

**Dubai Electricity & Water Authority**  
**IMS (Intelligent Metering System) Project**

**Field Requirements**

**A. Commercial & Residential Buildings**

- 1) **In each / typical floors, Provide 32mm conduit for ‘interconnecting communication cable’ between the Electricity and Water metering rooms with pulling rope and the following junction boxes (provide access panels on false ceiling, if required).**
  - a) In electricity metering room, install 150mm x 150mm x 100mm size end junction box near to the SMDB.
  - b) In water metering room, install 150mm x 150mm x 100mm size end junction box minimum 2mtr away from the meter. If 2mtr clearance is not available, install this junction box in the corridor area above false ceiling and provide another 100mm x 100mm x 50mm size end junction box in the water metering room and connect both with 38mm conduit (for water meters up to 08Nos).
  - c) Install pulling junction boxes in every 10-15mtr distance / corner portions.
- 2) **Provide 32/38mm heavy-duty conduit for ‘interconnecting communication cable’ between the main water meter chamber and nearest ground floor electrical room or LV room with pulling rope and the following junction boxes.**
  - a) Install IP55, 150mm x 150mm x 100mm size end junction box near to the SMDB in ground floor electrical room or near to the data concentrator area in LV room.
  - b) In main water meter chamber, install IP-55, 100mm x 100mm x 50mm size end junction box on high level.
  - c) Install pulling chamber / junction box in every 20-25mtr distance / corner portions.
  - d) Proper waterproofing is required for the conduits in main water meter chamber and building retaining wall.
  - e) Provide a IP55, 400mm x 300mm x 200mm size enclosure near to the main water meter area to a height of 1.8mtr from the finished floor level with 38mm heavy-duty conduits, if the main water meter distance is exceeding 40mtr from the nearest main / sub LV room.
- 3) **In main LV room (near to the entrance), 500mm (Height) x 300mm (Width) provision required on the wall with 100mm x 100mm x 50mm size surface type junction box for each data concentrator (Each data concentrator requires a 3ph+N supply from the respective main LV panels). Following additional requirements are to be incorporated.**
  - a) In main LV panel metering compartment- CT’s shorting terminal block and 3Nos sealable type VT fuse carriers + 2Nos rail mounted type connector terminals are required.
  - b) Install conduit with 5c. 2.5mm<sup>2</sup> cables (R,Y,B,N&E) from the LV panel-metering compartment to the data concentrator junction box on the wall.
  - c) Terminate the data concentrator supply cables with VT fuses in LV panel-metering compartment & with connector terminals in the data concentrator junction box on the wall.
  - d) Distance between the data concentrator junction boxes shall be minimum 300mm, if two or more main LV panels are in the main LV room.
- 4) **Provide 38mm conduit for ‘PSTN communication cable’ between the MDF and main LV rooms with pulling rope and the following junction boxes (provide access panels on false ceiling, if required).**
  - a) Install 150mm x 150mm x 100mm size end junction box in MDF room, near to the main control panel.
  - b) Install 150mm x 150mm x 100mm size end junction box in main LV room, near to the data concentrators.
  - c) Install pulling junction boxes in every 10-15mtr distance / corner portions.

**B. Villa Complex**

- 1) **Provide 25mm conduit for ‘interconnecting communication cable’ between the electrical and water metering cabinets of respective premises with pulling rope and the following junction boxes.**
  - a) Install IP55, 100mm x 100mm x 50mm size pulling junction boxes in every 10mtr distance / corner portions
  - b) In Electricity metering cabinet, connect the communication conduit with the cable gland box (bottom plate).
  - c) In Water metering cabinet, connect the communication conduit on high level (within 10cm from the top).
- 2) **Provide 38/50mm conduit for ‘PSTN communication cable’ between the nearest main telephone control panel and the DEWA transformer platform with necessary junction boxes / chambers and pulling rope.**

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