Integrated Position Sensor Installation to Course Computer

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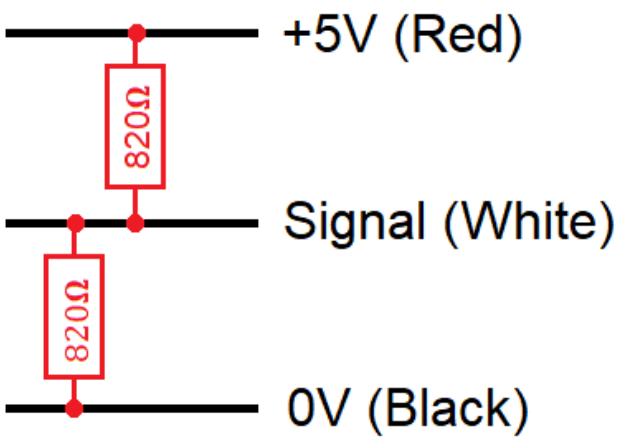
Introduction

The HyPro integrated position sensor has an analogue voltage output and is compatible with most autopilots that support a potentiometer (3-wire variable resistor) rudder sensor. When retrofitted, the integrated sensor's output voltage range is:

Model	V (extended)	V (centre)	V (retracted)
ML+40S	1.28	2.84	4.39
ML+40M	0.54	2.46	4.39
ML+40L	0.20	2.50	4.80

These values assume a supply voltage of 5V and the sensor emulates a potentiometer. The output voltage at a given position is a ratio of the supply voltage.

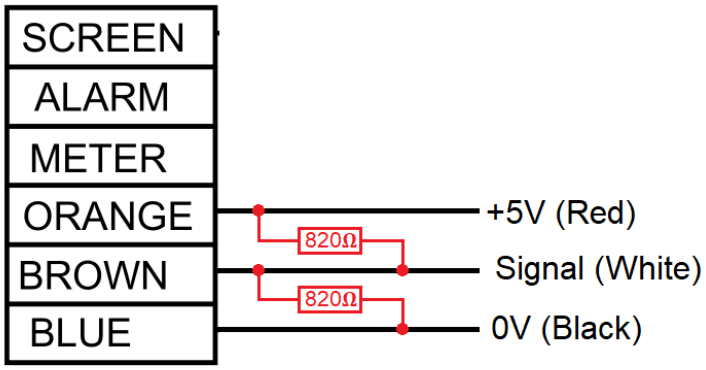
For course computers designed for rotary potentiometers (eg Coursemaster and Raymarine), please fit two 820Ω resistors to reduce the voltage range:



Note Signal cable may be yellow. This results in the following voltages:

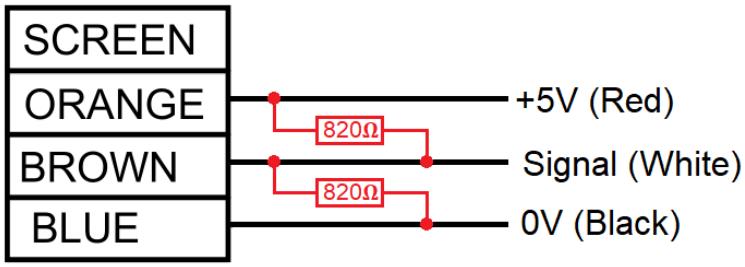
Model	V (extended)	V (centre)	V (retracted)
ML+40S	2.19	2.59	2.98
ML+40M	2.00	2.49	2.98
ML+40L	1.91	2.50	3.09

Coursemaster CM85i / CM95 / CM950



Note Signal cable may be yellow.

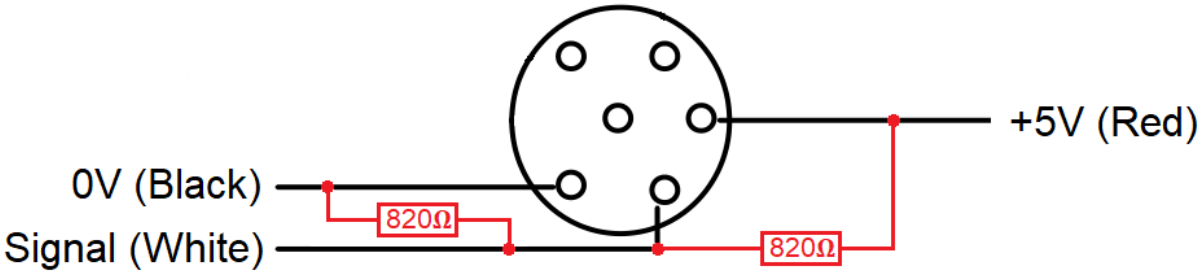
Coursemaster CM650



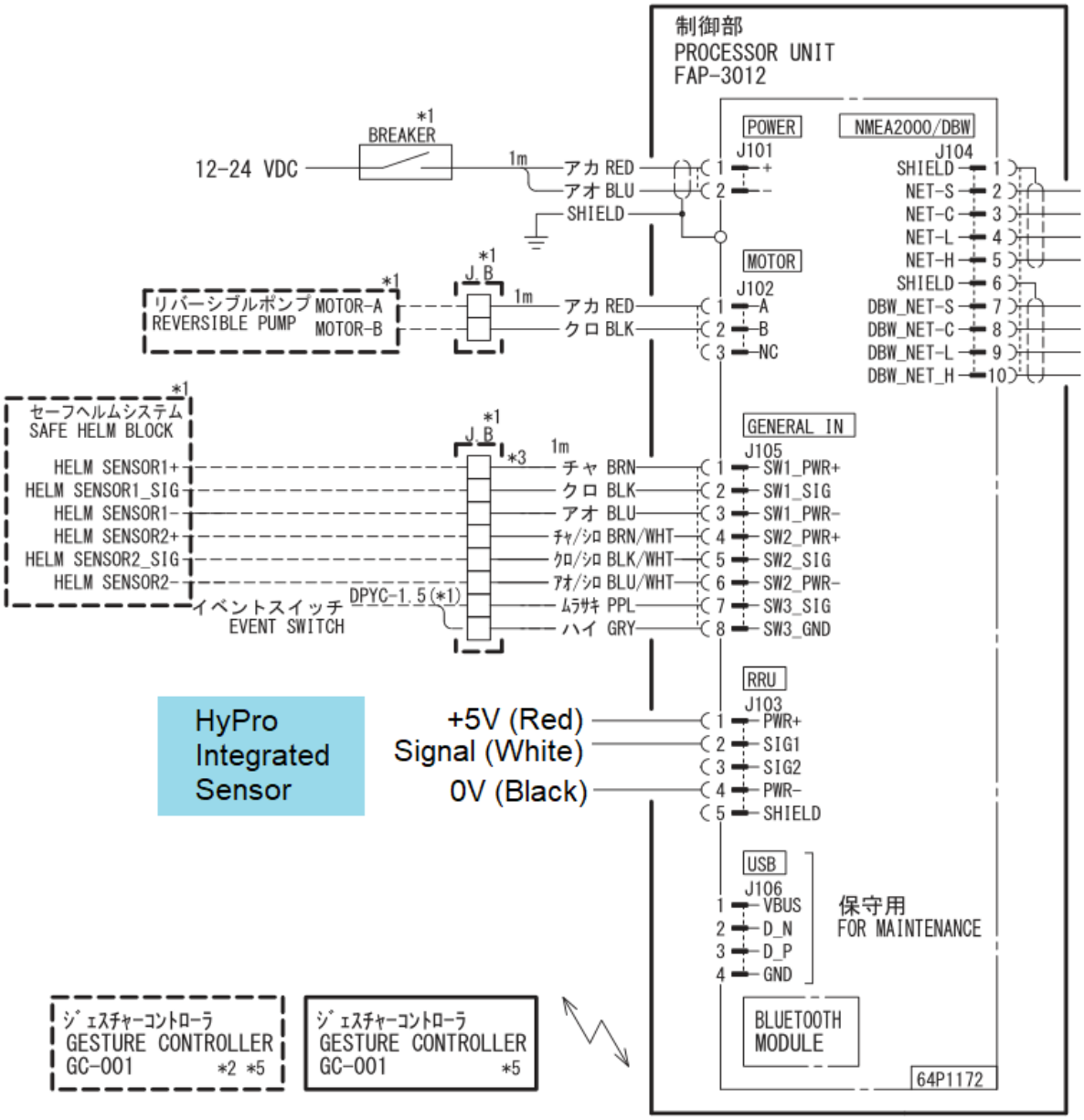
Note Signal cable may be yellow.

Coursemaster CM880

A plug needs to be fitted to the sensor cable (requires soldering).

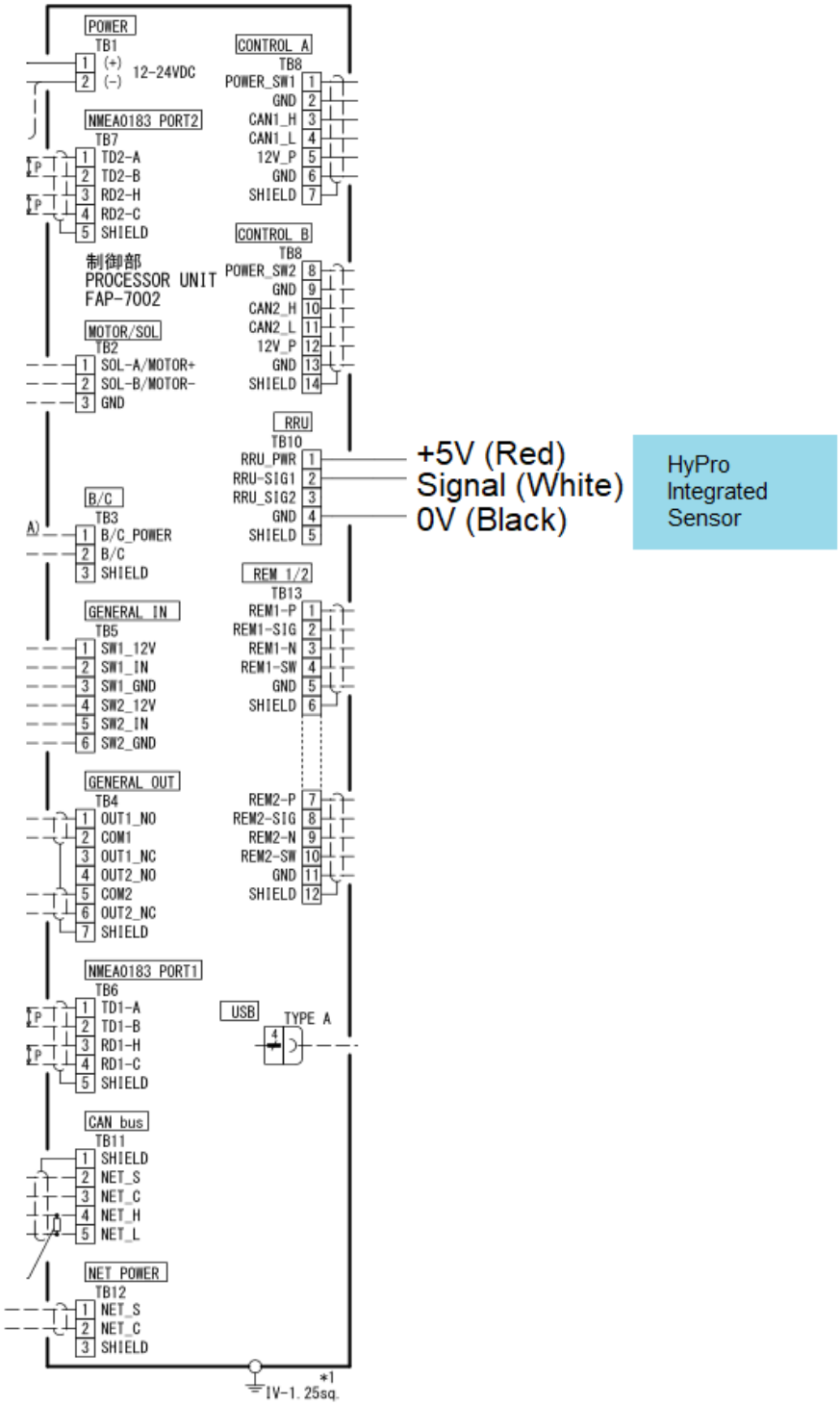


Furuno NAVpilot 300



Note Signal cable may be yellow.

Furuno NAVpilot 700 / 711 / 720 / 711C



Note Signal cable may be yellow.

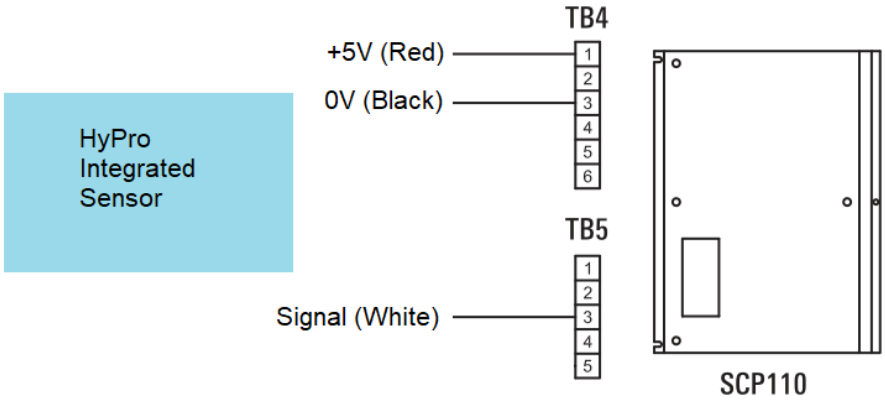
Garmin GHP12ECU / ECU14 / Smart Pump V2

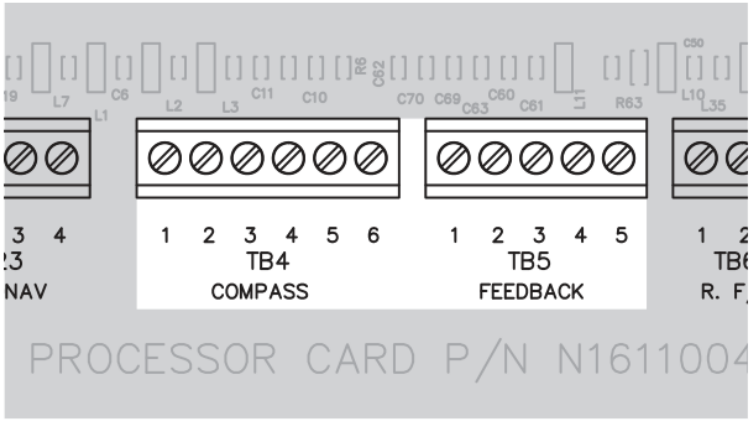
Garmin autopilots require a proprietary plug. A 1m long cable fitted with the appropriate moulded plug is available (Garmin part no: 010-11532-00). Connect as follows:

Function	HyPro colour	Garmin colour
+5V	Red	Red
Signal	White	Yellow
0V	Black	Black

Note Signal cable may be yellow.

Humminbird SCP110 Course Computer

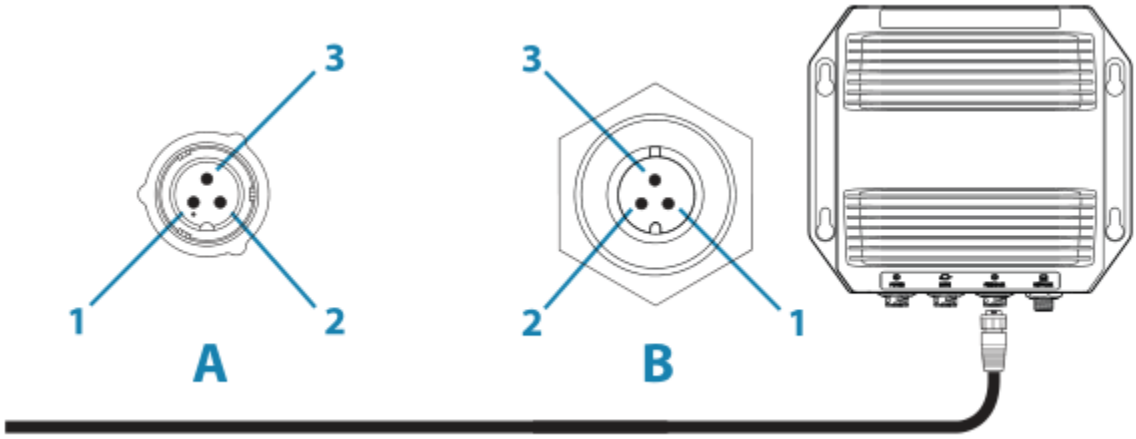




Note Signal cable may be yellow.

Navico NAC-1 / NAC-2

A 2m long cable fitted with the appropriate moulded plug is available (Navico part no: 000-14798-001). Connect as follows:



Pin #	Function	HyPro colour	Navico colour
1	+5V	Red	Red
2	Signal	White	Yellow
3	0V	Black	Black

Note Signal cable may be yellow.

NKE Gyropilot 3

Stifteinsatz (Steckseite)
Male insert (mating side)

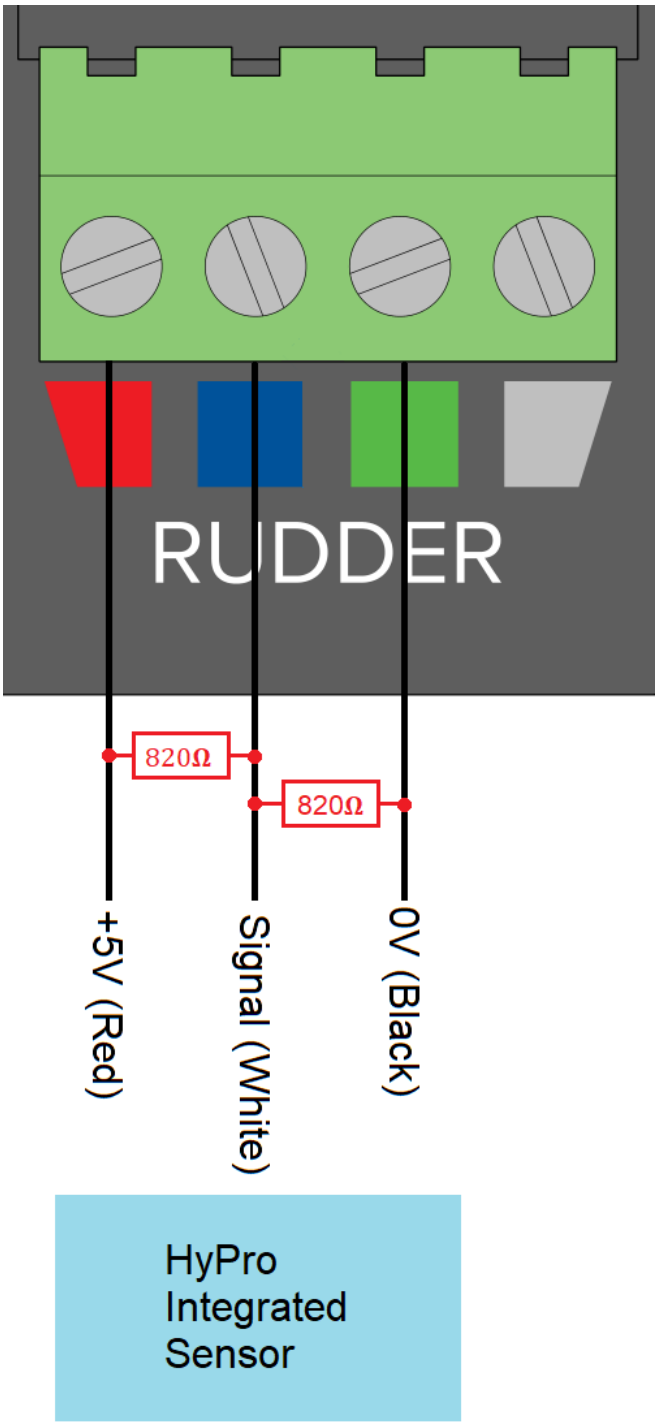
Binder 620

5 pol
5 contacts

1	
2	+5V (Red)
3	0V (Black)
4	
5	Signal (White)

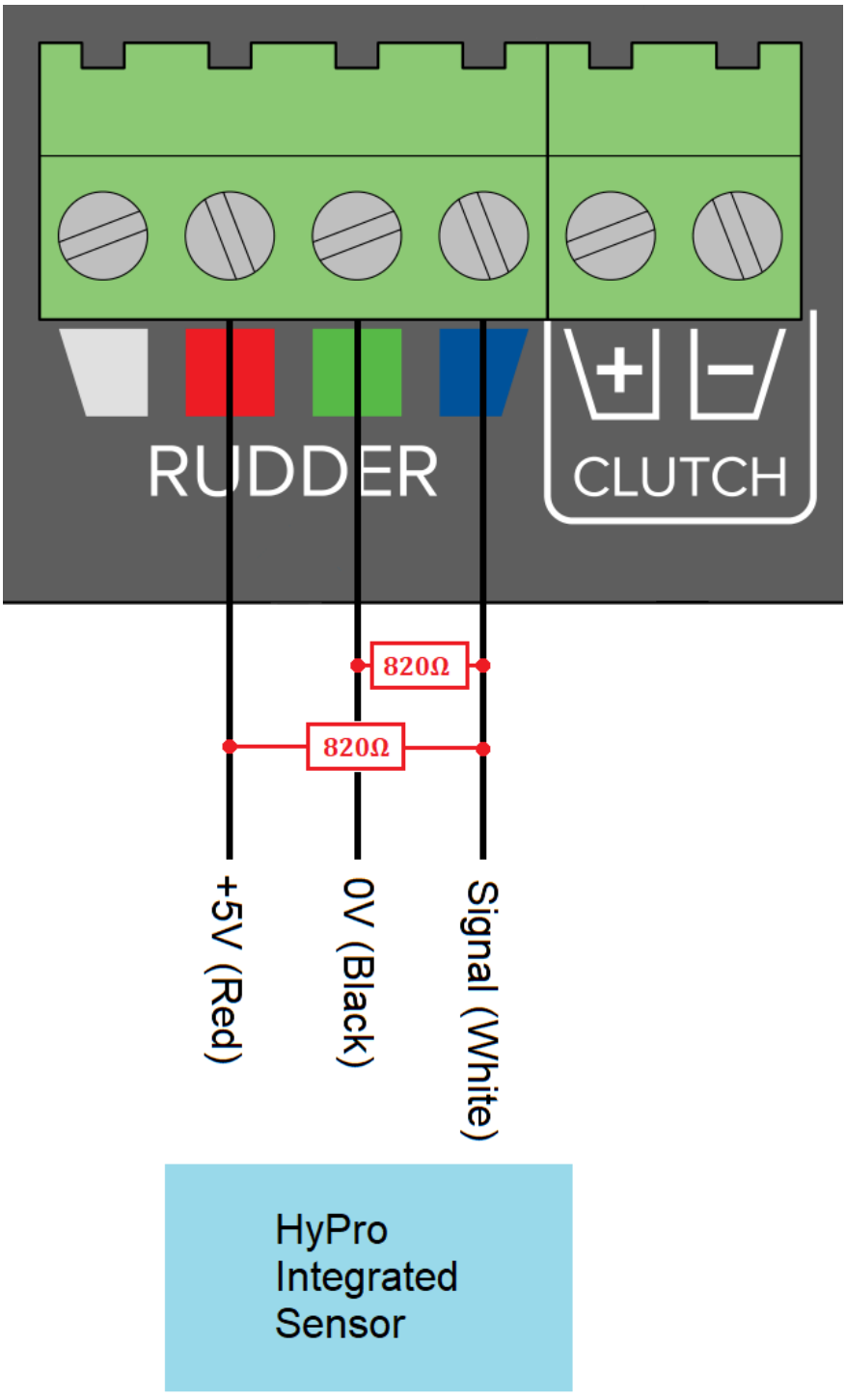
Note Signal cable may be yellow.

Raymarine ACU100 / ACU150



Note Signal cable may be yellow.

Raymarine ACU200 / ACU300 / ACU400



Note Signal cable may be yellow.