

ION7650, wDispl, 5MB 1024s, 5A 240VAC/300VDC 50Hz - RS+T2 - 8I+3R+4O

M7650B1C0B6A0A1A

- Discontinued on: May 3, 2021
- ! To be end-of-service on: Mar 31, 2026

Main

Range	PowerLogic
Device Short Name	ION7650
Product Or Component Type	Energy and power quality meter

voltage sag and swell detection waveform capture compilance monitoring dip and swell, transient disturbance direction detection programmability (logic and math functions) setpoint learning up to the 63rd harmonic Device Application Demand and power factor control Co-generation and IPP monitoring Load curtailment Energy pulsing and totalisation Tariff metering Equipment monitoring and control Instrument transformer correction 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 total Reactive power per phase Reactive power total Reactive power total Reactive power per phase Reactive power total Reactive power per phase Supply Voltage 10300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz Type Of Network 3P 1P + N 3P + N Power Consumption In Va 45 VA Maximum Power Consumption In Va Display Resolution 320 x 240 pixels QVGA	Power Quality Analysis	harmonic distortion
waveform capture compliance monitoring dip and swell, transient disturbance direction detection programmability (logic and math functions) setpoint learning up to the 63rd harmonic Device Application Demand and power factor control Co-generation and IPP monitoring Load curtailment Energy pulsing and totalisation Tariff metering Equipment monitoring and control Instrument transformer correction Type Of Measurement Current Voltage Frequency Apparent power factor total Apparent power factor total Apparent power factor total Apparent power per phase Power factor per phase Active power total Active power total Reactive power total Reactive power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N Power Consumption In Va 20 VA Maximum Power Consumption In Va Journal Apparent Power Consumption In V	Tower Quality Finally old	
compliance monitoring dip and swell, transient disturbance direction detection programmability (logic and math functions) setto internation programmability (logic and math functions) setto internation up to the 63rd harmonic Device Application Demand and power factor control Co-generation and IPP monitoring Load curtailment Energy pulsing and totalisation Tariff metering Equipment monitoring and control Instrument transformer correction Type Of Measurement Current Voltage Frequency Apparent power total Power factor total Apparent power per phase Power factor per phase Active power per phase Active power per phase Reactive power total Reactive power per phase Reactive power total Reactive power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N Power Consumption In Va 45 VA Maximum Power Consumption In Va Display Resolution 320 x 240 pixels QVGA		
dip and swell, transient disturbance direction detection programmability (logic and math functions) setpoint learning up to the 63rd harmonic Device Application Demand and power factor control Co-generation and IPP monitoring Load curtailment Energy pulsing and totalisation Tariff metering Equipment monitoring and control Instrument transformer correction Type Of Measurement Current Voltage Frequency Apparent power factor total Apparent power factor total Apparent power factor total Apparent power factor per phase Active power per phase Reactive power total Reactive power per phase Active power per phase Reactive power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N Power Consumption In Va 20 VA Maximum Power Consumption In Va Va Display Resolution 320 x 240 pixels QVGA		·
disturbance direction detection programmability (logic and math functions) setpoint learning up to the 63rd harmonic Device Application Demand and power factor control Co-generation and IPP monitoring Load curtaliment Energy pulsing and totalisation Tariff metering Equipment monitoring and control Instrument transformer correction Type Of Measurement Current Voltage Frequency Apparent power total Power factor total Apparent power per phase Active power per phase Power factor per phase Reactive power total Reactive power per phase Reactive power total Reactive power per phase Reactive power per phase Reactive power total Reactive power total Reactive power total Reactive power per phase Reactive power per phase Reactive power total Reactive power per phase Reacti		, and the second
programmability (logic and math functions) setpoint learning up to the 63rd harmonic Dewice Application Demand and power factor control Co-generation and IPP monitoring Load curtailment Energy pulsing and totalisation Tariff metering Equipment monitoring and control Instrument transformer correction Type Of Measurement Current Voltage Frequency Apparent power total Power factor total Apparent power per phase Power factor per phase Active power total Reactive powe		·
Setpoint learning up to the 63rd harmonic Device Application Demand and power factor control Co-generation and IPP monitoring Load curtailment Energy pulsing and totalisation Tariff metering Equipment monitoring and control Instrument transformer correction Type Of Measurement Current Voltage Frequency Apparent power total Power factor total Apparent power per phase Active power per phase Active power total Active power total Reactive power total Reactive power per phase Reactive power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N Power Consumption In Va 20 VA Maximum Power Consumption In 45 VA Maximum Power Consumption In 45 VA Display Resolution 320 x 240 pixels QVGA		
up to the 63rd harmonic Device Application Demand and power factor control Co-generation and IPP monitoring Load curtailment Energy pulsing and totalisation Tariff metering Equipment monitoring and control Instrument transformer correction Type Of Measurement Current Voltage Frequency Apparent power total Power factor total Apparent power per phase Power factor per phase Active power per phase Reactive power total Reactive power per phase Reactive power per phase Reactive power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N Power Consumption In Va 20 VA Maximum Power Consumption In Va Display Resolution 320 x 240 pixels QVGA		, , , , , , , , , , , , , , , , , , , ,
Device Application Demand and power factor control Co-generation and IPP monitoring Load curtailment Energy pulsing and totalisation Tariff metering Equipment monitoring and control Instrument transformer correction Type Of Measurement Current Voltage Frequency Apparent power total Power factor total Apparent power prhase Power factor per phase Active power total Active power total Active power total Reactive power Act		· · · · · · · · · · · · · · · · · · ·
Co-generation and IPP monitoring Load curtailment Energy pulsing and totalisation Tariff metering Equipment monitoring and control Instrument transformer correction Type Of Measurement Current Voltage Frequency Apparent power total Power factor total Apparent power per phase Active power per phase Active power total Reactive power total Reactive power total Reactive power per phase Reactive power per phase Reactive power per phase Reactive power total Reactive powe		up to the cord harmonic
Load curtailment Energy pulsing and totalisation Tariff metering Equipment monitoring and control Instrument transformer correction 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 total Reactive power total Reactive power per phase Reactive power per phase Reactive power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N 3P + N Power Consumption In Va 45 VA Maximum Power Consumption In Va Display Resolution 320 x 240 pixels QVGA	Device Application	•
Energy pulsing and totalisation Tariff metering Equipment monitoring and control Instrument transformer correction Type Of Measurement Current Voltage Frequency Apparent power total Power factor total Apparent power per phase Active power per phase Active power total Reactive power total Reactive power total Reactive power total Reactive power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N Power Consumption In Va 20 VA Maximum Power Consumption In Va Display Resolution 320 x 240 pixels QVGA		Co-generation and IPP monitoring
Tariff metering Equipment monitoring and control Instrument transformer correction Type Of Measurement Current Voltage Frequency Apparent power total Power factor per phase Power factor per phase Active power total Active power total Reactive power Active power total Reactive power total Reactive power Active power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N Power Consumption In Va 20 VA Maximum Power Consumption In Va Display Resolution 320 x 240 pixels QVGA		Load curtailment
Equipment monitoring and control Instrument transformer correction Type Of Measurement Current Voltage Frequency Apparent power total Power factor total Apparent power per phase Power factor per phase Active power per phase Active power total Active power per phase Reactive power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N Power Consumption In Va 20 VA Maximum Power Consumption In Va Display Resolution 320 x 240 pixels QVGA		Energy pulsing and totalisation
Instrument transformer correction Type Of Measurement Current Voltage Frequency Apparent power total Power factor total Apparent power per phase Power factor per phase Active power per phase Reactive power total Reactive power per phase Reactive power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N Power Consumption In Va Maximum Power Consumption In Va Display Resolution Current Voltage Frequency Apparent Power total Reactive power per phase 8upply Voltage 110300 V DC 85240 V AC 4763 Hz Power Consumption In Va 3P 1P + N 3P + N Power Consumption In Va 30 V A		· · · · · · · · · · · · · · · · · · ·
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 total Active power total Reactive power per phase Reactive power per phase Reactive power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N Power Consumption In Va Maximum Power Consumption In Va Display Resolution Current Voltage Frequency Apparent power total Reactive power per phase Active power per phase Reactive power per phase 84 Active power per phase Reactive pow		
Voltage Frequency Apparent power total Power factor total Apparent power per phase Power factor per phase Power factor per phase Active power total Active power per phase Reactive power per phase Reactive power per phase Reactive power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N Power Consumption In Va 20 VA Maximum Power Consumption In Va Display Resolution 320 x 240 pixels QVGA		Instrument transformer correction
Frequency Apparent power total Power factor total Apparent power per phase Power factor per phase Power factor per phase Active power total Active power total Active power total Active power per phase Reactive power total Reactive power per phase Reactive power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N Power Consumption In Va 20 VA Maximum Power Consumption In Va Display Resolution 320 x 240 pixels QVGA	Type Of Measurement	Current
Frequency Apparent power total Power factor total Apparent power per phase Power factor per phase Power factor per phase Active power total Active power total Active power total Active power per phase Reactive power total Reactive power per phase Reactive power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N Power Consumption In Va 20 VA Maximum Power Consumption In Va Display Resolution 320 x 240 pixels QVGA	-	Voltage
Apparent power total Power factor total Apparent power per phase Power factor per phase Power factor per phase Active power total Active power per phase Reactive power total Reactive power per phase Reactive power per phase Reactive power per phase Reactive power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N Power Consumption In Va 20 VA Maximum Power Consumption In Va Display Resolution 320 x 240 pixels QVGA		•
Power factor total Apparent power per phase Power factor per phase Power factor per phase Active power total Active power total Active power total Reactive power per phase Reactive power per phase Reactive power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N Power Consumption In Va 20 VA Maximum Power Consumption In Va Display Resolution 320 x 240 pixels QVGA		· · ·
Apparent power per phase Power factor per phase Active power total Active power total Active power total Reactive power total Reactive power per phase Reactive power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N Power Consumption In Va 20 VA Maximum Power Consumption In Va Display Resolution 320 x 240 pixels QVGA		· · · · ·
Power factor per phase Active power total Active power per phase Reactive power per phase Reactive power per phase Reactive power per phase Reactive power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N Power Consumption In Va 20 VA Maximum Power Consumption In Va Va Display Resolution 320 x 240 pixels QVGA		
Active power total Active power per phase Reactive power per phase Reactive power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N Power Consumption In Va 20 VA Maximum Power Consumption In Va Display Resolution Active power total Active power per phase Reactive power per phase Reactive power per phase Reactive power per phase Reactive power total Reactive pow		
Active power per phase Reactive power total Reactive power per phase Supply Voltage 110300 V DC 85240 V AC 4763 Hz Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P 1P + N 3P + N Power Consumption In Va 20 VA Maximum Power Consumption In Va 120 VA Maximum Power Consumption In Va 320 x 240 pixels QVGA		· ·
Reactive power total Reactive power per phase		·
Reactive power per phase		
85240 V AC 4763 Hz		·
85240 V AC 4763 Hz	Sumply Voltage	440 000 V DO
Network Frequency 60 Hz [In] Rated Current 5 A Type Of Network 3P	Supply voltage	
[In] Rated Current 5 A Type Of Network 3P		85240 V AC 4763 Hz
Type Of Network 3P 1P + N 3P + N Power Consumption In Va 20 VA Maximum Power Consumption In 45 VA Va Display Resolution 320 x 240 pixels QVGA	Network Frequency	60 Hz
1P + N 3P + N Power Consumption In Va 20 VA Maximum Power Consumption In 45 VA Va Display Resolution 320 x 240 pixels QVGA	[In] Rated Current	5 A
3P + N Power Consumption In Va 20 VA Maximum Power Consumption In 45 VA Va Display Resolution 320 x 240 pixels QVGA	Type Of Network	3P
Power Consumption In Va 20 VA Maximum Power Consumption In 45 VA Va Display Resolution 320 x 240 pixels QVGA		1P + N
Maximum Power Consumption In 45 VA Va Display Resolution 320 x 240 pixels QVGA		3P + N
Va Display Resolution 320 x 240 pixels QVGA	Power Consumption In Va	20 VA
Display Resolution 320 x 240 pixels QVGA		45 VA
Display Type Backlif I CD		320 x 240 pixels QVGA
	Display Type	Backlit LCD

Sampling Rate	1024 samples/cycle
Measurement Current	05 A
Input Type	Current 0.00520 A (impedance 0.002 Ohm)
Measurement Voltage	100600 V AC phase to phase 57347 V AC phase to neutral
Frequency Measurement Range	4269 Hz
Number Of Inputs	8 digital 120 V DC
Measurement Accuracy	Current 0.1 % 15 A Voltage 0.1 % 57288 V Energy 0.2 %
Accuracy Class	Class 0.2S energy conforming to IEC 62053-22
Number Of Outputs	3 relay 4 solid state
Communication Port Protocol	Telnet DNP3 at <= 115.2 kbits/s ION at <= 115.2 kbits/s Modbus at <= 115.2 kbits/s Modbus, master
Communication Port Support	RS485 SUB-D 9: RS485/RS232 Infrared
Data Recording	Trending/forecasting Event logs Time stamping GPS synchronisation Data logs Sequence of event recording Min/max of instantaneous values
Transmission Rate	<= 19200 bauds 300115200 bauds 30057600 bauds
Memory Capacity	10 MB
Web Services	Web server
Tamperproof Of Settings	Protected by access code Hardware lock by jumper
Compatibility Code	ION7650
Environment	
Electromagnetic Compatibility	Electrical fast transient/burst immunity test conforming to IEC 61000-4-4 Electrostatic discharge conforming to IEC 61000-4-2 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
Mounting Support	Enclosure door
Type Of Installation	Indoor installation
Overvoltage Category	III
Ip Degree Of Protection	IP30 back: conforming to IEC 60529 IP50 front face: conforming to IEC 60529
Relative Humidity	595 %
Pollution Degree	2

-20...70 °C

Ambient Air Temperature For Operation

Ambient Air Temperature For Storage	-4085 °C
Operating Altitude	02000 m
Standards	IEC 61010-1
Width	192 mm
Depth	174 mm
Height	192 mm
Net Weight	1.9 kg

Packing Units

Unit Type Of Package 1	PCE
Number Of Units In Package 1	1
Package 1 Weight	0.001 g

Sustainability

Green PremiumTM label is Schneider Electric's commitment to delivering products with best-inclass environmental performance. Green Premium promises compliance with the latest regulations, transparency on environmental impacts, as well as circular and low-CO₂ products.

Guide to assessing product sustainability is a white paper that clarifies global eco-label standards and how to interpret environmental declarations.

Learn more about Green Premium >

Guide to assess a product's sustainability >

Eu Rohs Directive	Compliant
	EU RoHS Declaration
China Rohs Regulation	China RoHS declaration
Weee	The product must be disposed on European Union markets following specific waste collection and never end up in rubbish bins
California Proposition 65	WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov