**SCADA\_DEV\_WTN**

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| **Version** | **Release Notes** |
| 2.0 | Revised to support AOI Structure |

**Description**: This UDT is for implementing weather stations. At this time the only common element to weather stations deployed by the Region are rain gauges and so the UDT is focused on programming for that device.

**Naming Convention**: Tags using this UDT should be named using the first four fragments as defined in the tagging standard, typically BXX\_WTN1\_FI1 for rain gauges.

**UDT Members**

| **UDT Member** | **Datatype** | **Description** | **Usage** |
| --- | --- | --- | --- |
| ADDON | Weather\_Station\_v1 | Weather Station AOI | Programmed in weather station routine |
| DI\_SS | SCADA\_SYS\_DI\_1\_2 | Rain Gauge Reed Switch Input | Programmed in Digital Input routines |
| PB\_EN | BOOL | Rain Totalizing Enabled | Used on HMI |
| AO\_CF | REAL | Rain Gauge mm/Tip calibration factor | Used on HMI |
| AI\_C5 | REAL | Rainfall 5 Minute Total | Used on HMI |
| AI\_L5 | REAL | Rainfall Last 5 Minute Total | Used on HMI |
| AI\_HT | REAL | Rainfall Hour Total | Used on HMI |
| AI\_YH | REAL | Rainfall Last Hour Total | Used on HMI |
| AI\_TD | REAL | Rainfall Today | Used on HMI |
| AI\_YT | REAL | Rainfall Yesterday | Used on HMI |
| AI\_WT | REAL | Rainfall This Week | Used on HMI |
| AI\_YW | REAL | Rainfall Last Week | Used on HMI |
| AI\_MT | REAL | Rainfall This Month | Used on HMI |
| AI\_YM | REAL | Rainfall Last Month | Used on HMI |
| AI\_TY | REAL | Rainfall This Year | Used on HMI |
| AI\_YL | REAL | Rainfall Last Year | Used on HMI |

**AOI**

The AOI will be implemented within a weather station routine within the Device Program.

| **AOI Parameter** | **Requirement** | **Default Value** | **Description** | **Implementation Guideline** |
| --- | --- | --- | --- | --- |
| Weather\_Station\_v1 | Mandatory | *Tagname*.ADDON | Weather Station AOI | N/A |
| Enable | Mandatory | *Tagname.*PB\_EN | Enable Rain Gauge | N/A |
| Input\_Tip | Mandatory | *Tagname.*DI\_SS.Eng | Rain Gauge Tip Input | N/A |
| Calibration\_Factor | Mandatory | *Tagname.*AO\_CF | Rain Gage mm/Tip calibration | N/A |
| Five\_Minute\_Total | Mandatory | *Tagname.*AI\_C5 | 5 Minute Rainfall | N/A |
| Last\_Five\_Minute\_Total | Mandatory | *Tagname.*AI\_L5 | Last 5 Minute Rainfall | N/A |
| Hour\_Total | Mandatory | *Tagname.*AI\_HT | Hourly Rainfall | N/A |
| Last\_Hour\_Total | Mandatory | *Tagname.*AI\_YH | Last Hour Rainfall | N/A |
| Day\_Total | Mandatory | *Tagname.*AI\_TD | Rainfall Today | N/A |
| Last\_Day\_Total | Mandatory | *Tagname.*AI\_YT | Rainfall Yesterday | N/A |
| Week\_Total | Mandatory | *Tagname.*AI\_WT | Rainfall This Week | N/A |
| Last\_Week\_Total | Mandatory | *Tagname.*AI\_YW | Rainfall Last Week | N/A |
| Month\_Total | Mandatory | *Tagname.*AI\_MT | Rainfall This Month | N/A |
| Last\_Month\_Total | Mandatory | *Tagname.*AI\_YM | Rainfall Last Month | N/A |
| Year\_Total | Mandatory | *Tagname.*AI\_TY | Rainfall This Year | N/A |
| Last\_Year\_Total | Mandatory | *Tagname.*AI\_YL | Rainfall Last Year | N/A |
| Minute\_Reset | Mandatory | SYS\_Minute\_Reset | Used for incrementing totalizers | N/A |
| Current\_Minute | Mandatory | SYS\_Calendar\_This[4] | Used for resetting rainfall totalizers | N/A |
| Hour\_Reset | Mandatory | SYS\_Hour\_Reset | Used for resetting rainfall totalizers | N/A |
| Day\_Reset | Mandatory | SYS\_Day\_Reset | Used for resetting rainfall totalizers | N/A |
| Week\_Reset | Mandatory | SYS\_Week\_Reset | Used for resetting rainfall totalizers | N/A |
| Month\_Reset | Mandatory | SYS\_Month\_Reset | Used for resetting rainfall totalizers | N/A |
| Year\_Reset | Mandatory | SYS\_Year\_Reset | Used for resetting rainfall totalizers | N/A |

**AOI Operation Description**

The AOI performs the following functions:

* If the rain gauge is disabled, tip counts are continually reset to prevent any totalizing from occurring
* Count rain gauge tips and convert to total rainfall based on calibration
* Increase the totalizers every minute
* Based on status of other reset bits, move the current time register to the previous time register and reset the current time register.

**Programming Examples**

Programming of this device is straightforward and there are no specific or custom requirements the programmer should be aware of.

**HMI Integration**

This AOI is intended for use with the “Weather Station v1\_0” pop-up.

A standard button exists on the “Symbols Library – Misc I” window on the InTouch baseload that holds the action script for mapping tags to the pop-up. Developers can perform a Substitute Tag option on this object to replace the placeholder tags with the correct device tagging. There are no manual adjustments that need to be made to this script.