

# Product data sheet

## Characteristics

# S8650A4C0H6E1B0A

ION8650 meter 128MB, FT21 panel,  
120VAC/160VDC 60Hz, Ethernet 3I+4O



## Main

Range	PowerLogic
Product name	PowerLogic ION8650
Device short name	ION8650A
Product or component type	Energy and power quality meter

## Complementary

Power quality analysis	<ul style="list-style-type: none"> <li>Harmonic distortion</li> <li>Programmability (logic and math functions)</li> <li>Voltage sag and swell detection</li> <li>Waveform capture</li> <li>Up to the 63rd harmonic</li> <li>Conforming to IEC 61000-4-30: class A power quality measurement</li> <li>Conforming to IEC 61000-4-15 flicker</li> <li>Magnitude harmonic up to the 50th</li> <li>Transient capture</li> <li>Conforming to EN 50160 compliance report</li> </ul>
Device application	<ul style="list-style-type: none"> <li>Instrument transformer correction</li> <li>Energy pulsing and totalisation</li> <li>Demand and power factor control</li> <li>Tariff metering</li> <li>Equipment monitoring and control</li> <li>Load curtailment</li> <li>Co-generation and IPP monitoring</li> </ul>
Type of measurement	<ul style="list-style-type: none"> <li>Power factor total</li> <li>Power factor per phase</li> <li>Apparent power total</li> <li>Apparent power per phase</li> <li>Active power total</li> <li>Active power per phase</li> <li>Reactive power total</li> <li>Reactive power per phase</li> <li>Current</li> <li>Voltage</li> <li>Frequency</li> </ul>
Supply voltage	<ul style="list-style-type: none"> <li>120...277 V AC 47...63 Hz</li> <li>120...480 V AC 47...63 Hz</li> <li>65...120 V AC 47...63 Hz</li> <li>80...160 V DC</li> </ul>
Network frequency	60 Hz
Outlet standard	American
Line Rated Current	<ul style="list-style-type: none"> <li>5 A</li> <li>1 A</li> <li>2 A</li> </ul>
Poles description	<ul style="list-style-type: none"> <li>1P + N</li> <li>3P</li> <li>3P + N</li> </ul>
Power consumption in VA	24 VA
Maximum power consumption in VA	33 VA
Display type	FSTN transreflective LCD

Form designation	36S 2½-element 4 9 3-element 4 35 2-element 3 29 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 62053-22 Class 0.2S energy conforming to IEC 62053-23 Class 0.2 energy conforming to ANSI C12.20
Number of outputs	2 pulse 4 form C relay output
Communication port protocol	TCP/IP at 10/100 Mbit/s DNP3 at 300...115200 bauds ION at 300...115200 bauds DLMS at 300...115200 bauds Modbus at 57600 bauds Ansi C12.18 at <= 19200 bauds DNP3 at 10/100 Mbit/s ION at 10/100 Mbit/s IEC 61850 ed. 2 at 10/100 Mbit/s Modbus RTU, master/slave at 300...115200 bauds Modbus TCP, master/slave at 10/100 Mbit/s EtherGate
Communication port support	RJ45: Ethernet SUB-D 9: RS485/RS232 Infrared Terminal block: RS485
Time synchronisation protocol	IRIG-B GPS: Truetime/Datum
Data recording	Sag and swell logs Time stamping Revenue logs Historical logs Transient logs GPS synchronisation Event logs Harmonics logs Alarms Data logs
Transmission rate	10/100 Mbit/s <= 19200 bauds 300...115200 bauds 57600 bauds
Memory capacity	128 MB
Web services	Web server Robust security logs Port addressing user designed Alarm notification by e-mail
Ethernet service	Enable/Disable serial ports SNMP-Traps and SYSLOG Enable/disable Ethernet protocols
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 Susceptibility to electromagnetic fields conforming to IEC 61000-4-3 Electrical fast transient/burst immunity test conforming to IEC 61000-4-4 1.2/50 µs shock waves immunity test conforming to IEC 61000-4-5 Conducted and radiated emissions B conforming to CISPR 22 Conducted RF disturbances conforming to IEC 61000-4-6 Immunity to impulse waves conforming to IEC 61000-4-12
Mounting mode	Flush-mounted
Enclosure type	FT21 switchboard
Type of installation	Indoor installation
Overvoltage category	III
IP degree of protection	IP30 back: IP50 front face:
Relative humidity	5...95 %
Pollution degree	2
Ambient air temperature for operation	-40...85 °C
Ambient air temperature for storage	-40...185 °F (-40...85 °C)
Operating altitude	0...9842.52 ft (0...3000 m)
Standards	ANSI C12.1 IEC 62052-11
Width	6.42 in (163 mm)
Maximum Depth	8.98 in (228 mm)
Height	11.22 in (285 mm)
Net Weight	15.43 lb(US) (7 kg)

## Ordering and shipping details

Category	09758 - POWERLOGIC ION 8650A HARDWARE
Discount Schedule	PM1S
Nbr. of units in pkg.	1
Package weight(Lbs)	1 lb(US) (0.45 kg)
Returnability	Yes

## Packing Units

Package 1 Height	11.42 in (29.000 cm)
Package 1 width	11.42 in (29.000 cm)
Package 1 Length	16.14 in (41.000 cm)

## Offer Sustainability

California proposition 65	WARNING: Cancer and Reproductive Harm - <a href="http://www.P65Warnings.ca.gov">www.P65Warnings.ca.gov</a>
EU RoHS Directive	Compliant <a href="#">EU RoHS Declaration</a>
Mercury free	Yes
RoHS exemption information	<a href="#">Yes</a>
China RoHS Regulation	<a href="#">China RoHS Declaration</a>
Environmental Disclosure	<a href="#">Product Environmental Profile</a>
Circularity Profile	<a href="#">End Of Life Information</a>
WEEE	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins.