

STARLOG

Humidity & Temperature Probe (5V)

Model 6539A

This data sheet describes the operation of a Humidity & Temperature Probe (5V) (Model 6539A) in a STARLOG Data Logging System. This probe is a precision Humidity Probe, based on the Vaisala HMP35A Humidity Probe, modified to be used with the STARLOGGER.

Temperature is measured with an LM34 sensor (replacing the original PT100). A 5V to 10V converter has been added to allow operation from the STARLOGGER's 5V UPS (User Power Source).

A 125ms UPS Prescan setting is needed to allow the %RH measurement time to stabilize.

The Probe may be used with a Model 6704A Radiation Gill Screen.

The Model 7200A Humidity and Temperature Probe (10V) is still available for use with the MACRO Logger. (Vaisala Model HMP 35A.)

1. Installation Notes

Connect the Probe to the STARLOGGER as follows:

Cable Colour	Signal	Channel	STARLOGGER	
			FTS	PIN
Purple	%RH Gnd	Digital Gnd	41	23
Brown	%RH Signal	A0	39	2
Green	Temp Gnd	Digital Gnd	38	23
White	Temp Signal	A1	36	1
Blue	Power +5V	+5V UPS	15, 16, 17	13
Yellow	unused			
Black	unused			

Then add the Model 6539A Humidity & Temperature Probe to the Scheme. If this probe is not already in the list of instruments available to add to a Scheme, use the **Scheme Editor** to **Install** a probe and its transducers with the following scaling details:

1.1. Relative Humidity Scaling

Transducer 1			
Description: Relative Humidity			
Output:	Analog Voltage (mV)	Channel:	A0
Min:	0		
Max:	1000		
Scale:	FullScale a to b	Title:	Humidity
a:	0	Units:	%RH
b:	100	Using:	###.#
Formula:	none		
		OK	Cancel

1.2. Temperature Scaling

Transducer 2			
Description: Temperature			
Output:	Analog Voltage (mV)	Channel:	A0
Min:	0		
Max:	2120		
Scale:	FullScale a to b	Title:	Temp
a:	-17.8	Units:	DegC
b:	100	Using:	###.#
Formula:			
		OK	Cancel

1.3. Prescan Setting

To allow the Relative Humidity measurement time to stabilize, ensure that the STARLOGGER's Prescan setting is 125ms. Use the **CDT Editor** to **Upload** the STARLOGGER's current setting. Change it to 125ms if necessary, then **Download** the new setting to the STARLOGGER.