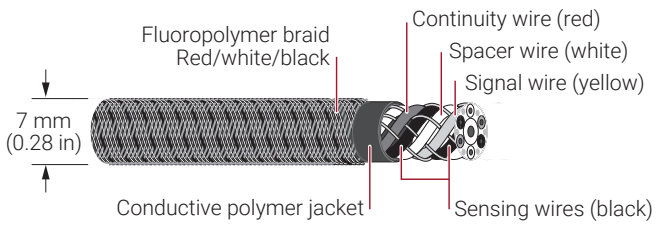
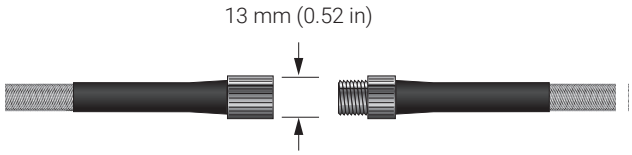
TT5000

nVent RAYCHEM TraceTek

FUEL SENSING CABLE





Drawing not to scale

Cable construction

PRODUCT OVERVIEW

nVent RAYCHEM TraceTek TT5000 sensing cable detects the presence of liquid hydrocarbon fuels at any point along its length, yet does not react to the presence of water. Installed with a TraceTek alarm and locating module, the cable senses the liquid, triggers an alarm, and pinpoints the location of the leak within one meter.

Distributed sensing

TT5000 sensing cable provides distributed leak detection and location for a wide range of applications. The cable is available in a variety of lengths to provide as much coverage as needed.

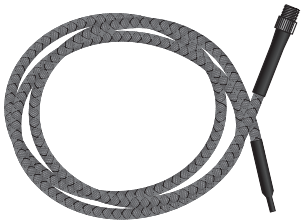
Design flexibility

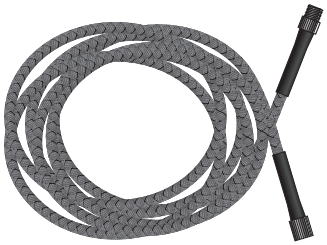
TT5000 sensing cable can be purchased in bulk form, cut to length in the field and joined using connector kits, or it can be obtained in standard lengths with connectors attached in the factory. These modular sensing cables may be connected in series to provide distributed monitoring for trenches, subfloors, and double-containment piping, or used individually for double-containment tanks, sumps, and small areas. TT5000 zone sensing cable—which comes with a factory-installed, heat-shrink end termination—is also available for small area coverage.

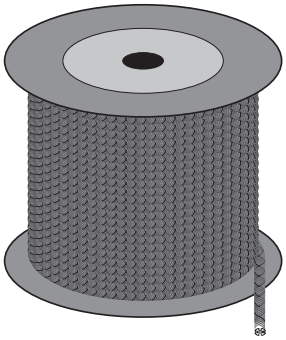
Advanced technology

TraceTek uses radiation-crosslinking and conductive-polymer technology to make TT5000 sensing cable mechanically strong and chemically resistant. The core of the cable is constructed of two sensing wires, an alarm signal wire, and a continuity wire. The core is encased in a conductive-polymer jacket and surrounded with a fluoropolymer braid. This rugged construction allows the cable to perform reliably in the most demanding environments.

ORDERING INFORMATION







TT5000 zone sensing cable with factory-installed connector and end termination		
Catalog Number	**Part Number**	**Description**
TT5000–1.5M/5FT–HSE–MC	673739-000	1.5 m (5 ft) sensing cable with preinstalled heat-shrink end termination, prepared for zone system

TT5000 modular sensing cable with factory-installed connectors		
Catalog Number	**Part Number**	**Description**
TT5000–0.3M/1FT–MC	343347-000	0.3 m (1 ft) sensing cable
TT5000–1.5M/5FT–MC	743599-000	1.5 m (5 ft) sensing cable
TT5000–3M/10FT–MC	690609-000	3 m (10 ft) sensing cable
TT5000–4.5M/15FT–MC	251851-000	4.5 m (15 ft) sensing cable
TT5000–7.5M/25FT–MC	753845-000	7.5 m (25 ft) sensing cable
TT5000–15M/50FT–MC	770285-000	15 m (50 ft) sensing cable
TT5000–30M/100FT–MC	260635-000	30 m (100 ft) sensing cable

TT5000 bulk sensing cable for installation in double-containment piping (connector kits required)		
Catalog Number	**Part Number**	**Description**
TT5000–SC	869309-000	Bulk sensing cable on reel Minimum length: 30 m (100 ft) Maximum length: 240 m (800 ft)

Connector kits (not shown)		
Catalog Number	**Part Number**	**Description**
TT5000–CK–MC–M/F (includes test tools)	122499-000	Components for five mated pairs of connectors
TT5000–CK–MC–M	961207-000	One pin-type connector
TT5000–CK–MC–F	880841-000	One socket-type connector

Note: Refer to the Product Selection Guide (H55869) for other components of the TraceTek system.

PRODUCT CHARACTERISTICS

Cable diameter	7 mm (0.28 in) nominal
Cable diameter with connector	13 mm (0.52 in) nominal
Cable weight	7.3 kg/100 m nominal (4.81 lb/100 ft nominal)
Fluoropolymer braid	Color—red, white and black
Operating temperature range	–20°C to 60°C (–4°F to 140°F)
Pull force limit	Not to exceed 22.7 kg (50 lb)
Bend radius	50 mm (2 in) minimum
Pressure	Loads greater than 9 kg (20 lb) per linear inch at 20°C (68°F) may immediately trigger an alarm
Nonresettable	Must be replaced after exposure to hydrocarbon liquids

CHEMICAL RESISTANCE

Cable functions normally after exposure in accordance with ASTM D 543 at 23°C (73°F) for seven days	Sulfuric acid	(10%)
	Hydrochloric acid	(10%)
	Nitric acid	(10%)
	Sodium hydroxide	(10%)

WATER RESISTANCE

Sensing cable	Less than 10 µA leakage when immersed in salt water for 90 days
Connector system	Less than 10 µA leakage when immersed in water at 10 psig for 24 hours

RESPONSE TIME

Represented Materials Detected	Typical Response Time at 20°C (68°F)
Gasoline	12 minutes
#1 diesel fuel	60 minutes
#2 diesel fuel	120 minutes
JP5 jet fuel	70 minutes
JP8 jet fuel	50 minutes
Jet-A jet fuel	50 minutes
Xylene	20 minutes

Notes:

- Response Time Test Method: "Test Procedures for Third Party Evaluation of Leak Detection Methods; Cable Sensor Liquid Contact Leak Detection Systems."
- Response times are affected by operating temperature. Consult factory for specific response times at other temperatures and in other liquids.

APPROVALS AND CERTIFICATIONS

TraceTek TT5000 sensing cables are approved for installation in ordinary and hazardous areas when used in conjunction with approved TraceTek monitoring equipment and zener safety barriers when appropriate.

All TraceTek sensing cables are designated as "simple apparatus" and included in the approval certification for TraceTek monitoring instruments.

Consult the specific data sheets and approval certificates for the TraceTek TTSIM-128, TTSIM-1, TTSIM-1A, TTSIM-2, TTC-1 and TT-FLASHER-BE for application limitations and specific area approvals and certifications.

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