Medium Voltage Distribution Modular vacuum switchgear range with Shielded Solid Insulation System

Technical Memo

# **Architecture**

# Premset compact tariff metering solution withstands harsh environment

M06S Premset cubicle is the most compact tariff metering solution

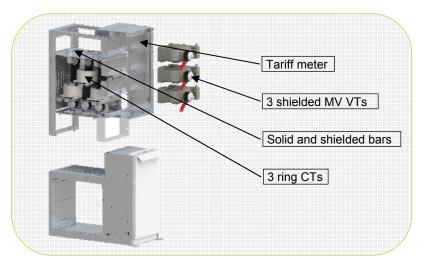


### **Principle**

The Premset compact metering cubicle includes:

- $\bullet$  3 ring CTs with LV insulation around shieldee bars (50A cl0,5 & from 100 to 600 A cl0,2S 5VA)
- 3 shielded MV VTs phase to earth (cl0,2 10VA)
- · Shielded solid insulated bars
- Electronic tariff meter

Unlike conventional metering solutions which are air insulated (AIS technology) having larger width, Premset compact metering cubicle is 375mm width and include 2SIS technology (solid insulated and shielded) for harsh environment withstand.





## Main points to remember

M06S compact tariff metering cubicle:

- Answers the increasing needs of tariff metering and sub-metering, reduced maintanence, minimum footprint and cost.
- Includes 2SIS technology (shielded solid insulation system) for better reliability and safety thanks to insensitivity to harsh environment and very low internal arc probability.
- Allows tariff metering and a lot of energy quality measurements.
- Allows easy front face access to VTs



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## Advantages - Fixed circuit-breakers bring higher reliability and reduced maintenance cost

- Compact solution reduces by 2 or 3 times the width.
- Fully harsh environment withstand.
- Screened VTs are not sensitive to superficial aging contrary to traditional VTs.
- Accessible VTs in front face are easy to disconnect for cable testing or to remove for replacement.
- Utility can use any electronic meters with this solution (Power consumption of CT & VT are sufficient: 10 VA & 5VA).

Schneider can provide ION 8800 for tariff metering and power quality.

- Use of Premset compact metering in the Premset switchboard ensures consistency of the system:
- same width as for other cubicles.
- same bottom compartment as for other cubicles ensuring quick assembly.
- same connection system as for other cubicles







#### **FAQ**

#### • Is Premset compact metering complying with international standards?

Premset compact metering is compliant with international standard IEC 61000 4 30, IEC 61557-12 and therefore it has passed type and routine tests required by the standard

- There is no fuse to protect VT, is it a problem?
- Fuses protect switchboard and not VT.
- Since Premset compact metering is harsh environment withstand including screened VT, there is no risk of fault on switchboard due to compact metering.
- Many utilities do not recommend fuse.

## • What happens if the CTs rating is lower than 50A?

Even for low loads (less than 200kVA), you can use M06S cubicle. For instance for a transformer 200kVA, you don't need to choose a bulky CT 25/5 which could not allow to extend the power of your application. It is most relevant to choose CT 100/5 cl0,2S, much smaller, providing the best accuracy from 120A to 0,1A and largely enough accuracy up to 0,1A.

If you want to use your own CTs and VTs, you can use traditional Premset metering cubicle M06A.

#### • What is the IP of metering cubicle?

The IP for M06S is IP3X which is sufficient for as M06S is a fully solid insulated and shielded solution (there is no possible external influence on dielectric behaviour).

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