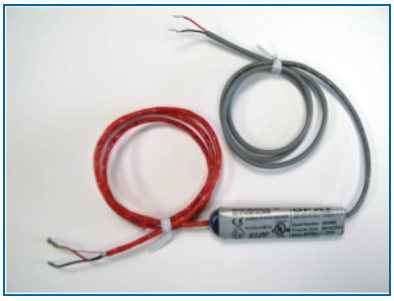
M00-ISIM Installation and Procedure Guide

20-0349-ISI-XX: Smart Sensor Equipped with Intellisense™ Technology

20-0349-ISI-NC and 20-0349-ISI-NO

20-0349-ISI-DF



Description

20-0349-ISI-XX module connects user provided switches to the OPW Tank Gauges Smart Sensor 12V IS module.

20-0349-ISI-NO interfaces with Normally Open contact sensors.

20-0349-ISI-NC interfaces with Normally Closed contact sensors.

20-0349-ISI-DF is specifically for the 30-0216 Dual Float Sensor.

Specifications:	
Operating Temperature:	-40C to +70C (-40°F to 158°F) Smart Sensor
Cable:	3 feet (0.9 m) of gas and oil resistant cable to inline ISIM + 3 feet (0.9 m) ISIM tail
Alarm Threshold Configuration:	Fully Automatic
Diagnostic Reading from Sensor Setup: **20-0349-ISI-NO:** **20-0349-ISI-NC:**	 **0 – 0.5** in-alarm **485 - 495** normal **0 – 0.5** normal **485 - 495** in-alarm

Installation

IMPORTANT: ALWAYS observe Local and National Electrical Codes for installation location.

WARNING: Make sure that the cabling (gas and oil resistant FMS part # 12-1300) back to the controller is in conduit that is dedicated to intrinsically safe wiring. Use wire nuts and\or seal packs for field connections.

Connect the RED and BLACK wires of the 20-0349-ISI-NO to the wires of a normally open switch per diagram.

Connect the RED and BLACK wires of the 20-0349-ISI-NC to the wires of a normally closed switch per diagram.

Connect the RED and BLACK wires of the 20-0349-ISI-DF to the Red and White wires of the 30-0216. Polarity is not important.

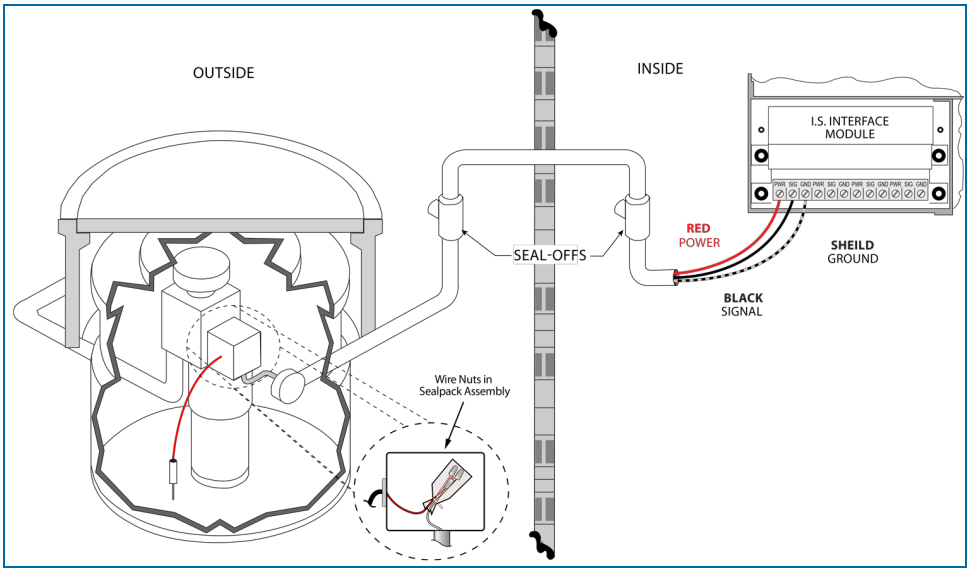
NOTE: This sensor can only be used with a Smart Sensor 12V IS Module and can be connected in parallel up to a maximum of 16 sensors per channel. This Sensor CANNOT be connected in parallel with any device other than Smart Sensors; it cannot be mixed with any non-Smart sensors.

This sensor requires 1 interface module position.

1. Begin with “Typical Installation Drawing” (see below).
2. Use the supplied seal packs and wire nuts.
3. Install seal-offs at both ends of the conduit run.

Connections:	
Sensor Wire Color	**12V Smart Sensor Interface Channel**
Red	Power
Black (hydrocarbon sensor)	Signal
Shield (or 3rd conductor)	Ground
Sensor Wire Color	**User Switch Sensor**
Red	Contact 1
Black	Contact 2

Typical Installation Drawing:



Controller Setup

Auto Detect the sensor (refer to your tank-gauge controller configuration manual). Alarm thresholds do not need to be set (thresholds are configured automatically through the Intellisense mechanism between sensor and iSite console).

Testing the Sensor

WARNING: When working in the hazardous area use caution to avoid a hazardous situation.

When conducting testing or decontamination of the sensor work in a well ventilated area with no hot surfaces or open flames near by.

- Put the sensor in a fault condition and wait for up to two (2) minutes. Check that the sensor has entered an alarm state. After returning the sensor to its normal position check that the alarm condition has ended.
- If the controller fails to go into alarm, check all wiring and junction boxes to make sure there is continuity without shorts.