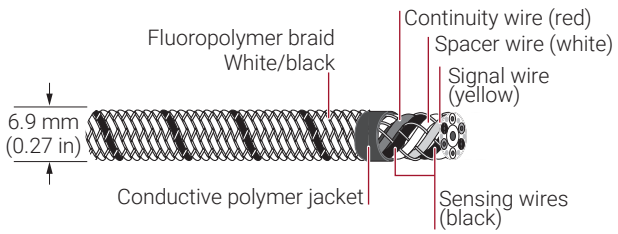
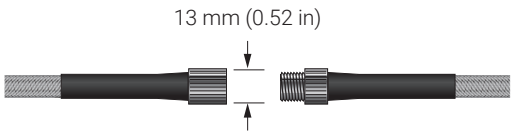
TT5001

CONNECT AND PROTECT

Solvent sensing cable

PRODUCT OVERVIEW





Drawing not to scale

Cable construction

nVent RAYCHEM TraceTek TT5001 sensing cable detects liquid organic solvents anywhere along its length, but does not react to the presence of water. Installed with an nVent RAYCHEM 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

TT5001 sensing cable provides distributed leak detection and location for a wide range of applications. Cable lengths can be arranged to provide as much coverage as necessary.

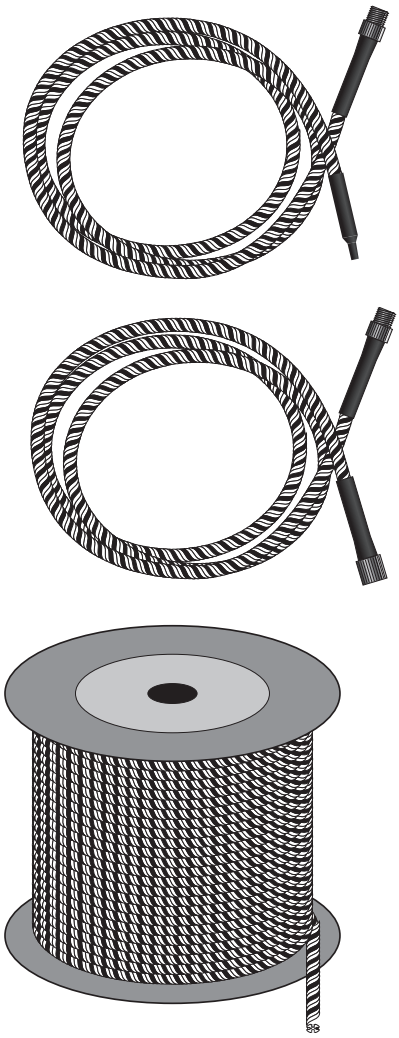
Design flexibility

TT5001 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. TT5001 zone sensing cable—which comes with a factory-installed, heat-shrink end termination—is also available for small area coverage.

Advanced technology

nVent RAYCHEM radiation-crosslinking and conductive-polymer technology is used to make TT5001 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 well, even in demanding environments.

ORDERING INFORMATION



TT5001 zone sensing cable with factory-installed connector and end termination

Catalog number	Part number	Description
TT5001–1.5M/5FT–HSE–MC	142401-000	1.5 m (5 ft) sensing cable with preinstalled heat-shrink end termination, prepared for zone system

TT5001 modular sensing cable with factory-installed connectors

Catalog number	Part number	Description
TT5001–0.3M/1FT–MC	453689-000	0.3 m (1 ft) sensing cable
TT5001–1.5M/5FT–MC	135133-000	1.5 m (5 ft) sensing cable
TT5001–3M/10FT–MC	405471-000	3 m (10 ft) sensing cable
TT5001–7.5M/25FT–MC	385457-000	7.5 m (25 ft) sensing cable
TT5001–15M/50FT–MC	897185-000	15 m (50 ft) sensing cable

TT5001 bulk sensing cable for installation in double-containment piping (connector kits required)

Catalog number	Part number	Description
TT5001–SC	227899-000	Bulk sensing cable on reel Minimum length: 75 m (250 ft) Maximum length: 250 m (825 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 nVent RAYCHEM TraceTek system.

PRODUCT CHARACTERISTICS

Cable diameter	6.9 mm (0.27 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—white and black
Operating temperature range	–20°C to 60°C (–4°F to 140°F)
Pull force limit	Not to exceed 23 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 most solvents

CHEMICAL RESISTANCE

Cable functions normally after exposure in accordance with ASTM D 543 at 23°C (73°F) for seven days

Sulfuric acid (10%)	(10%)
Hydrochloric acid (10%)	(10%)
Nitric acid (10%)	(10%)
Sodium hydroxide (10%)	(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)
Toluene	10 min
Dichloromethane (methylene chloride)	5 min
1, 1, 1-trichloroethylene (TCE)	8 min
Trichloroethane (TCA)	20 min
Methyl ethyl ketone (MEK)†	10 min†
Acetone†	10 min†
n-methyl pyrrolidone (NMP)†	60 min†
Isopropyl alcohol (anhydrous)	90 min

Notes:
- Response times are based on 50 mm (2 in) of cable immersed in liquid.
- Response times are affected by operating temperature. Consult factory for specific response times at other temperatures and in other liquids.

† Prolonged immersion in ketones will inhibit sensing-cable performance.

APPROVALS AND CERTIFICATIONS

TT5001 sensing cables are approved for installation in ordinary and hazardous areas when used in conjunction with approved nVent RAYCHEM TraceTek monitoring equipment and zener safety barriers when appropriate.

All nVent RAYCHEM TraceTek sensing cables are designated as “simple apparatus” and included in the approval certification for nVent RAYCHEM TraceTek monitoring instruments.

Consult the specific data sheets and approval certificates for the nVent RAYCHEM TraceTek TT-TS12, TTDM-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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General Signaling Equipment
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FM APPROVED

The TT5001 sensing cables are FM approved as system interconnection cable in the TraceTek Diesel Leak Detection System when installed with a TraceTek Alarm and Locator Module and TT-FFS Fast Fuel Sensor to detect liquid hydrocarbon fuels.

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