



TECHNICAL SPECIFICATION

NCEM C62-323

June 2022

Outdoor Meter Box

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1. Application field

This document defines specifications for boxes for indoor individual energy metering equipment to be used where low voltage electricity is supplied by CEM.

These boxes are briefly referred to as meter boxes.

2. Establishment conditions

The meter boxes shall be installed near the supply point of client's installation, in a suitable location and easily accessible.

The meter boxes of client's installation of the same building may be installed:

a) Outside the building, on the façade of building or on the property's fencing wall near the respective incoming, adjacent to public road or public domain access, in the case of single-family residential buildings;

b) Outside the building, on the façade of the building near the respective incoming, adjacent to public road or public domain access, in the case of buildings or autonomous units intended for commercial or industrial activities;

The meter boxes shall be installed so that the meter display is not less than 1 m or more than 1.70 m above the floor. If the building is located in a low-lying flooding area (as defined by MSAR Government), the installation height of the boxes should meet the requirements defined in Annex 12 of NCEM C14-100.

3. Constructive features

3.1 Generalities

The meter boxes shall be designed and constructed in such a way as to ensure, in normal use, the correct operation of the equipment installed therein and the necessary safety conditions.

3.2 Types of boxes

For the purpose of this section, the following type of meter boxes is considered:

- Type ACX - Outdoor box for direct and indirect connected metering;

The meter boxes shall be in accordance with the attached figures and the table below.

Type of Box	Enclosure		
	Width	Height	Depth
ACX	360	540	230

3.3 Constitution

The meter boxes consist of two different parts:

a) Enclosure, intended to ensure the protection of the equipment installed therein, composed of:

- One tub box;
- One cover or a door fitted with a closing device;

b) Installation plate intended for installing metering equipment, to be attached to the enclosure in a removable manner.

- Enclosure

The enclosure (including the transparent glass window) shall be flame retardant and should be constructed of polyester reinforced with glass fiber or other insulating plastic material with appropriate characteristics, in particular:

- a) Be flame retardant
- b) Be sufficiently stable after exposing to weather conditions under normal conditions.

- Degree of protection

The enclosure shall be designed and constructed in such a way that it will not suffer any permanent deformation and permit adequate ventilation of the electrical equipment in order to avoid possible condensation, with IP43 and IK09 protection rating as defined in IEC 60529 and IEC 62262 respectively.

- Protection against corrosion

All iron parts incorporated in enclosure should preferably be of stainless steel or be effectively protected against corrosion by galvanizing and passivation.

The enclosure shall resist the corrosion of ultraviolet rays.

- Equipment mounting

The enclosure shall be fitted with a M6 threaded bolt for fastening the installation plate.

- Opening for passage of electrical conduits

The opening for passage of electrical conduits should be painted, immediately after its execution, with a coat of primer of the type used in the painting of the boxes.

- Interior accessibility

The enclosure shall be provided with a cover or door, provided with windows in transparent insulation material for meter reading in accordance to attached figure (Minimum size shall be 25cm length with 20cm wide). The locking system of the enclosure, when fitted with a cover, shall be made by 8 mm triangular head screw(s). When equipped with a door, it shall be made by a lockable handle with 8 mm triangular female socket wrench, fitted with a sealing device.

- Marking

The enclosure should have an indelible and well legible marking, consisting of the manufacturer's identification and the protection index.

- Polyester enclosure

The attached figures provide information of polyester enclosures, which are currently used for meter boxes and approved by CEM.

Models from other manufacturers may be considered subject to prior approval by CEM.

- Installation plate

The installation plate should have the shape and minimum dimensions indicated in the attached figures, and be constructed of bakelite plate with a 5 mm thickness.

3.4 Energy metering equipment

The meter boxes are intended to contain the metering equipment, supplied and assembled by CEM, consisting of:

- Single or three-phase active energy meter;

Simple rates (Group A)

- Three-phase energy meter;

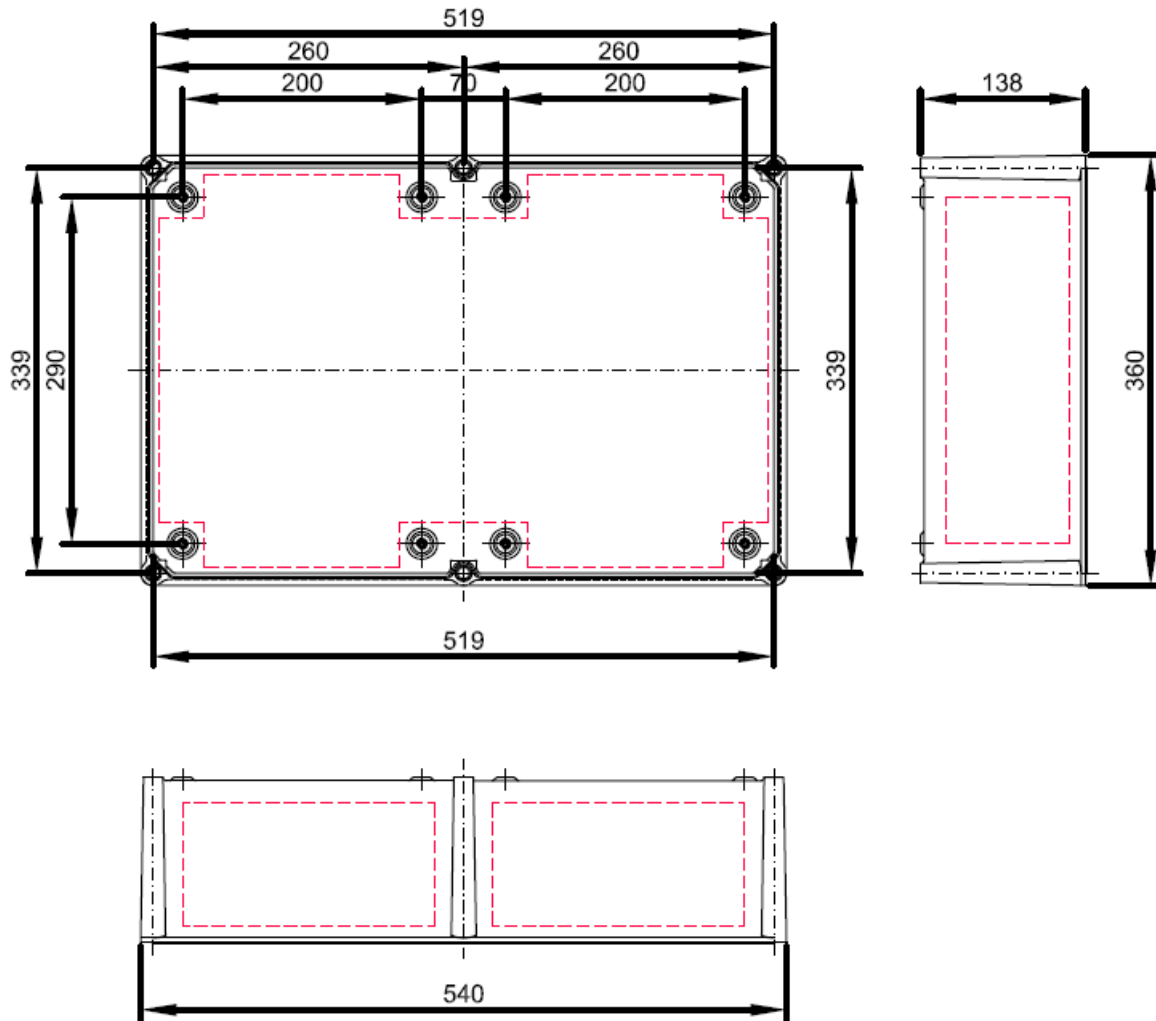
Double rates (Group B and C)

- Single phase energy meter, multi-rates with maximum indication;
- Three-phase energy meter, multi-rates with maximum indication;
- Terminal strip

Type ACX

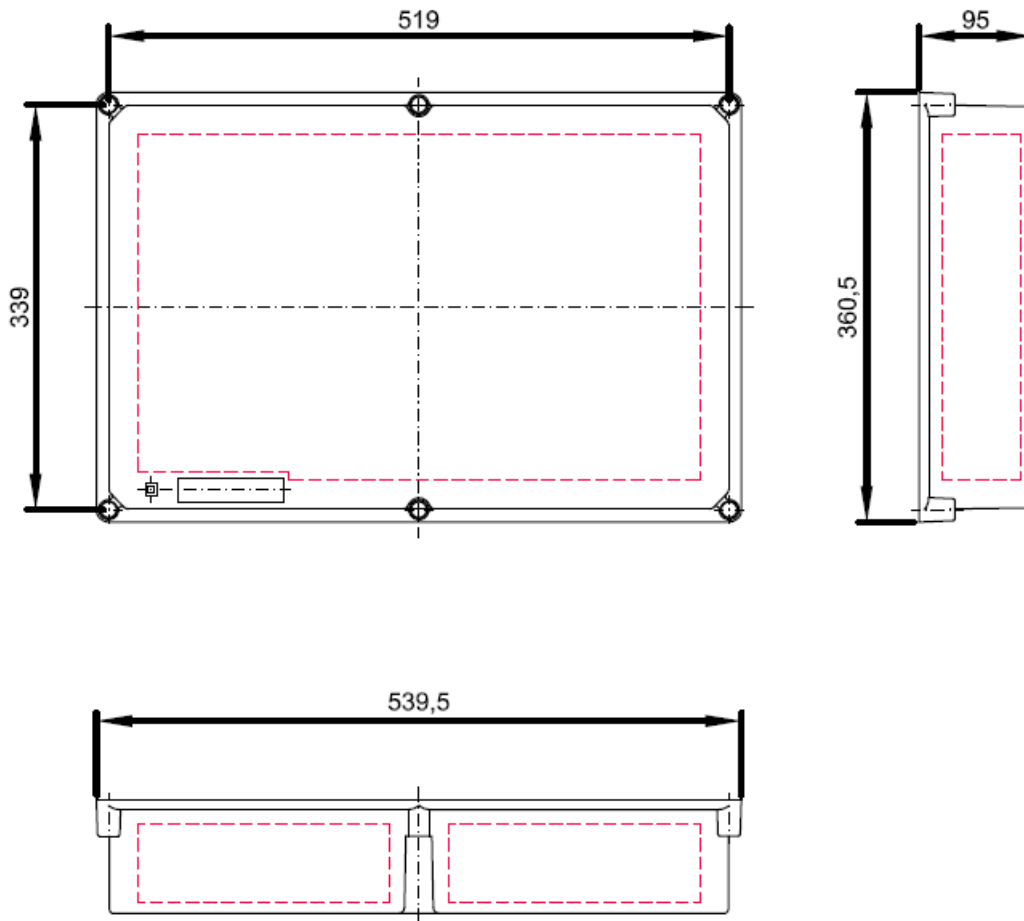
Outdoor meter box for direct and indirect-connected metering

Enclosure
(dimensions in mm)



Type ACX
Outdoor meter box for direct and indirect-connected metering

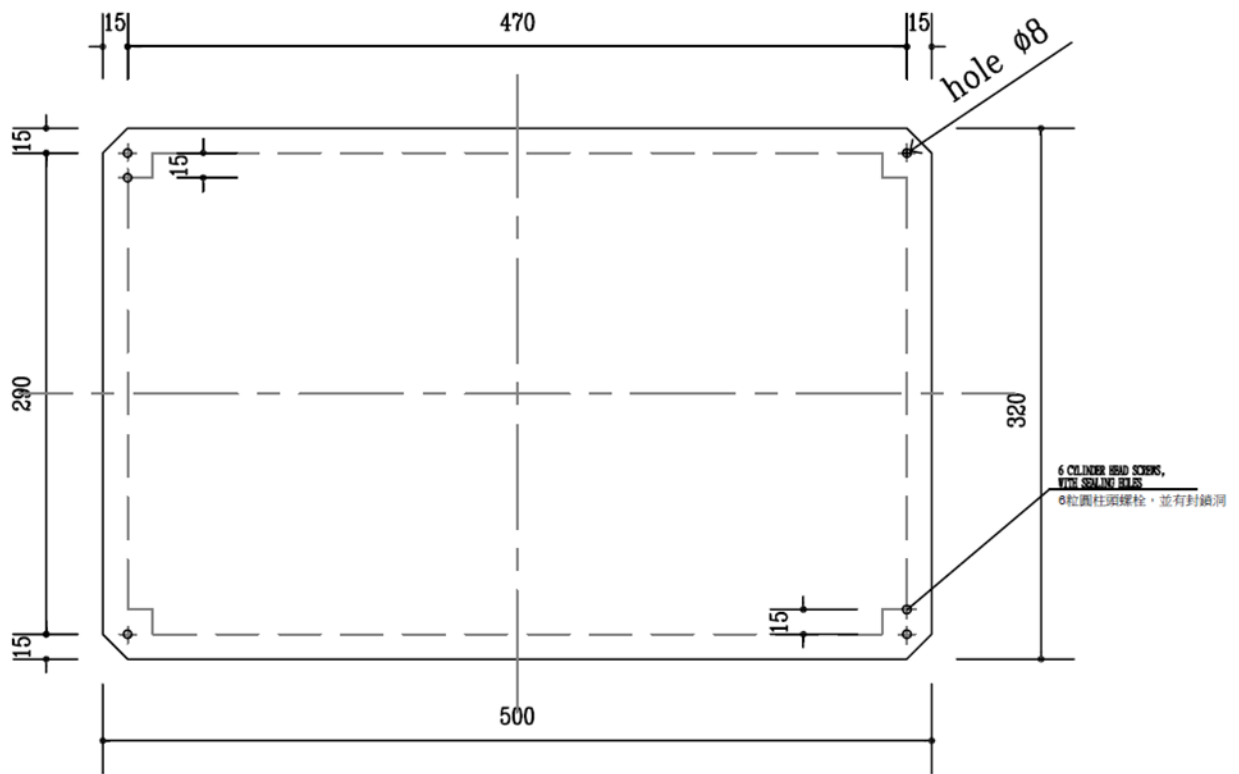
Cover
(dimensions in mm)



Type ACX

Outdoor meter box for direct and indirect-connected metering

Installation plate
(dimensions in mm)



(尺寸單位:毫米)