

# METER BOXES

BY TRICEL

50+ YEARS  
TECHNICAL  
EXPERIENCE



## ELECTRICAL METER BOX

IRISH STANDARD RECESSED  
COMPLIANT WITH IRISH STANDARDS 2023  
STOCK CODE: 106216



**TRICEL**  
GENERATIONS OF INNOVATION

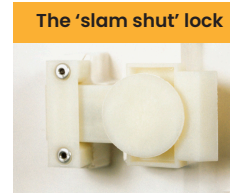
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ESB Networks have introduced a revised Specification for electric meter boxes in Ireland. Taken in conjunction with the ESB Specification 2004, the changes are largely around the ESB's requirements for the provision of design, materials, manufacturing, testing and delivery of product in Ireland. Some changes are not obvious, the materials have enhanced fire rating and compliance testing, as required for certification by the ESB. The materials comply with ESP Specification 16442 and IEC 62208 (2011) empty enclosures for low voltage switchgear and control gear assemblies – general requirements. The most notable change is that the timber backboard will be replaced by a Composite SMC Fire Retardant board. The SMC board is designed to be a long-life product, with improved sustainability and as such the SMC materials will ensure that the minimum lifetime of the products will be 40+ years.



**Note:** To comply with ESB regulations, all outdoor meter cabinets must comply with 'National Code of Practice Interface - 4th Edition 2008', replacing 3rd Edition, issued 2002.



## Backboards on Outdoor Meter Cabinets

From 1st of January 2024, ESB's main supplier of replacement backboards in Outdoor Meter Boxes will no longer be providing chip board backboards. All backboards will now be made up of an approved composite material. Once the existing stock of chipboard backboards has been depleted then all new stock supplied to central stores will be made up on the composite material. Many NTs will already have encountered these backboards on new connections and in some cases may have booked them out through our own stores. For those who have not, please be aware that this new backboard is approved for use and will be the only one in stock from next year on.



SAFETY MUST  
BE WHY-BASED



PEOPLE ARE  
THE SOLUTION



SAFETY IS BUILT  
ON PEOPLE'S  
STRENGTHS



TREAT PEOPLE  
AS FAMILY

esbnetworks.ie



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GENERATIONS OF INNOVATION

\*Approximate dimensions. In accordance with Tricel's normal policy of product development these specifications are subject to change without notice.

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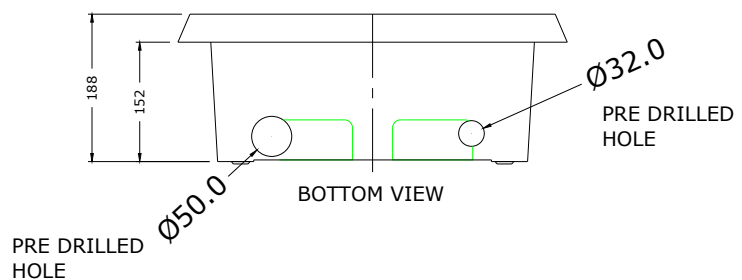
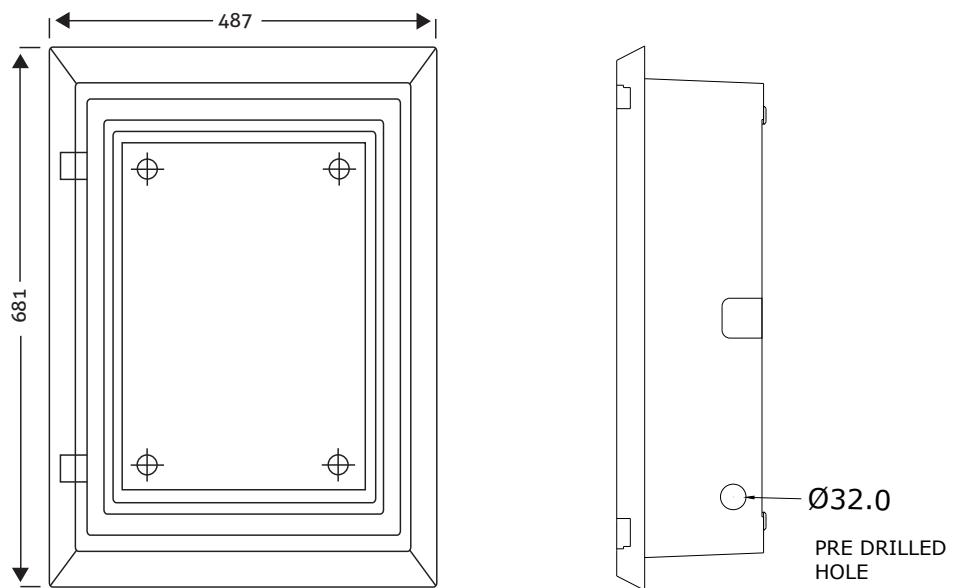
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## General requirements for domestic metering equipment as per latest National Code of Practice:

- Only ESB equipment should be fitted in outdoor metering cabinets.
- The diagram below shows a typical outdoor metering cabinet.
- Where it is impossible to fit ESB equipment into an accessible outdoor location, contact the local
- ESB office during the planning stage to identify an alternatively suitable location.



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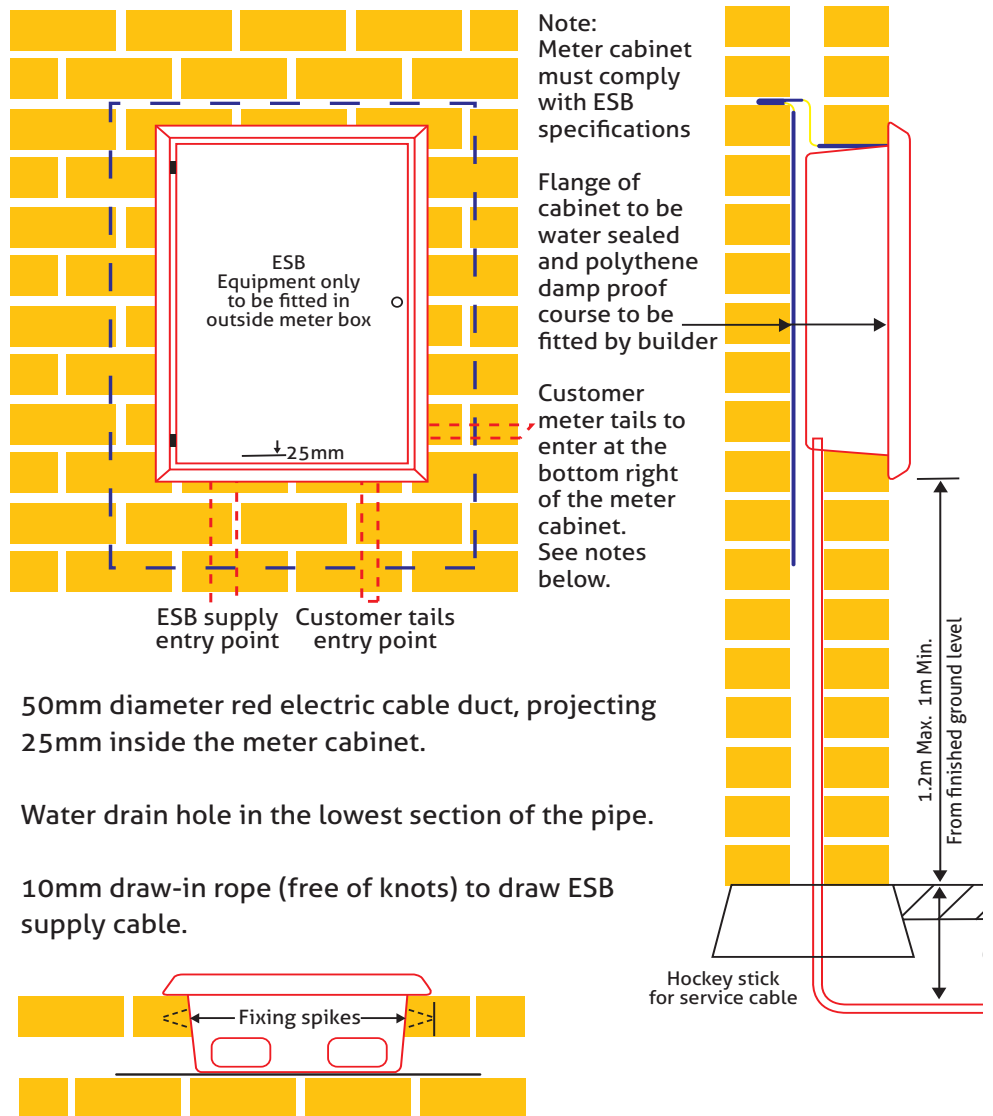
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**Note:** Entry point for customer tails will be accepted at the right-hand side wall of the box. This entry point shall be PRE-DRILLED as close as possible to the bottom right-hand corner.



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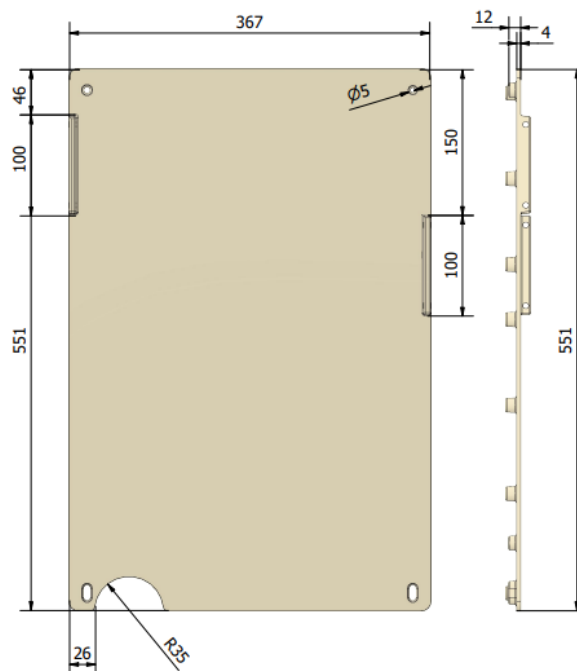
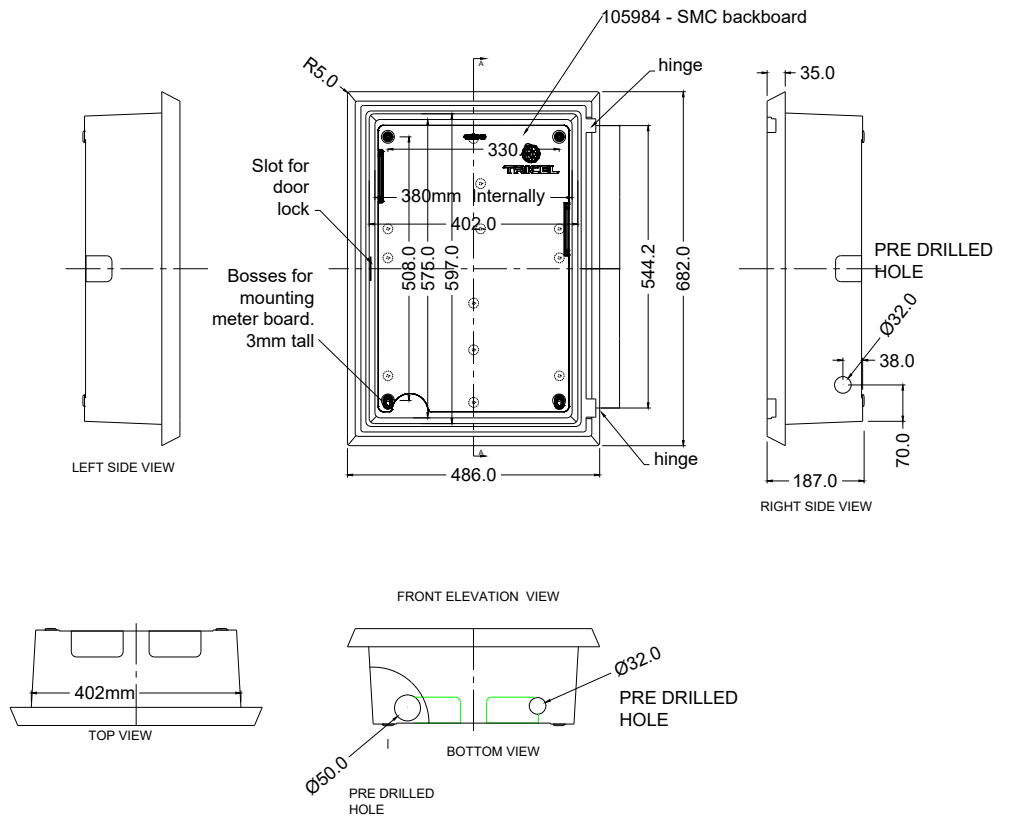
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## DRAWINGS AND DIMENSIONS



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**New Code: 106216**



## MATERIAL REQUIREMENTS:

- ESB Specification 2004 and ESB Specification 16442 (2021)
- Manufactured from Chemically inert glass reinforces thermoset materials, Composite GRP.
- Substantially non-hygroscopic
- Resistant to normal environmental conditions including ultraviolet radiation, dampness, and abrasion per ESB Specification 18080.
- Capable of being painted without special preparations.
- The material shall be as described in IEC 62208 (2011) empty enclosures for low voltage switchgear and control gear assemblies – General Requirements.
- Box and door to comply with BS 8567:2012.
- Manufactured using a minimum of 16% by weight of glass fibre Type E to BS 3691 {BS EN 14020}, with fibre length of not less than 6mm.
- Using Polyester resin is Type C to BS 3532:1990 (or equivalent EN or IEC standard).

## Testing, Type Testing, Routing and Sample Testing / Mechanical Properties: Testing shall be completed to IEC 62208 (2011)

- Dielectric strength: resistance of the circuit does not exceed 0,1  $\Omega$ .
- Thermal stability: air temperature maintained at  $(40 \pm 2)$  °C.
- Resistance to heat.
- Resistance to abnormal heat and fire.
- Thermal power dissipation capability
- Flexural modulus to EN ISO 178 not less than 7.5Gpa.
- Flexural strength to EN ISO 178 not less than 50Mpa.
- Impact strength to EN ISO 179 not less than 10kJ/m<sup>2</sup>.
- Density: Generally, of 1.6 to 2.1 g/ml



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## Flammability:

- IEC 62208 (2011) Resistance to abnormal heat and to Fire. Externally tested and certified by an ESB Networks approved test house.
- Complies with flame test as per ESI Standard 12-3 April 1986 {less than 38mm scorch back on samples}.

## Physical requirements and construction of the SMC Composite back board:

- The backboard shall be Composite SMC in construction manufactured using Fire Retardant materials in accordance with ESB Specification 16442 and 18080 to IEC 62208 (2011) empty enclosures for low voltage switchgear and control gear assemblies – General Requirements.
- The thickness of the meter board shall be 4mm and not more than 12mm at any point.
- The Board shall consist of a flat 4mm panel with 8mm lugs and have a fixing hole at each top corner, a fixings slot at each bottom corner and two integral side lugs each with two fixing holes.
- The front, rear sides lugs and all visible edges of the board shall have a mirror finish, be uniform in colour (white) and free from imperfections.
- Manufactured from chemically inert glass reinforces thermoset materials.
- Manufactured using a minimum of 30% by weight of glass fibre Type E to BS 3691 {BS EN 14020} of length (12mm to 25mm).
- Using Polyester resin is Type C to BS 3532:1990 (or equivalent EN or IEC standard).
- Substantially non-hygroscopic
- Resistant to normal environmental conditions including ultraviolet radiation, dampness, and abrasion per specification 18080.

## Hinges:

The door shall have two hinge pins, one fixed and one spring-loaded (in brass), so as the door is removable and replaceable.

## Screws:

Screws shall be zinc plated and chrome passivated in accordance with BS 7371-12 2008 (or equivalent EN or IEC standard).

## Installation Sticker:

146000

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## Locking mechanism:

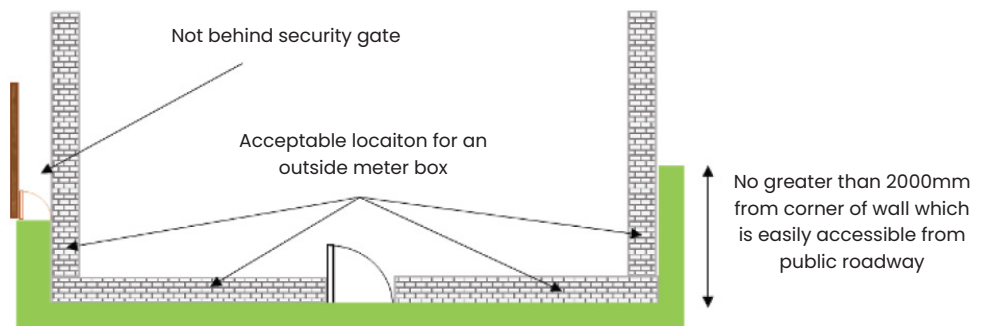
The locking mechanism on the door shall be ESB TECHNICAL SPECIFICATION: 2004

## ELECTRICAL METER BOX

- The door shall be supplied with a lock, sufficiently robust for normal long-term use, to prevent unauthorized access to the meter installation. This lock shall be:
- Nylon 12 (PA 12) glass-filled is a type of nylon/polyamide powder that has been reinforced with glass fibres with enhanced compressive strength and improved heat distortion temperature. Parts produced are consistent and durable and stiffness allows to produce components for automotive, aerospace and consumer products.
- Operable by a standard electric meter box key manufactured from galvanised steel to ESB specifications.
- Spring-loaded so that it will not open accidentally (e.g., blow open in windy conditions)

## DOMESTIC CONNECTION

Standard Outside Meter Box Connection.



For all new standard single-phase domestic connections, the outside meter box is the preferred option for connection between the DSO and customer.

- The outside meter box shall be of a standard size 600mm x 400mm x 155mm (high x wide x deep) and fitted flush in external wall at a height above the finished ground level to the bottom of the outside meter box of minimum 1000mm maximum 1200mm.



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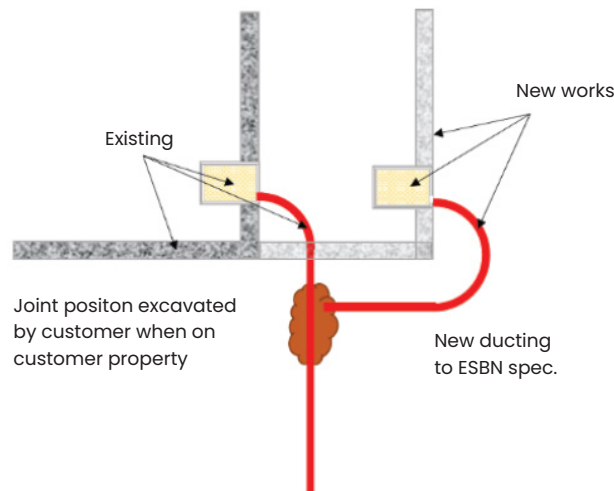
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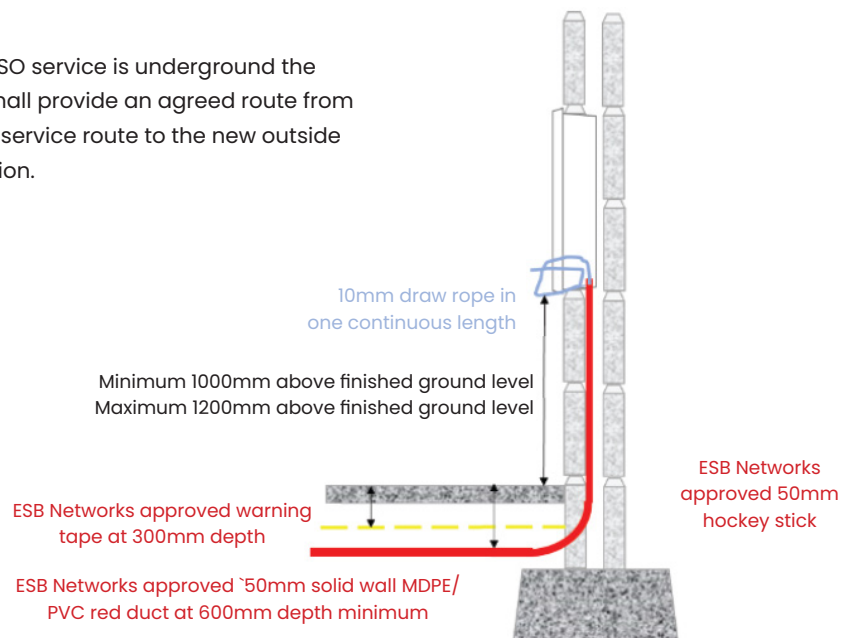
## SERVICE ALTERATION

Domestic

When a customer is carrying out work on their electrical installation, they should review the location of the DSO equipment. Contact shall be made with the local DSO office to discuss a new location.



When the DSO service is underground the customer shall provide an agreed route from the existing service route to the new outside meter location.



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**Also available: 800 x 600 x 300mm**

**Agricultural/Horticultural Premises**



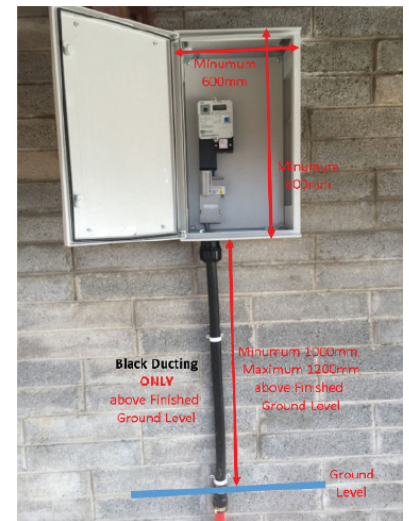
It is essential that these requirements are complied with by Customer/ Contractor to ensure prompt installation of ESB Networks connection cables.

All service terminations shall be enclosed within an IP55 rated enclosure. Entries into such enclosures shall be glanded to maintain IP55 standards.

A vertically hinged IP55 enclosure (800 x 600 x 200 minimum) e.g. Polyester / Stainless steel is required for a single-phase connection. This is provided and installed by the customer to house ESB Networks equipment. For other metering arrangements a larger enclosure will be required. The location of the cabinet should be agreed with the local ESB Networks office beforehand, whether indoor OR outdoor.

## Specification for Standard Underground Service Supplied from Overhead Network.

A suitable size red electric cable duct to be provided by Customer in a 600mm deep (minimum conditions) trench from the meter cabinet to ESB Networks pole. The duct should have a minimum radius bend of 450mm. The duct should contain a 10mm, strong draw rope to facilitate the pulling in of ESB Networks service cable.



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