CURRENT® family

IDC
Intelligent data concentrator

Reliable innovation. Personal solutions.
Preface

The Ormazabal CURRENT® family Metering Portfolio provides real-time, Connected Intelligence™ that gives you a superior ability to aggregate, analyze and report both meter data and low voltage measurements.

Our Intelligent data concentrators use meter data and low voltage measurements to build a market-leading set of Smart Grid applications that facilitate asset management, performance benchmarking and eventually enable decisions on grid optimization. Our Intelligent data concentrators are designed to truly underpin the Connected Intelligence™ concept.

The CURRENT® family Metering Portfolio offers you a combination of Meter Data Collection and Low Voltage Supervisory functions in multiple product options that ensure you an available offering for every installation variant.

Key features and benefits

Multi-vendor interoperability
Fully interoperable with meters and back-end management systems from other vendors implementing compliant technology (e.g. PRIME/DLMS, WebServices, …)

Field proven
Both technology and implementation have been proven in successful mass rollouts at several utilities worldwide. Installation environments include overhead and underground networks, large transformers (>800 meters) and large substations comprising multiple transformers.

Smart Grid advantages from a Smart Metering rollout
Our Intelligent data concentrators include several Smart Grid applications such as energy balancing, automatic phase detection, and modular digital input/output controllers, to name but a few.

Scalable solution
Together with auxiliary nodes, our Intelligent data concentrators offer coverage on all transformers at large multi-transformer substations.

Fully managed solution
Combined with the CURRENT® family OpenGrid® Software Platform, our Intelligent data concentrators maximize total Smart Grid benefit for capital invested whilst reducing overall cost and risk with savings in turn-key provisioning, meter data collection, Smart Grid analytics and several other Head End System (HES) features – simply easy to use!

Technical data

Physical features

- Dimensions: [H / W / D] 240 / 170 / 100 mm
- Enclosure: Plastic
- Mounting: DIN rail
- Operating temperature: -25°C to +70°C
- Storage temperature: -25°C to +75°C
- IP rating: IP20 per IEC 60529
- Battery backed up RTC: 3 years
- Network interface: Ethernet 10/100BaseT, Serial RS232 port, Serial RS485 port*
- * Optional

Electrical features

- Protection: Over current and neutral fault immunity
- Power consumption:
  - 230VAC @ 50 Hz: 4.2 W / 23.4 VA typical
  - 120VAC @ 60 Hz: 3.4 W / 9.9 VA typical
- Notes:
  - 1) Typical: Low PRIME load (beacons each 0.6 sec)
  - 2) Mac: PRIME load (75% duty cycle)

Main function

- Model 9710: Base node, Data concentrator, DLMS client
- Model 9711: Ethernet auxiliary node, Data concentrator, DLMS client
- Model 9610: Base node

Low voltage supervision

- 800

PLC injection

- Single phase configurable

Phase mapping

- Yes

Ethernet port isolation

- 10 kV / 1 min *
- * Optional

Supervision

- LV basics supervision
  - Three phase voltages, currents, power (active, reactive and apparent) and power factor
  - Calculated neutral current on 4-wire systems
  - 4 quadrant energy meter
  - Hourly and daily load profiles
  - Energy measurement accuracy
    - +/- 0.5% on kWh and kVarh
  - Current sensors
  - Conventional current transformers

Protocols

- Network protocols: TCP/IP, HTTP, FTP, SCP
- Device management protocols
- Webservices, WebServer, SSH
- Network time sync
  - Network time protocol (NTP)
  - Meter reading protocol
  - IEC 62056 (DLMS COSEM)

Standards

- PLC
  - PRIME Specifications v1.3.6, compliance certification
  - PRIME topology evolution & performance reports
  - CENELEC-A band. Operating frequency per EN 50065-1 (From 3 kHz to 95 kHz)
  - Auxiliary nodes to support multiple injection points for multi transformer substations
- Type Approvals
  - Europe: CE mark per Directive 1999/5/EC
  - Terminal equipment (R&TTE), which includes the following:
    - Directive 2006/95/EC: low voltage electrical equipment (LVD)
    - Directive 2006/95/EC: electromagnetic compatibility (EMC)
- Safety Approvals
  - IEC safety - general requirements: IEC 60950-1:2005, class II, double insulation

Proven Technology

Our Intelligent data concentrators provide you with all features of a mature AMI device. Featuring in multiple rollouts and collecting data from millions of meters in the field from multiple vendors, the IDC is an industry leading product.

Better still, we can offer you Low Voltage Supervisory functions integrated into the intelligent data concentrator device (models 971x). Simply a flexible and cost effective monitoring solution.

Integrated Solution

The CURRENT® family intelligent data concentrators integrate into a backend system. Our OpenGrid® Software Platform offers you a cockpit to manage your devices - an easy-to-use web based graphical interface. Furthermore OpenGrid® enables you to integrate the IDC into 3rd party applications.