

ACM100

Alternating Current Monitor

The ACM100 is a device that 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 DSM Series dedicated displays or with NMEA 2000 compatible software such as Maretron N2KView®.



Available accessories for the ACM100:



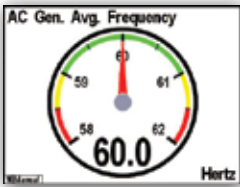
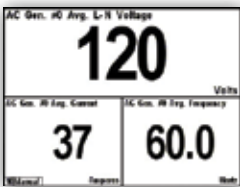
M000630



M000612



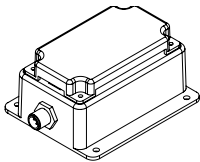
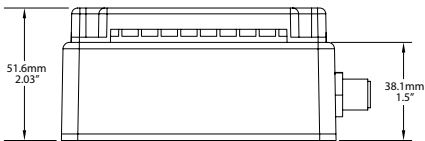
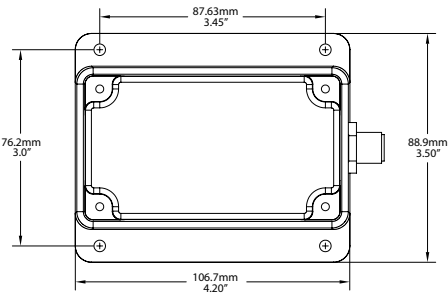
N2KView® Screen



DSM Series Screen Shots

Product Features

- NMEA 2000® Interface
- Waterproof connectors
- Sealed waterproof enclosure
- Single phase, split phase or 3-phase AC Sources
- 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



PRODUCTS

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

SPECIFICATIONS

PARAMETER	VALUE	COMMENT
Measurement Capabilities		Single Phase 120, 208, 230, 240
		Split Phase 120/240
		3-Phase Delta 208, 230, 400, 480, 600
		3-Phase Wye 208Y/120, 400Y/230, 415Y/240, 480Y/277, 600Y/347
		Delta with Wild Phase 120/208/240
		Corner Grounded Delta 120/208/240
Measurement Voltage Range	0-380 VAC	Line-to-Neutral
Measurement Voltage Accuracy	±1%	
Measurement Current Range	0-100 A	With included current transducer (0 to 400A with optional transducer)
Measurement Current Accuracy	±1%	With included current transducer
Measurement Frequency Range	30-80Hz	
Measurement Frequency Accuracy	0.5Hz	Typical

NMEA 2000® PARAMETER GROUP NUMBERS (PGNs)

DESCRIPTION	PGN#	PGN NAME	DEFAULT RATE
Periodic Data PGNs	65001-65003	Bus Phase A-C Basic AC Quantities	Disabled
	65004	Bus Average Basic AC Quantities	2 times/second
	65005	Utility Total AC Energy	2 times/second
	65006-65014	Utility Phase A-C Power and Basic Quantities	Disabled
	65015	Utility Total AC Reactive Power	2 times/second
	65016	Utility Total AC Power	2 times/second
	65017	Utility Average Basic AC Quantities	2 times/second
	65018	Generator Total AC Energy	2 times/second
	65019-65027	Generator Phase A-C Power and Basic Quantities	Disabled
	65028	Generator Total AC Reactive Power	2 times/second
	65029	Generator Total AC Power	2 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 Request/Command/Acknowledge	N/A
Maretron Proprietary PGNs	126720	Device Configuration Information	N/A
	130818	Device Label	N/A

ELECTRICAL

PARAMETER	VALUE	COMMENT
Operating Voltage	9 to 32 Volts	DC Voltage
Power Consumption	50mA	NMEA 2000® Interface
Load Equivalence Number (LEN)	1	NMEA 2000® Spec. (1LEN = 50mA)
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
Rain and Spray	12.5mm Nozzle @ 100liters/min from 3m for 30min per IEC 60945-8.8
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

CERTIFICATIONS

PARAMETER	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