ACM100 *Alternating Current Monitor*

Maretron's ACM100 is a device which monitors AC power sources and outputs information about these sources onto the industry standard NMEA 2000® marine data network. ACM100 output information is then displayed with networked NMEA 2000® equipment such as the Maretron DSM250 dedicated display or with NMEA 2000® compatible software such as Maretron N2KView®.

Products

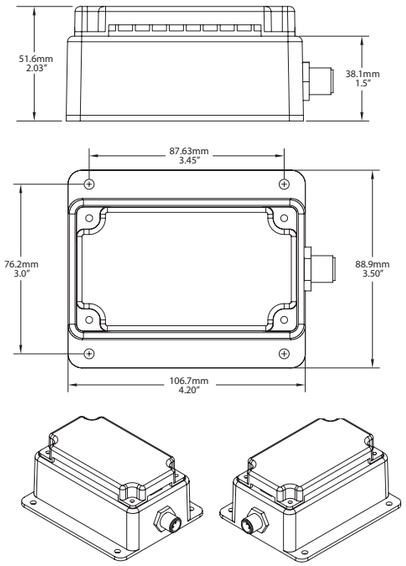
PART NUMBER	DESCRIPTION
ACM100-01	Alternating Current (AC) Monitor
M000630	100 Amp AC Transducer with Cable
M000612	400 Amp AC Transducer with Cable

The following accessories are available for the ACM100:

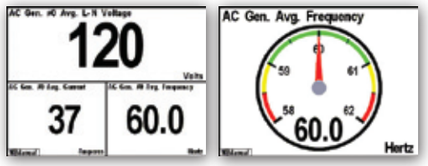
M000630

M000612

- NMEA 2000® Interface
- Waterproof Connectors
- Sealed Waterproof Enclosure
- Opto-Isolated from NMEA 2000® Eliminating Potential Ground Loops
- Monitoring of busses carrying AC power and transmitting:
  - Voltage
  - Frequency
- Monitoring AC Power Sources such as Utilities and Generators and transmitting:
  - Voltage
  - Current
  - Frequency
  - Real Power
  - Reactive Power
  - Apparent Power
  - Power Factor
  - Total Energy Imported
  - Total Energy Exported



N2KView Screen



DSM250 Screen Shots

Specifications

Certifications

Parameter	Value	Comment
Measurement Voltage Range	0 to 240VAC	AC Voltage
Measurement Voltage Accuracy	± 1%	0 to 240 VAC
Measurement Current Range	0 to 200A	With included current transformer
Measurement Current Accuracy	± 1%	With included current transformer

Standard	Comment
NMEA 2000® Standard	Level A
Maritime Navigation and Radio Communication Equipment & Systems	IEC 61162-3
Maritime Navigation and Radio Communication Equipment & Systems	IEC 60945
FCC and CE mark	Electromagnetic Compatibility

NMEA 2000® Parameter Group Numbers (PGNs)

Description	PGN #	PGN Name	Default Rate
Periodic Data PGNs	65001	Bus #1 Phase C Basic AC Quantities	10 times/second
	65002	Bus #1 Phase B Basic AC Quantities	10 times/second
	65003	Bus #1 Phase A Basic AC Quantities	10 times/second
	65004	Bus #1 Average Basic AC Quantities	10 times/second
	65005	Utility Total AC Energy	10 times/second
	65006	Utility Phase C AC Reactive Power	10 times/second
	65007	Utility Phase C AC Power	10 times/second
	65008	Utility Phase C AC Basic Quantities	10 times/second
	65009	Utility Phase B AC Reactive Power	10 times/second
	65010	Utility Phase B AC Power	10 times/second
	65011	Utility Phase B AC Basic Quantities	10 times/second
	65012	Utility Phase A AC Reactive Power	10 times/second
	65013	Utility Phase A AC Power	10 times/second
	65014	Utility Phase A AC Basic Quantities	10 times/second
	65015	Utility Total AC Reactive Power	10 times/second
	65016	Utility Total AC Power	10 times/second
	65017	Utility Average Basic AC Quantities	10 times/second
	65018	Generator Total AC Energy	10 times/second
	65019	Generator Phase C AC Reactive Power	10 times/second
	65020	Generator Phase C AC Power	10 times/second
	65021	Generator Phase C AC Basic Quantities	10 times/second
	65022	Generator Phase B AC Reactive Power	10 times/second
	65023	Generator Phase B AC Power	10 times/second
	65024	Generator Phase B AC Basic Quantities	10 times/second
	65025	Generator Phase A AC Reactive Power	10 times/second
	65026	Generator Phase A AC Power	10 times/second
	65027	Generator Phase A AC Basic Quantities	10 times/second
	65028	Generator Total AC Reactive Power	10 times/second
	65029	Generator Total AC Power	10 times/second
	65030	Generator Average Basic AC Quantities	10 times/second
Response to Requested PGNs	126464	PGN List (Transmit and Receive)	N/A
	126996	Product Information	N/A
	126998	Configuration Information	N/A
Protocol PGNs	059392	ISO Acknowledge	N/A
	059904	ISO Request	N/A
	060928	ISO Address Claim	N/A
	065240	ISO Address Command	N/A
	126208	NMEA	N/A
Maretron Proprietary PGNs	128720	Configuration	N/A

Electrical

Parameter	Value	Comment
Operating Voltage	9 to 32 Volts	DC Voltage
Power Consumption	100 mA	NMEA 2000®v Interface
Load Equivalence Number (LEN)	2	NMEA 2000® Spec. (1LEN = 50 mA)
Reverse Battery Protection	Yes	Indefinitely
Load Dump Protection	Yes	Energy Rated per SAE J1113

Mechanical

Parameter	Value	Comment
Size	3.50" x 4.20" x 2.03" (88.9mm x 106.7mm x 51.6mm)	Excluding NMEA 2000® Connector & Cable
Weight	13 oz. (368.5 g)	

Environmental

Parameter	Value
IEC 60945 Classification	Exposed
Degree of Protection	IP64
Operating Temperature	-25°C to 55°C
Storage Temperature	-40°C to 70°C
Relative Humidity	93%RH @40° per IEC60945-8.2
Vibration	2-13.2Hz @ ±1mm, 13.2-100Hz @ 7m/s² per IEC 60945-8.7
Solar Radiation	Ultraviolet B, A, Visible, and Infrared per IEC 60945-8.10
Corrosion (Salt Mist)	4 times 7days @ 40°C, 95%RH after 2 hour Salt Spray Per IEC 60945-8.12
Electromagnetic Emission	Conducted and Radiated Emission per IEC 60945-9
Electromagnetic Immunity	Conducted, Radiated, Supply, and ESD per IEC 60945-10
Safety Precautions	Dangerous Voltage, Electromagnetic Radio Frequency per IEC 60945-12