



TECHNICAL SPECIFICATION

NCEM C62-322

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Individual Metering Boards

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1. Application field

This document defines specifications for individual direct metering to be used where low voltage electricity is supplied by CEM.

These boards are briefly referred to as meter boards.

2. Establishment conditions

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

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

a) In appropriate spaces in common areas of collective use, together with meter boards of the premises of each floor, in the case of autonomous units of residential and commercial buildings;

b) In appropriate spaces in common areas of collective use, together with meter boards of the premises of each floor or group of incomings, in the case of autonomous units of industrial buildings and shopping centers;

Appropriate spaces for the installation of meter boards are described as follows:

- Niches with a door, intended for the installation of meters for the client's installations of each floor or group of incomings;

- Vertical ducts with a door, intended for the installation of risers, collective line distribution boxes and meters corresponding to the installations of each floor;

The characteristics and dimensions of vertical niches and ducts for metering installation shall be defined taking account of the following:

a) The front configuration of niches and ducts shall be rectangular and result from the overlap of meter boards;

b) The access door shall open outwards, shall not be able to open inwards, and shall include a handle on its outer portion;

- c) The depth of the space of niches and ducts, for housing of meter board and respective equipment, should be at least 0.22 m;
- d) The access dimensions of niches and ducts shall be at least equal to the outer dimensions of meter board set plus 0.10 m, in order to ensure a distance of 0.05 m (measured in vertical projection) to the meter board set;
- e) The meter boards shall be installed such that the meter display is not less than 0.7 m or more than 1.7 m above the floor. If the building is located in a low-lying flooding area (as defined by MSAR Government), the installation height should meet the requirements defined in Annex 12 of NCEM C14-100.

The attached figures give examples of the arrangement of meter boards in niches and vertical ducts. These examples are not restrictive.

3. Constructive features

3.1 Generalities

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

The meter boards shall be made of bakelite.

3.2 Types of boards

For the purposes of this section, the following types of meter boards are considered:

- Type PHCM 300 - Horizontal single-phase meter board;
- Type PVCM 200 - Vertical single-phase meter board;
- Type PHCT 350 - Horizontal three-phase meter board;
- Type PVCT 250 - Vertical three-phase meter board;

3.3 Constitution

The meter boxes are made up of two different parts:

- a) Base for the installation of energy metering equipment;
- b) Frame for fixing the base in a removable manner.

The bases for installing metering equipment shall be of the shape and dimensions indicated in the enclosed figures and in the below table, and shall be made of a 5 mm thickness bakelite plate.

Type of board	Width	Height
PHCM 300	300	300
PVCM 200	200	400
PHCT 350	350	350
PVCT 250	250	500

The frames should have the shape and dimensions indicated in the enclosed figures and should be made of pine wood or similar.

3.4 Energy metering equipment

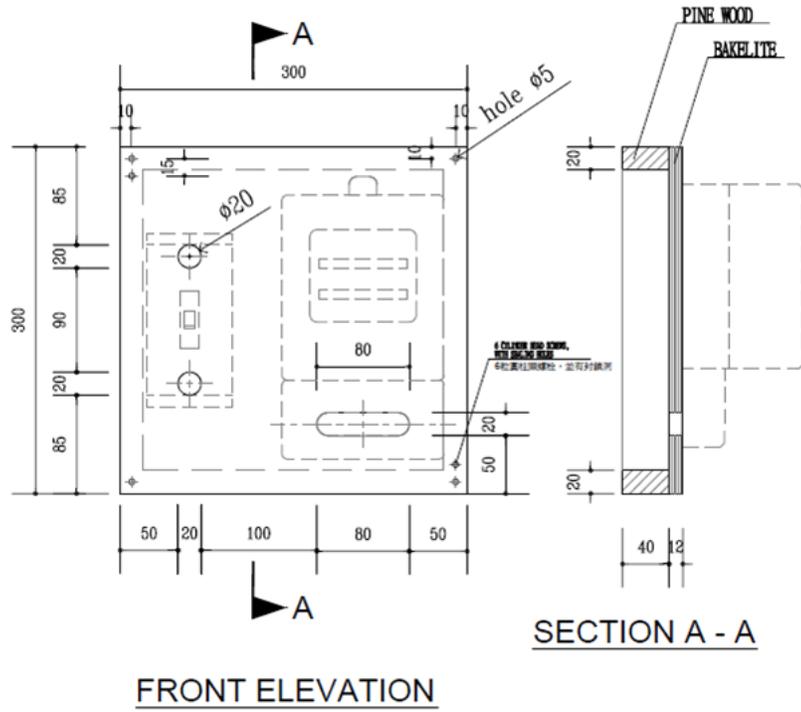
The meter boards are intended to contain the metering equipment, supplied and assembled by CEM, consisting of:

- a) Single phase meter board
 - Service circuit breaker for limiting contracted apparent power;
 - Single phase energy meter;

- b) Three-phase meter board
 - Service circuit breaker for limiting contracted apparent power;
 - Three-phase energy meter.

Horizontal single-phase meter board

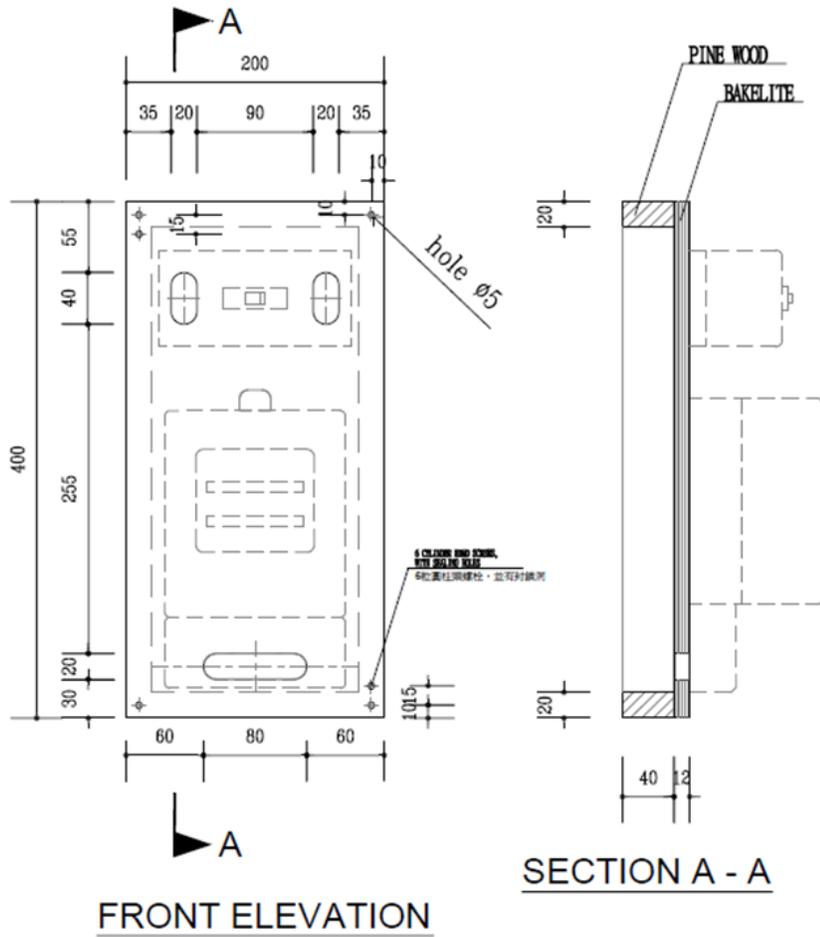
Type PHCM 300
(dimensions in mm)



(尺寸單位:毫米)

Vertical single-phase meter board

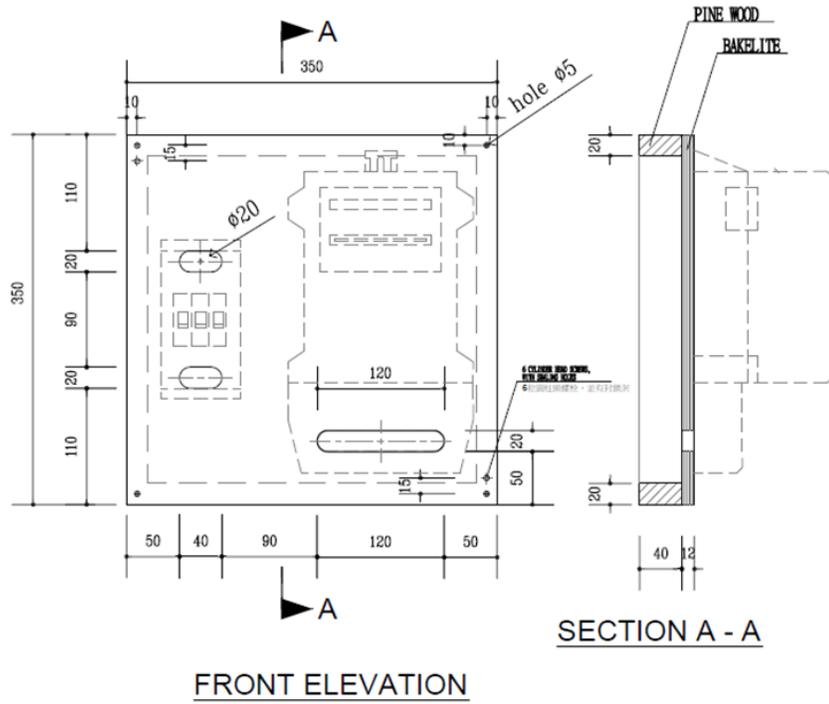
Type PVCM 200
(dimensions in mm)



(尺寸單位:毫米)

Horizontal three-phase meter board

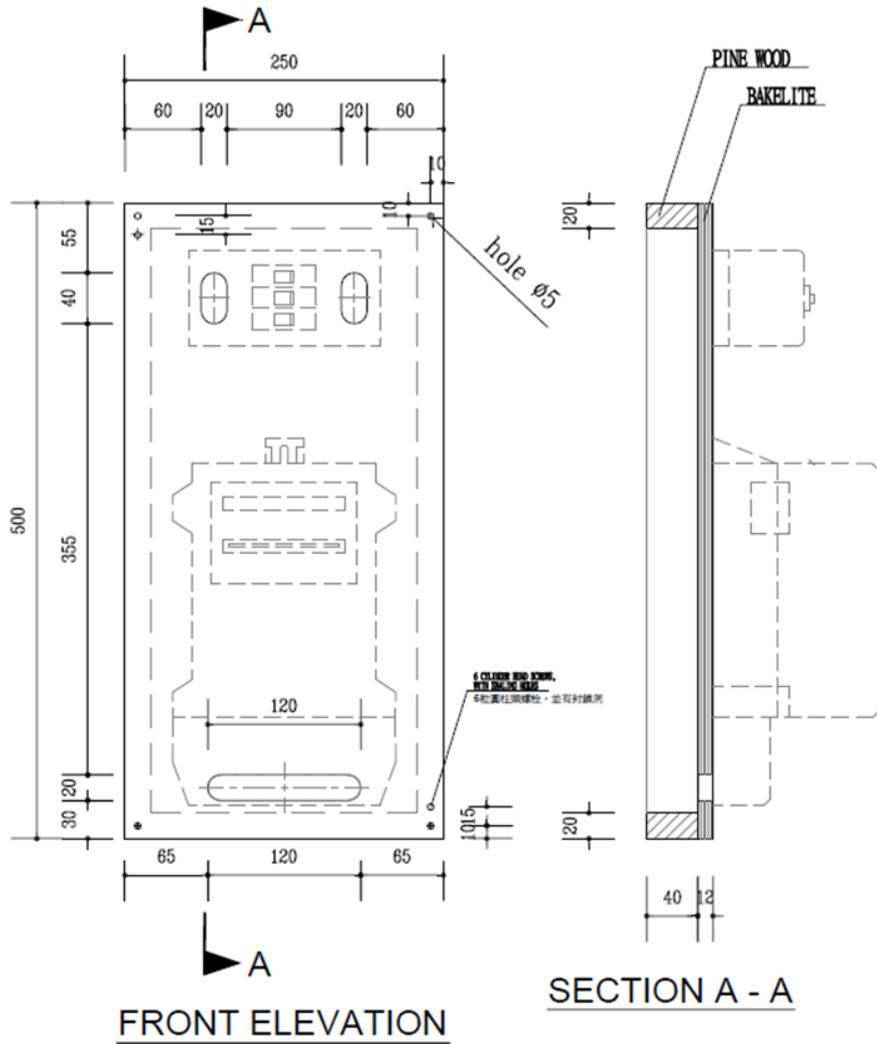
Type PHCT 350
(dimensions in mm)



(尺寸單位:毫米)

Vertical three-phase meter board

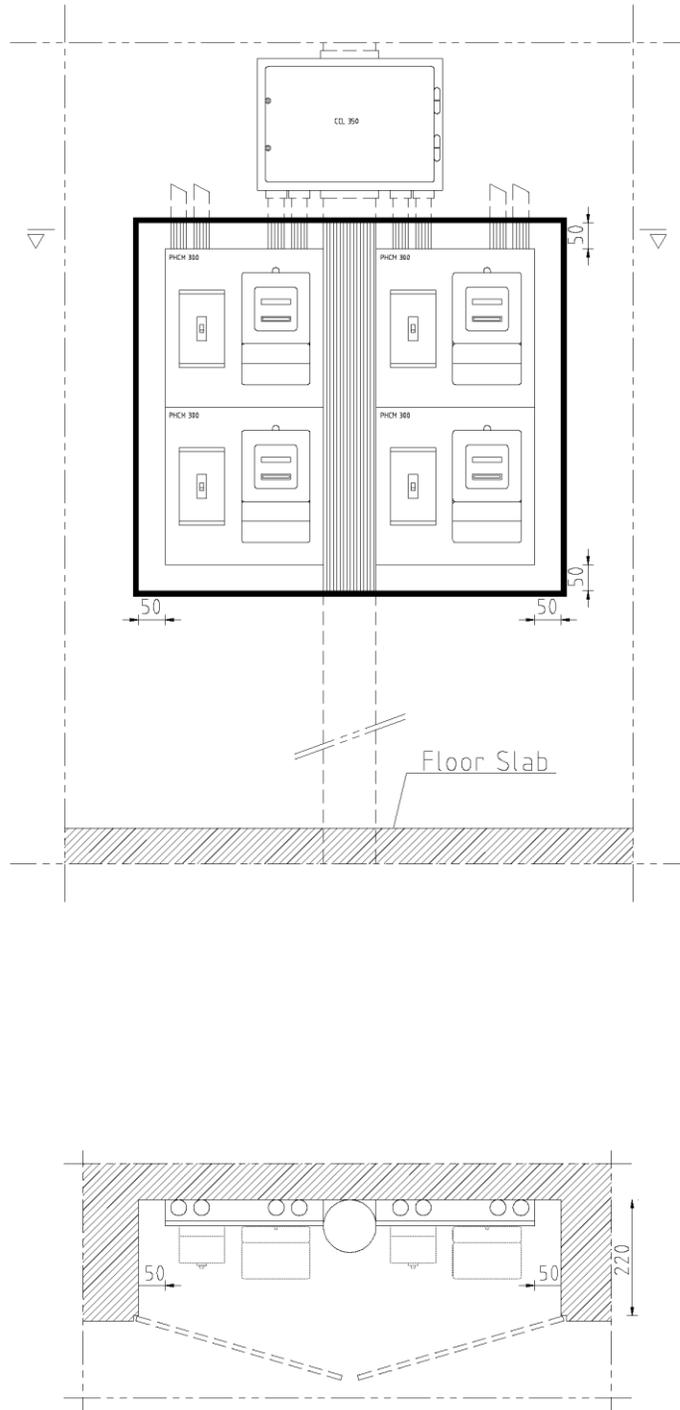
Type PVCT 250
(dimensions in mm)



(尺寸單位:毫米)

Meter board mounting in niche

(dimensions in mm)



Meter board mounting in vertical duct (dimensions in mm)

