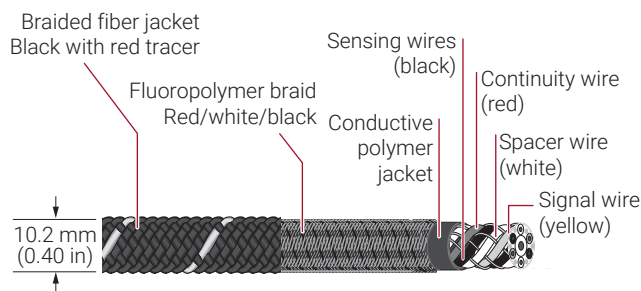


# TT5000-HUV

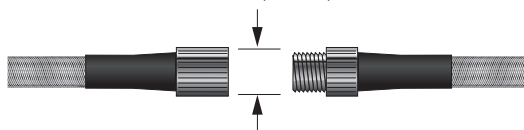
## CONNECT AND PROTECT

### Fuel sensing cable for aboveground leak detection

#### PRODUCT OVERVIEW



Drawing not to scale  
13 mm (0.52 in)



**Cable construction**

nVent RAYCHEM TraceTek TT5000-HUV sensing cable detects the presence of liquid hydrocarbon fuels at any point along its length, yet it does not react to the presence of water. Installed with an nVent RAYCHEM TraceTek Sensor Interface Module and Alarm Panel, the cable senses the hydrocarbon liquid, triggers an alarm and pinpoints the location of the leak within one meter.

#### Designed for aboveground leak detection

TT5000-HUV sensing cable is designed for use on aboveground pipe, around pump pads or valves where the cable will be exposed to sunlight and weather during its service life. The sensor cable core is standard an nVent RAYCHEM TT5000 with well documented response times, numerous third party qualifications and years of successful applications. The 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 or custom cut lengths with connectors attached in the factory. The cable is designed to be attached to the bottom of horizontal piping, spiraled around vertical pipe, or placed on flat surfaces below or around pumps and valves and other applications where surface level fuel leaks and spills can be anticipated.

#### Distinctive appearance and ready for refinery, tank farm and terminal applications

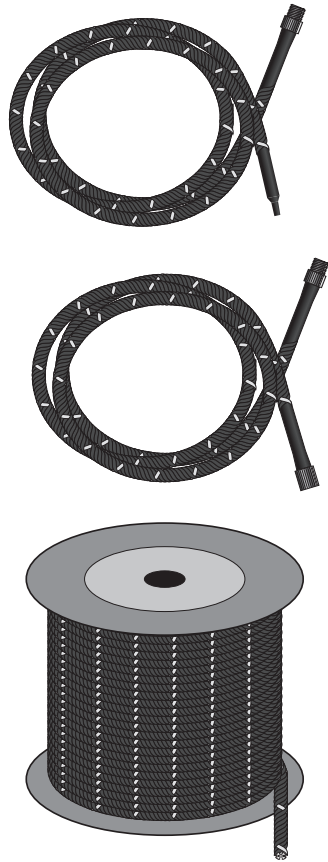
TT5000-HUV sensing cable has a matte black rope outer layer with a red tracer stripe. The rope outer layer is fabricated with thousands of individual filaments that add strength and excellent protection from the damaging effects of direct sunlight exposure. Additionally, this rope layer makes the sensor cable resistant to kinks and pliable, yet rugged enough for installation and long service life in pipe applications.

The sensor cable can have connectors wherever necessary; can be branched as needed and in general can be tailored to match the piping network. Circuits up to 1000 meters can be constructed by connecting individual segments. Multiple circuits can be monitored from a single control room location.

## Advanced technology

nVent RAYCHEM radiation cross-linking and conductive-polymer technology is used to make TT5000-HUV cable. The combination of water and chemically resistant cable core coupled with the enhanced UV protection provided by the rope outer layer yield a product well suited for aboveground leak detection. The cable is able to withstand the rigors of installation and long years of service with exposure to rain, snow, sunlight and similar weather stresses.

## ORDERING INFORMATION



### TT5000-HUV modular sensing cable with factory-installed connectors

| Catalog number     | Part number | Description                  |
|--------------------|-------------|------------------------------|
| TT5000-HUV-1M-MC   | P000001302  | 1 m (3 ft) sensing cable     |
| TT5000-HUV-3M-MC   | P000001301  | 3 m (10 ft) sensing cable    |
| TT5000-HUV-7.5M-MC | P000001300  | 7.5 m (25 ft) sensing cable  |
| TT5000-HUV-15M-MC  | P000001299  | 15 m (50 ft) sensing cable   |
| TT5000-HUV-30M-MC  | P000001298  | 30 m (100 ft) sensing cable  |
| TT5000-HUV-50M-MC  | P000001297  | 50 m (164 ft) sensing cable  |
| TT5000-HUV-100M-MC | P000001296  | 100 m (328 ft) sensing cable |

### TT5000-HUV bulk sensing cable (connector kits required)

| Catalog number | Part number | Description   |
|----------------|-------------|---|
| TT5000-HUV-SC  | P000000821  | Bulk sensing cable on reel<br>Minimum length: 30 m (100 ft)<br>Maximum length: 240 m (800 ft) |

### Connector kits (not shown)

| Catalog number                                | Part number | Description                                   |
|---|-------------|---|
| TT5000-HUV-CK-MC-M/F<br>(includes test tools) | P000001207  | Components for five mated pairs of connectors |

### Installation materials

| Catalog number     | Part number | Description                            |
|--------------------|-------------|--|
| TT-PU-FOAM-2x0.5   | P000001136  | 2-inch wide foam with adhesive backing |
| TT-VSTRAP-1.5x75ft | P000001135  | Fastening strap                        |

## PRODUCT CHARACTERISTICS

|                                |   |
|--------------------------------|---|
| Cable diameter                 | 7 mm (0.28 in) nominal  |
| Cable diameter with connector  | 13 mm (0.52 in) nominal   |
| Cable diameter with rope braid | 10.2 mm (0.40 in) nominal   |
| Fluoropolymer braid            | Color—red, white and black  |
| Braided fiber jacket           | Color—black with red tracer   |
| Cable weight                   | 8.8 kg/100 m nominal (5.9 lb/100 ft nominal)  |
| Operating temperature range    | -20°C to 60°C (-4°F to 140°F)   |
| Pull force limit               | Not to exceed 100 kg (220 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 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                           |
| MTBE (Methyl Tert-Butyl Ether) | 45 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

TT5000-HUV 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.



General Signaling Equipment  
76LJ



The TT5000-HUV sensing cable is FM approved in the TraceTek Leak Detection System that detects the presence of liquid hydrogen fuels when installed with a TraceTek Alarm and Locator Module.

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