



Extended cable lengths for pH/ORP/ISE Sensors with 3TX-pH/ISE-X Transmitters

NO PREAMPLIFIER: Connecting directly to the 3TX-pH or 3TX-ISE using sensors without preamplifiers:

The pH, ORP & ISE sensors come with 10 feet (3 meters) of cable standard (without additional charge to base price). These sensors can be supplied with up to 20 feet (6 meters) of cable without adding an integral preamplifiers to wire directly into the 3TX-pH or 3TX-ISE analyzers by choosing the appropriate per foot cable adder at time of order:

http://www.astisensor.com/ASTI_3TX-pH_3TX-ISE_Sensor_Wiring_Schematic.pdf

The cables for the sensors without preamplifiers are fully integral and so they cannot be cut, adulterated or spliced in any way. Because of this, the exact total length of cable required should be specified at the time of order. In a few cases cable lengths longer than 20 feet have been employed without an integral preamplifier, but it is best practice to restrict the cable length for sensors without preamplifier to 20 feet and to employ some form of preamplifier thereafter for any longer runs.

If a cable length longer than 20 feet is required, there are a number of options employing a preamplifier are available:

EXTERNAL PREAMPLIFIER: Connecting to the 3TX-pH/ISE-X using sensors without preamplifiers & external preamp

You can use the existing pH/OR/ISE sensor (whatever the cable length) and simply add an external preamplifier in a NEMA 4X J-Box assembly. Find below a link to download photos of the mini external preamplifier installed into the 1MF NEMA 4X J-Box complete with extension cable for visualization purposes:

http://www.astisensor.com/Mini_External_Preamp_NEMA4X.zip

This mini external preamplifier approach can minimize the long term residual cost of ownership for the sensor replacement aspect as well as simplifying maintenance. The wiring detail is linked below:

http://www.astisensor.com/ASTI_3TX-pH-X_3TX-ISE-X_with_Mini_External_Preamp_Hookup.pdf

Specification sheet for for interfacing with the 3TX-pH-X and 3TX-ISE-X preamplifier style transmitters is linked below:

http://www.astisensor.com/Mini_External_Preamplifiers.pdf

INTEGRAL PREAMPLIFIER: Connecting to the 3TX-pH/ISE-X using sensors with integral preamplifiers

In the alternative, if a preamplifier is integrated inside of the ISE sensor, then these terminations can be bridged across any ordinary suitable terminal strip so long as it is installed into a NEMA 4X waterproof J-box enclosure. The wiring schematic for when a 3TX compatible preamplifier is provided below:

http://www.astisensor.com/ASTI_3TX-pH-X_3TX-ISE-X_Sensor_Preamp_Wiring_Schematic.pdf

Either the external preamplifier or integral preamplifier approach will yield a setup that can support up to 300 feet total distance between the sensor and transmitter installation locations.

QUICK DISCONNECT OPTION: For fast & easy of commissioning for insertion and removal of sensor from service

The quick disconnect option **MUST** be specified at the time of order and is **ONLY** available if a preamp is integrated into the pH/ORP/ISE sensor. A quick start guide (see link below) shows a twist lock sensor with an integral preamplifier, the WPIT sealing option and the Q5M/Q5F quick disconnect system installed in a NEMA 4X field J-Box for visualization.

http://www.astisensor.com/Simplified_Q5M_Q5F_3TX_Quick_Disconnect_Guide.pdf

Please inquire to the ASTI factory for the costs associated with the various options outlined above. Please be sure to inquire about these extended cable length options before the purchase of any equipment to ensure that the most optimal configuration for the desired installation scheme is employed.