Marine DC / AC NMEA2000®
Current Sensors Data Sheet

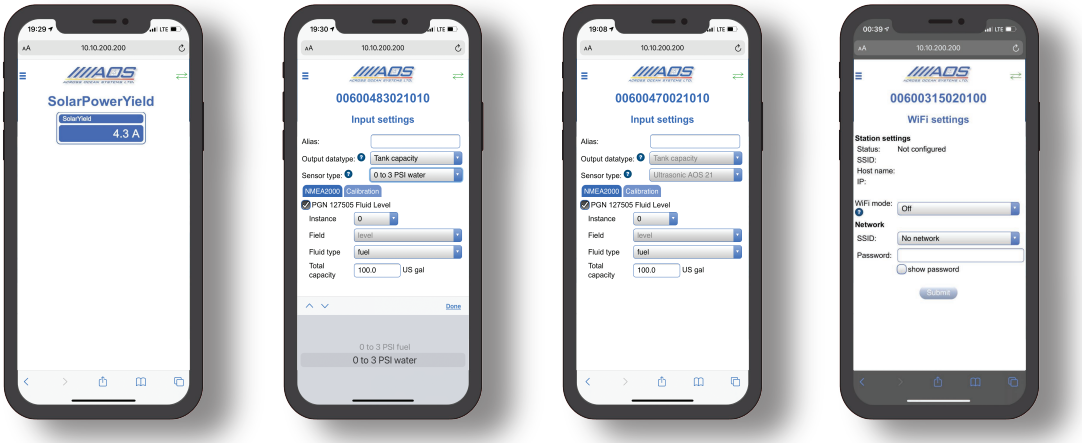
Across Ocean Systems Ltd. offers a broad range of digital non-intrusive current measuring sensors. The advantage of this type of current sensors is that they do not interrupt hight current circuits, therefore there is no danger of the connections heating up and burning as seen on many DC shunt based systems. Another advantage is that our sensor can be used not only for direct current (DC) measurement, but also for alternating current (AC) measurement. If during use, the current exceeds the sensor's rated current, the sensor will not overheat and create critical situations as observed with shunt type current sensors in overload mode.



⚠WARNING

As the unit might need to be installed in AC Mains cabinet/compartment, while the installation is extremely simple, we recommend using certified electrician. All local regulations and electrical code must be followed!

All AOS Ltd. NMEA 2000® Digital Sensors have our standard Wi-Fi configuration interface that allows configuration directly from your iPhone / Android mobile phone, as well as from a PC or MAC computer. Using Chrome web browser is preferable. In the configuration pages, one can name the sensor, change the senor instance as well as modify other sensor settings. Appropriate single or multiple output PGNs can be also selected, as some sensors support an output of multiple PGNs for the data they represents. Multi channel modules can output the same or different type PGNs for each channel. Where applicable simple multi-point calibration is available e. g. for calibration of tank level sensors.

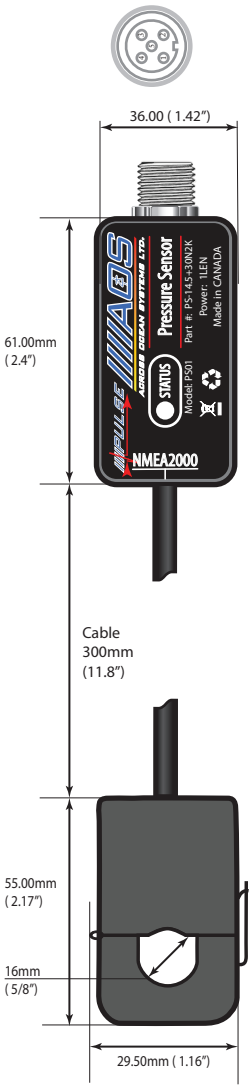


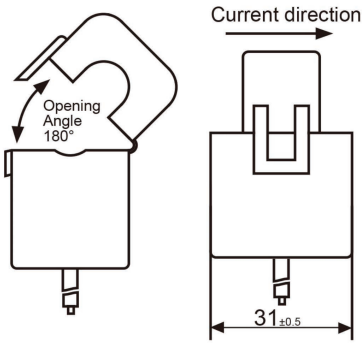
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Specifications

M12
NMEA2000
Male (pin) connector





Working Current

Parameter	Part Number	Value	Resolution	Comment
Current Range	CS-0-10-N2K	+/- 10 Amp	< 0.05 Amp	DC or AC current
	CS-0-20-N2K	+/- 20 Amp	< 0.1 Amp	DC or AC current
	CS-0-30-N2K	+/- 50 Amp	< 0.25 Amp	DC or AC current
	CS-0-100-N2K	+/- 100 Amp	< 0.5 Amp	DC or AC current
	CS-0-200-N2K	+/- 200 Amp	< 1.0 Amp	DC or AC current
Accuracy	All	+/- 1 %	Based on sensor's full working range	

Electrical

Parameter	Value	Comment
NMEA 2000® Operating Voltage	9 VDC to 32 VDC	Powered via NMEA 2000® port
NMEA 2000®Power Consumption	< 50 mA / 100* mA	*When Wi-Fi is enabled for configuration
NMEA 2000® LEN	1 LEN / 2 LEN config	NMEA 2000® Spec. (1 LEN = 50 mA)
NMEA 2000® Reverse Polarity	Protected	Indefinite

NMEA 2000®

Parameter	PGN	Name	Update rate
System PGNs	059392	ISO Acknowledgment	
	059904	ISO Request	
	060160	ISO Transport Protocol, Data Transfer	
	060416	ISO Transport Protocol, Conn Management	
	060928	ISO Address Claim	
	065240	ISO Commanded Address	
	126208	NMEA Request/ Command/ Acknowledge	
	126464	PGN List - Transmit PGNs group function	
	126993	Heartbeat	60 sec
	126996	Product information	
	126998	Configuration information	
Data PGNs	127508	Battery status	1.5 sec

Mechanical and Environmental

Parameter	Value	Comment
NMEA 2000® Box	36mm X 61mm X 26mm (1.42" X 2.4" X 1.1")	Without the M12 Connector
Cable	300mm (11.8")	Cable length may vary
Current Sensor	55mm X 29.5mm X 31mm (2.17" X 1.16" X 1.22")	In closed position
Weight	248g (8.9 oz)	
Operational / Storage Temp	-30 °C to +60 °C (-22 °F to +140 °F) -40 °C to +70 °C (-40 °F to +158 °F)	
Operational Humidity	90%	Non Condensing
IP Rating	IP66 / IP64	NMEA 2000® Box / Current Sensor

NMEA 2000® Level A certified

Standards Compliance

Across Ocean System's devices are NMEA 2000® Level A certified and designed to comply with the most stringent marine standards such as IEC 60945 and IEC 61162-3, as well as the European CE standard - Electromagnetic Compatibility section.

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