



Connection Diagram of Iotron™ Sensors to most Yokogawa Transmitters

Cable Color Coding	Instrument Terminal Name	Yokogawa Terminal #
Green	TC *	11
Yellow	TC *	12
Black	Reference	13
Red	Liquid Earth / ORP **	14
Clear	Measure (pH Input Signal)	15
Shield (Drain)	Shield ***	16

* **Note 1***: The temperature compensation element is a Platinum 1000 Ohm by default for Yokogawa Transmitters (-1000-). Other temperature compensation elements such as PT100 and 3K Balco are available upon request. You can measure the value of your TC element by measuring the resistance between the Green and Yellow wires on any standard multimeter.

** **Note 2****: The liquid earth input is required to be connected to the transmitter to ensure stable operation of the sensor once installed into online service. **PLEASE BE SURE TO CONNECT THE RED WIRE TO TERMINAL 14 EVEN IF YOU DO NOT PLAN TO PERFORM ORP MEASUREMENT.**

*** **Note 3*****: The shield connection (Terminal 16) is not necessary for the pH sensor to operate normally with the Yokogawa transmitter but may result in improved operation for some customers.

Note 4: If your sensor part number has a “**Y**” in the alpha prefix (for example PNYZ) or a “**JYC**” in the TC portion of the part number (for example -1000**JYC**-) then you have a **316 stainless steel solution ground liquid earth input element** that will function as your liquid earth input. This type of liquid earth element is not suitable to make ORP measurements and only serves to promote a stable online sensor reading.

Note 5: If your sensor part number has a “**PT**” in the alpha prefix (for example PNZPT) AND a “**JYC**” in the TC portion of the part number then you have a **platinum solution ground liquid earth input element**. This platinum input will serve as both your liquid earth (to stabilize the pH sensor reading) as well as providing online ORP measurement. The “**PT**” alpha prefix should be used together with the “**JYC**” in the TC portion of the part number to ensure correct wiring for a Yokogawa transmitter. An example part number for a Yokogawa transmitter with a PT liquid earth would be PNZPT 6031-1000**JYC**-10-TL