SMART X®
QUICK START GUIDE

Cat. IV 300 V

CE

Full instructions and video tuto.
http://doc.smart-impulse.com

Help Desk
+44 (0) 330 684 6080
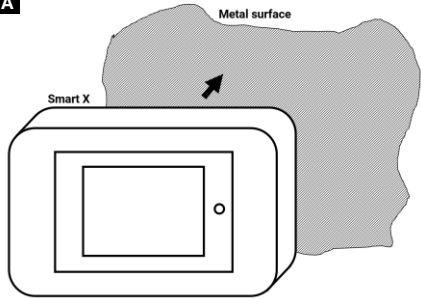technique@smart-impulse.com

V1.3

SETUP

The **Smart X** is a new generation meter compatible with all electrical configurations (cat. IV 300 V) that enables to **identify the consumption of each type of equipment in a building** by measuring a single point of the network.

Magnetic, you can fix it on any metal surface (fig.A) or install it on a DIN rail thanks to the adapters provided (fig.B).
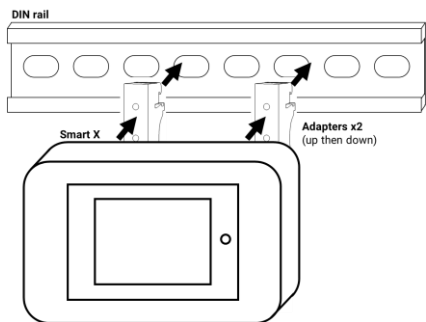
If the phases to be measured are accessible from outside the electrical panel (fig.C) and a power outlet is available, you can install it without even opening the panel!

Fig. A

OR

Fig. B

MEASUREMENT

For each phase of the installation to be measured (eg: main incomer, specific circuit), encircle all the insulated conductors thanks to the openable coils (*fig.C-D*), **by imperatively respecting the direction of the sensors (arrow inside the loop, pointing from the source to the measured load) and the order of the phases** (*fig.E*).

If the electrical panel supplies a capacitor bank or has downstream power generation units, it is absolutely necessary to measure each of these points independently thanks to a multi-sensor kit (sold separately).

* Otherwise, it is possible to measure only a part of these conductors (same number of conductors measured for each phase). Warn imperatively Smart Impulse.
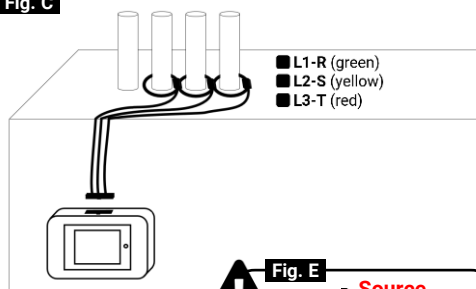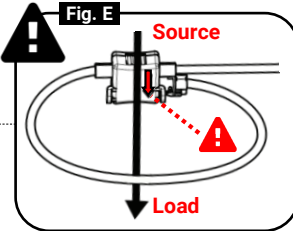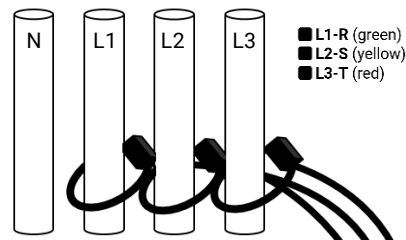
Fig. C

L1-R (green)
L2-S (yellow)
L3-T (red)

Fig. E

Source

Load

Fig. D

N   L1   L2   L3

L1-R (green)
L2-S (yellow)
L3-T (red)

POWER

⚠ **Connect first the lead (single- or three-phase) to the 'IN' port of the Smart X, then to the network. 'OUT' port is strictly dedicated to share power supply between Smart X (fig.I)**

Depending on your installation:

> For optimum accuracy, connect the **three-phase lead** to the Smart X then insert the magnetic connectors **on the screws downstream the closest low voltage modular circuit breaker, while respecting the positioning of the neutral* and the order of the phases** (*fig.G*, max voltage 435 V_{RMS}).

> For a measurement without opening the electrical panel, simply connect the **single-phase lead** to the Smart X then plug it into a power socket (*fig.H*).

> If a Smart X is already installed, you can connect the new one to it via the **'bridge' lead** (*fig.I*).
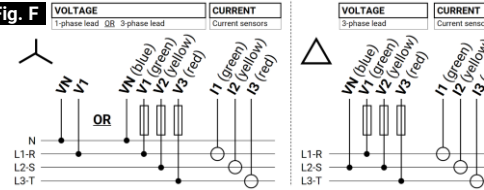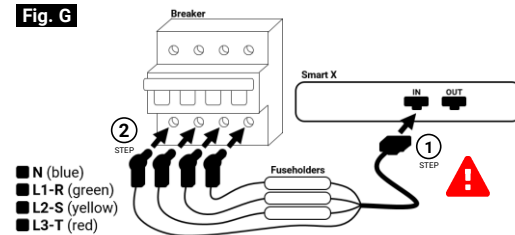
The screen of the Smart X lights up.

Fig. F

VOLTAGE 1-phase lead OR 3-phase lead	CURRENT Current sensors	VOLTAGE 3-phase lead	CURRENT Current sensors

Fig. G

N (blue)
L1-R (green)
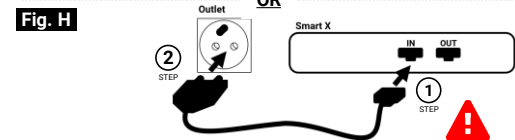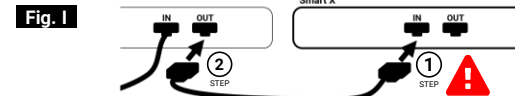L2-S (yellow)
L3-T (red)

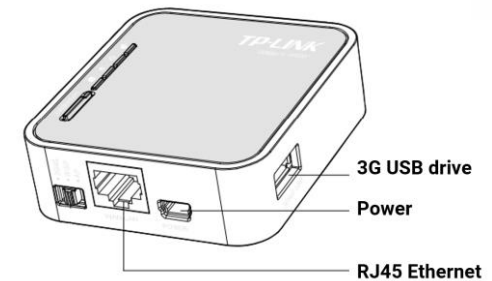
OR

Fig. H

OR

Fig. I

COMMUNICATION

Plug in the Smart Router close to the Smart X installed (fig.J, a multi-socket adaptor may be necessary), then connect it to the local network* or to the 3G network thanks to the 3G USB-drive provided. After 2 minutes, the Smart X in the same electrical room pair automatically to the Smart Router (Wi-Fi).

*LAN: Before the installation, please provide an Ethernet cable and check with your IT department for outgoing connection authorisation to our server :

- ICMP protocol to 8.8.8.8 (ping), DNS
- TCP protocol to 83.222.241.132, port 80 (HTTP)
- UDP protocol to time.google.com, port 123 (NTP)

* 3G : If 3G coverage is insufficient (< -100 dBm), it is possible to move the 3G USB-drive. Contact Smart Impulse.

Fig. J

3G USB drive
Power
RJ45 Ethernet

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, **imperatively accompanied by the photos below**. The installation will be validated only after reception of these documents. Thank you !

- Smart X meter
- Current sensors
- Power supply connection
- Smart Router
- Wide plan of room after installation