

4139 Temperature Compensated Humidity and Temperature Transmitter

Specification

Overview

The Honeywell 4139 is a high accuracy humidity and temperature transmitter targeted for OEM applications requiring %RH measurement. The 4139 provides a temperature compensated 4-20mA humidity output, as well as a field rangeable 4-20 mA temperature output.

Description

Temperature Compensated – Humidity output on the 4139 is automatically corrected over the full range of operating conditions.

Field Rangeable Temperature Output - The 4139 transmitter is delivered pre-calibrated to a specific temperature range. If a different range is desired, the temperature output on the 4139 can be re-ranged; thus allowing one unit to be used as a spare for any range.

One-Point Field Calibration - Portable transfer standards are available which can be used as references to verify and /or adjust the relative humidity calibration on-line. The transmitter incorporates a test jack which allows its %RH output to be read on an optional plug-in digital indicator, 0411339-40728-0 . Use of the reference standards, as well as the plug in-indicator permits easy calibration verification. Single point adjustment may then may be if necessary.

Remote Probe Capability (Optional) - The 4139 can be ordered with a remote probe with user specified cable lengths of 6, 25 or 50 feet.

Weatherproof Housing – Both the duct and wall mount housings are suitable for outdoor use.

N.I.S.T. Traceable Calibrations Available - Certification of N.I.S.T. traceability is available as an option.



Figure 1 – 4139 Transmitter

Features

- Temperature Compensated RH
- Temperature Output
- $\pm 1\%$ RH Accuracy **Option**
- Remote Probe **Option**
- One Point Field Calibration

Specifications

Performance		
	Humidity	Temperature
Sensing Element:	Monolithic RHIC sensor	1000 ohm Pt RTD
Accuracy:	± 2% RH 0-90% RH at 77F (25C); ± 3% RH 0-90% RH at 59 -122F (15-59C); ± 5% RH 0-90% RH at 32 -176F (0 – 80C); available as an option : ± 1% RH 0-80% RH at 77 – 95F (25 – 35C) <i>Includes temperature, linearity, hysteresis and repeatability</i>	±0.5F (0.3C) at room temperature or ±0.8% of span operating on 24 Vdc. <i>Includes temperature, linearity; hysteresis and repeatability.</i>
Calibration Range:	0 – 100% RH for 4 – 20 mA	50 sec. In air 10 ft/sec. at 77F (25C)
Time Constant:	50 sec. In air 10 ft/sec. At 77F (25C)	
Input voltage Effect:	±0.002% RH/Volt maximum, which is negligible, from 9.4 to 45 Vdc	
RFI Rejection:	Good RFI rejection of normal frequencies with standard installations	
Temperature Ratings: Operating: Storage:	-10 to 185°F (-23 to 85°C) non-condensing -58 to 185°F (-50 to 85°C) non-condensing	
Operating Pressure:	50 psi maximum	
Installation		
Power Supply:	9.4Vdc + (R _{load} X 0.02A) min. to 45 Vdc max., unregulated. Add 2.7 Vdc for use with the 0411339-40728-0 digital meter.	
Recommended R _{load} :	100 ohms + 0.1% at 11.4 Vdc minimum 250 ohms + 0.1% at 14.4 Vdc minimum 500 ohms + 0.1% at 19.4 Vdc minimum Add 2.7 Vdc for use with the 0411339=40728-0 digital meter.	
Transmitter Housing:	Duct Mount and Wall mount housings: 41/2" (144mm) long X 2 ¾" (70mm) wide X 2 ¼" (57mm) deep; cast alloy moisture resistant housing with three ½" NPT integral bosses and gasketed cover. Suitable for outdoor use. Underwriters Laboratories Ltd. Listed 459L. Surface mount hardware supplied	
Transmitter Connections:	Screw terminals, non-polar, connect either way	
Sensor Housing:	Sensor is protected by 60 micron sintered stainless steel filter.	
Mounting:	See dimensional drawings and Figure 2.	
Maintenance		
Cleaning:	Sintered stainless steel filter can be washed with water and a stiff brush (e.g. toothbrush)	
Zero and Span Adjust:	Non-interacting; set zero only for field calibration	

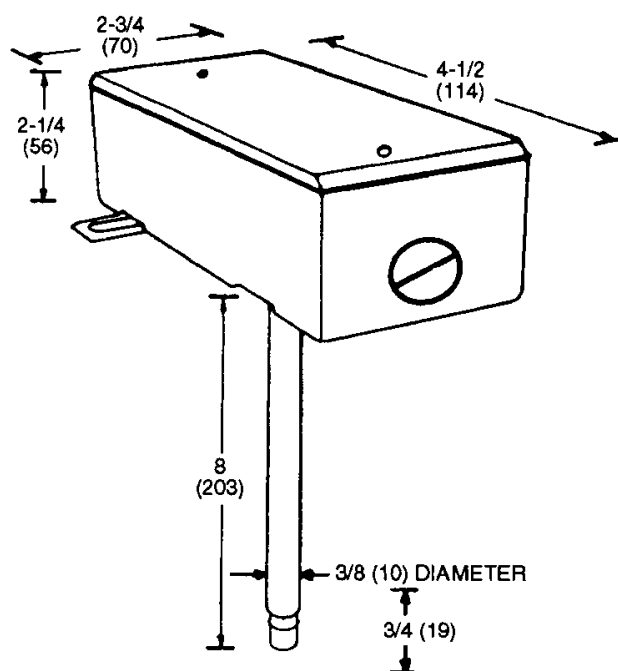


Figure 2 – Dimension Drawing

Distributor :

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