instrumentation cable series

# TT5001 / TT5001-HUV

## Fast-Response Organic Solvent Leak Sensing Cable

Fast-response water-immune organic solvent leak sensing cable (TT5001 & UV TT5001-HUV)

**Sub-3-Min Solvent Alarm** | **MEK, Toluene & Acetone** | **TT5001-HUV Outdoor UV**



## Application

TT5001 and TT5001-HUV Fast-Response Organic Solvent Leak Sensing Cable engineered with a fast-diffusing swelling-elastomer actuator that detects low-molecular-weight organic solvents (MEK, acetone, toluene, xylene, benzene,.

**Typical uses:** Pharmaceutical API & Solvent Recovery Piping, Semiconductor Photoresist & Solvent Sub-Fabs, Outdoor Petrochemical Aromatics (BTX) Pipe Racks, Lithium-Ion Battery Slurry (NMP / DMC / EMC) Lines, Specialty Paint, Coating & Adhesive Manufacturing

## Construction





Cross-section, not to scale

1. 2 × fluoropolymer-insulated copper continuity wires
2. Concentric 20 Ω/m conductive-polymer sensing pair
3. Thin-wall fast-response solvent-swelling elastomer
4. Open-weave protective braid (UV Black on TT5001-HUV)

## Technical data

Typical values

| | | | |
|---|---|---|---|
| **Sensing wire linear R** | ≈ 20.0 Ω/m (±2 % linearity — compatible with all panels) | **Dry / water-immersed IR** | ≥ 100 MΩ in dry air or clean water |
| **Location accuracy** | ± 0.5 % of total sensing circuit length | **Hazardous area rating** | Ex ia IIC T4 Ga Simple Apparatus (with zener barrier) |
| **Continuous operating temp.** | -20 °C to +60 °C | **Response time (Toluene/MEK)** | 30 to 90 seconds @ 20 °C |
| **Response time (Gasoline/Jet)** | 1 to 3 minutes @ 20 °C | **Nominal outer diameter** | 6.5 mm (0.26 in) cable body |
| **Min. bend radius** | 35 mm (5.5 × OD) | **Max. pulling tension** | 160 N (35 lbf) |
| **Detected organic solvents** | MEK, Acetone, Toluene, Xylene, Benzene, THF, Hexane, Ethyl Acetate | **Water & humidity immunity** | Zero false alarm in outdoor rain, snowmelt or washdown water |
| **Reset after evaporation** | Automatically resets to > 100 MΩ once clean volatile solvent evaporates | **Standards** | IEC 60079-11 / UL 913 Intrinsically Safe Simple Apparatus |

## Sizes

4 standard constructions

**Tick the sizes you need** and send this page to info@tebaoflex.com or WhatsApp +86 185 9591 3361.

| Order designation | Environment & connectors | Body Ø mm | Weight ≈ kg/km | MEK/Toluene sec | Gasoline sec |
|---|---|---|---|---|---|
| **Fast-Response Organic Solvent Leak Sensing Cables** 4 sizes | | | | | |
| ☐ **TT5001 (Bulk)** | **Indoor Solvent Containment Pipes & Trenches** | **6.5** | **52** | **45** | **90** |
| ☐ **TT5001-PC** | **Indoor Modular Lengths with Plastic Connectors** | **6.5** | **52** | **45** | **90** |
| ☐ **TT5001-HUV (Bulk)** | **Outdoor UV-Stabilized Pipe Racks & Tank Dikes** | **6.5** | **54** | **45** | **90** |
| ☐ **TT5001-HUV-PC** | **Outdoor UV Modular Lengths (1.5 m to 15 m)** | **6.5** | **54** | **45** | **90** |

– TT5001 resets automatically once clean volatile solvents (such as acetone, MEK or toluene) evaporate from the cable.

## Standards and approvals

- ✓ Ex ia IIC Simple Apparatus
- ✓ SEMI S2 Compliant
- ✓ CE, RoHS 2 & REACH

## Certifications

**Management systems:** ISO 9001, ISO 14001, ISO 45001

### Request a quotation

Send the size, length and destination. An application engineer replies within 2 business hours.

WhatsApp / phone
**+86 185 9591 3361**

Email
**info@tebaoflex.com**

Web
**tebaoflex.com/cables/tracetek-tt5001-tt5001-huv-fast-response-organic-solvent-leak-sensing-cable**

Typical values for this cable type, based on UL 913 / IEC 60079-11 / SEMI S2. Values for your order are confirmed in the quotation. Subject to change without notice. Jiangsu Tebaoflex Special Cable Co., Ltd., Taicang, Jiangsu, China.