### Main

<table>
<thead>
<tr>
<th>Range</th>
<th>PowerLogic</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device short name</td>
<td>ION8650C</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>up to the 31st harmonic</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>harmonic distortion</td>
</tr>
<tr>
<td></td>
<td>voltage sag and swell detection</td>
</tr>
<tr>
<td></td>
<td>programmability (logic and math functions)</td>
</tr>
<tr>
<td>Device application</td>
<td>Equipment monitoring and control</td>
</tr>
<tr>
<td></td>
<td>Demand and power factor control</td>
</tr>
<tr>
<td></td>
<td>Tariff metering</td>
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<tr>
<td></td>
<td>Load curtailment</td>
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<tr>
<td></td>
<td>Instrument transformer correction</td>
</tr>
<tr>
<td></td>
<td>Co-generation and IPP monitoring</td>
</tr>
<tr>
<td></td>
<td>Energy pulsing and totalisation</td>
</tr>
</tbody>
</table>

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<thead>
<tr>
<th>Type of measurement</th>
<th>Current</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Voltage</td>
</tr>
<tr>
<td></td>
<td>Frequency</td>
</tr>
<tr>
<td></td>
<td>Apparent power total</td>
</tr>
<tr>
<td></td>
<td>Power factor total</td>
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<tr>
<td></td>
<td>Apparent power per phase</td>
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<tr>
<td></td>
<td>Power factor per phase</td>
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<tr>
<td></td>
<td>Active power total</td>
</tr>
<tr>
<td></td>
<td>Active power per phase</td>
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<tr>
<td></td>
<td>Reactive power total</td>
</tr>
<tr>
<td></td>
<td>Reactive power per phase</td>
</tr>
</tbody>
</table>

| Supply voltage                       | 120...277 V AC 47...63 Hz |
|                                      | 65...120 V AC 47...63 Hz  |
|                                      | 80...160 V DC             |

| Network frequency                    | 60 Hz                     |

| Outlet standard                      | American                  |

| [In] rated current                   | 2 A                       |
|                                      | 1 A                       |
| **Type of network** | 3P + N  
|                     | 3P  
|                     | 1P + N  
| **Power consumption in VA** | 24 VA  
| **Maximum power consumption in VA** | 33 VA  
| **Display type** | FSTN transflective LCD  
| **Form designation** | 9S 3-element 4  
|                     | 36S 2½-element 4  
|                     | 29S 2½-element 4  
| **Sampling rate** | 1024 samples/cycle  
| **Measurement current** | 0.001…24 A  
| **Input type** | Current 0.01…20 A (impedance 0.05 Ohm)  
| **Measurement voltage** | 57…277 V AC phase to neutral  
|                     | 100…480 V AC phase to phase  
| **Number of inputs** | 3 digital 0.001…100 mA 30 V DC  
| **Measurement accuracy** | Current 0.1 %  
|                     | Voltage 0.1 %  
|                     | Power 0.1 %  
|                     | Power factor 0.1 %  
|                     | Frequency 0.001 Hz  
|                     | Energy 0.1 %  
| **Accuracy class** | 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  
| **Number of outputs** | 2 pulse  
|                     | 4 form C relay output  
| **Communication port protocol** | DNP3 at 300…115200 bauds  
|                     | ION at 300…115200 bauds  
|                     | Ansi C12.18 at <= 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, slave at 300…115200 bauds  
|                     | Modbus TCP, slave at 10/100 Mbit/s  
|                     | EtherGate  
| **Communication port support** | RJ45: Ethernet  
|                     | SUB-D 9: RS485/RS232  
|                     | Terminal block: RS485  
|                     | Infrared  
| **Time synchronisation protocol** | GPS: Truetime/Datum  
|                     | IRIG-B  
| **Data recording** | Time stamping  
|                     | Data logs  
|                     | Historical logs  
|                     | Alarms  
|                     | Sag and swell logs  
|                     | Harmonics logs  
|                     | Revenue logs  
|                     | Event logs  
|                     | GPS synchronisation  
| **Transmission rate** | <= 19200 bauds  
|                     | 10/100 Mbit/s  
|                     | 300…115200 bauds  
|                     | 57600 bauds  
| **Memory capacity** | 32 MB  
| **Web services** | Robust security logs  
|                     | Web server  
|                     | Port addressing user designed  
|                     | Alarm notification by e-mail  
| **Ethernet service** | Enable/disable Ethernet protocols  
|                     | SNMP-Traps and SYSLOG  
|                     | Enable/disable serial ports  

Tamperproof of settings Protected by access code

Compatibility code ION8650C

**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 61000-4-12
- 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**
Socket-mounted

**Mounting support**
Enclosure door

**Type of installation**
Indoor installation

**Overvoltage category**
III

**IP degree of protection**
<table>
<thead>
<tr>
<th>Component</th>
<th>Category</th>
</tr>
</thead>
<tbody>
<tr>
<td>Front face</td>
<td>IP65</td>
</tr>
<tr>
<td>Back</td>
<td>IP51</td>
</tr>
</tbody>
</table>

**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**
178 mm

**Depth**
237 mm

**Height**
178 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