CCM Marine portable

multi cylinder combustion monitoring system for Marine Diesel Engines

The CCM Marine portable is a comprehensive system which can be rapidly installed on-site to enable acquisition of cylinder pressure data on 2- and 4-stroke Marine Diesel Engines.

Characteristics

- Optimise performance
- Advanced engine balancing
- Save fuel
- Reduce emissions
- Event recording of last 40 pressure cycles

Application:

- 4 stroke Diesel engines 350…1800 RPM
- 2 stroke Diesel engines 50…900 RPM

Technical data

<table>
<thead>
<tr>
<th>CCM portable</th>
<th>Max. 12 analog inputs (option: extension to 20 analog inputs)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Resolution: 0.1°CA</td>
</tr>
<tr>
<td></td>
<td>Interface: Fast Ethernet LAN 100 Mbits/s</td>
</tr>
<tr>
<td></td>
<td>Wide range power supply 90…264VAC</td>
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<td></td>
<td>Optical- or magnetic pick-up for TDC position</td>
</tr>
</tbody>
</table>

Pressure sensors HTT-06

<table>
<thead>
<tr>
<th>Measuring range pressure</th>
<th>0…300 bar</th>
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<tbody>
<tr>
<td>Over pressure static</td>
<td>1200 bar</td>
</tr>
<tr>
<td>Thermal shock 1500 RPM pmi=9bar</td>
<td>&lt; +/- 0.5 bar</td>
</tr>
<tr>
<td>Accuracy</td>
<td>≤1% Full scale</td>
</tr>
<tr>
<td>Frequency</td>
<td>10 kHz</td>
</tr>
<tr>
<td>Temperature range of SCU</td>
<td>-40 °C ... + 75 °C</td>
</tr>
<tr>
<td>Output signal range</td>
<td>4…20 mA</td>
</tr>
</tbody>
</table>
Mounting:

The HTT-06 cylinder pressure sensors are installed on special designed indicator valves for reducing operating temperature of 250—300 °C on measuring element. This allows perfect conditions for online monitoring of combustion pressure.

HTT-06 sensor mounted on a special designed indicator valve at a Wärtsilä 9L32 diesel engine

HTT-06 sensor mounted on a special designed indicator valve at a MAN 48/60 diesel engine.

CCM Marine portable PC software

The CCM Marine PC software is a modernised version for online combustion monitoring on two- and four stroke diesel engines.
Scope of supply

CCM portable box (small) incl. the following:
- Central unit incl. multi channel data acquisition unit 1...12 cylinder
- incl. front panel with connectors for power supply, pick-up signal, pressure signal from terminal box, LAN/Ethernet
- incl. wide range power supply 90...264VAC
- Firmware: Resolution 0.1°CA @ 1800 RPM incl. Event storing of 40 cycles/cylinder
- Calculation per cylinder: Pmax, Pcomp, Ipower and IMEP
- Communication: Fast Ethernet LAN Interface 100mBits/s
- Dimension and weight: 405 mm x 330 mm x 165 mm;
- Weight: 4.6 kg

Product no. W-8110

CCM portable box (big) incl. the following: W-8105
- Central unit incl. multi channel data acquisition unit 1...20 cylinder
- incl. front panel with connectors for power supply, pick-up signal, pressure signal from terminal box, LAN/Ethernet
- incl. wide range power supply 90...264VAC
- Firmware: Resolution 0.1°CA @ 1800 RPM incl. Event storing of 40 cycles/cylinder
- Calculation per cylinder: Pmax, Pcomp, Ipower and IMEP
- Communication: Fast Ethernet LAN Interface 100mBits/s
- Dimension and weight: 543 mm x 419 mm x 218 mm;
- Weight: 10.3 kg

Visualisation software 2- and 4-stroke (1...20 cylinder license) IW-8051
- Diagrams: pressure/CA, p/v, Pmax, Pmax balance, Event storing, Engine report
- Supported operating system: Microsoft WIN 7, WIN 10
Scope of supply

Sensors, cables and accessories
- HTT-06 cylinder pressure sensor
- Terminal box for 12 sensors incl. 10m connecting cable to CCM
- Sensor connecting cable 5 m
- Sensor connecting cable 10 m
- Ethernet cable 10m
- Optical pick-up sensor
- Variable friction arm for optical pick-up sensor
- Magnetic pick-up sensor
- Sensor connecting cable 10 m
- Special indicator valve

Option:
- Portable box for sensors and cables
- Industrial notebook PC WINDOWS 10 en

Product no.
IW-6408
IW-8129
IW-4108
IW-4109
IW-8131
IW-1240
IW-1239
IW-4109
IW-7990
IW-6310