Sensor 072

The tekmar Slab Sensor 072 has a black high density polyethylene head and is ideal for use in soil or concrete. The 072 is supplied with 20’ (6 m) of 2-conductor cable.

Sensor Wiring

**Caution:** Do not run sensor wires parallel to telephone or power cables. If sensor wires are located in an area with strong sources of electromagnetic interference, shielded cable or twisted pair should be used. Alternately, the wires can be run in a metal conduit that is grounded to the common sensor terminal on the control and not to earth ground.

- Sensor wiring can extended up to 500’ using 18 AWG wire.
- Wire splices should be properly soldered and protected in an accessible, waterproof junction box.

Installation

Installing the Sensors

**Note:** Proper placement of sensors is critical for correct control operation.

Though sensors are designed for direct embedding in slab material, it is recommended to install them in a metal or plastic sleeve. This allows for easy replacement if the sensor should ever fail or have to be relocated. The sensor should be placed 1” (25 mm) below the slab surface and 1/2 way between the pipes or electric cables.

Sensor Testing Instructions

A good quality test meter capable of measuring up to 5,000 kΩ (1 kΩ = 1000Ω) is required to measure the sensor resistance. In addition to this, the actual temperature must be measured with either a good quality digital thermometer, or if a thermometer is not available, a second sensor can be placed alongside the one to be tested and the readings compared.

First measure the temperature using the thermometer and then measure the resistance of the sensor at the control. The wires from the sensor must not be connected to the control while the test is performed. Using the chart on the following page, estimate the temperature measured by the sensor. The sensor and thermometer readings should be close. If the test meter reads a very high resistance, there may be a broken wire, a poor wiring connection or a defective sensor. If the resistance is very low, the wiring may be shorted, there may be moisture in the sensor or the sensor may be defective. To test for a defective sensor, measure the resistance directly at the sensor location.

Do not apply voltage to a sensor at any time as damage to the sensor may result.
**Temperature vs. Resistance Table**

<table>
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<th>Resistance Ω</th>
<th>Temperature °F</th>
<th>Resistance Ω</th>
<th>Temperature °F</th>
<th>Resistance Ω</th>
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</table>

**Technical Data**

**Slab Sensor 072**

- Approvals: CSA C US
- Operating Range: -60 to 140°F (-51 to 60°C)
- Dimensions: 3/8” OD x 1.5” (10 OD x 38 mm), 20’ (6 m) 18 AWG wire.
- Sensor: NTC thermistor, 10 kΩ @ 77°F (25 °C ± 0.2°C), β = 3892
- Materials: Black High Density Polyethylene (HDPE) sleeve and jacket, solid PVC insulated wire
- Packaged Weight: 0.37 lb. (170 g)

**Limited Warranty and Product Return Procedure**

**Limited Warranty** The liability of tekmar under this warranty is limited. The Purchaser, by taking receipt of any tekmar product (“Product”), acknowledges that it has read and understands same.

The tekmar Limited Warranty to the Purchaser on the Products sold hereunder is a manufacturer’s pass-through warranty which the Purchaser is authorized to pass through to its customers. Under the Limited Warranty, each tekmar Product is warranted against defects in workmanship and materials; or to the exchange of the defective product for a warranty replacement product; or to the granting of credit for the defective product; or to the exchange of the defective product for a warranty replacement product; or to the granting of credit limited to the original cost of the defective product, and such repair, exchange or credit shall be the sole remedy available from tekmar, and, without limiting the foregoing in any way, tekmar is not responsible, in contract, tort or strict product liability, for any other losses, costs, expenses, inconveniences, or damages, whether direct, indirect, special, secondary, incidental or consequential, arising from ownership or use of the product, or from defects in workmanship or materials, including any liability for fundamental breach of contract.

The pass-through Limited Warranty applies only to those defective Products returned to tekmar during the warranty period. This Limited Warranty does not cover the cost of the parts or labor to remove or transport the defective Product, or to reinstall the repaired or replacement Product; all such costs and expenses being subject to Purchaser’s agreement and warranty with its customers.

Any representations or warranties about the Products made by Purchaser to its customers which are different from or in excess of the tekmar Limited Warranty are the Purchaser’s sole responsibility and obligation. Purchaser shall indemnify and hold tekmar harmless from and against any and all claims, liabilities and damages of any kind or nature which arise out of or are related to any such representations or warranties by Purchaser to its customers.

The pass-through Limited Warranty does not apply if the returned Product has been damaged by negligence by persons other than tekmar, accident, fire, Act of God, abuse or misuse; or has been damaged by modifications, alterations or attachments made subsequent to purchase which have not been authorized by tekmar; or if the Product was not installed in compliance with tekmar’s instructions and/or the local codes and ordinances; or if due to defective installation of the Product; or if the Product was not used in compliance with tekmar’s instructions.

This WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, WHICH THE GOVERNING LAW ALLOWS PARTIES TO CONTRACTUALLY EXCLUDE, INCLUDING, WITHOUT LIMITATION, IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE, DURABILITY OR DESCRIPTION OF THE PRODUCT, ITS NON-INFRINGEMENT OF ANY RELEVANT PATENTS OR TRADEMARKS, AND ITS COMPLIANCE WITH OR NON-VIOLATION OF ANY APPLICABLE ENVIRONMENTAL, HEALTH OR SAFETY LEGISLATION. THE TERM OF ANY OTHER WARRANTY NOT HEREBY CONTRACTUALLY EXCLUDED IS LIMITED SUCH THAT IT SHALL NOT EXTEND BEYOND TWENTY-FOUR (24) MONTHS FROM THE PRODUCTION DATE, TO THE EXTENT THAT SUCH LIMITATION IS ALLOWED BY THE GOVERNING LAW.

**Product Warranty Return Procedure** All Products that are believed to have defects in workmanship or materials must be returned, together with a written description of the defect, to the tekmar Representative assigned to the territory in which such Product is located. If tekmar receives an inquiry from someone other than a tekmar Representative, including an inquiry from Purchaser (if not a tekmar Representative) or Purchaser’s customers, regarding a potential warranty claim, tekmar’s sole obligation shall be to provide the address and other contact information regarding the appropriate Representative.