



ENVIROMUX® Series

Temperature/Humidity Sensor Installation Manual for ENVIROMUX-1W Sensors



ENVIROMUX-TH1W-7
Temperature/Humidity/Dewpoint
sensor



ENVIROMUX-T1W-1M
Temperature sensor



ENVIROMUX-TCKS-752
K-Type Thermocouple
Temperature sensor



ENVIROMUX-TCKS-1382
K-Type Thermocouple Wide-
Range Temperature sensor

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INTRODUCTION

Many different sensors can be connected to the ENVIROMUX-1W(P) Environment Monitoring Systems. A complete listing of available sensors and accessories can be found at <http://www.networktechinc.com/environment-monitor-1wire.html> and the manual covering installation and configuration for all features can also be found at this website.

This manual is only provided to instruct how to install the ENVIROMUX temperature and humidity sensors to this system.

MOUNTING

The ENVIROMUX TH1W-7 Temperature/Humidity/Dewpoint sensors are intended for indoor use only. These sensors can be mounting in any position but include a keyhole slot on the back to enable quick wall-mounting if desired.



Figure 1- Keyhole slot for standard mounting

CONNECT SENSORS

RJ11 Sensors

The temperature and humidity sensors for the ENVIROMUX-1W Environment Monitoring Systems have RJ11 6P4C plugs for connection to RJ11 6P4C jacks on the ENVIROMUX-1W. Connect each sensor to one of the female connectors labeled "1W Sensors" on the ENVIROMUX using RJ11 6P4C Straight-Wired Patch Cords and RJ11 Splitters (NTI# RJ11-3JCK). The male RJ11 connectors should snap into place. (See page 3 for wiring specification and pinout.) The total length of all combined sensors cables connected to each 1W Sensor port can be up to 600 feet.

Note: It is very important to locate the temperature and/or humidity sensors away from ventilation sources and fans.

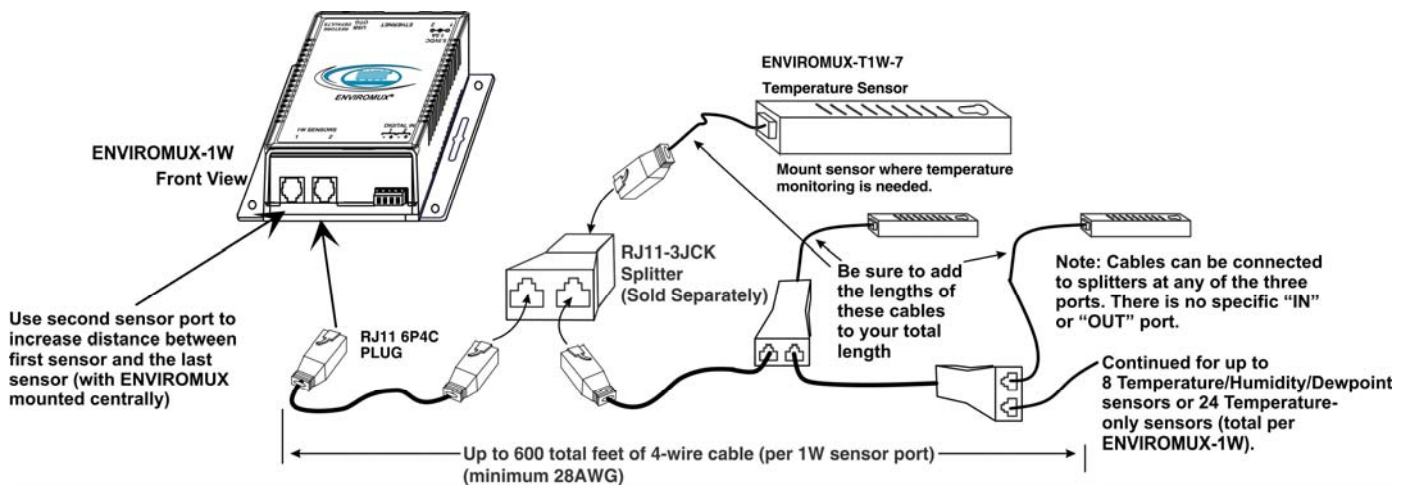


Figure 2- Connect Sensors using patch cable with RJ11 6P4C connectors

Application Note:

When connecting temperature and humidity sensors to the ENVIROMUX, the web interface will identify the sensor accordingly for the type of sensor it is. The various temperature and humidity sensor models offered by NTI have varying ranges of performance capabilities, as indicated in the table on page 2. Be sure to match the sensor installed to the operating range of the environment it will be expected to work in. Using a sensor outside of its intended temperature range may result in damage to the sensor.

NTI ENVIROMUX-1W TEMPERATURE/HUMIDITY SENSOR ATTACHMENT

All sensors will be automatically detected at boot-up. To add more sensors after boot-up, click on “Detect Sensors” on the Summary Page after making connection.

K-Type Thermocouple Temperature Sensors

K-Type Thermocouple Temperature Sensors such as ENVIROMUX-TCKS-752 and ENVIROMUX-TCKS-1382 can be connected to the ENVIROMUX-1W using the ENVIROMUX-TCK1W-7 Thermocouple K-Type to 1-Wire Converter.

Note: No changes in the jumper positions on the ENVIROMUX-TCK1W-7 are necessary.

The ENVIROMUX-TCK1W-7 includes a 7ft 28AWG cable for attachment to the ENVIROMUX-1W. The sensor and sensor converter can be hot-plugged to the ENVIROMUX-1W.

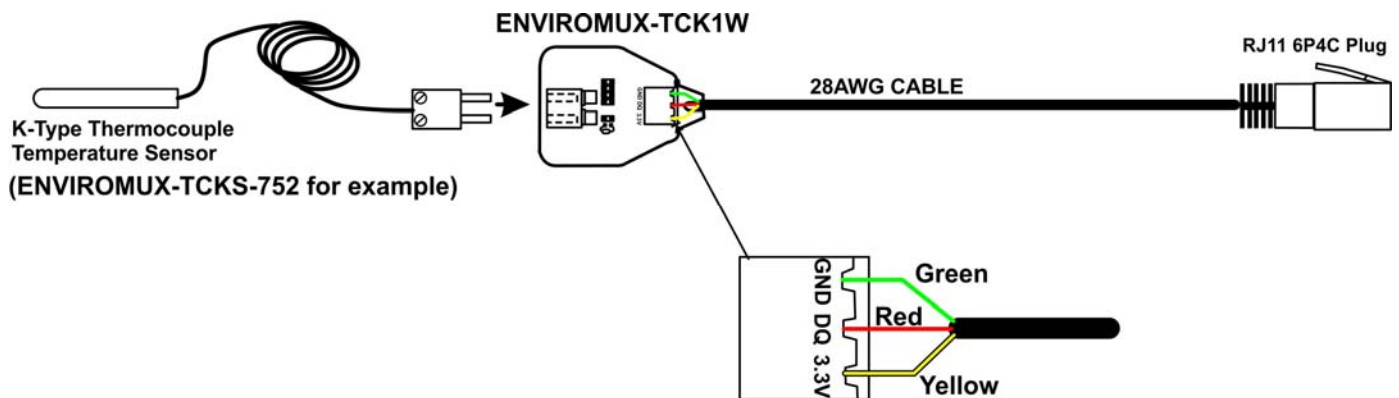


Figure 3- Connect K-Type Thermocouple using ENVIROMUX-TCK1W-7

TEMPERATURE AND HUMIDITY SENSORS

SENSOR MODEL	OPERATING TEMPERATURE RANGE	HUMIDITY RANGE	ACCURACY
ENVIROMUX-TH1W-7	-40 to 185°F (-40 to 85°C)	0 to 90% RH.	±0.72°F (±0.4°C) from 14 to 185°F (-10 to 80°C) ±0.90°F (±0.5°C) from -4 to 14° (-20 to -10°C) ±3% from 0 to 80% Relative Humidity ±4% from 80 to 90% Relative Humidity
ENVIROMUX-T1W-1M	-40 to 185°F (-40 to 85°C)	n/a	±0.5°C (±0.9° F) from -10°C to 85°C (14°F to 185°F)
ENVIROMUX-TCKS-752	32 to 752°F (0 to 400°C).	n/a	±4.0°F (±2.2°C).
ENVIROMUX-TCKS-1382	-40 to 1382°F (-40 to 750°C) (Probe Only)	n/a	0.75% ±4.5°F (0.75% ±2.5°C)
ENVIROMUX0-TCK1W Converter	-30°C to 85°C (-22°F to 185°F)	n/a	n/a

Sensor Calibration

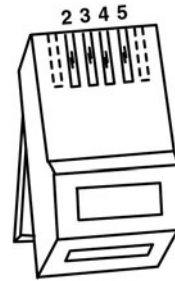
All temperature/humidity/dewpoint sensors are factory-calibrated and are not designed to be calibrated in the field. In the event recalibration of your sensor is desired, please contact NTI for an RMA to return your sensor. Sensors within warranty will be recalibrated at no charge. Normal labor charges will apply to sensors out of warranty.

NTI ENVIROMUX-1W TEMPERATURE/HUMIDITY SENSOR ATTACHMENT

RJ11 Sensor Cable

The RJ11 6P4C 4-Wire connection cable between the ENVIROMUX and connected external sensors is terminated with RJ11 6P4C plugs and must be wired straight through, pin 3 to pin 3, pin 4 to pin 4, etc. Wiring is as per the table and drawing below. The sensors that connect to “RJ11 Sensor” ports are all designed to use cables wired to this standard.

Pin	Wire Color	Signal
1	no wire	--
2	not connected	--
3	Red	Data
4	Green	Gnd
5	Yellow	VCC
6	no wire	--



RJ11 6P4C CONNECTOR

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MAN259 REV 4/12/2016