

**Saudi Electricity Company**



**الشركة السعودية للكهرباء**

**SEC DISTRIBUTION CONSTRUCTION STANDARD**

**SDCS-02**

**DATE: January 2009G**

**SDCS-02**

**CONSTRUCTION STANDARD  
FOR  
UNDER GROUND NETWORK**

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**PART 3**

**Rev. 01**

**INSTALLATION OF  
RECESSED TYPE KWH METER BOXES  
INTO CONSUMER'S WALL**



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## **1 Introduction**

This construction standard specifies the design of wooden frames for polyester meter boxes intended to be installed recessed into the consumer's wall.

This standard is intended to assist the field engineers and technicians to achieve uniform standard in construction to ensure a satisfactory and economical level of service without operating restrictions so that the operational errors are minimized for safety and reliability of the system.

## **2 Revisions and additions**

This construction standard is subject to revision as new material and methods of construction are developed. The latest revision of this construction standard shall be applicable.

## **3 Service conditions and system parameters**

For construction and installation of wooden meter frames, the service conditions and system requirements shall be as given in the latest revision of SEC General Requirements for All Equipment/Material Specification No. 01-SDMS-01.

## **4 Design of wooden meter frame**

4.1 Meter frames are intended to be supplied and installed by consumers. They should be recessed into their boundary front walls, whenever it is possible.

4.2 Meter frames design has been classified into six types: single, double, quadruple, CT-operated up to 400 Amps, CT-operated 500&630 Amps and remote meter boxes as shown in the attached drawings.

4.3 The minimum thickness of the hard wood to be used for the frames shall not be less than 20 mm.

4.4 The following points are required to be considered at site during the installation of meter boxes in the wooden frames:

4.4.1. The minimum clearance between the wooden frames and any other utility service such as telephone and water boxes shall not be less than 2 m.

4.4.2. Meter wooden frames should be easily accessible from the front in the consumer's boundary without any obstruction.



- 4.4.3 Meter wooden frame dimensions shown in the attached drawings are internal clearances.
- 4.4.4 Bottom of the meter wooden frames shall be at 80 cm from the pedestrian right of way or 1 m from the asphalt level.
- 4.4.5 If marble blocks or engraved stones are used to cover the wall, then a clearance of 5 cm shall be kept from the top of the frames.
- 4.4.6 Consumer shall not be allowed to terminate more than one cable for each meter installed.
- 4.4.7 Consumer is requested to install in an appropriate location inside his premises a circuit breaker for each outgoing with rating not exceeding SEC breaker.
- 4.4.8 Meter frames shall not be located on the top of sewerage system or water tanks.

## **5 Cable entry pipes**

- 5.1 For the entry of SEC cables into the meter box installed in the wooden frame, PVC pipes with diameter as indicated in the drawings for each type shall be provided. The thickness of the pipes shall be 3 mm.
- 5.2 These pipes shall be installed by the consumer inside his front boundary wall. The number of pipes and the clearance between them are shown in the drawings, depending on the type of meter box to be installed.
- 5.3 The upper and lower edges of the pipes shall be cut smoothly to avoid scratching the cable.

## **6 Method of meter boxes installation**

- 6.1 As per SEC standard and practice, one to **five** meters can be installed on the front wall of the consumer. So installation of single, double, quadruple, CT-operated up to 400 Amps, CT-operated 500&630 Amps and remote meter boxes shall apply in this standard.
- 6.2 The area assigned for installing the meter boxes shall be finished smooth and clean regardless the finishing of the surrounding area.



6.3 The fixation of the meter boxes into the frame shall be in such a way that the used tools and fasteners will not damage the body of the box.

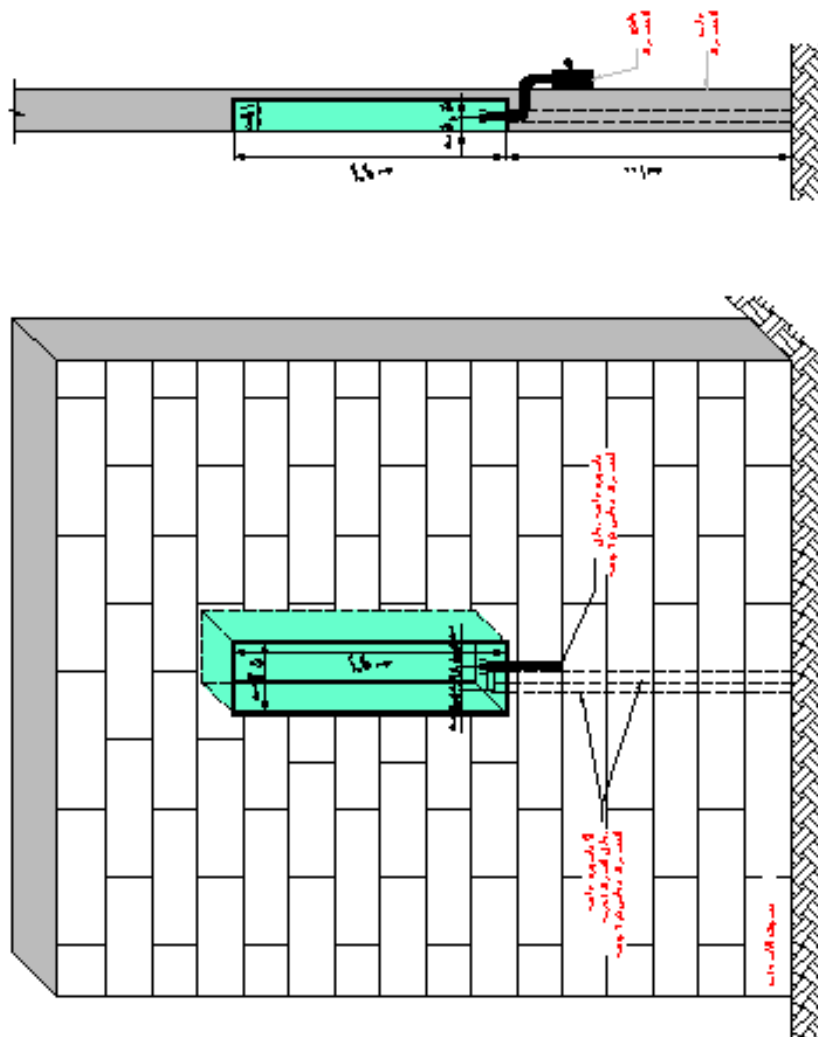
6.4 All cable loops between the boxes shall pass through the cable trench.

## 7 Drawings

The following drawings are attached to this standard:

- Fig. 1 Wooden Frame for single meter cabinet
- Fig. 2 Wooden Frame for double meter cabinet
- Fig. 3 Wooden Frame for CT-Operated meter cabinet up to 400 Amps.
- Fig. 4 Wooden Frame for CT-Operated meter cabinet 500&630 Amps.
- Fig. 5 Wooden Frame for quadruple meter cabinet
- Fig. 6 Wooden Frame for remote

- برواز صندوق عداد مفرد بقطاع من ٣٠ إلى ١٥٠ امبير

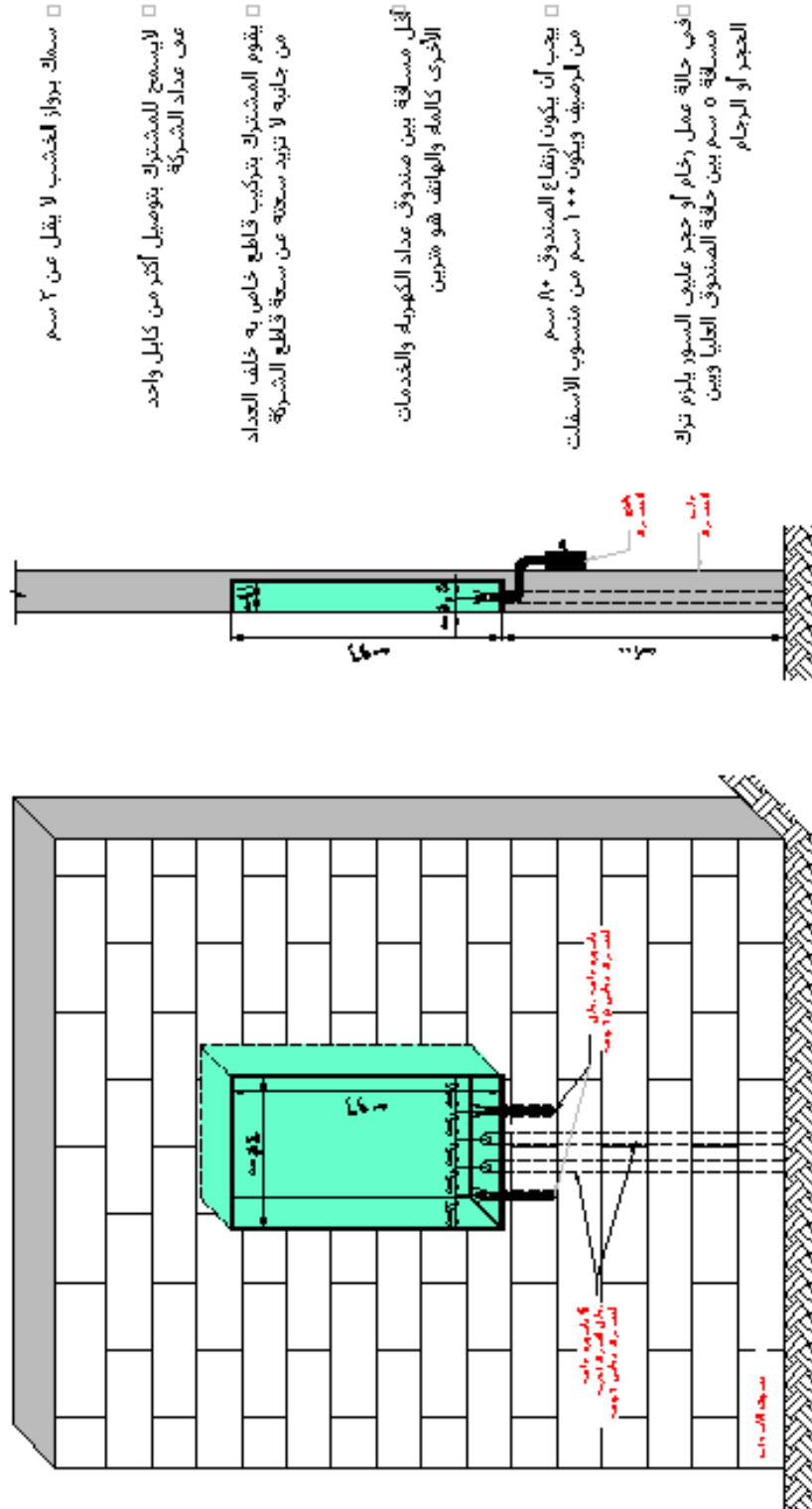


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برواز لصندوق عداد مزوج بقاطع من ٣٠ إلى ١٥٠ امبير لكل عداد FIG:02

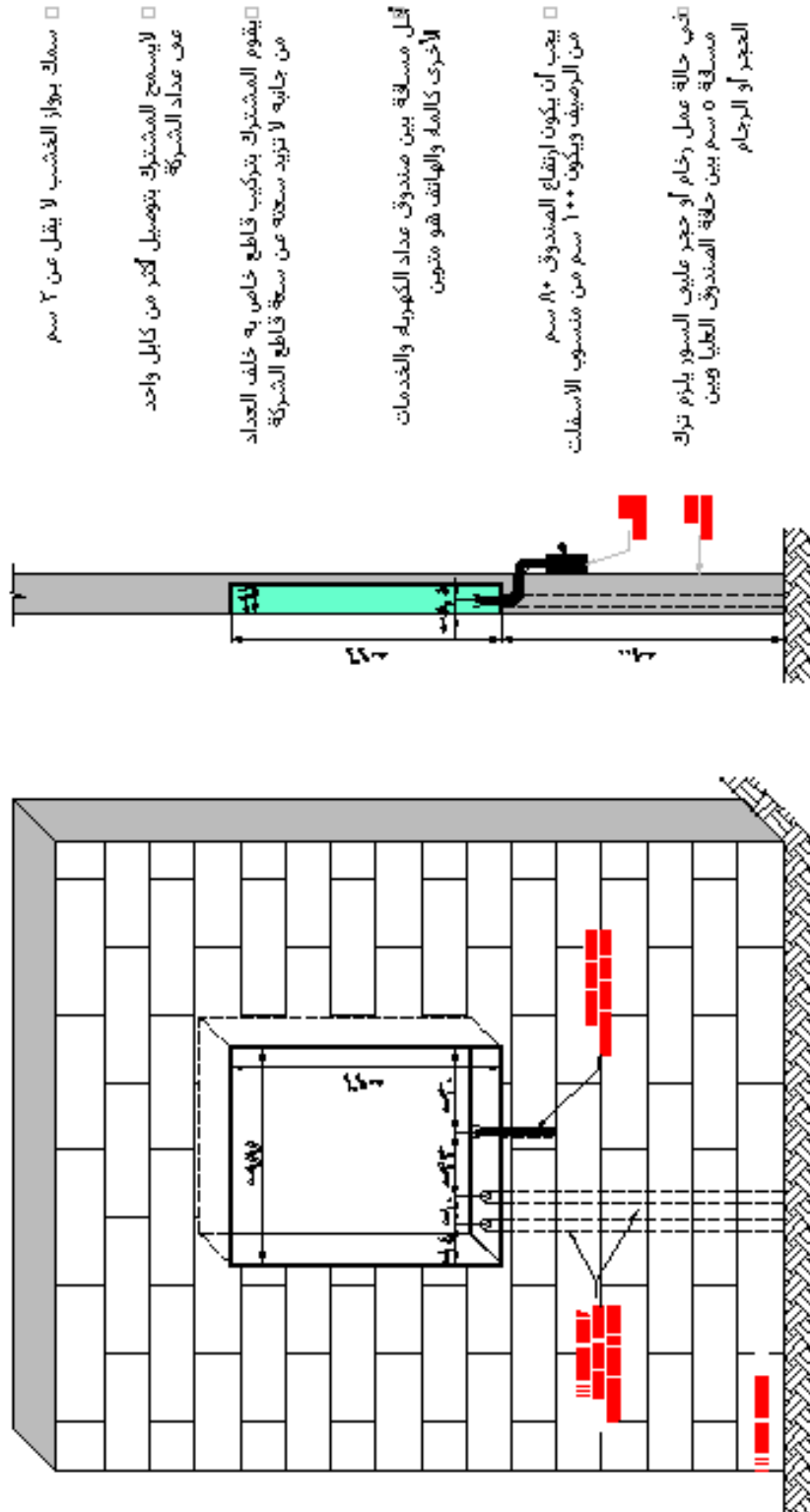


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برواز لصندوق عداد مفرد بقطر من ٢٠٠ إلى ٢٠٠ سم امبير FIG:03



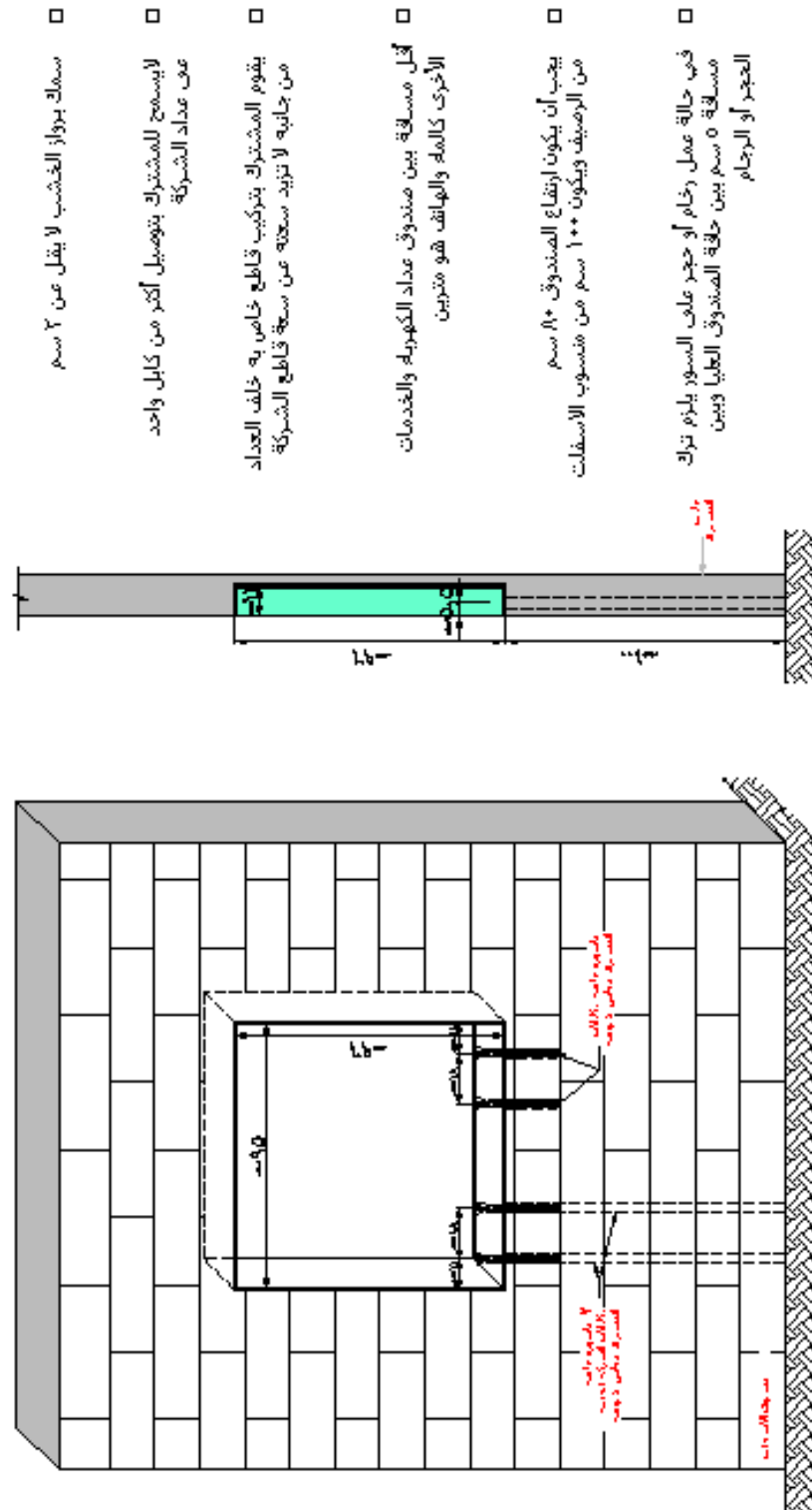


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FIG:04 بيرواز لصندوق عداد مفرد بقطاع من ٥٠٠ إلى ٦٣٠ امبير

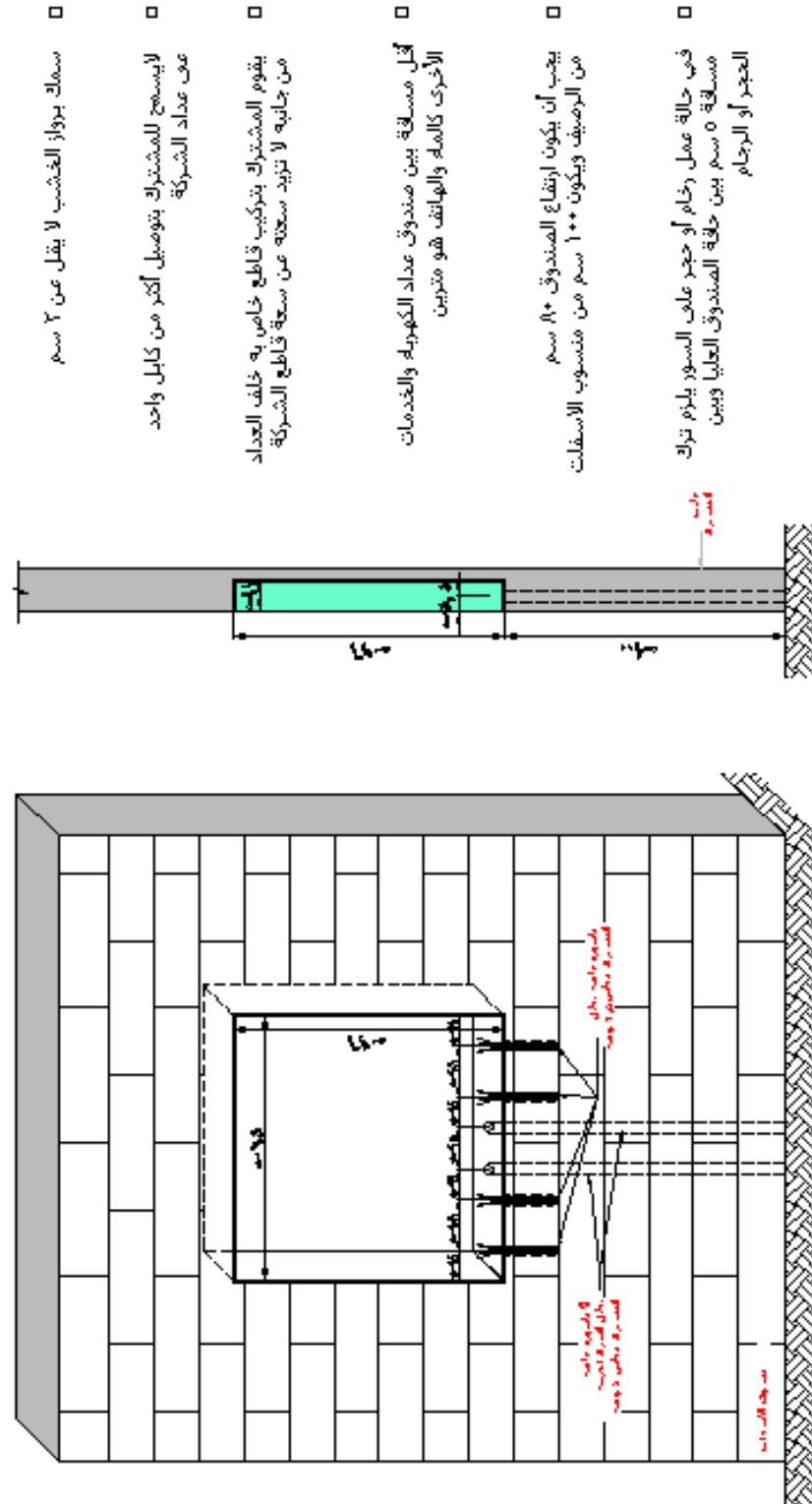


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برواز لصندوق عداد رباعي بقاطع من ٣٠ إلى ١٥٠ امبير لكل عداد FIG:05



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برواز لصندوق عداد سى تى يستخدم للمشاركين بقاطع ٥٠٠ ٦٣٠ ٨٠٠ امبير FIG:06

