

## Carlo Gavazzi

### Are you measuring energy usage for billing applications legally?

The Measuring Instruments Directive (MID) has been in force since October 2006 and was introduced by the European Commission which replaces meters previously installed under the OFGEM process.

After, 2016 all new and replacement meters installed for billing applications must be MID approved. Installation of non approved meters for billing applications is illegal.

Contact us for a free guide to MID.

Our innovative family of meters and energy management software not only fulfil the legal requirements but are suitable for any power management application, from simple to the most arduous. The range starts from an ultra compact DIN-rail mounted, single-phase 32A energy meter providing both active and reactive energy metering and cost allocation functions, up to a three-phase energy analyser offering built-in hot/cold water, gas and remote heating measurements and load monitoring.

Also on offer is EOS-Array a monitoring and control system for photovoltaic (PV) plants. It's easy to install and versatile and provides real time and historical data in both analytical and graphical form. Enabling a clear and concise management of small to medium or high power photovoltaic (PV) plants as well as multiple locations. Meeting the growing demands for clean sources of energy by maintaining efficient operation, maximising performance and strengthening the Return on Investment.

### What is Dupline®?

Dupline® is a true 2 wire bus system that offers a realistic alternative to parallel wiring to reduce wiring and installation cost in many building automation applications.

Dupline® has a wide range of dedicated building automation components including temperature sensors, humidity sensors, PIRs, lux sensors and analogue & digital I/O modules. All the devices are linked together on the Dupline® 2 wire bus back to the Dupline® controller, from where data can be exchanged with a BMS controller.

Compared to a traditional parallel-wired installation, the wiring of a Dupline® system is much simpler to install because of the 2 wire concept. Flexibility to specification changes and enhancements are easily implemented as extra devices are simply connected to the same wiring.

In larger applications multiple Dupline® networks can be linked together via RS485 or Ethernet to the BMS controller, here are some of the popular applications where Dupline can be used :-

- Under floor heating control & CO<sub>2</sub> monitoring
- Natural ventilation including window control
- Monitoring & control of fire & smoke dampers
- Energy data collection for electricity water & gas consumption
- Alarm point monitoring
- Links directly with building management system

Dupline® features at a glance

- No special cable required
- Free topology for cable routing
- Up to 10 km transmission distance without repeaters
- Extremely noise immune – can run next to power cables
- Bus powered devices available
- Modbus connection to BMS controllers
- Proven performance in more than 100,000 installations worldwide
- Cost effective alternative to hard wiring



Range of MID meters



Current transformers

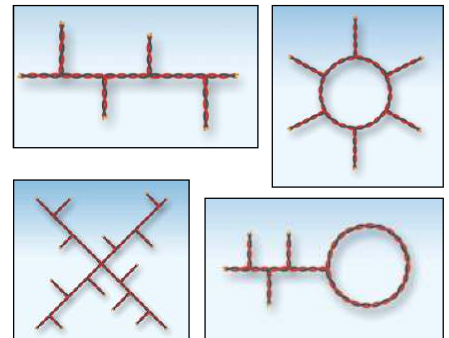


Control and management system for PV applications

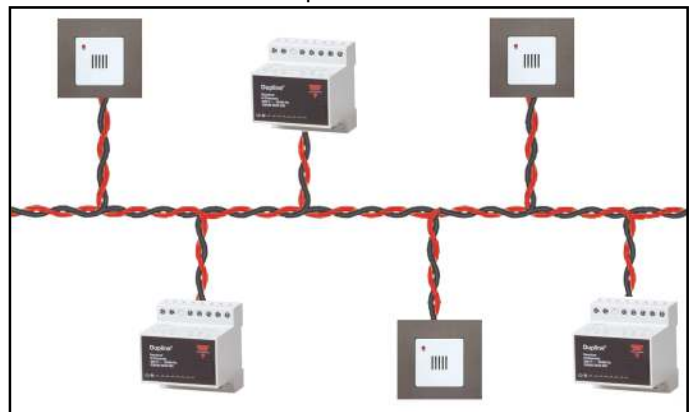
## Dupline®

Fieldbus Installationbus

Offering completely free topology allowing the network to be established as a line, ring, star or a combination of these.



Fieldbus / Installationbus connection options



Many devices can be bus powered - no need for local power supply