



METEL.EU
SECURITY & AUTOMATION

Management and Protection of Water Resources

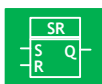
IPLOG



The Long Range LoRaWAN wireless standard is an optimum monitoring and management solution for remote water resources. IPLOG PLCs with LoRaWAN interface are considerably more flexible than the conventional endpoints focused on measuring 1-2 variables. PLC modularity allows you to build an endpoint with up to dozens of different inputs and outputs. In addition, the endpoint can autonomously perform its own control program written in EN61131-3 programming languages.



Wireless & Encrypted Network



PLC Based End Nodes



A Wide Range of Inputs and Outputs



Suitable for OFF GRID Applications



The Long Range Wireless & Encrypted Network

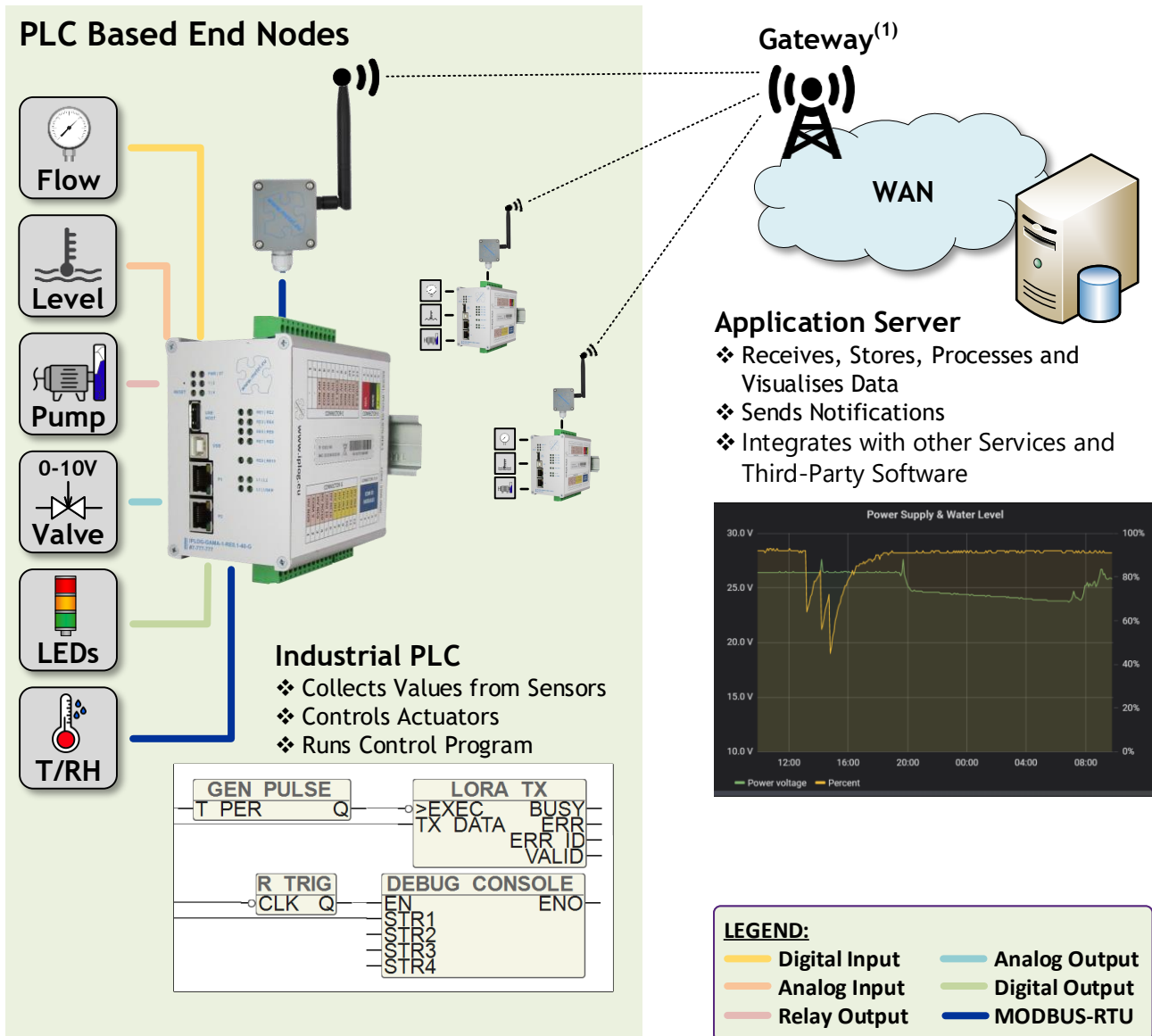
The LoRaWAN combines low data rate and robust modulation to achieve a multi-km communication range. The key benefits are its bidirectional possibilities with a long range radius which is usually 2-5 km in urban areas and 15 km in suburban areas. All LoRaWAN devices encrypt their payload and header with the AES algorithm, using keys of 128 bits.

PLC Based End Nodes

LoRaWAN duty cycle limitations do not allow real time communications. Our end nodes are based on modular PLCs which largely eliminates known LoRa deficiencies. The PLC runs the control program independently of the central server and only the necessary data for visualization, logging, and operator feedback are transmitted via the LoRa network. Typical examples of usage are sensors reading systems for area or buildings monitoring, data collection from weather stations, controlling of pumping water from wells etc.

A Wide Range of Inputs and Outputs

Thanks to the end nodes based at modular PLCs a wide variety of inputs, outputs and serial interfaces can be used. All end nodes can contain up to dozens of inputs and outputs, and functions such as concentrators with the LoRa interface. In addition, sensors and IO modules with LAN, 1-Wire or Modbus interfaces can be connected to the PLC.



(1) LoRa gateway can communicate with tens of end nodes.