M8650A0C0H6C7B1A
ION8650 meter 128MB, 9S/29S/36S,
120VAC/160VDC 60Hz, Full comm 3I+4O,
password

Main
Range PowerLogic
Device short name ION8650A
Product or component type Energy and power quality meter

Complementary
Power quality analysis 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

Device application
Tariff metering
Instrument transformer correction
Equipment monitoring and control
Demand and power factor control
Energy pulsing and totalisation
Co-generation and IPP monitoring
Load curtailment

Type of measurement
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

Supply voltage 120…277 V AC 47…63 Hz
<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Network frequency</td>
<td>60 Hz</td>
</tr>
<tr>
<td>Outlet standard</td>
<td>American</td>
</tr>
<tr>
<td>[In] rated current</td>
<td>5 A, 1 A, 2 A</td>
</tr>
<tr>
<td>Type of network</td>
<td>1P + N, 3P, 3P + N</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 transflective LCD</td>
</tr>
<tr>
<td>Form designation</td>
<td>9S 3-element 4, 36S 2½-element 4, 29S 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, TCP/IP at 300…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, ModernGate, EtherGate, 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, ModernGate, EtherGate</td>
</tr>
<tr>
<td>Time synchronisation protocol</td>
<td>iIRIG-B, GPS: Truetime/Datum</td>
</tr>
<tr>
<td>Data recording</td>
<td>Alarms, Transient logs, Revenue logs, Event logs, Data logs, Harmonics logs, Sag and swell logs, GPS synchronisation, Time stamping, Historical logs</td>
</tr>
<tr>
<td>Transmission rate</td>
<td>300…115200 bauds, 300…57600 bauds, 57600 bauds</td>
</tr>
</tbody>
</table>
### Memory capacity
128 MB

### Web services
- Port addressing user designed
- Alarm notification by e-mail
- Web server
- Robust security logs

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

### Tamperproof of settings
- Protected by access code
- Hardware lock by jumper

### 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 61000-4-12
- 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
- IP65 front face:
- IP51 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
- 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