



# TraceTek® Leak Detection

## Product selection guide for water sensing systems

### Scope of This Guide

This guide will help you select TraceTek® products for water detection in commercial buildings. Detailed product information in this guide complements the *TraceTek Application Guide for Commercial Building Protection* (H53147).

Additional TraceTek products are available for other liquids—fuels and oils, organic solvents—and for other types of applications. See the *TraceTek Selection Guide for Industrial and Environmental Applications* (H55869) for further detail.

### Modular Design Approach

A TraceTek leak detection system is a versatile modular system, with interchangeable components that can be configured in many differ-

ent ways. Standard lengths of TraceTek cable plug together with no special tools, making it easy to modify or add to the system in the future. The range of TraceTek alarm modules and modular components allows you to tailor the monitoring approach and layout to the application.

### Contents of This Guide

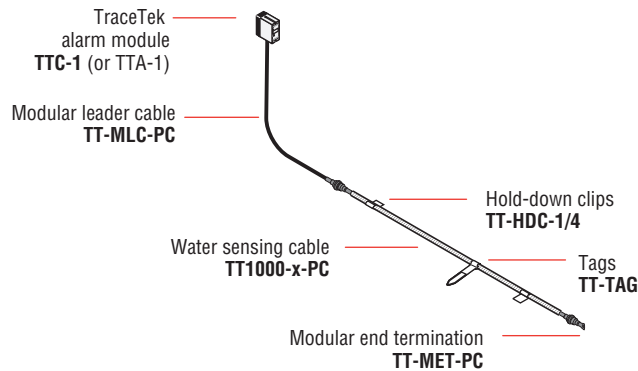
The first two pages of this guide show typical configurations for TraceTek leak detection systems. Many other configurations are possible as well. The last two pages present product listings—detailed technical and ordering information for the products available.

## Elements of a TraceTek System

### A Basic System

Every TraceTek leak detection system has these basic parts:

- An alarm module
- Leader and/or jumper cables (nonsensing cables between the module and the areas monitored)
- Sensing cable
- End termination
- Accessories such as hold-down clips and tags



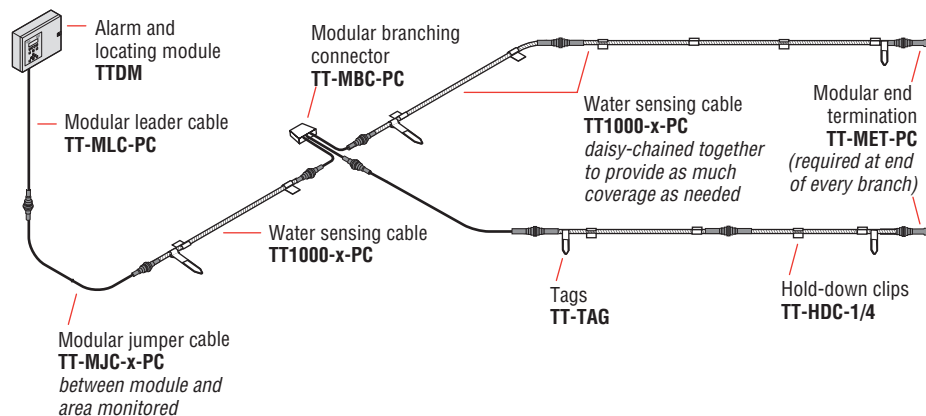
### A Locating System

A TraceTek locating system often includes these additional circuit components:

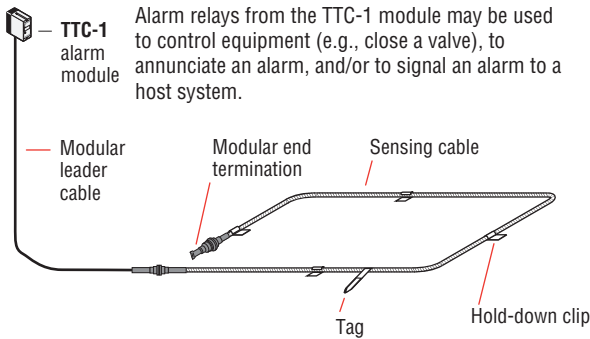
- Branching connectors
- Weighted lengths

These components make it possible for a locating system to monitor one or more areas or lengths.

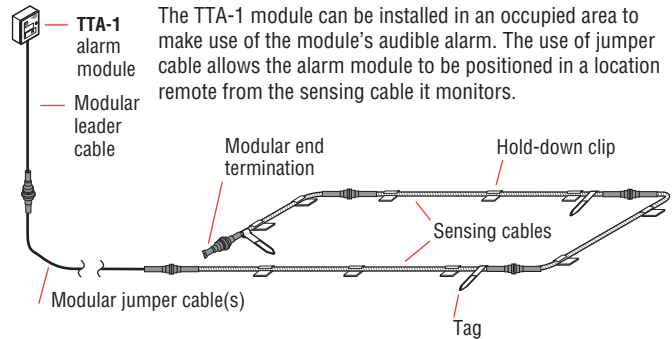
A locating system has one more essential element: a system map (see an example on the next page).



### Small Area Coverage: Basic TraceTek Alarm System



Sensing cable can be positioned to provide complete leak detection coverage of pumps, boilers, and other equipment.



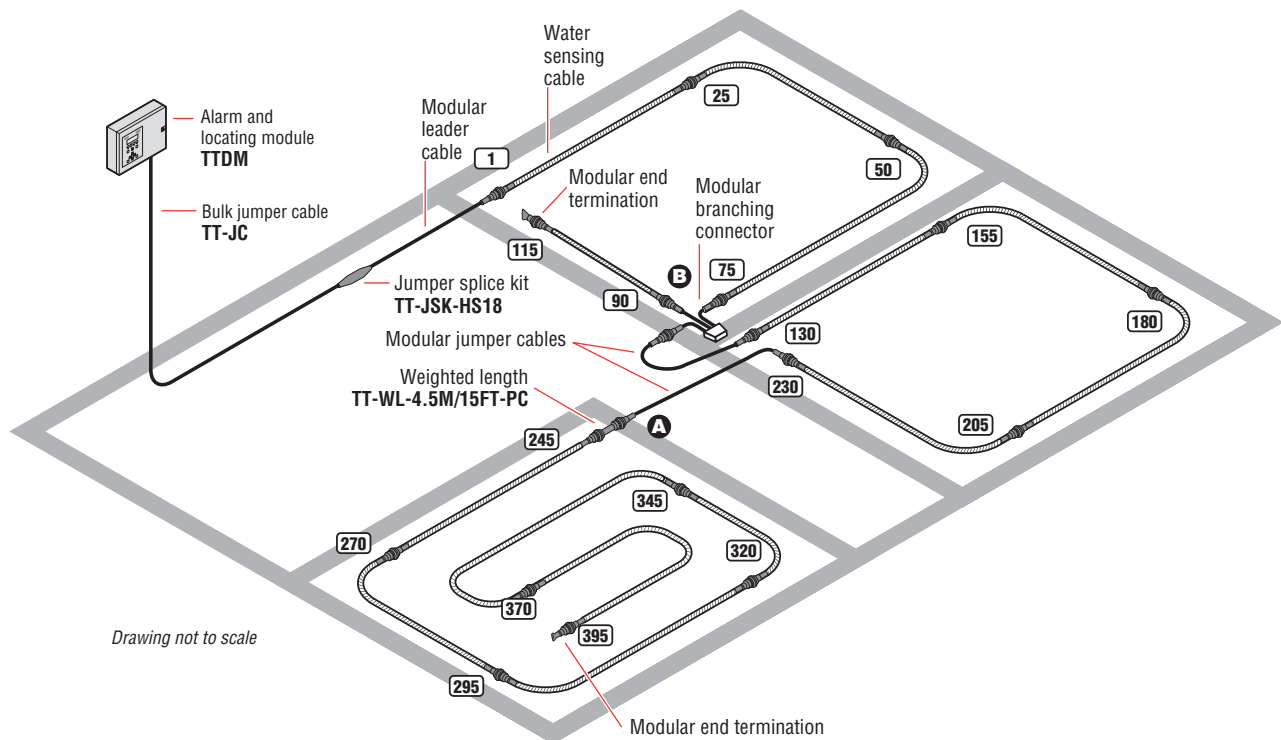
**Note:** A TraceTek alarm system can include several lengths of sensing cable. However, for large and/or separate areas, consider a TraceTek locating system.

### Wide Area Coverage: TraceTek Locating System

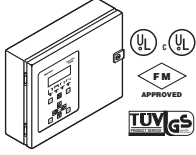




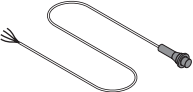
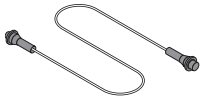



A TraceTek locating system can monitor one or more large areas. If water contacts the sensing cable, the alarm and locating module indicate the location with a digital display. A system map created after installation provides reference points (e.g., **25** in the illustration) to facilitate a quick, effective response.

On this illustration, **A** shows where the sensing circuit jumps to a new room and a weighted length is used. The weighted length simulates 15 feet (4.5 m) of sensing cable so the system map will show a clear division between the separate areas.







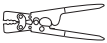
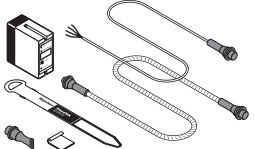
**B** shows a branch in the sensing circuit. A TraceTek branching connector is wired so the connected branches appear in series, middle leg first. The branching connector also adds a simulated cable length of 15 feet (4.5 m) on each branch to make a clear division between areas. Although not shown, a system may have branches within branches. The number of branches is limited only by the length of the sensing circuit.



## TraceTek Products for Water Detection in Commercial Buildings

| Product   | Catalog No.   | Selection  | Description  |
|---|---|--|--|
| <b>Alarm Modules</b>  |   |  |  |
| TTDM alarm and locating module  | TTDM-1<br>TTDM-2<br>TTDM-24   | 115 Vac supply<br>230 Vac supply<br>24 V supply  | Alarm and locating module; indicates liquid location with digital display. Monitors up to 5000 ft (1500 m) of sensing cable. Metal enclosure, NEMA 12. Data logging.<br>Outputs: Audible alarm, 4 LEDs, backlit LCD<br>3 DPDT form C relays (leak, service, and fault)<br>4-20 mA analog output<br>Serial port configurable for RS-232 or RS-485 |
|    |   | <i>For details on approvals, see data sheets</i>   |  |
| TTA alarm module  | TTA-1   | 115 or 240 Vac supply  | Nonlocating single-channel alarm module<br>Monitors up to 100 ft (30 m) of sensing cable<br>Metal enclosure, NEMA 1<br>Outputs: Audible alarm, 3 LEDs<br>4 PDT form C relay (leak or fault)  |
|    |   |  |  |
| TTC alarm module  | TTC-1   | 24 V supply  | Nonlocating single-channel alarm module<br>Monitors up to 100 ft (30 m) of sensing cable<br>Plastic enclosure, NEMA 1<br>Outputs: 3 LEDs<br>DPDT form C relay (leak)<br>SPDT form C relay (fault)  |
|    |   |  |  |
|   | TT-DRC  | DIN rail clip  | Mounting clip for attachment to DIN rail in electrical panel   |
|    |   |  |  |
| External or remote alarm  | TTE-XAL   | External audible alarm   | 95 dB alarm triggered by relay closure; requires 24 V supply   |
|  |   |  |  |
| <b>Jumper Cables</b>  |   |  |  |
| Modular leader cable  | TT-MLC-PC   | Modular leader cable (with plastic connector)<br>Length: 12 ft (3.5 m)                   | Cable with one end prepared for connection to terminals in module (or for splicing to bulk jumper cable), and with socket-type plastic connector at other end.   |
|  |   |  |  |
| Modular jumper cable  | TT-MJC-x*-PC<br>TT-MJC-1M/3FT-PC<br>TT-MJC-3M/10FT-PC<br>TT-MJC-7.5M/25FT-PC<br>TT-MJC-15M/50FT-PC<br>TT-MJC-30M/100FT-PC | Modular jumper cable<br>1m 3 ft<br>3 m 10 ft<br>7.5 m 25 ft<br>15 m 50 ft<br>30 m 100 ft | Jumper cable with pin-type plastic connector at one end, socket-type plastic connector at other end.<br><br>* Cable length   |
|  |   |  |  |
| Basic jumper cable  | TT-JC-76M/250FT   | Bulk jumper cable (250 ft reel)  | Bulk jumper cable with four color-coded 18 AWG conductors. Connectors not included.  |
|  |   |  |  |
| Jumper splice kit   | TT-JSK-HS18   | Jumper splice kit  | Splice kit for jumper cable; contains parts for 5 splices. Includes 20 crimps and 5 heat-shrinkable tubes. For use with 18 AWG jumper wire.  |
|  |   |  |  |
| <b>Sensing Cables</b>   |   |  |  |
| Water sensing cable   | TT1000-x*-PC<br>TT1000-1M/3FT-PC<br>TT1000-3M/10FT-PC<br>TT1000-7.5M/25FT/PC<br>TT1000-15M/50FT-PC                        | Modular sensing cable<br>1m 3 ft<br>3 m 10 ft<br>7.5 m 25 ft<br>15 m 50 ft               | TT1000 water sensing cable with pin-type plastic connector at one end, socket-type plastic connector at other end.<br><br>*Cable length  |
|  |   |  |  |

**TraceTek Products for Water Detection in Commercial Buildings (Continued)**

| Product  | Catalog No.                      | Selection   | Description  |
|--|----------------------------------|---|--|
| <b>Circuit Components</b>  |                                  |   |  |
| End termination<br>     | TT-MET-PC                        | Modular end termination (with plastic connector)      | Terminates sensing circuit; has pin-type plastic connector. Required at end of sensing circuit and all branches.   |
| Branching connector<br> | TT-MBC-PC                        | Modular branching connector (with plastic connectors) | Allows a "T" or branch in the sensing circuit. Has one pin-type connector to connect to cable from alarm module, two socket-type connectors to connect two branches. Wire the branches in series and adds a simulated length of 15 ft (4.5 m) on each branch to make clear division between areas. |
| Weighted length<br>     | TT-WL-4.5M/15FT-PC               | Weighted length (with plastic connectors)             | Simulates 15 ft (4.5 m) of sensing cable. Makes a clear division between separate areas in a locating system.  |
| <b>Accessories</b>   |                                  |   |  |
| Hold-down clips<br>     | TT-HDC-1/4/200-N/A<br>TT-HDC-1/4 | No adhesive (200/bag)<br>Adhesive-backed (50/bag)     | Hold-down clips attach cable to flat surfaces. Pressure-sensitive adhesive bonds to clean, flat surfaces. <i>Use a clip for each 4 ft (1.3 m) of sensing cable.</i>  |
| Tags<br>                | TT-TAG                           | TraceTek tags   | Tags to identify TraceTek sensing cable and record mapped distance. Tag attaches to sensing cable by closing on itself (like a cable tie). Package contains 50 high-visibility yellow tags and a permanent marker. <i>Use a tag on each length of cable and at mapping points.</i>                 |
| <b>Tools</b>   |                                  |   |  |
| Portable test box<br> | TT-PTB-1000                      | Portable test box                                     | Battery-operated device to test TraceTek sensing cables. Allows testing of anything from an individual length up to 2000 ft (1000 m) of sensing cable. Useful for installation and maintenance.  |
| Crimp tool<br>        | AD-1522-1                        | Crimp tool  | Tool sized to properly crimp connectors in TT-JSK-HS18 jumper splice kit.  |
| <b>Prepackaged Kits</b>  |                                  |   |  |
| Complete kits<br>     | TTC-KIT-1<br>TTC-KIT-2           | 25 ft of TT1000 cable<br>50 ft of TT1000 cable        | Each kit contains a TTC-1 alarm module, a modular leader cable, a modular sensing cable of length indicated, a modular end termination, 15 hold-down clips, and 5 tags.  |



The TraceTek products group is a part of Tyco Thermal Controls, Tyco International. Tyco Thermal Controls is ISO 9001 certified.

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