

Vessel Bunker Transfer Monitoring System (BTMS) Semi custom design also for retrofit

The proven ABB CoriolisMaster mass flow sensor technology in combination with other ABB sensors and ABB control and flow computer technology fulfill the application of online fuel transfer measurement during bunkering process on board.

Measurement made easy

Introducing bunker transfer monitoring on board

Bunker fuel is a significant cost factor on board. Today saving fuel is an important target and forces the requirement to exactly measure the amount bunkered.

Mass flowmeter technology allows monitoring the correct amount, eliminating errors caused by, for example, water and air content in the bunker fuel (Cappuccino effect).

The difference between the value of the bunker bill and the real consumption of fuel could be optimized.



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Measuring system components at a glance

- Flexible vertical or horizontal mounting into existing environment.
- Separate CoriolisMaster sensors in various sizes (DN 150, DN 100 or DN 80) for HFO, MDO, and other bunker fuels.
- HFO fuel two-train CoriolisMaster sensors for up to 1720 t/h transfer rate.
- One sensor train for heavy fuel, different sensor for lighter fuels.
- Insulation wrapped around CoriolisMaster sensor to maintain HFO fuel temperature.
- System cabinet to control the complete measurement arrangement and to handle and store all measurement data in an accredited way.

Remote monitoring and control display

- Multiple independent, color, remote touch-screen displays for monitoring and controlling the system, which can be placed elsewhere on the vessel e.g. ECR, Bunker station or ship bureau.
- Specially designed intuitive touch HMI of remote color display for easy operation.
- Full control of system.
- Bidirectional interface to ship information system.
- Customizable printouts.
- Optional ticket printer.
- Measured bunker transfer can be printed individually or transferred paperless to the ship information system.

Typical system design

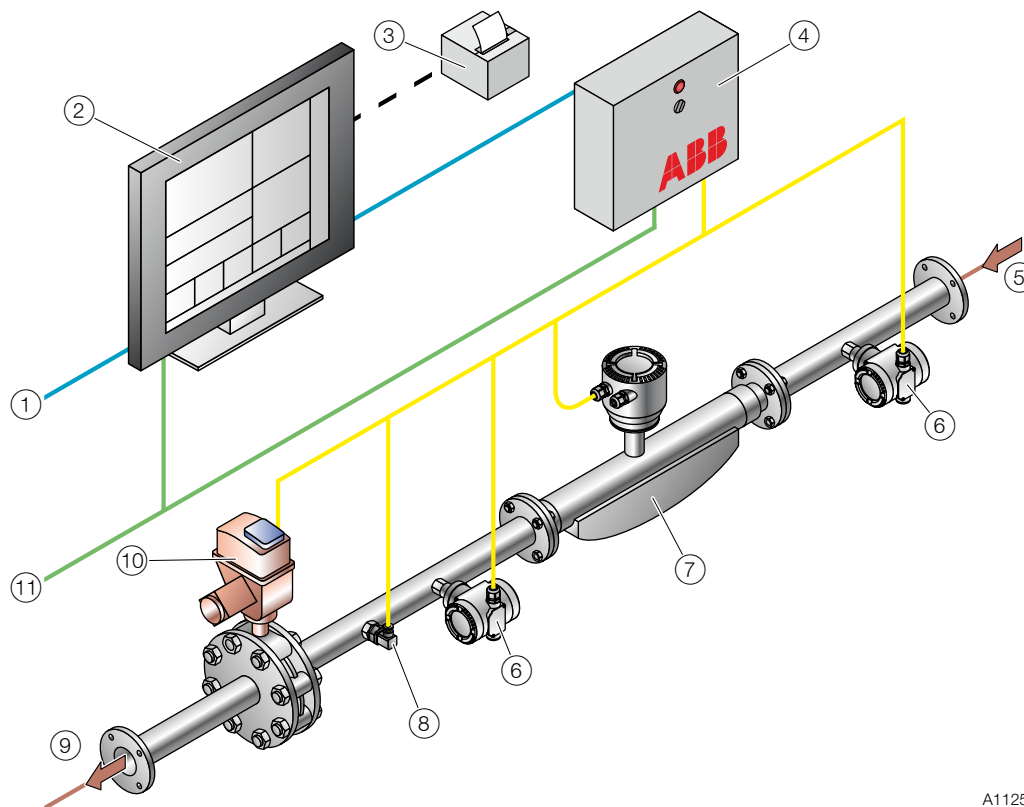


Fig. 1

① Ethernet ② Remote touch screen PC ③ Ticket printer (optional) ④ System control cabinet ⑤ Bunker fuel "in" ⑥ Screw-in ABB pressure transmitter ⑦ ABB CoriolisMaster mass flowmeter ⑧ Screw-in ABB thermometer ⑨ Bunker fuel "out" ⑩ Valve with electrical actuator ⑪ 230 V, 16 A

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Products used

Coriolis mass flowmeter ABB CoriolisMaster	
	<p>Controlled via system control cabinet, which includes power supply. Separate sensors for HFO or other fuels; optional insulation for HFO.</p> <p>BTMS CoriolisMaster mass flow sensor sizes:</p> <p>Twin sensor DN 150: max. capacity 1720 t/h Single sensor DN 150: max. capacity 860 t/h Single sensor DN 100: max. capacity 520 t/h Single sensor DN 80: max. capacity 250 t/h</p> <p>Accuracy: 0.1%</p> <p>Integration into existing vessel piping system after site survey.</p> <p>Accredited ABB Flowcomputer "SpiritIT" solution for control, diagnostics and data handling and storage.</p> <p>Cabinet mounting system near walls or cradle.</p>
Remote display	
	<p>19" flat panel PC with touch screen display to independently monitor and control unit for the BTMS system.</p> <p>System can be mounted in or on consoles or at walls. More than one unit can be connected to BTMS system control cabinet via Ethernet.</p> <p>Standard or dedicated ticket printer can be connected to the remote display.</p> <p>Optional data transfer into ship information system via Ethernet access.</p>
Ticket printer (option)	
 G12077	<p>Standard printer connected to remote display allows narrow printout sheet of measured bunker data for adding to mate's receipt.</p>

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1) 14 euro cents/minute from German landlines,
max. 42 euro cents/minute from mobile phone
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