A. T. M. S. *Proven Advanced Technology Solutions*

m.PAD Phase and Feeder Identification for Live LV

by **MADE-SA**

Identifies Phase & Feeder

Runs Live

Simple to Use

Clear Display

Signals via Feeders

No Radio Problems

m.PAD is used to determine or confirm customer connections on an LV network.

The transmitter is connected by croc clips (or banana plugs) to each phase and neutral voltage at any point in the sub-station, and is powered from phase 1 & 2 for continuous operation. In addition, up to 12 Rogowski coils are each closed around all 3 phases of outgoing feeders.

The hand-held receiver has two voltage probes, or a mains plug, and when these are placed in contact with the phase and neutral at a customer connection it draws a specific current signal which is detected by the transmitter, which in return sends the phase and feeder identification to be displayed on the receiver. The communication technology used is unique to MADE-SA and assures error-free indication.

The system is CE marked and manufactured to NF EN 50065-1, 50082-1, (EMC) & 61010 Electrical Security.

OPERATION

The transmitter is connected and turned on in the substation, with the Rogowski coils in the correct orientation. The transmitter display gives setting up information and, in use, shows the network frequency and phase rotation; Once the receiver has been used, the transmitter shows the most recent Feeder and Phase identification, and the time since it was made.

Making a Measurement.

The receiver is connected between **phase and neutral** (this is very important, otherwise the system will not start and the overvoltage LED will light), the receiver is automatically powered-up, the green LED lights, and the message « **Reception …** » is shown. It then behaves as a « special » load detected by the transmitter.

Check that the operation is correct by the « signal » LED. This lights briefly approximately each four seconds.

Wait for the display to show the result in the form « Dxx Lx », for example « D05 L2 » for feeder N°5, phase N°2. The same conventions are adopted in the case of ambiguity of the feeder (**D??**) and feeder not identified (**D--**) as for the transmitter.

Even if the feeder is not identified, the phase may be identified. However the inverse is not possible in principle.

Once disconnected from the mains the receiver maintains the display for several seconds before shutting off. It is then possible to consult the result again by pressing the ON button, the receiver is turned back on (supplied by the internal battery), but the green LED remains unlit. Only the last result can be displayed.

When the receiver is reconnected to the network, the previous result is effaced by re-initialisation of the system so that there is no doubt about the source of the result displayed;

If the ambient lighting is too low, pressing the left-hand button starts the backlighting. A second press turns off the backlighting.

mPAD also verifies the phase rotation of the network, clockwise or anticlockwise.

The system has a self-test mode with an associated wiring loom so that its correct functioning can be confirmed in the field.

Technical Characteristics

Carrying Case Size   54x41x22 cm. Weight 9.85 Kg

Transmitter   Size   24x16x12 cm. Weight 3 Kg
                            Supply 230/400 Volts from connections
                            Protection Rating   IP 22

Receiver   Size   20x10x 6 cm.   Weight 0.6 Kg
                            Supply 110/230 Volts from connection; 9 V. battery for reading results
                            Protection Rating   IP 64

M.PAD is C€   marked and conforms to the CEM standards NF EN 61 000 -6 -1-1 & -6-3