

RS 232 communication

Configuration
Orbital – TMC 2

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2. Introduction

This document shows how to enable RS232 communication on a turbine with Orbital TMC 2 controller.

The document includes:

- How to change parameter and which settings needs to be changed.
- Cable connections.

3. *Orbital TMC 2*



Communication: 9600 8N1.

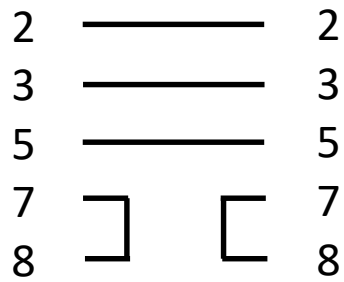
Communication id is 1. (But it can be changed in menu)

RS232 connector is in left side of the controller.

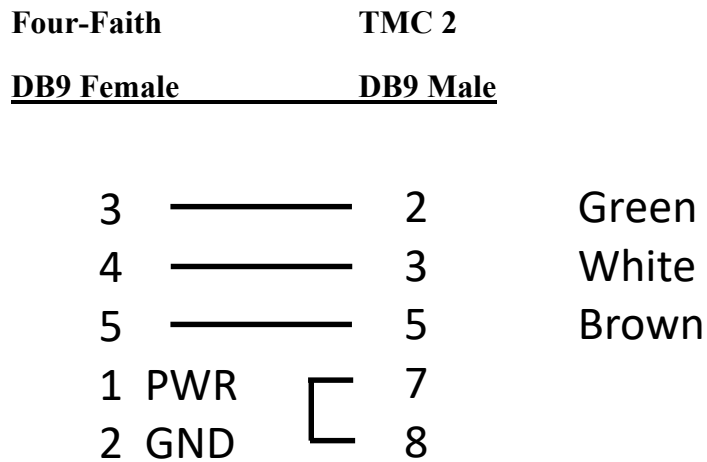
4. Cables

4.1. FourFaith driver (TMC 2)

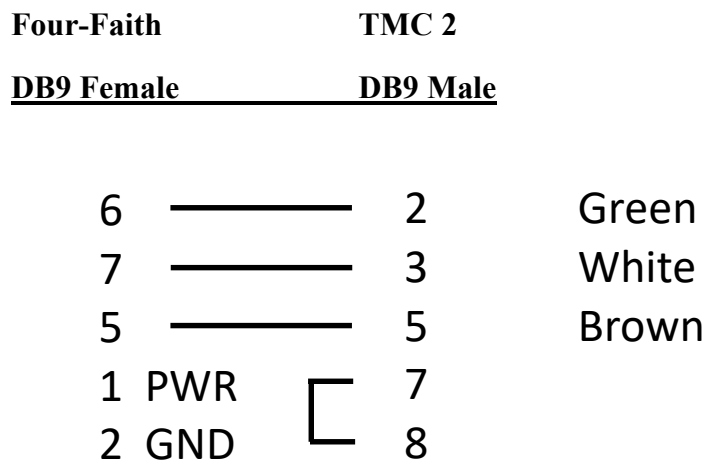
Four-Faith	TMC 2
<u>DB9 Female</u>	<u>DB9 Male</u>



4.2. Cable layout for F2816 - COM 1



4.3. Cable layout for F2816 - COM 2



The Power (PWR) must be between +5V to +36V DC (Standard power supply is 12V DC)

An easy way to check if the wires on pin 3 and 4 (COM1) or pin 6 and 7 (COM2) is mounted correct is to measure the DC voltage on both pins in reference to GND (pin 5). If the Rx and Tx wires are mounted correct, should it be possible to measure a voltage on both pins (Above 3 volts). If there is only voltage on one pin is the wires wrong and they must be flipped.

5. Four Faith – Signal monitoring

5.1. F2403 Signal monitoring

The Four Faith F2403 GPRS modem can be used to monitor the signal strength during installation.

This can be done on units bought after October 2014 and with firmware versions after this date.

The Signal mode is activated using a special DB9 adaptor that is inserted into the RS232 port on the Four Faith modem. When the adaptor is inserted will the online LED on the modem not display the online status anymore but instead will the signal strength be display. The signal level is illustrated by a number of blinks that is repeated every 3 seconds.

There are 5 different blink levels.

Level	Signal strength (dBm)	Quality
1	-113 -> -103	Bad
2	-101 -> -95	Marginal
3	-93 -> -85	OK
4	-83 -> -75	Good
5	-73 or higher	Excellent



The GPRS modem will not attempt to connect unless the signal strength is 2 or above but the signal should be no less than 3 or more before a stable connection can be expected.

Be aware that when the Signal tester adaptor is inserted will the modem NOT attempt to go online. The modem will return to normal operation when the adaptor is removed.

5.2. F2816 Signal monitoring

The Four Faith F2816 GPRS modem can be used to monitor the signal strength during installation.

The Signal mode is activated by pressing the signal tester button on the “Multiport interface” unit. The button has to be kept pressed during the signal testing.

If the kit is not equipped with the signal tester button can the signal mode be activated by connecting pin 11 (IO2) to the ground pin 2 or 5.

When the connection is established will the online LED on the modem not display the online status anymore but instead will the signal strength be display. The signal level is illustrated by a number of blinks that is repeated every 3 seconds.

There are 5 different blink levels.

Level	Signal strength (dBm)	Quality
1	-113 -> -103	Bad
2	-101 -> -95	Marginal
3	-93 -> -85	OK
4	-83 -> -75	Good
5	-73 or higher	Excellent



The GPRS modem will not attempt to connect unless the signal strength is 2 or above but the signal should be no less than 3 or more before a stable connection can be expected.

Be aware that when the Signal tester is active will the modem NOT show the online signal anymore. The modem will return to normal operation when the adaptor is removed.