CoriolisMaster FCB330, FCB350, FCH330, FCH350
Installation supplement for Marine (DNV) approved installations

Measurement made easy
Signal cable assembly

- **Cable end for sensor terminal box (FCB3xx)**
- **Cable end for transmitter (FCT3_R)**

![Signal cable assembly](image)

**Cable specification**

<table>
<thead>
<tr>
<th>Signal cable</th>
<th>Designation</th>
<th>RFE-EMC (i) 7 x 2 x 0.5 mm²</th>
</tr>
</thead>
<tbody>
<tr>
<td>Shield</td>
<td>Pair shielding with continuity wire and copper braided screen</td>
<td></td>
</tr>
<tr>
<td>Temperature range</td>
<td>-40 ... 90 °C (-40 ... 194 °F)</td>
<td></td>
</tr>
<tr>
<td>Loop resistance</td>
<td>maximum 80 Ω/km</td>
<td></td>
</tr>
<tr>
<td>Inductance</td>
<td>0.6 mH/km approx.</td>
<td></td>
</tr>
<tr>
<td>Max. cable length</td>
<td>50 m (164 ft)</td>
<td></td>
</tr>
</tbody>
</table>

**Signal cable assembly**

1. Strip the signal cable and cut the wire mesh shield to the length as shown.
2. Remove the cable core and foil shield from the wire pairs.
3. Wire pairs 6 and 7: Cut both sides of the jacket, as these wire pairs are not required.
4. Slide the union nut ₁ and plastic insert ₂ of the cable gland over the cable.
5. Splice the EMC braid ₃ and the drain wires ₄ and turn them over the plastic insert ₂.
6. Cut wires of the EMC braid and the drain wires to the length as shown. The shield must be at least 2 mm above the sealing ring ₅.
7. Insert the Cable with plastic insert into the cable gland ₆, screw and tighten the union nut.
8. Connect the signal cables to the transmitter and flowmeter sensor as shown in the connection diagrams.
9. Connect the signal cables for signal inputs and outputs to the transmitter as shown in the connection diagrams. Connect the cable shields to the designated grounding clamp.
10. Connect the power supply cables to the transmitter as shown in the connection diagrams.
11. Screw all open covers for the transmitter and flowmeter sensor connection areas back into place.

**NOTICE – Potentially adverse effect on housing ingress protection**

If the gasket (o-ring) is seated incorrectly or damaged, this may have an adverse effect on the housing ingress protection. Before closing the housing cover, check the gasket (o-ring) for any damage and replace if necessary. Check that the gasket is properly seated when closing the housing cover.
Connection of transmitter to flowmeter sensor

**Fig. 2**

A. Connection of transmitter to flowmeter sensor in non-hazardous areas
B. Connection of transmitter to flowmeter sensor in hazardous areas Zone 1 / Div. 1
1. Equipotential bonding (PA)

<table>
<thead>
<tr>
<th>Terminal</th>
<th>Pair / wire color (No.)</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>85</td>
<td>Pair 4 / white (7)</td>
<td>Sensor 1</td>
</tr>
<tr>
<td>86</td>
<td>Pair 4 / blue (8)</td>
<td>Sensor 1</td>
</tr>
<tr>
<td>87</td>
<td>Pair 3 / white (5)</td>
<td>Sensor 2</td>
</tr>
<tr>
<td>88</td>
<td>Pair 3 / blue (6)</td>
<td>Sensor 2</td>
</tr>
<tr>
<td>89</td>
<td>Pair 2 / white (3)</td>
<td>Temperature</td>
</tr>
<tr>
<td>90</td>
<td>Pair 2 / blue (4)</td>
<td>Temperature</td>
</tr>
<tr>
<td>91</td>
<td>Pair 5 / white (9)</td>
<td>Driver</td>
</tr>
<tr>
<td>92</td>
<td>Pair 5 / blue (10)</td>
<td>Driver</td>
</tr>
<tr>
<td>93</td>
<td>-</td>
<td>Not used</td>
</tr>
<tr>
<td>94</td>
<td>-</td>
<td>Not used</td>
</tr>
<tr>
<td>95</td>
<td>Pair 1 / white (1)</td>
<td>Temperature</td>
</tr>
<tr>
<td>96</td>
<td>Pair 1 / blue (2)</td>
<td>Temperature</td>
</tr>
</tbody>
</table>

**IMPORTANT (NOTE)**
The precise position of the PA terminals may vary according to the device type. Each terminal is marked accordingly. When the FCT330, FCT350 transmitter is connected to the FCB330, FCB350, FCH330, FCH350 flowmeter sensor, the transmitter must also be connected to "PA". The wires must be connected in pairs in order to ensure EMC protection.

The following flowmeter sensor / transmitter combinations are permitted:
- FCB330, FCH330 flowmeter sensor with FCT330 transmitter
- FCB350, FCH350 flowmeter sensor with FCT350 transmitter
Installation of marine and ATEX Zone 1 approved transmitter housing

1. Install the support bracket ① between the wall mounting bracket ② and the wall or pipe.
2. Use for this installation the supplied equipment ③, ④ and ⑤.

Contact us

ABB Limited
Process Automation
Oldens Lane, Stonehouse
Gloucestershire, GL10 3TA
UK
Tel: +44 (0)1453 826661
Fax: +44 (0)1453 829671

ABB Inc.
Process Automation
125 E. County Line Road
Warminster, PA 18974
USA
Tel: +1 215 674 6000
Fax: +1 215 674 7183

ABB Automation Products GmbH
Process Automation
Dransfelder Str. 2
37079 Goettingen
Germany
Tel: +49 551 905-0
Fax: +49 551 905-777

www.abb.com/flow

Note
We reserve the right to make technical changes or modify the contents of this document without prior notice. With regard to purchase orders, the agreed particulars shall prevail. ABB does not accept any responsibility whatsoever for potential errors or possible lack of information in this document.

We reserve all rights in this document and in the subject matter and illustrations contained therein. Any reproduction, disclosure to third parties or utilization of its contents - in whole or in parts – is forbidden without prior written consent of ABB.

Copyright© 2014 ABB
All rights reserved