## Main

<table>
<thead>
<tr>
<th>Range</th>
<th>PowerLogic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device short name</td>
<td>ION8650A</td>
</tr>
<tr>
<td>Product or component type</td>
<td>Energy and power quality meter</td>
</tr>
</tbody>
</table>

## Complementary

<table>
<thead>
<tr>
<th>Power quality analysis</th>
<th>conforming to IEC 61000-4-15 flicker magnitude harmonic up to the 50th transient capture conforming to EN 50160: ed. 4 compliance report harmonic distortion voltage sag and swell detection waveform capture programmability (logic and math functions) up to the 63rd harmonic conforming to IEC 61000-4-30: class A power quality measurement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device application</td>
<td>Tariff metering Co-generation and IPP monitoring Load curtailment Demand and power factor control Instrument transformer correction Equipment monitoring and control Energy pulsing and totalisation</td>
</tr>
<tr>
<td>Type of measurement</td>
<td>Current Voltage Frequency Apparent power total Power factor total Apparent power per phase Power factor per phase Active power total Active power per phase Reactive power total Reactive power per phase</td>
</tr>
<tr>
<td>Supply voltage</td>
<td>120...277 V AC 47...63 Hz 120...480 V AC 47...63 Hz 65...120 V AC 47...63 Hz</td>
</tr>
</tbody>
</table>

Disclaimer: This documentation is not intended as a substitute for and is not to be used for determining suitability or reliability of these products for specific user applications.
<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network frequency</td>
<td>80...160 V DC</td>
</tr>
<tr>
<td>Outlet standard</td>
<td>50 Hz</td>
</tr>
<tr>
<td>[In] rated current</td>
<td>2 A, 5 A, 1 A</td>
</tr>
<tr>
<td>Type of network</td>
<td>1P + N, 3P + N, 3P</td>
</tr>
<tr>
<td>Power consumption in VA</td>
<td>24 VA</td>
</tr>
<tr>
<td>Maximum power consumption in VA</td>
<td>33 VA</td>
</tr>
<tr>
<td>Display type</td>
<td>FSTN transreflective LCD</td>
</tr>
<tr>
<td>Form designation</td>
<td>36S 2½-element 4, 9 3-element 4, 35 2-element 3, 29 2½-element 4</td>
</tr>
<tr>
<td>Sampling rate</td>
<td>1024 samples/cycle</td>
</tr>
<tr>
<td>Measurement current</td>
<td>0.001...24 A</td>
</tr>
<tr>
<td>Input type</td>
<td>Current 0.01...20 A (impedance 0.05 Ohm)</td>
</tr>
<tr>
<td>Measurement voltage</td>
<td>57...277 V AC phase to neutral, 100...480 V AC phase to phase</td>
</tr>
<tr>
<td>Number of inputs</td>
<td>3 digital 0.001...100 mA 30 V DC</td>
</tr>
<tr>
<td>Measurement accuracy</td>
<td>Current 0.1 %, Voltage 0.1 %, Power 0.1 %, Power factor 0.1 %, Frequency 0.001 Hz, Energy 0.1 %</td>
</tr>
<tr>
<td>Accuracy class</td>
<td>Class 0.2S energy conforming to IEC 62053-23, Class 0.2 energy conforming to ANSI C12.20, Class 0.2S energy conforming to IEC 62053-22</td>
</tr>
<tr>
<td>Number of outputs</td>
<td>2 pulse, 4 form C relay output</td>
</tr>
<tr>
<td>Communication port protocol</td>
<td>DNP3 at 300...115200 bauds, ION at 300...115200 bauds, Ansi C12.18 at &lt;= 19200 bauds, IEC 61850 ed. 2 at 10/100 Mbit/s, TCP/IP at 10/100 Mbit/s, DLMS at 300...115200 bauds, Modbus at 57600 bauds, DNP3 at 10/100 Mbit/s, ION at 10/100 Mbit/s, Modbus RTU, master/slave at 300...115200 bauds, Modbus TCP, master/slave at 10/100 Mbit/s, EtherGate</td>
</tr>
<tr>
<td>Time synchronisation protocol</td>
<td>GPS: Truetime/Datum, IRIG-B</td>
</tr>
<tr>
<td>Data recording</td>
<td>Harmonics logs, Historical logs, GPS synchronisation, Sag and swell logs, Data logs, Transient logs, Time stamping, Alarms, Event logs, Revenue logs</td>
</tr>
<tr>
<td>Transmission rate</td>
<td>300...115200 bauds, 10/100 Mbit/s, &lt;= 19200 bauds, 57600 bauds</td>
</tr>
<tr>
<td>Memory capacity</td>
<td>128 MB</td>
</tr>
</tbody>
</table>
### Web services
- Alarm notification by e-mail
- Port addressing user designed
- Web server
- Robust security logs

### Ethernet service
- Enable/disable serial ports
- Enable/disable Ethernet protocols
- SNMP-Traps and SYSLOG

### Tamperproof of settings
- Protected by access code

### Provided equipment
- Break out panel

### Compatibility code
- ION8650A

### Environment
- **Electromagnetic compatibility**
  - Electrostatic discharge immunity test conforming to IEC 61000-4-2
  - Conducted RF disturbances conforming to IEC 61000-4-6
  - Immunity to impulse waves conforming to IEC 61000-4-4
  - Electrical fast transient/burst immunity test conforming to IEC 61000-4-4
  - Susceptibility to electromagnetic fields conforming to IEC 61000-4-3
  - 1.2/50 µs shock waves immunity test conforming to IEC 61000-4-5
  - Conducted and radiated emissions B conforming to CISPR 22

#### Mounting mode
- Flush-mounted

#### Enclosure type
- FT21 switchboard

#### Type of installation
- Indoor installation

#### Overvoltage category
- III

#### IP degree of protection
- IP50 front face:
- IP30 back:

#### Relative humidity
- 5…95％

#### Pollution degree
- 2

#### Ambient air temperature for operation
- -40…85 °C

#### Ambient air temperature for storage
- -40…85 °C

#### Operating altitude
- 0…3000 m

#### Standards
- ANSI C12.1
- IEC 62052-11

#### Width
- 163 mm

#### Depth
- 228 mm

#### Height
- 285 mm

#### Net weight
- 7 kg

### Offer Sustainability
- **Sustainable offer status**
  - Green Premium product

#### REACh Regulation
- REACh Declaration

#### EU RoHS Directive
- Compliant
  - EU RoHS Declaration

#### Toxic heavy metal free
- Yes

#### Mercury free
- Yes

#### RoHS exemption information
- Yes

#### China RoHS Regulation
- China RoHS declaration
  - Pro-active China RoHS declaration (out of China RoHS legal scope)

#### Environmental Disclosure
- Product Environmental Profile

#### Circularity Profile
- End of Life Information

#### WEEE
- The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins

### Contractual warranty
- **Warranty**
  - 18 months