



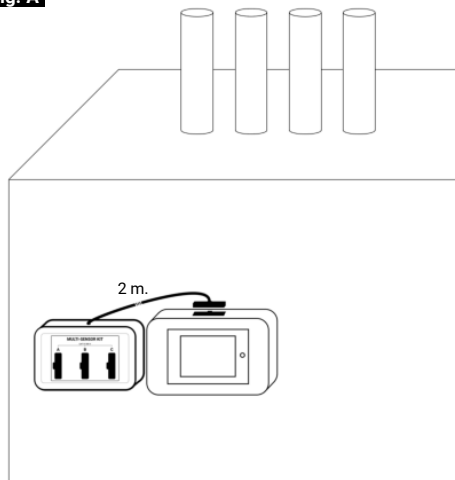
## SETUP

If the electrical panel studied either supplies a **capacitor bank**, either is fed by **several coupled transformers** or has **power generation units downstream** the measured main incomer (excluding generator), it is absolutely necessary to measure each of these points independently.

To do this, the **multi-sensor kit** connected to the Smart X can be used to sum up to 3 different measuring points.

Magnetic, it can be installed on any metallic surface near the points to be measured, at a maximum distance of 2 metres from the Smart X (fig.A).

Fig. A



## MEASUREMENT

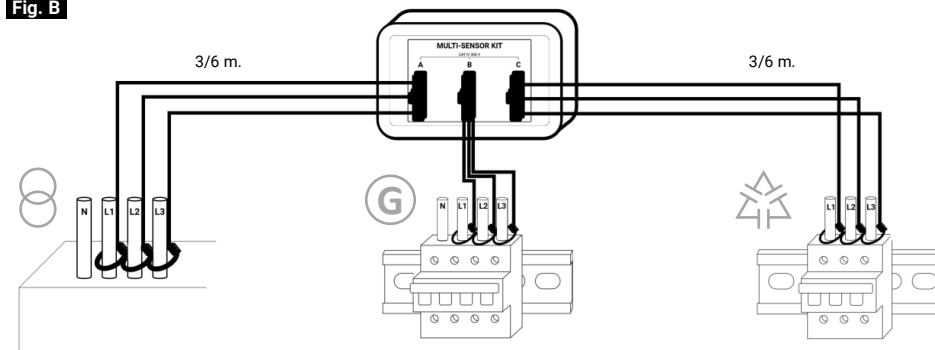
For each measuring point (ex: low voltage main incomer, capacitor bank, photovoltaic panels), encircle all the insulated conductors of each phase\* thanks to the openable coils, **by imperatively respecting:**

- **the order of the phases (L1/L2/L3)**, which must imperatively be the same for every point to be measured,
- **the direction of the sensors** (fig. B): arrow inside the sensor's loop and positioned:
  - in the current direction for low voltage main incomer and power generation units,
  - In the opposite current direction for capacitor banks to neutralise the disturbances.

\* If it is not possible to encircle all the conductors per phase, it is possible to measure only a part of these ones. In this case, **respect imperatively the following instructions and warn Smart Impulse:**

- The number of encircled conductors must be the same for each phase of a given measuring point (ex: 2 measured conductors out of 4 for phases 1, 2 et 3 of the low voltage main incomer)
- The proportion of encircled conductors must be the same for each measuring point (ex: 2 conductors out of 4 for low voltage main incomer, 1 out of 2 for power generation units, 1 out of 2 for capacitor banks)

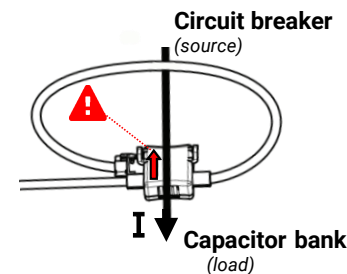
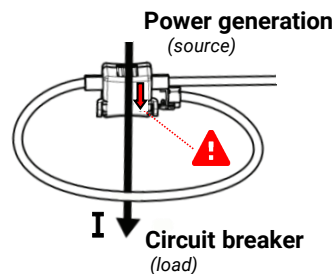
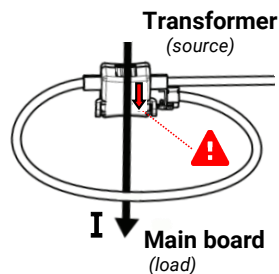
Fig. B



**Low voltage main incomer**  
Arrow inside the loop, pointing from the main incomer (transformer) to the main board (main circuit breaker) (current direction)

**Power generation units**  
Arrow inside the loop, pointing from the power generation unit (excl. generator) to its circuit breaker. (current direction)

**Capacitor banks**  
Arrow inside the loop, pointing from the capacitor bank to its circuit breaker (opposite current direction)

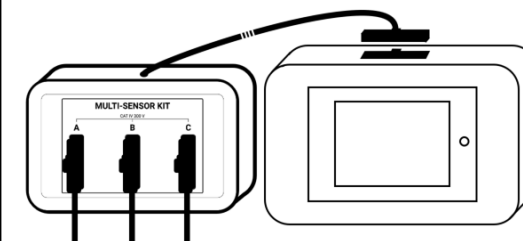


## CONNECTION

Once the sensors are installed, connect the multi-sensor kit to the Smart X, then connect the Smart X to its power supply and to the Smart Router (see Smart X quick start guide).

*Note: To validate the proper functioning of the installation, you will be asked by telephone to connect each measuring point of the kit (A, B, C) one after the other in order to validate them individually, then to connect all the points.*

Fig. C



## VALIDATION

Once the meter is set up, call the Help Desk on +44 (0) 330 684 6080 in order to validate the installation, then please **send within 24h the validation form to [technique@smart-impulse.com](mailto:technique@smart-impulse.com), imperatively accompanied by the photos below.** The installation will be validated only after reception of these documents. Thank you !



- Smart X meter
- Multi-sensor kit
- Current sensors of the different measuring points, with arrow visible
- Power supply connection
- Smart Router
- Wide plan of room after installation