



## ZYDAX Dual Temperature Wet-Dry Sensor (T2WD)

### Introduction

The Zydax Dual Temperature Wet-Dry Sensor (T2WD) is a state of the art intelligent surface sensor with unprecedented capabilities. The inherent intelligence provides a platform for the reporting of accurate data, as well as system expandability abilities for devices such as cameras.

### Data Reported

When purchased with standard configuration, the T2WD reports the following information:

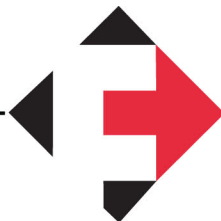
- Air Temperature
- Humidity
- Dew Point (calculated)
- Actual Pavement Surface Temperature
- Pavement Surface Condition (wet, dry)
- Chemical Wet Condition – with ice alert.
- Pavement Temperature at 1.75 inches below the pavement surface
- Sub-Surface Temperature at any depth up to five feet.

### Power Requirements

The T2WD operates from a wide range of DC voltages from 12VDC to 60VDC. Higher voltages allow the use of smaller power cabling at long distances reducing installation costs, easing cable routing, potentially reduces size of conduit if used. Typically operated at 24 volts DC and shipped with a direct burial power supply.

### Expandability

The T2WD can act as a data collector for multiple Zydax sensors or other devices such as cameras. Zydax technology can monitor up to 8,000 ft (2440 meters) of highway from a single access point.



## M. S. Foster & Associates, Inc.

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## Communications

Published open protocol. Standard with an internal modem and intelligence so it functions as a stand-alone system if desired with no need for an RPU (Remote Processor Unit) or other expensive support equipment. Communications can also be done by cell phone, Satellite, or fiber optics. Because of inherent intelligence and open protocol, it can also be connect to an existing RWIS (Roadway Weather Information System) RPU.

## Temperature Accuracy

TEMPERATURE ACCURACY	
+61 and beyond	=/> 0.60 to max 0.80 degrees C.
+51 to + 60	+/- 0.60 degrees C.
+41 to + 50	+/- 0.50 degrees C.
+26 to + 40.	+/- 0.35 degrees C.
+16 to +25	+/- 0.25 degrees C.
+11 to + 15	+/- 0.20 degrees C.
+6 to +10	+/- 0.15 degrees C.
0 to + 5	+/- 0.1 degrees C.
0 to - 5	+/- 0.15 degrees C.
-6 to -10	+/- 0.20 degrees C.
-11 to -15	+/- 0.25 degrees C.
-16 to -25	+/- 0.35 degrees C.
-26 to -40	+/- 0.40 degrees C.
-41 to -50	+/- 0.40 degrees C.

- Zydax, LLC. All temperatures are Celsius. Survivability is +85 to -65 degrees C. Temperature resolution is 0.0325°C reported to 0.XX°C

## Freeze Point Determination

The T2WD does not determine or display the freeze point of any moisture that is present. It only displays wet, dry, or chemical wet conditions.

## Wet/Dry Conditions

The ZAPSS uses a novel (Patented) multiple elements method to determine wet/dry surface condition. The multiple elements combined with advanced algorithms provide wet dry conditions with great reliability. Sensitivity is easily adjusted to eliminate false alarms and to meet your wet/dry reporting needs.

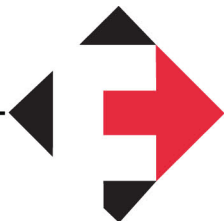
## Switching

The T2WD can be a stand-alone unit (connected to power only) used to activate warning signs based on wet dry conditions, and/or surface temperature. This same function can be utilized while remotely monitoring conditions and alarming via email and/or phone calls whenever an alarm condition is met.

## Other Information

- Crystal controlled Real Time Clock with 10 year battery
- Time and date stamped data.
- Ability to operate as a Master sensor in a large network.
- Ability to operate as a Slave sensor in a large network.
- Standard Cable length
  - 60 feet (18.2 meters) on the main cable. Direct Burial type.
  - 75 feet (22.9 meters) on the Temperature/humidity sensor.

**Zydx sensors NEVER require maintenance or calibration!**



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