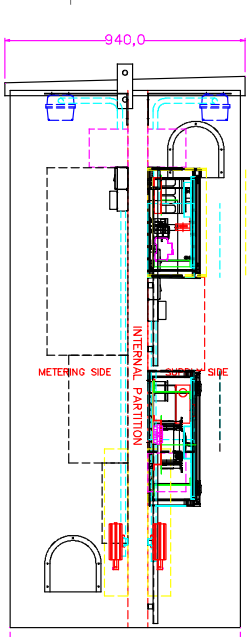
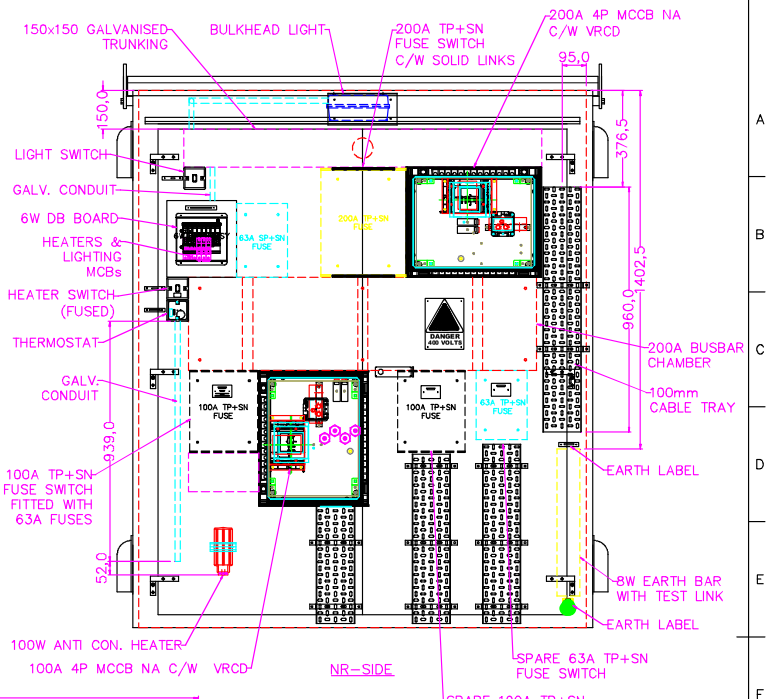
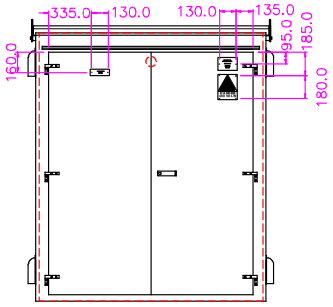


DNO-METER SIDE

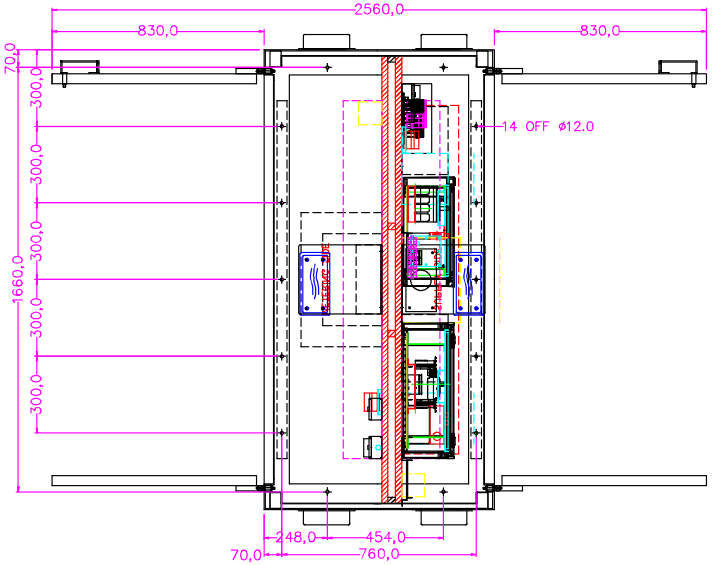




NR-SIDE



LABEL FIXING POSITIONS
SCALE 1:2



BASED ON DRAWING:
UA007562-HYD-GAR-EPT-000005/6 REV B01

REV: –			
EDR: –			
UNLESS OTHERWISE STATED:– ALL DIMENSIONS IN MM. TOLERANCES TO H30052 FIXING STANDARD TO H30051 WIRING STANDARD TO H20051 WELDING STANDARD TO BN 61.	MATERIAL –	SIZE –	
DO NOT SCALE THIS DRAWING. IF IN DOUBT, ASK	REF. A7292221	COPY ISSUED	
TITLE GENERAL ASSY EQUIPPED NR CUBICLE (TYPE NR002) TWICKENHAM	ORIGINAL SCALE 1:9	BLAKLEY ELECTRICS LIMITED	
	DATE. 14/12/16		
	DRN. A.H	DRAWING No. A7292221	REVISION
	CHKD.		
	APPD.	SHEET 1 OF 1	