



Field Installation Guide for Quick Disconnect Q7M & Q7F Snap Connectors for pH Sensors & ORP Sensors with 5-Wire Differential Type Analog Preamplifiers

Q7M & Q7F SNAP FIELD INSTALLATION SCHEMES - PART 1

Installation of the Iotron™ pH sensors and ORP sensors with integral 5-wire differential analog preamplifiers with the Q7M & Q7F quick disconnect snap connectors is detailed in this guide.

BASE CONFIGURATIONS FOR SENSORS WITH Q7M CONNECTOR:

All Iotron™ pH sensors and ORP sensors with integral 5-wire differential analog preamplifiers can potentially be used with the the Q7M & Q7F quick disconnect snap connectors system. These connectors must be installed at the ASTI factory at the time of fabrication and cannot be added later in the field. Sensors purchased for this installation scheme come standard with 3 meters (10 feet) of integral cable and include quick disconnect male terminated **IP67 & NEMA 6P rugged field ready Q7M quick disconnect snap connector**. The shorter integral cable length of 1.5 meters (5 feet) is also available but there is no difference in cost for this shorter sensor cable lengths. The longer integral cable length of 6 meters (20 feet) is a standard order option whereas 12 meters (40 feet) of integral cable is also available as a special order option. Surcharges apply for both stand order option for the 6m (20 feet) length as well as the special order option 12m (40 feet) integral cable length options.

For each sensor terminated in a Q7M male snap connector there must exist a mating Q7F female snap to tinned leads cable extension. **The Q7M/Q7F connectors are waterproof and corrosion resistant IP67 & NEMA 6P rated when interfaced.** The tinned leads from this cable extensions are wired directly and permanently into the mating transmitter terminal sensor input board terminals (please see the wiring schematic specific to the OEM instrument that you to interface for details). These female snap to tinned leads cable extensions are available in length 1.5 meters (5 feet), 3 meters (10 feet), 6 meters (20 feet), 12 meters (40 feet) as standard order options as well as the longer 24 meters (80 feet) length as a special order option. The best practice for design of a field commissioning scheme employing the Q7M/Q7F connector system is to use the well stocked standard sensor cable lengths and cable extension options for the lowest cost and best availability installation.

GENERAL NOTE:

The sensor terminations are always male snap connector. The female snap to male snap cable extensions and female snap to tinned leads cable extensions can be used in any combination without signal degradation so long as the maximum supported 305 meters (1,000 feet) of total cable length is not exceeded. For best result running the cable in conduit for area that may have high levels of noise and RF interference is recommended for best results.



Q7M & Q7F SNAP FIELD INSTALLATION SCHEMES - PART 2

The various standard and special order Q7M & Q7F installation schemes and the corresponding cable length installation achieved for each are detailed below:

Integral Cable Lengths for Sensors Terminated with Q7M Quick Disconnect Snap Connectors

→ Sensors that are terminated with Q7M male snap connector come standard with 3 meters (10 feet) of integral cable

→ Shorter 1.5 meters (5 feet) of integral sensor cable length also terminating with Q7M male snap connector are available for same price as the standard 3 meters (10 feet) length. Specify shorter lengths by -Q7M-1.5m coding. If -Q7M option is invoked without any cable length indicated the sensor is supplied with standard 3 meters (10 feet) of cable & Q7M male snap connector complete.

→ Longer 6 meters (20 feet) integral sensor cable lengths also terminating with Q7M male snap connector are available as a standard order option with applicable surcharge.

→ **Maximum 12 meters (40 feet) of integral sensor cable with Q7M male snap connector is available as a SPECIAL ORDER OPTION (-Q7M-12m) ALSO WITH APPLICABLE SURCHARGE.**

Q7F Female Snap to Tinned Leads Cable Extension Options

1.5 meters (5 feet)	Q7F-1.5m-TL
3 meters (10 feet)	Q7F -3m-TL
6 meters (20 feet)	Q7F -6m-TL
12 meters (40 feet)	Q7F -12m-TL
24 meters (80 feet)	Q7F -24m-TL - Special Order Option Only

POSSIBLE TOTAL CABLE LENGTH INSTALLATIONS FOR Q7M/Q7F CONNECTOR SYSTEM

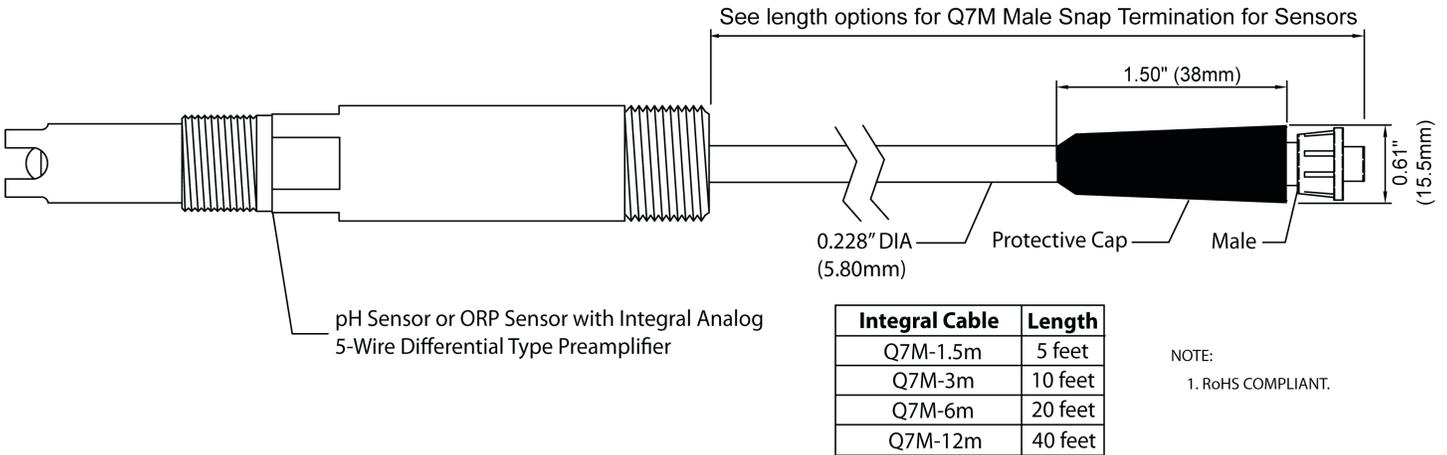
Sensors with Q7M male snap connector and female Q7F snap to tinned leads cable extension

	+1.5 meters	+3 meters	+6 meters	+12 meters	+24 meters
1.5m (5ft) integral cable:	3m (10 feet)	4.5m (15 feet)	7.5m (25 feet)	13.5m (45 feet)	25.5m (85 feet)
3m (10 ft) integral cable:	4.5m (15 feet)	6m (20 feet)	9m (30 feet)	15m (50 feet)	27m (90 feet)
6m (20 ft) integral cable:	7.5m (25 feet)	9m (30 feet)	12m (40 feet)	18m (60 feet)	30m (100 feet)
12m (40 ft) integral cable:	13.5m (45 feet)	15m (50 feet)	18m (60 feet)	24m (80 feet)	36m (120 feet)

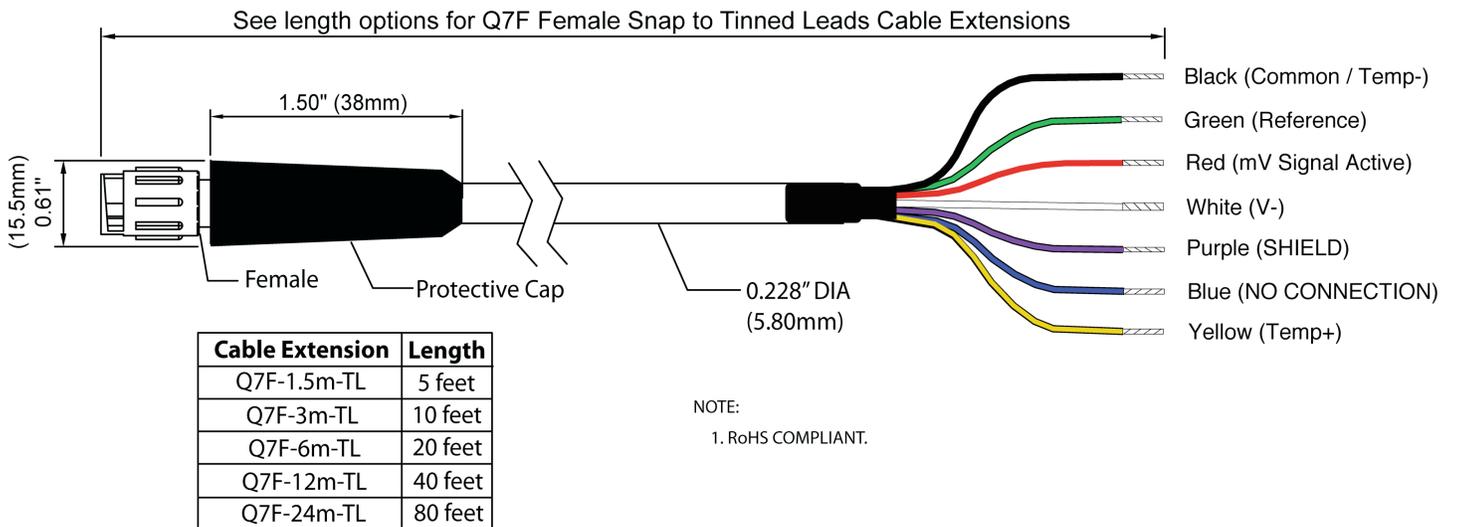
Items denoted in GREEN are special orders. This means that there may be limited availability and/or extended lead times for purchase of these items or to invoke these options. Contact ASTI factory or distributor for further details.

Q7M & Q7F SNAP FIELD INSTALLATION SCHEMES - PART 3

Detail drawing for sensors terminated with Q7M quick disconnect male snap connector (-Q7M-Xm):

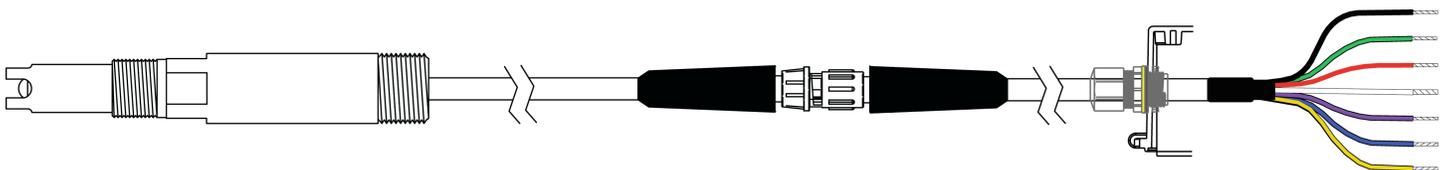


Detail for female snap to tinned leads Q7F-Xm-TL cable extensions for 5-wire differential analog preamplifiers:



Assembly Drawing for Q7M & Q7F Style Quick Disconnect Field Installation Scheme:

Sensor with Q7M male snap connector bridged with female snap to tinned leads (Q7F-Xm-TL) cable extension. The tinned leads are interfaced to transmitter terminals. Sealing cable gland used on transmitter enclosure for watertight connection.



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