

J2K100 *J1939 to NMEA 2000® Gateway*

Maretron's J2K100 attaches directly into J1939 networks of compatible engines, transmissions, and gensets and converts the J1939 data to the new marine digital interface (NMEA 2000®). Critical engine, transmission, and genset data is then distributed throughout the vessel over a single cable where it can be monitored by any NMEA 2000® compatible display.

The J2K100 can also be used as part of a complete fuel computer. Simply connect the J2K100 together with Maretron universal displays (DSM200/DSM250/N2KView®) and GPS antenna/receiver (GPS100) and you have a system capable of displaying gallons per hour and/or miles per gallon.



Products

| PART NUMBER | DESCRIPTION |
|---------------|--|
| J2K100-01 | J1939 to NMEA 2000® Gateway |
| MCF-2M-D4 | J2K100 adapter Micro female to Deutsche 4 Pin 2 Meter Cordset |
| CF-2M-D12 | J2K100 adapter Micro female to Deutsche 12 Pin 2 Meter Cordset |
| MCF-2M-D12CAT | J2K100 adapter Micro female to Deutsche 12 Pin 2 T cable |

The J2K100 converts the following information:

- AC Generator Current
- AC Generator Frequency
- AC Generator Voltage
- Tachometer
- Engine Hours
- Coolant Pressure
- Coolant Water Temperature
- Engine Oil Pressure
- Engine Oil Temperature
- Boost Pressure
- Fuel Rate Monitoring
- Charging Voltage
- Percent Engine Load
- Percent Engine Torque
- Rated Engine Speed
- VIN
- Software ID
- Transmission Gear
- Transmission Oil Pressure
- Transmission Oil Temperature



The J2K100 is compatible with any engine, transmission, or genset equipped with a J1939 interface, including products from the following manufacturers:

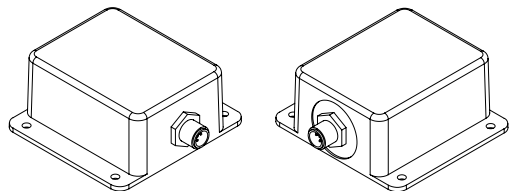
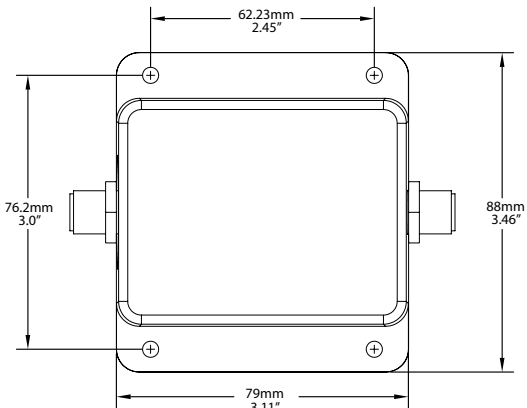
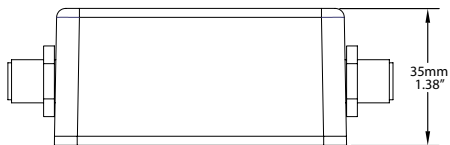
- Caterpillar
- Cummins
- Detroit Diesel
- John Deere
- Kohler
- Northern Lights
- Onan
- Perkins
- Steyr
- Volvo Penta
- Yanmar

Specifications (J1939 Data Translated to NMEA 2000® Data)

Certifications

NMEA 2000® Parameter Group Numbers (PGNs)

Environmental Mechanical Electrical



| J1939 SPN/PGN | Description | NMEA 2000® PGN |
|---------------|--------------------------------------|----------------|
| 190 / 61444 | Engine Speed | 127488 |
| 102 / 65270 | Engine Turbocharger Boost Pressure | 127488 |
| 100 / 65263 | Engine Oil Pressure | 127489 |
| 175 / 65262 | Engine Oil Temperature 1 | 127489 |
| 110 / 65262 | Engine Coolant Temperature | 127489 |
| 167 / 65271 | Alternator Potential (Voltage) | 127489 |
| 183 / 65266 | Engine Fuel Rate | 127489 |
| 247 / 65253 | Engine Total Hours of Operation | 127489 |
| 109 / 65263 | Engine Coolant Pressure | 127489 |
| 94 / 65263 | Engine Fuel Delivery Pressure | 127489 |
| 92 / 61443 | Engine Percent Load at Current Speed | 127489 |
| 513 / 61444 | Actual Engine – Percent Torque | 127489 |
| 189 / 65214 | Engine Rated Speed | 127498 |
| 237 / 65260 | Vehicle Identification Number | 127498 |
| 234 / 65242 | Software Identification | 127498 |
| 523 / 61445 | Transmission Current Gear | 127493 |
| 127 / 65272 | Transmission Oil Pressure | 127493 |
| 177 / 65272 | Transmission Oil Temperature | 127493 |

| Standard | Comment |
|---|-------------------------------|
| NMEA 2000® Standard | Level B+ |
| 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 |

| Description | PGN # | PGN Name | Default Rate |
|---------------------------|------------------------------|---|-----------------|
| Periodic Data PGNs | 127488 | Engine Parameters, Rapid Update | 10 times/second |
| | 127489 | Engine Parameters, Dynamic | 1 time/second |
| | 127498 | Engine Parameters, Static | N/A |
| | 127493 | Transmission Parameters, Dynamic | 10 times/second |
| | 65030 | J1939 Generator Average Basic AC Quantities | 10 times/second |
| | 65226 | J1939 Diagnostic Message #1 | N/A |
| | 65227 | J1939 Diagnostic Message #2 | N/A |
| | 65228 | J1939 Diagnostic Message #3 | N/A |
| | 65229 | J1939 Diagnostic Message #4 | N/A |
| | 65230 | J1939 Diagnostic Message #5 | N/A |
| | 65231 | J1939 Diagnostic Message #6 | N/A |
| | 65232 | J1939 Diagnostic Message #8 | N/A |
| 65234 | J1939 Diagnostic Message #10 | N/A | |
| 65235 | J1939 Diagnostic Message #11 | N/A | |
| 65236 | J1939 Diagnostic Message #12 | N/A | |
| Response to Request 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 | Configuration | N/A |

| Parameter | Value | Comment |
|-------------------------------|---------------|---------------------------------|
| Operating Voltage | 9 to 16 Volts | DC Voltage |
| Power Consumption | <150mA | Average Current Drain |
| Load Equivalence Number (LEN) | 3 | NMEA 2000® Spec. (1LEN = 50 mA) |
| Reverse Battery Protection | Yes | Indefinitely |
| Load Dump Protection | Yes | Energy Rated per SAE J1113 |

| Parameter | Value | Comment |
|-----------|--|--------------------------------|
| Size | 3.11" x 3.46" x 1.38" (79mm x 88mm x 35mm) | Including Flanges For Mounting |
| Weight | 8 oz. (227 g) | |

| Parameter | Value |
|--------------------------|--|
| IEC 60945 Classification | Exposed |
| Degree of Protection | IP67 |
| 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 |



DSM250/DSM200 Screen Shots

