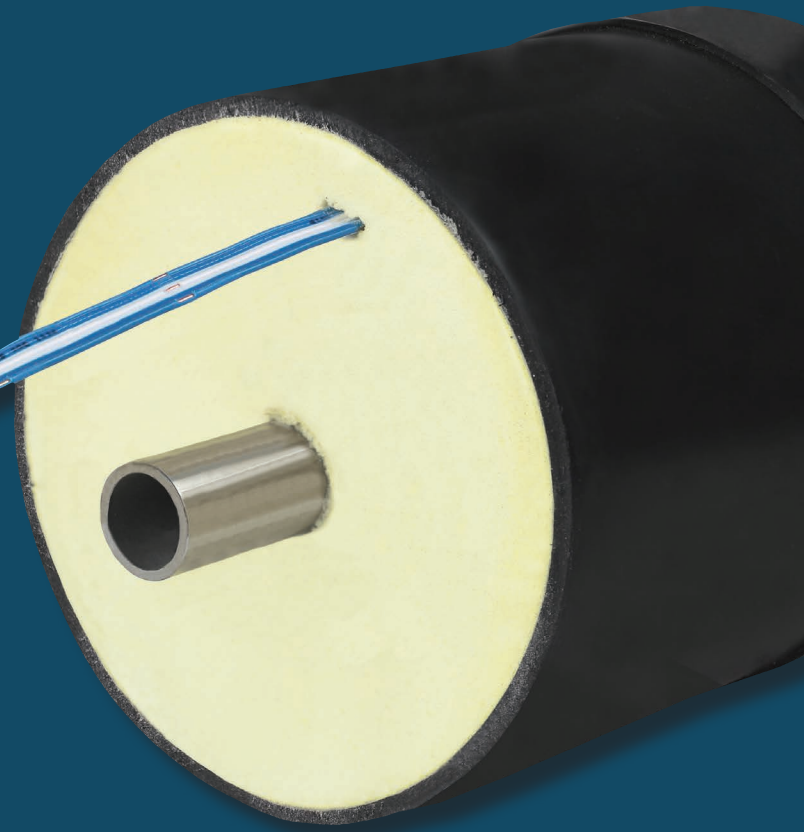


# Blue Detect Leak Sensing Cable

## Rovanco®



- Fault Locating Accurate within 3 Feet
- Alarm Box will Email & Text when there is a Leak
- Works with Metal and Plastic Piping Systems

**Innovative leak detection monitoring for your piping system!**

# Rovanco's

## Blue Detect Leak Sensing Cable with Monitoring/Alarm Unit

### *Undetected Pipe Faults Result In...*

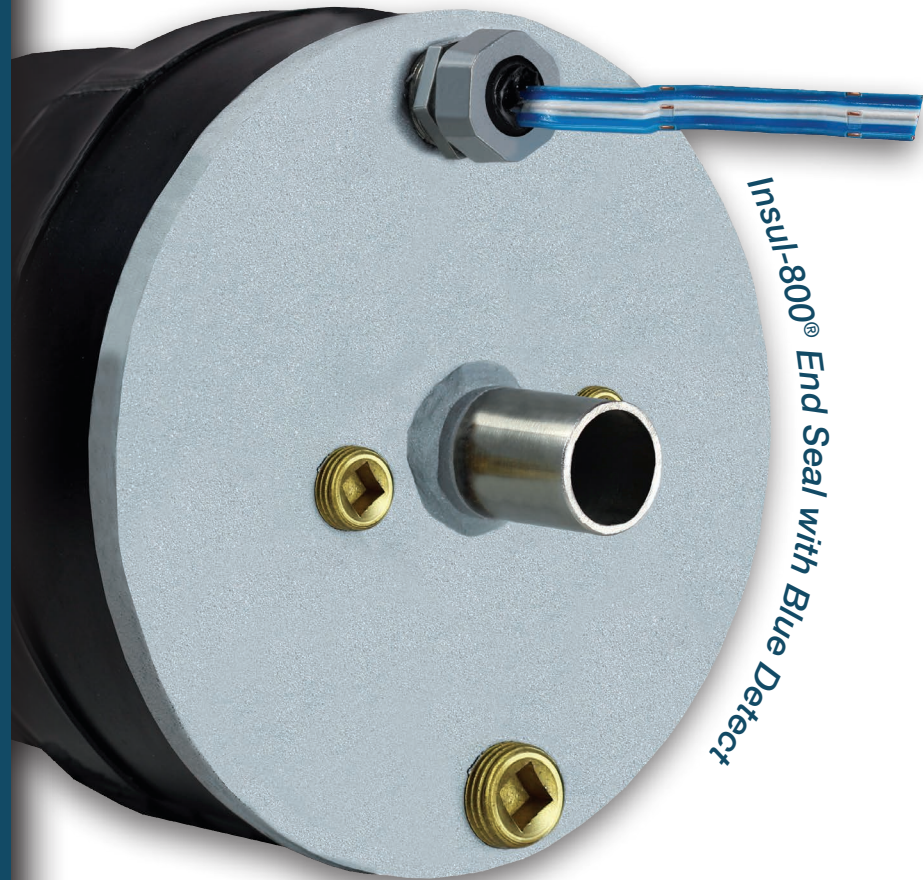
- *Pipe corroding or failure*
- *Loss of system service*
- *Expensive repairs*
- *Destruction of fiber optics & cables*

The Blue Detect Leak Sensing Cable system features a precisely parallel pair of conductors producing the same impedance along the entire length of the cable which facilitates the troubleshooting and detection of pipe leaks and wet insulation in district heating, district cooling, water, sewerage and industrial sectors.

The cable runs the entire length of the pipe and can be attached directly to a pipe, in the air space between the carrier pipe and outer jacket or embedded within the polyurethane insulation on pre-insulated piping.

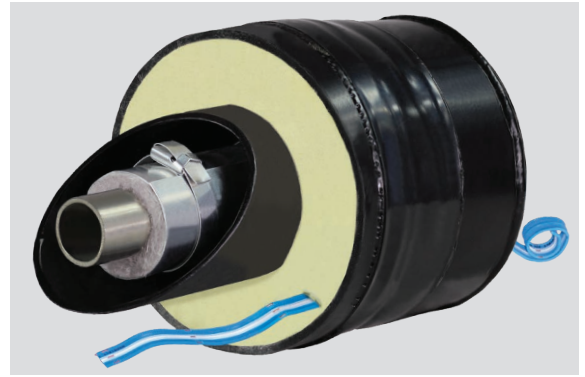
Once Blue Detect equipped piping is installed and alarm unit is connected, the status of the piping system is continuously monitored by the embedded cable which conveys this information to the alarm unit (pictured to the right).

***In the result of a break in the system or leak, the alarm unit's system software sends an immediate alert via email or text with the location of the leak – accurate within 3 feet!***



# Features

- **Continuous Remote Monitoring** – connection between the cable conductors and the monitoring unit facilitates accurate, fast locating of system fault
- **Total System Monitoring** – of the carrier pipe/conduit pipe, outer jacket and insulation detecting moisture or breaches in all elements of the system
- **Versatility** – cable sensing system works with nearly every pipe type and diameter as well as metal and plastic piping systems
- **Fully Tested** – all cable conductors are tested before and after polyurethane foam insulation is added and the pipe manufacturing process is complete, assuring reliable and dependable performance
- **Multiple Cable Option** – can be used for very large pipe diameters or for monitoring redundancy for piping installed in critical environments
- **Easy to Connect Cables** – connecting one leak sensing cable to the next in the field can be easily accomplished with the included joining sleeves
- **Advanced Communication** – measured data can be transmitted via a network or through the alarm units 3G/4G connection and the unit's software can be updated remotely using a wireless network
- **A Better Cable** – the Blue Detect Leak Sensing Cable eliminates problems associated with conventional systems using copper wires, offers a long service life with very low contact resistance
- **Broadcasted Alerts** – monitoring boxes can send alerts via email or text message to as many people as you choose



Cable runs the entire length of pipe so your complete piping run is continuously monitored for leaks



Intelligent enough to recognize the difference between typical pipe condensation and a leak



Fast, accurate fault location in the field shortens downtime and reduces repair cost



Monitoring/Alarm unit can be mounted inside or externally mounted (remote monitoring)

**Dependable performance with accurate fault location!**

## Blue Detect X6

### Leakage Control and Localization at the Highest Level

#### Function

The X6 continuously measures electrical quantities on the sensor cables that are monitored. If a leak occurs, this is detected immediately by X6 when the measured values change and can be analyzed by trained technicians.

The X6 TDR measures the sensor cable every minute, 24 hours a day, and measures a leakage or other error directly into the sensor cable that the error occurred. The X6 also detects if one or more sensor cables are interrupted.

Leaks or cable interruptions are sent immediately to the user in the form of SMS/Email or to senior systems such as ex GIS, SCADA, etc.

#### Monitoring

The X6 is equipped with the latest versions of 3G modem to enable communication with WiDetect Online and XTool software that manages SMS and Email Alert to affected personnel.

Using XTool and XTool Web Dashboard you can easily manage devices, analyze measurement data, and effectively get a good overview of your monitoring system.

#### Mounting

The X6 is easy to install. If the detector is to be connected to the WiDetect Online Service, it is delivered with a SIM card, antenna, stored in your account so that communication and collection of measurement values start as soon as the X6 is powered up and connected to the sensor wires. Connection to sensor cables is made using the supplied wiring box. Follow our installation instructions.

#### Specifications

<b>Pulse Types:</b>	Flank and sinus curve
<b>Measuring Range:</b>	Measuring length sensor cable 30C 3000m per loop or 1500m open wire
<b>Power Supply:</b>	12VDC trafo, 110-240V AC
<b>Enclosure:</b>	IP53, with appliance cabinet IP67
<b>I/O Module:</b>	External sensor module, relay
<b>Connection:</b>	One module per sensor type
<b>Network Connection:</b>	Ethernet TCP / IP (Cable)
<b>Wireless Connection:</b>	Internal 3G modem
<b>Wifi:</b>	Yes, internal

## Blue Detect Leak Sensing Cable Technical Data

**Cable Width x Thickness:** 11 mm x 2 mm

**Conductors:** 3 parallel, insulated single-strand copper conductors with a cross-section of 0.75 mm<sup>2</sup> and a diameter of 1 mm

**Extended Cable Length:** Stripped copper, 10 mm

**Cable Insulation:** Cross-linked polyethylene (PEX)

#### Cable Color:

2 blue conductor lines with a white earth conductor line in the middle

#### Loop Resistance In The Field:

25.4 ohm (at 20°C) per 1,000 m wire.  
Resistance increases by 0.4% per degree

#### Insulation Test (spark test):

Performed by cable manufacturer using high-frequency alternating current (5 kHz AC) at 2.2 kV

**Max. Test Voltage in the Field:** 1,000 volts

**Characteristic Impedance:** 200 ohm

#### Pulse Velocity:

170-190 m/μs in polyurethane

**Continuous Working Temp:** -40°C to +120°C

**Transient Temp:** +200°C for 4 hours

**Service Life:** 20 years at continuous operating temperature of +120°C

**UV Stability:** Good (tested in climatic chamber for 1,000 hours)

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