



KNX Weather Station Driver

1. Intro

This Control4 driver is designed to seamlessly integrate KNX weather station functionality into Control4 smart home system. This innovative driver offers an enhanced level of automation and control, allowing you to effortlessly incorporate weather data from KNX weather station into Control4 ecosystem.

With the integration of KNX weather station capabilities, you can now harness real-time weather information to optimize various aspects of smart home environment. Whether you're looking to automate variables monitoring, trigger actions based on weather conditions, or simply stay informed about local weather patterns, this driver empowers you to do so with ease.

Features:

- **Autoconfiguration:** Select your device brand and model from the driver database, and the driver adapts to it, making setup very simple. A "Generic" option is also available to select only the functions you want to use.
- **Events Triggering:** Program actions based on variable changes, enhancing automation possibilities.
- **Conditional Evaluation:** Analyze Weather Station variable values and define actions based on conditions – a "must" for tailored programming.
- **Variables in Composer Pro:** Access driver variables for versatile programming or display the information in the UI using the **Custom Info Display** driver (<https://drivercentral.io/platforms/control4-drivers/utility/custom-info-display/>). The driver generates a Template for fast configuration of the **Custom Info Display** driver.
- **Dynamic Setup:** To avoid exposing a lot of properties and functions, the driver was designed to dynamically show (and hide) properties and functions relevant to the desired needs.

2. Properties

- **Cloud Status:** Current status of the driver's license.
- **Automatic Updates:** Enable automatic driver updates (Recommended!)

- **Driver:** Driver's name.
- **Driver Version:** Current driver version.
- **Driver Information:** Last debug information.
- **Current Status:** Important information about the current status of the driver.
- **Debug Mode:** If on, driver will print debug information on Lua output.
- **Brand Selector:** The driver has a database of brands (and models) that can be selected to autoconfigure the driver, showing the right weather station properties for the specific device. Also, a 'Generic' option is available to manually choose the features to configure.
- **Model Selector:** To select the model of the device when a brand is selected.
- **Brightness Function:** (Visible in 'Generic') Manually enable the amount of features in the driver.
- **Twilight Function:** (Visible in 'Generic') Manually enable Twilight (or Dusk) features in the driver.
- **Precipitation Function:** (Visible in 'Generic') Manually enable Precipitation features in the driver.
- **Temperature Function:** (Visible in 'Generic') Manually enable Temperature features in the driver.
- **Wind Speed Function:** (Visible in 'Generic') Manually enable Wind Speed features in the driver.
- **KNX Group Addresses Configuration Properties:** Depending on the Brand and Model selected (or the manual functions enabled), a list of properties will be visible to set the proper group addresses (GA). They are self-explanatory, so they are not detailed here one by one. Some key points:
 - To keep the driver simple, the Threshold 2 option is populated when Threshold 1 is configured first.
 - Please note that Threshold 1 and Threshold 2 don't need to match exactly the Threshold (also could be called 'limit' in some KNX devices) 1 and 2 on the ETS configuration. For example, if you want to populate only the 'threshold 2' of the ETS in this driver, you can just use the Threshold 1 property.
 - The properties will accept only KNX group addresses (1, 2, or 3 level type). If an invalid group address is entered, the driver will clean the property.
- **Current Values Properties:** When a valid group address is entered in a property, the driver will populate the corresponding "value property" where you can see the current value of the parameter.

- *Console*: For maintenance purposes only.

3. Connections

- *KNX Control*: Must be connected to the proper KNX gateway where all the data will be pulled. The driver auto-connects to the first gateway found in the project.

4. Actions

- *Generate Template for Custom Info Driver*: To display weather station information effectively, **Barbini.dev** recommends using this driver in conjunction with **the Custom Info Display** driver. Please refer to the **Generate Template for Custom Info Driver** section for more information about this function.

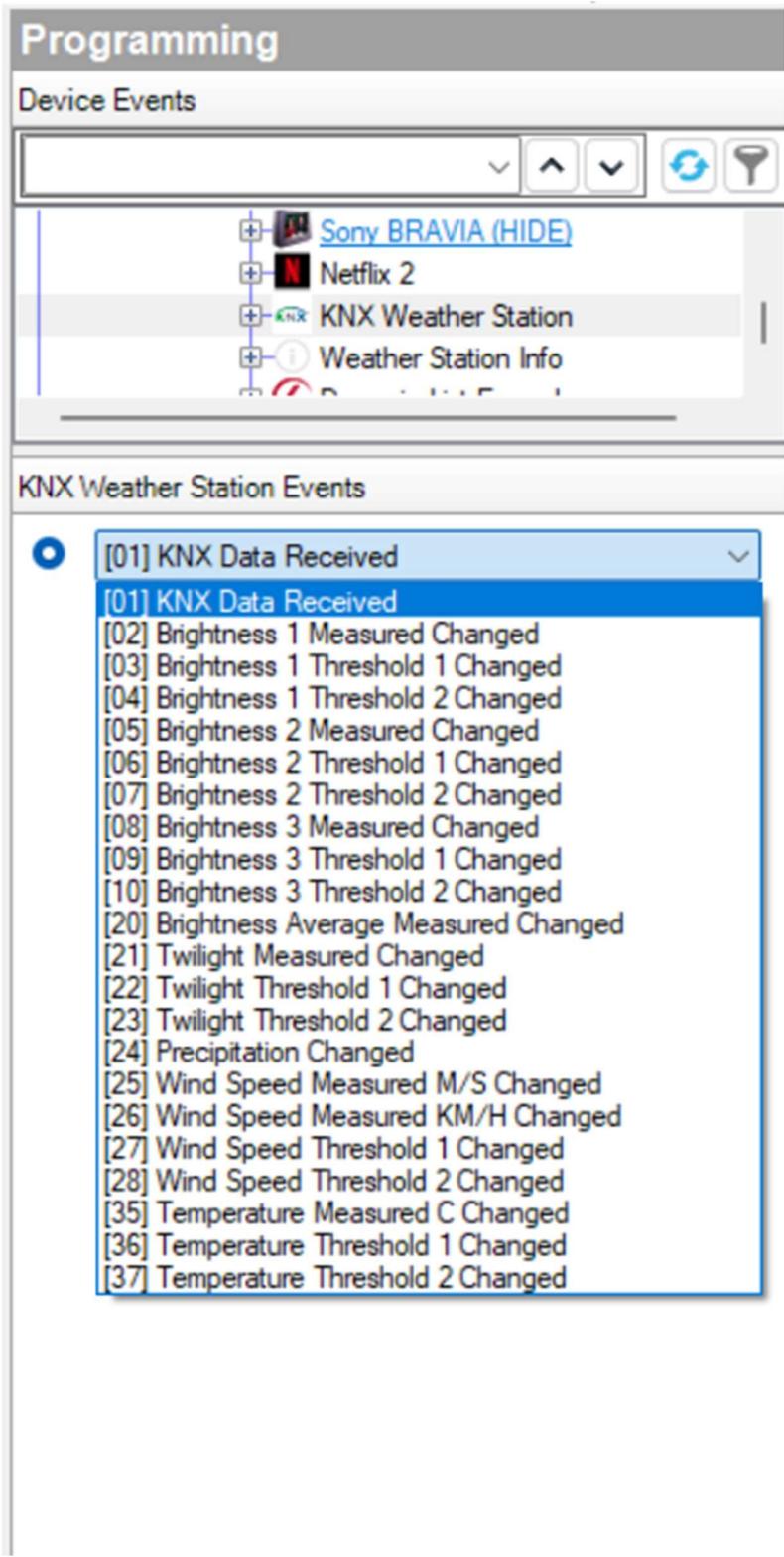
5. Commands

- *N/A*

6. Events

This driver dynamically generates all the variables changed events to allow the Dealer to easily trigger programming within Composer Pro. Some important notes:

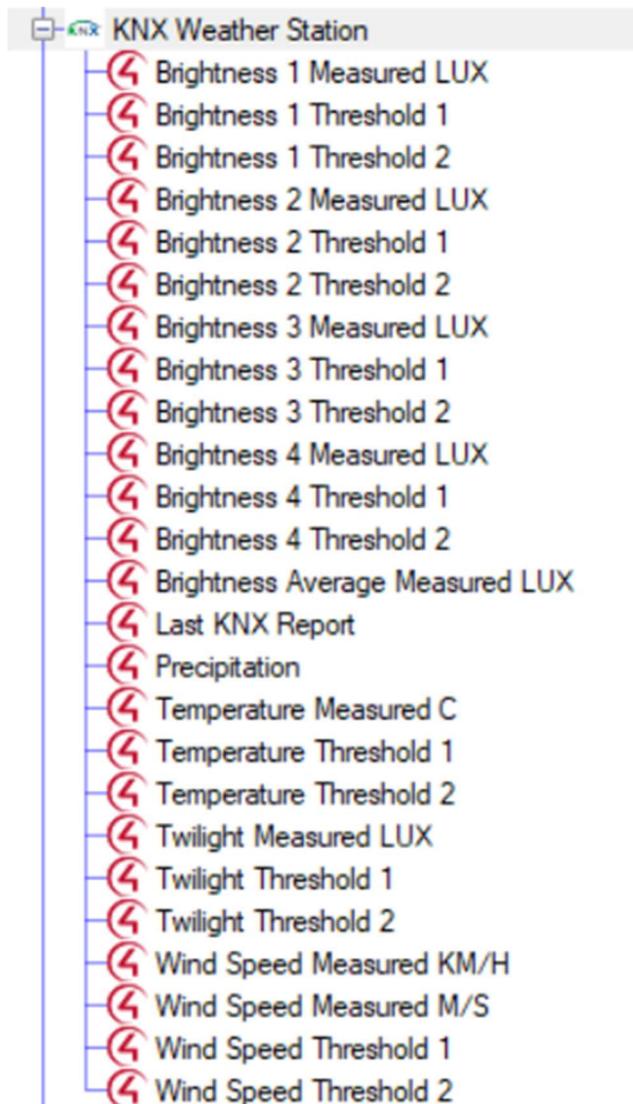
- ❖ **As the driver creates (and deletes) the events when the brand and models are being changed, please note that if you make some programming triggering them will be lost if you change the brand/model configuration.** This doesn't have any implications when the system is rebooted.
- ❖ When a unique parameter is presented in the driver with some variants (for example, Wind Speed data is received in 'm/s' but the driver also populates it in 'Km/h'), one events is generated by each variant.
- ❖ A 'KNX Data Received' event is available, and it will be triggered every time the KNX gateway reports a new data for the driver.
- ❖ Any value "changed" event will be triggered when a value has been changed from a previously saved value. The driver won't trigger the event when it receives the variable data for the first time (for example, when the controller reboots and the driver receives the data from the KNX gateway for the first time).



7. Driver Variables

The driver serves all the parameters as variables within C4 for using them for other purposes. Please note that because these variables can't be generated dynamically, all the variables are going to be present. This variable list could grow in the future when driver's upgrades are made, and new

functions added.



8. Driver Conditionals

One of the most useful aspects of this driver is its ability to evaluate conditionals based on variable status. A dynamic generation of conditionals has been implemented to showcase the driver-configured parameters conditionals for an easy way to program. The numeric variables can have multiple comparisons (equal, not equal, less, less or equal, greater, greater or equal), and Boolean variables have true/false.

Actions

Device Actions

- Sony BRAVIA (HIDE)
- Netflix 2
- KNX Weather Station
- Weather Station Info

KNX Weather Station Actions

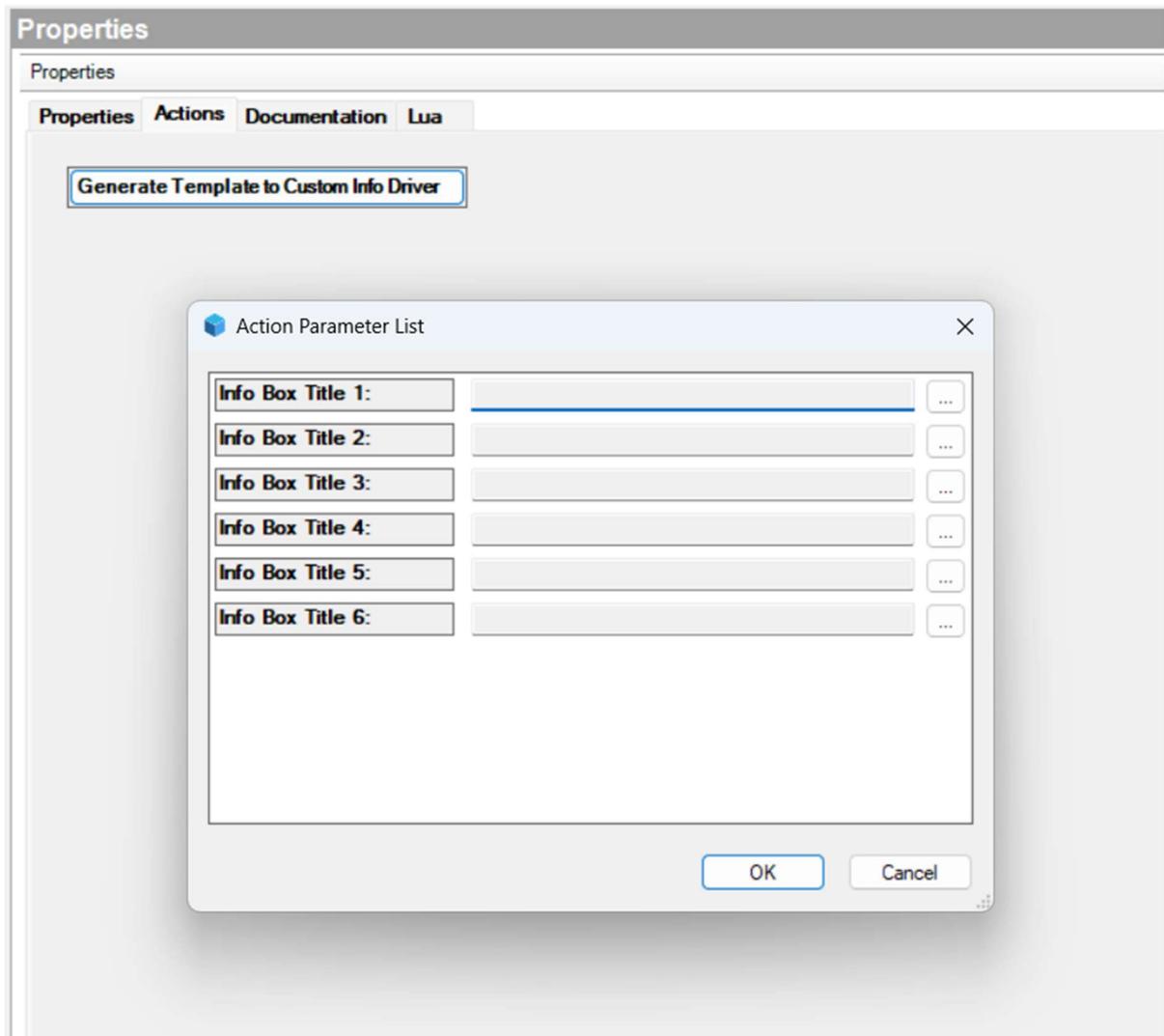
? If Service Room->KNX Weather Station Brightness 1 Value is >= 12000 Lux

Commands	Conditionals	Loops
<input checked="" type="radio"/> Brightness 1 Value [Lux]		>= 12000
<input type="radio"/> Brightness 1 Threshold 1		<input checked="" type="radio"/> True <input type="radio"/> False
<input type="radio"/> Brightness 1 Threshold 2		<input checked="" type="radio"/> True <input type="radio"/> False
<input type="radio"/> Brightness 2 Value [Lux]		= 0
<input type="radio"/> Brightness 2 Threshold 1		<input checked="" type="radio"/> True <input type="radio"/> False
<input type="radio"/> Brightness 2 Threshold 2		<input checked="" type="radio"/> True <input type="radio"/> False
<input type="radio"/> Brightness 3 Value [Lux]		= 0
<input type="radio"/> Brightness 3 Threshold 1		<input checked="" type="radio"/> True <input type="radio"/> False
<input type="radio"/> Brightness 3 Threshold 2		<input checked="" type="radio"/> True <input type="radio"/> False
<input type="radio"/> Twilight Value [Lux]		= 0
<input type="radio"/> Twilight Threshold 1		<input checked="" type="radio"/> True <input type="radio"/> False
<input type="radio"/> Twilight Threshold 2		<input checked="" type="radio"/> True <input type="radio"/> False
<input type="radio"/> Precipitation		<input checked="" type="radio"/> True <input type="radio"/> False
<input type="radio"/> Wind Speed Value [m/s]		= 0
<input type="radio"/> Wind Speed Value [Km/h]		= 0
<input type="radio"/> Wind Speed Threshold 1		<input checked="" type="radio"/> True <input type="radio"/> False
<input type="radio"/> Wind Speed Threshold 2		<input checked="" type="radio"/> True <input type="radio"/> False
<input type="radio"/> Temperature Value [°C]		= 0
<input type="radio"/> Temperature Threshold 1		<input checked="" type="radio"/> True <input type="radio"/> False
<input type="radio"/> Temperature Threshold 2		<input checked="" type="radio"/> True <input type="radio"/> False

9. Generate Template for Custom Info Driver

This driver is focused on facilitating the grabbing of all KNX weather station data from the Control4 side. As displaying this information in the UI could be desired, we decided to easily export the wished data to our **Custom Info Display** driver. Since there are different ways to display the information and we can't cover all of them, we just generate a template, and then slight modifications can be made to accommodate your preferences. Obviously, this tool is not mandatory.

When you click on the action button, a pop-up box will appear:



Like the Custom Info driver has 6 title boxes, you can select the content you want to display for each title box. When you click on the three dots button, another pop-up will appear showing all the different data possible depending on the driver configuration. These options change dynamically, showing only the data that is enabled in the driver, so it is recommended to first configure entirely the Weather Station driver.

Properties

Properties

Properties Actions Documentation Lua

Generate Template to Custom Info Driver

Action Parameter List

Select

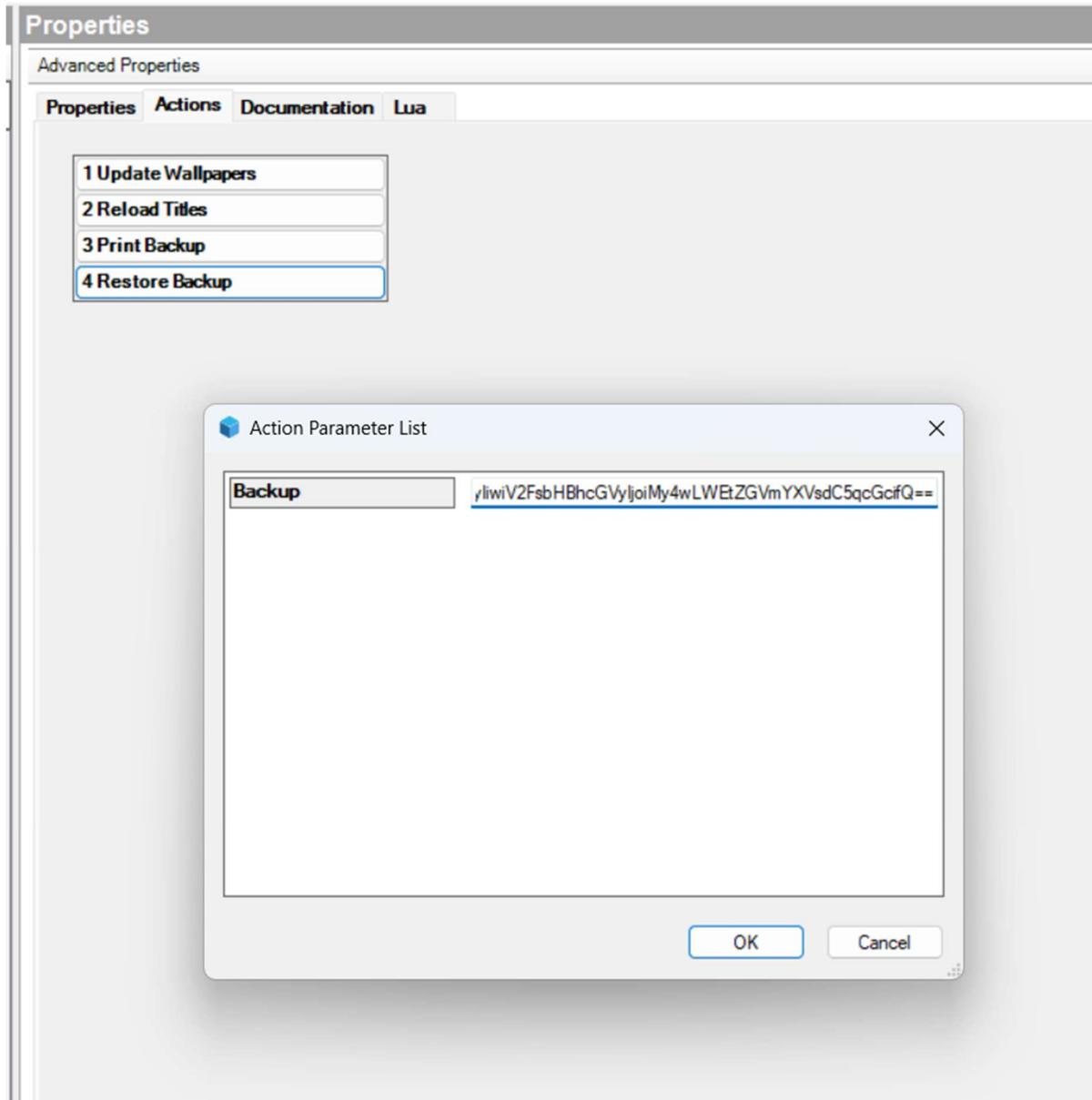
- None
- Brightness 1
- Brightness 2
- Brightness 3
- Brightness Average
- Twilight
- Precipitation
- Temperature
- Wind Speed [M/S]
- Wind Speed [KM/H]
- KNX Data Income Timestamp

OK Cancel

Info E ...

OK Cancel

Copy this string. Go to the **Custom Info display** driver, Action tab, and click on '4 Restore Backup'. In the pop-up box, paste the string:



When you click the Ok button, the driver will configure itself with the template generated by the Weather Station driver.

Please note that all the previous configuration of the **Custom Info Display** driver will be overwritten by this process.

Properties		Properties	Summary
Advanced Properties			
Properties	Actions	Documentation	Lua
Cloud Settings			
Cloud Status	License Activated		
Automatic Updates	On		
MAC	000FF955652		
-Driver Information-			
Driver	Custom Information		
Driver Version	24010501		
Driver Information	03/14/24 16:09:42 : Send To UI:		
-Driver Configuration-			
Debug Mode	On		
UI Icon	Weather		
Wallpaper	3.0-a-default.jpg		
Buttons Background Color	Grey		
Box Quantity	4		
***** Box 1 *****			
Box 1 Title	- Brightness Average Info - Value: {949,1025} Lux		
Box 1 Button Quantity	0		
***** Box 2 *****			
Box 2 Title	- Twilight Info - Value: {949,1014} Lux Threshold 1: {949,1015} Threshold 2: {949,1016}		
Box 2 Button Quantity	0		
***** Box 3 *****			
Box 3 Title	- Wind Speed Info - Value: {949,1019} Km/h Threshold 1: {949,1020} Threshold 2: {949,1021}		
Box 3 Button Quantity	0		
***** Box 4 *****			
Box 4 Title	- KNX Last Data Received - {949,1001}		
Box 4 Button Quantity	0		

After that, you can make the changes you want, such as adjusting words or formatting, or even adding information about other Control4 driver variables. For more information, please refer to the Custom Info display driver documentation.

10. Limitations and Comments

- It is quite difficult to cover all the market KNX weather station devices' functionality. That's why we focused primarily on the most common functions first, with the possibility of expanding functionality in the future depending on the Dealers' common requests.
- In order to keep the driver easy to handle, we tried to make it as dynamic as possible. This way, we avoid displaying a lot of properties and functions that may confuse the Dealer. The downside to this approach is that some configurations (like programming in events) could be lost if you reconfigure the driver. **Therefore, it is recommended to first configure all the driver properties and then proceed with the rest of the configuration and programming.**

- The Brand and Model database could be expanded in the future based on the most common devices requested by the Dealers.

Warranty and disclaimer

Barbini.dev provide drivers tested as much as possible. However, due to the highly variants of systems setups and the constant changing of the electronics systems, updates and/or modifications may be required to fixing bugs or improve the driver functionality.

Many of our drivers interact with systems APIs (like Control4 and/or any other 3rd party system). Therefore, if any API changes, the driver may stop functioning correctly. **Barbini.dev** cannot guarantee long-term functionality of any driver developed that uses APIs. **Barbini.dev** has the right to repair, provide updates, or discontinue a driver at any time. These repairments or updates could be free or required additional expenses. Despite the above, our efforts will always be to maintain the drivers as long as possible and free of charge of upgrades as much as possible.

Trial and Showroom Licenses

All the drivers have 10 days of trial, allowing dealers to test the features of any driver in a customer project before purchasing it. The trial automatically begins when a driver is installed in a project.

We enable all the Showroom licenses to have unlimited access to the drivers.

Developed By: Barbini.dev

Contact: <https://highqualityautomation.com/>



240411xx – Initial Release

240422xx – Improved decimal separator interpretation in float values independently of the locale