Make Sense!

• **TRUE parallel 18 channel GPS receiver**
• **WAAS and EGNOS ready**
• **Seamless precise positioning anywhere, anytime**

**FEATURES**

• The TRUE 18 channel parallel receiver provides precise and quick positioning at any time.
• WAAS and EGNOS ready – The satellite based positioning correction system will be fully operated within a few years time. The systems called WAAS (USA) and EGNOS (EU) are in trial phase which services are broadcast now. The GPS-20A is ready for receiving the seamless correction signals provided from these systems.
• NMEA 0183 interface with provision for external RTCM SC-104 differential corrections.
• The NMEA output supplied as standard, providing highly accurate positioning and navigation data to externally connected equipment such as a radar, plotter, sounder, DSC VHF, etc.
**SPECIFICATIONS**

- **Receiving frequency**: 1575.42 MHz ± 1 MHz
- **Receiving channel**: Parallel 18 channel
- **Sensitivity**: Better than -130 dBm
- **Accuracy (PDOP ≤ 3)**
  - **Position**: Better than 10 m (2DRMS, SA=OFF, PDOP≤3)
  - **DGPS**: Better than 8 m (2DRMS, SA=OFF, PDOP≤3)
- **Velocity**: Better than 1 m/sec (RMS, SA=OFF)
- **Dynamics**
  - **Velocity**: Less than 350 km/h
  - **Acceleration**: Less than 1 G
- **Position update time**: Every 1 second
- **Time to position fix**
  - **Cold start**: 50 seconds (typical)
  - **Warm start**: 45 seconds (typical)
  - **Hot start**: 20 seconds (typical)
- **Initial position data**: Not necessary
- **Almanac and time data**: Not necessary
- **Differential Receiver input**: SBAS (WAAS, MSAS, EGNOS)
- **GPS External input**: RTCM SC-104
- **Power supply**
  - **Voltage**: 10.8 to 31.2 VDC
  - **Consumption**: Less than 1.3 W
- **Temperature**
  - **Operation**: -25°C to +55°C
  - **Storage**: -40°C to +85°C
- **Data communication**: Asynchronous data communication with RS-422
- **Input data**: DGPS, RTCM SC-104, Baud rate: 4800
- **Output data**
  - **Format**: NMEA 0183 Ver. 2.0 (NOTE: Ver. 1.5 is available on option basis)
  - **Sentence**: GGA, GLL, VTG, ZDA, PKODA, PKODG1, PKODG7, GSA, GSV
  - **Data level**: RS-422
  - **Output current**: 40 mA maximum

**DIMENSIONS AND WEIGHT**

- **Weight**: 0.6 kg (1.3 lb)

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**EQUIPMENT LIST**

### Standard equipment

<table>
<thead>
<tr>
<th>Equipment</th>
<th>Description</th>
<th>Quantity</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPS sensor</td>
<td>GPS-20A With 10 m cable</td>
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<tr>
<td>Installation manual</td>
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</table>

### Options

<table>
<thead>
<tr>
<th>Option</th>
<th>Connector</th>
<th>Description</th>
<th>Quantity</th>
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<tbody>
<tr>
<td>Connector 1005</td>
<td>1005</td>
<td>5-Pin</td>
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<td>Connector 1006</td>
<td>1006</td>
<td>6-Pin</td>
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<tr>
<td>Connector LTWBD-06BFFA-L180</td>
<td>LTWBD-06BFFA-L180</td>
<td>6-Pin waterproof connector</td>
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<td>Connector HDEB-9S</td>
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<td>D-sub 9-Pin</td>
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<td>Connector HDE-CTF</td>
<td>HDE-CTF</td>
<td>Plug case</td>
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<td>Hose band 738-1015</td>
<td>738-1015</td>
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<td>2</td>
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</tbody>
</table>

**CONNECTIONS**

- **GPS-20A**
  - 10.8 to 31.2 VDC
  - Chart Plotter
  - Echo Sounder
  - Marine Radar
  - Solid lines: Standard devices and connections.

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**Safety precaution**

To ensure proper and safe use of the equipment, please carefully read and follow the instructions in the Operation Manual.

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