



Ref: FAQ0360

Version: 1.0

Title –SDI 12 Logger config for Lufft

Made By: AE 19/04/16

(Issue 1)

## Lufft WSx-UMB Weatherstation Configuration information for Radcom SDI-12 loggers using the IDT

SDI-12 uses 2 styles of data sets:

- 1) The “M” Basic Data set which contains a smaller selection of common measurements as detailed in section 19.6.4 of the Lufft manual
- 2) The “Mx” Additional Measurement Commands that contain groups of measurement types detailed in section 19.6.5.

The data set you wish to read is selected using the dropdown below -

Logged Register Address: Reading 1, M 1  
Off  
Friendly Name: AirTemp  
OK

where choosing M selects the **Basic** set and choosing M 1 to M 9 selects the **Additional** set

The SDI-12 logger reads data from the weather station in 9 reading sets, so once you choose your data set (“M x”) which contains a selection of common measurements, you then select the **Reading** that you wish from the set.

### Example 1: Basic Data Set (M)

Refer to Lufft manual section 19.6.4

19.6.4.1 Buffer assignment Basic Data Set WS600-UMB / WS700-UMB / WS800-UMB

Device configured for measurement values in metric units:				
Measurement value	UMB Channel	Min	Max	Unit
<b>Buffer '0'</b>				
Air temperature (act)	100	-50.0	60.0	°C
Rel. Humidity (act)	200	0.0	100.0	%
Rel. Air Pressure	305	300.0	1200.0	hPa
Wind Speed (avg)	460	0.0	75.0	m/s
Wind Speed (max)	440	0.0	75.0	m/s
<b>Buffer '1'</b>				
Wind Direction (vct)	580	0.0	359.9	°
Wet Bulb Temperature (act)	114	-50.0	60.0	°C
Precipitation Type	700	0, 60, 70		
Precipitation Intensity	820	0.0	200.0	mm/h
<b>Buffer '2'</b>				
Dew Point (act)	110	-50.0	60.0	°C
Wind chill Temperature (act)	111	-50.0	70.0	°C
Amount of Precip. difference	625	0.00	100000.00	mm
<b>Buffer '3'</b>				
Wind Speed (act)	400	0.0	75.0	m/s
Wind Speed (min)	420	0.0	75.0	m/s
Wind Speed (vct)	480	0.0	75.0	m/s
Wind Quality	805	0.0	100.0	%
<b>Buffer '4'</b>				
Wind Direction (act)	500	0.0	359.9	°
Wind Direction (min)	520	0.0	359.9	°
Wind Direction (max)	540	0.0	359.9	°
Specific Enthalpy (act)	215	-100.0	1000.0	kJ/kg

Configure Serial Channel: Serial1  
Protocol: SDI12  
Slave Address: 0  
Logged Register Address: Reading 1, M  
Off, M  
Friendly Name: AirTemp  
OK, Cancel

Note Buffers ‘2’ and up are not supported by the logger.



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## Example 2: Additional Measurement Set (M x)

Refer to Lufft manual section 19.6.5

Available Measurement Sets with available measurement values are:

M1	Temperature	9 Values
M2	Humidity	9 Values
M3	Air Pressure	9 Values
M4	Wind	9 Values
M5	Compass	1 Values
M6	WS401/601: Precipitation, Leaf Wetness	9 Values
	Others: Precipitation	4 Values
M7	WS800-UMB:Global Radiation, Lightning Sensor	9 Values
	Others: Global Radiation	4 Values
M8	Ext. Temperature	1 Value

If the sensor type requested with the measurement command is not available with the actual variant of the Smart Weather Sensor (WS200-UMB ... WS700-UMB) the logger will respond with “Error”.

### 19.6.5.1 Buffer Assignment Additional Measurement Commands M1 Temperature

Device configured for measurement values in metric units:

Measurement Value	UMB Channel	Min	Max	Unit
Buffer '0'				
Air Temperature (act)	100	-50.0	60.0	°C
Air Temperature (min)	120	-50.0	60.0	°C
Air Temperature (max)	140	-50.0	60.0	°C
Air Temperature (avg)	160	-50.0	60.0	°C
Dew Point (act)	110	-50.0	60.0	°C
Buffer '1'				
Dew Point (min)	130	-50.0	60.0	°C
Dew Point (max)	150	-50.0	60.0	°C
Dew Point (avg)	170	-50.0	60.0	°C
Wet Bulb Temperature (act)	114	-50.0	60.0	°C

Selecting the 8<sup>th</sup> reading in the list.

Configure Serial Channel: Serial1

Protocol: SDI12

Slave Address: 0

Logged Register Address: Reading 8 M 1

Off M

Friendly Name: DewPoint

OK Cancel



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**Example 3: Additional Measurement Set (M x)***Refer to Lufft manual section 19.6.5.2 – Humidity***19.6.5.2 Buffer Assignment Additional Measurement Commands M2**

Device configured for measurement values in metric or US units:

Measurement Value	UMB Channel	Min	Max	Unit
<b>Buffer '0'</b>				
Rel. Humidity (act)	200	0.0	100.0	%
Rel. Humidity (min)	220	0.0	100.0	%
Rel. Humidity (max)	240	0.0	100.0	%
Rel. Humidity (avg)	260	0.0	100.0	%
<b>Buffer '1'</b>				
Abs. Humidity (act)	205	0.0	1000.0	g/m <sup>3</sup>
Abs. Humidity (min)	225	0.0	1000.0	g/m <sup>3</sup>
Abs. Humidity (max)	245	0.0	1000.0	g/m <sup>3</sup>
Abs. Humidity (avg)	265	0.0	1000.0	g/m <sup>3</sup>
Specific Enthalpy (act)	215	-100.0	1000.0	kJ/kg
<b>Buffer '2'</b>				
Mixing Ratio(act)	210	0.0	1000.0	g/kg
Mixing Ratio (min)	230	0.0	1000.0	g/kg
Mixing Ratio (max)	250	0.0	1000.0	g/kg
Mixing Ratio (avg)	270	0.0	1000.0	g/kg

Configure Serial Channel: Serial1

Protocol: SDI12

Slave Address: 0

Logged Register Address: Reading 5 M 2

Off M

Friendly Name: AbsHumid

OK Cancel

Selecting the 5<sup>th</sup> reading in the list.**Note** Buffer '2' and up are not supported by the logger.**Document History:**

Edition	Date of Issue	Modification	Notes
1st	19/04/15	Release	