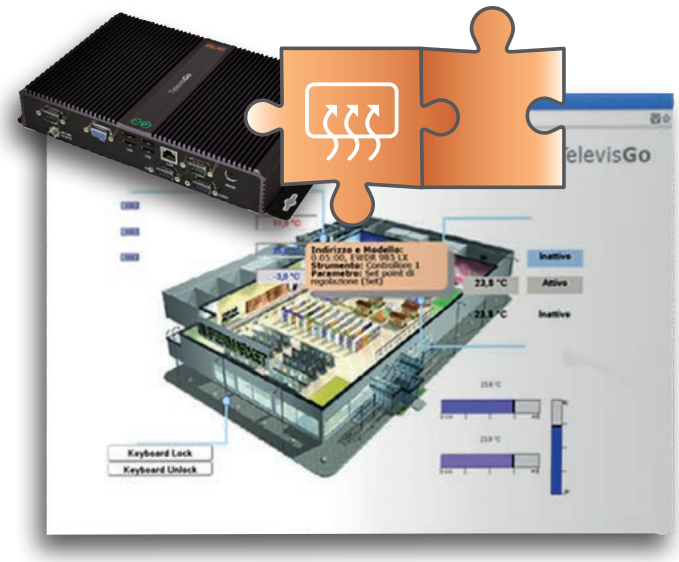
# Controlling the demisting heaters using the dewpoint




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## DEFINITIONS AND COMPATIBLE RELEASES

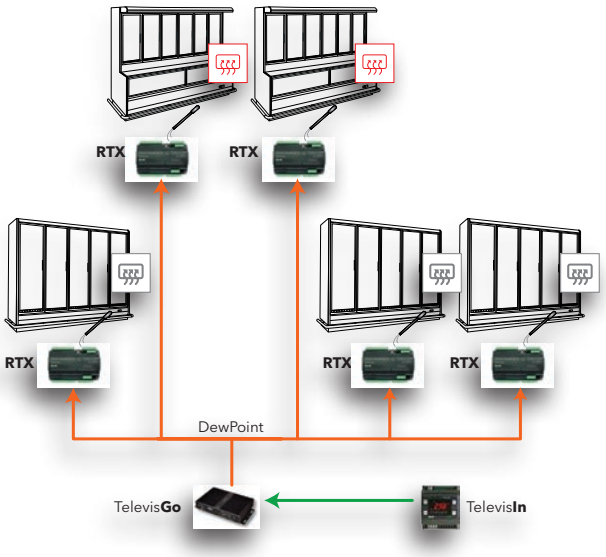
- Televis**Go** is the Embedded PC platform by Eliwell, that is a monitoring and supervision system with web interface.
  Televis**Go** **is a system that can be expanded with plug&play algorithms**
- **Instance**: Each algorithm can be instantiated, each instance is represented as a virtual instrument
- **Release** instruments that manage the **plug&play algorithms**

### Outputs

| Model | Firmware (msk) |
|---|---|
| RTX 600/V DOMINO ZERO | 756 |
| RTX 600/VS DOMINO ZERO | 755 |
| RTX-RTD 600/V DOMINO | 639 |
| RTX 600/V DOMINO | 627 |
| RTD-RTX 600/V LVD | 509 |

### Inputs

| Model | Firmware (msk) |
|---|---|
| TelevisIn | 499 |




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## COMPONENT INSTALLATION

The demisting heater control is typically set for the most serious conditions of use.
To increase its efficiency, the demisting heaters can be modulated based on the actual temperature and humidity conditions of the display unit area, sending the calculated dewpoint value to the controllers.
The temperature and relative humidity values are measured using a **TelevisIn** I/O module (probes 1 and 3 preloading application number 4).
The supervisor calculates the dewpoint and sends it to the **RTX** and **RTN** range controllers.
Each controller regulates the demisting heaters in an independent manner based on the dewpoint and the glass probe, modulating an OC output via SSR or 4...20mA/0-10V (for RTX only).

## ALGORITHM DOWNLOAD FROM WEB

The **DewPoint** algorithm, identifi ed by **1027_CentralizedDewPoint.zip**, is a .zip file available on the Eliwell website.

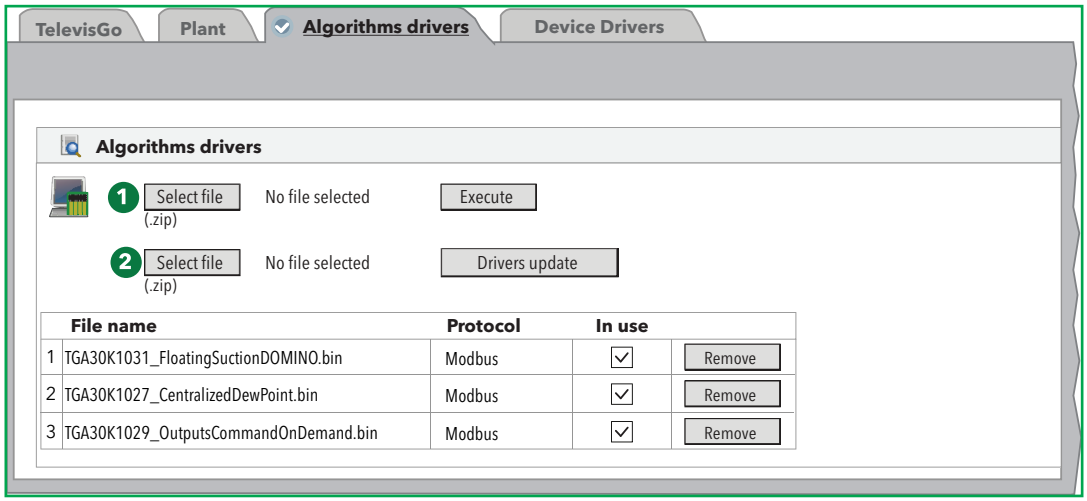
1. To download the latest version of Centralized Dew point:
2. **Go** to the website www.eliwell.com
3. Log in (if you are not registered, proceed with registration) https://www.eliwell.com/en/Services/Reserved-area.html
4. Access the page for Televis**Go** https://www.eliwell.com/en/Family/Televis**Go**.html
5. Access the page for the code corresponding to your product
6. Access the Software tab
7. In the Televis**Go** Algorithms section, use the drop-down menu to select CentralizedDewPoint Algorithm
8. Click Televis**Go** Algorithms to start downloading

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## Algorithm Installation

Access Televis**Go**

Access the page Computer > Update > Algorithms Drivers




| Reference | Description |
|---|---|
| 1 | Used to load a new algorithm |
| 2 | Used to update a pre-existing algorithm |

## Loading an algorithm

To load an algorithm:

1. Press Select file in row **1**
2. Select the file to load (**1027_CentralizedDewPoint.zip**)
3. Press Execute

The software will automatically open the Algorithms window.

## Updating an algorithm

To update an algorithm:

1. Press Select file in row **2**
2. Select the file to load
3. Press Drivers update

The software will automatically open the Algorithms window.

**NOTE**: If you are trying to update an algorithm using the Execute functions,the screen will display the message: "Algorithm already present". Use the Drivers update function.

**NOTE**: before updating an algorithm, it is recommended to previously save the current parameters map using the menu:

**Functions » Parameters » <algorithm selection> <select label> » Save map**

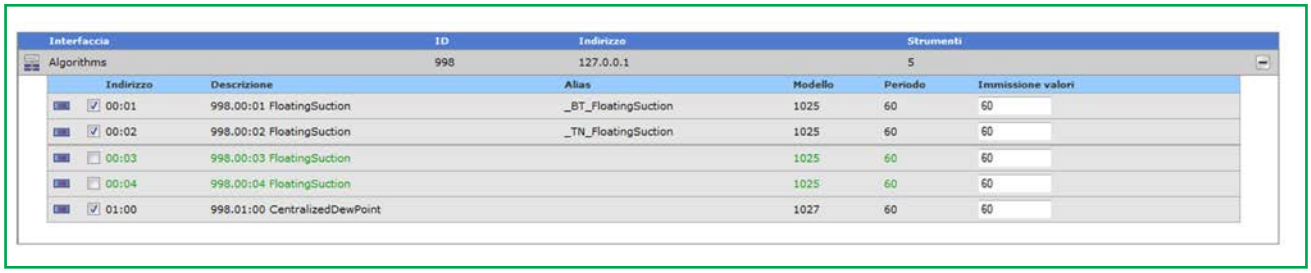
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## ACTIVATION

To select the instances of the algorithms loaded, enter the following menus in sequence:

**Settings → Interfaces → Algorithms**

The list of all previously loaded algorithms and the relative settings is shown here




The colours of the lines that appear have the following meanings:

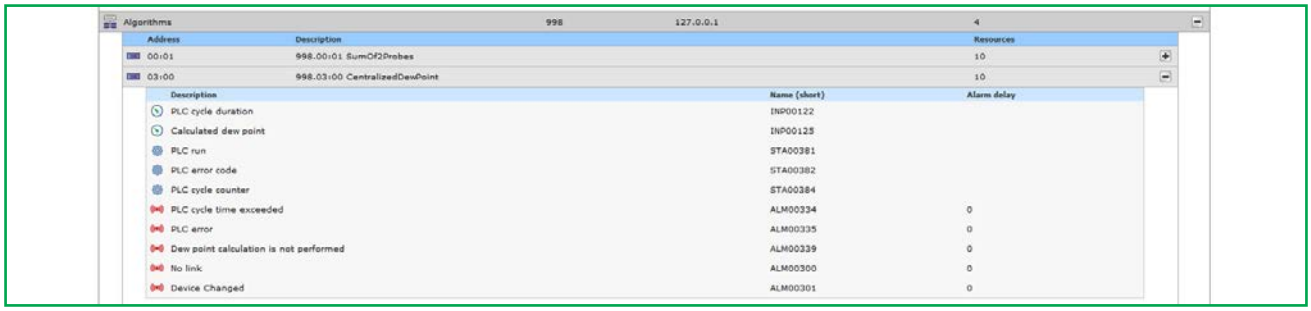
- **green:** **new** algorithm found in the virtual network
- **black:** algorithm **already present** in the virtual network

The value of the address and model linked to each algorithm instance is assigned automatically by the application.
The maximum number of instances per **CentralizedDewPoint algorithm = 2**
The value of the **Period** displayed indicates the time interval (or cycle period).
The period, expressed in seconds, can take a value between 60 (1 minute) and 86400 (1 day).
It is possible to change the current value of the cycle period by typing the desired value.

Select on the checkbox ☑ to the left of the address the instances that have to be enabled and press **Save** to save the configuration of the algorithm instances.

### Contents

With the menu: **Settings » Interfaces » Summary** it is possible to check which algorithms are present.

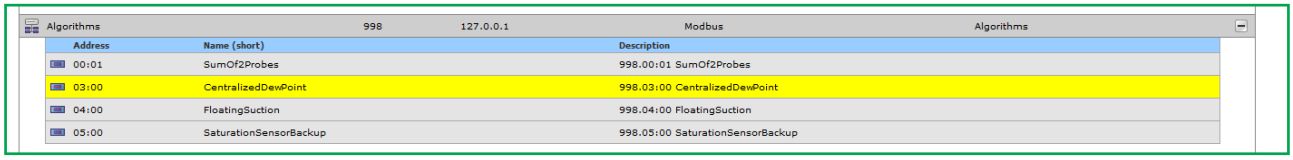



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## TELEVISGO CONFIGURATION

It is important to set the selectors as accurately as possible to guarantee that the algorithm will function correctly and to apply its effects on the established controllers.

From the menu **Functions » Parameters » Step 1** select the **CentralizedDewPoint** algorithm




Click on the line (in yellow) of the **CentralizedDewPoint** algorithm to access the following page **Functions » Parameters » Step 2**
This page shows all the parameters of the selected device.
The read-only selectors are in blue and cannot be changed by the user.

| | Label | Description | UM | Min | Max | Default | Device | Input |
|---|---|---|---|---|---|---|---|---|
| ☐ | filter0 | Selector of the TelevisIn module | | 0 | 1 | view | | |
| ☐ | filter1 | Selector temperature probe from TelevisIn | | 1 | 1 | view | | |
| ☐ | filter2 | Selector pressure probe from TelevisIn | | 1 | 1 | view | | |
| ☑ | filter3 | Selector of the cabinets | | 0 | 50 | view | | set |
| ☐ | filter4 | Selector dew point of the cabinet | | 1 | 1 | view | | |
| ☐ | Unit_of_Measure | Unit of measure | | 0 | 1 | 0 | | |

| Description | Min | Max | Factory setting | User settings |
|---|---|---|---|---|
| Selector of the TelevisIn module | 0 | 1 | TelevisIn* | Specify the address if multiple TelevisIn are present in the network |
| Selector temperature probe from TelevisIn | 1 | 1 | INP40001-1 | ✘ read only |
| Selector humidity probe from TelevisIn | 1 | 1 | INP40001-3 | ✘ read only |
| Cabinet selector | 0 | 50 | RTX* | Specify the addresses of the controllers to which the calculated dewpoint value should be sent. Modify the selector if controllers from the RTN range are used |
| Selector dew point of the cabinet | 1 | 1 | INP40096-1 | ✘ read only |
| Unit of measure | 0 | 1 | °C | 0=°C \| 1=°F |

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The **DewPoint** algorithm is preset with **instruments and resources to minimise user settings**
See **the UM column** that shows an icon that identifies the type of selector:

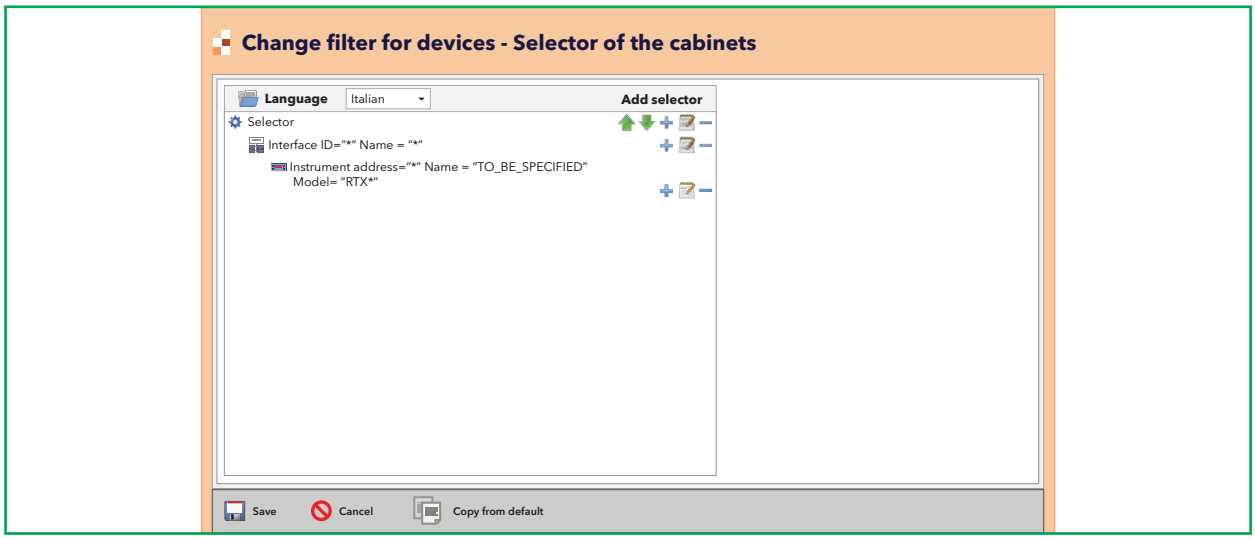
**Instrument selector (device)**
rule to select the devices on which the algorithm works.
**Input resource selector (subsidiary)**
rule to select an input resource on which the algorithm works.
**Output resource selector (subsidiary)**
rule to select an output resource on which the algorithm works.

The user only needs to change the **Unit_of_Measure** selector and **filter3** (**Selector of the cabinets**) to indicate which controllers should receive the calculated dew point.

If selected, by checking the checkbox ☑, it can be changed by clicking on **set** column **Value input.**
To display the selector setting, click on **Copy from default**

Enter the required parameters (address, name, model) and **save**

To change the selector again, press **edit** and repeat the procedure.




The unit of measure selector must be set coherently with what is set in **TelevisIn** and **RTX/RTN**.
By default, the system is configured in **°C**; the same unit of measure must be selected in **RTX/RTN** and in **TelevisIn**.
**N.B.** The algorithm does not provide an error message if the configuration is incorrect.

Once the algorithm has calculated the dewpoint, it writes the value on all selected **RTX/RTN** cabinets.

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## STATUS DISPLAY

| Description | Notes |
|---|---|
| **DewPoint algorithm statuses** | |
| Calculated dew point | Calculated dewpoint value |
| Dew point calculation is not performed | TelevisIn probe error.<br>The dewpoint value will no longer be transmitted and the calculated dew point will take on the conventional value of -99999.<br>After a timeout of 1h, the controller will use the preset value for the control. |
| **PLC prefix: Preset algorithm diagnostics** | |
| PLC cycle duration | During algorithm run |
| PLC run | Algorithm running |
| PLC error code | Algorithm error code |
| PLC cycle counter | Algorithm run cycle counter |
| PLC cycle time exceeded | Active if the cycle time of the algorithm exceeds the set value |
| PLC error | Active if the PLC error code is not 0 * (check) |
| **Default resources associated to all instruments** | |
| No - Link | The algorithm does not function in case of an internal blocking error (contact technical support) |
| Device changed | not used |

The commands **Start PLC** and **Stop PLC** are available and always present and visible in the panel **Functions » Commands**

## CHECKING THE DEWPOINT ON THE INSTRUMENTS

In order to check the correct operation of the algorithm, please note that the dewpoint value is also visible in the table in real time of the instrument RT*600 and is the resource called **Dew Point remote value 1**
This provides you with the confirmation that the selectors were correctly configured.

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| ☑ | rDP | Dewpoint remote value 1 | °C/°F | -67.0 | 320.0 | 0.0 | |
| ☐ | rP | Backup saturation probe 1 | Psi | -67.0 | 320.0 | 0.0 | |

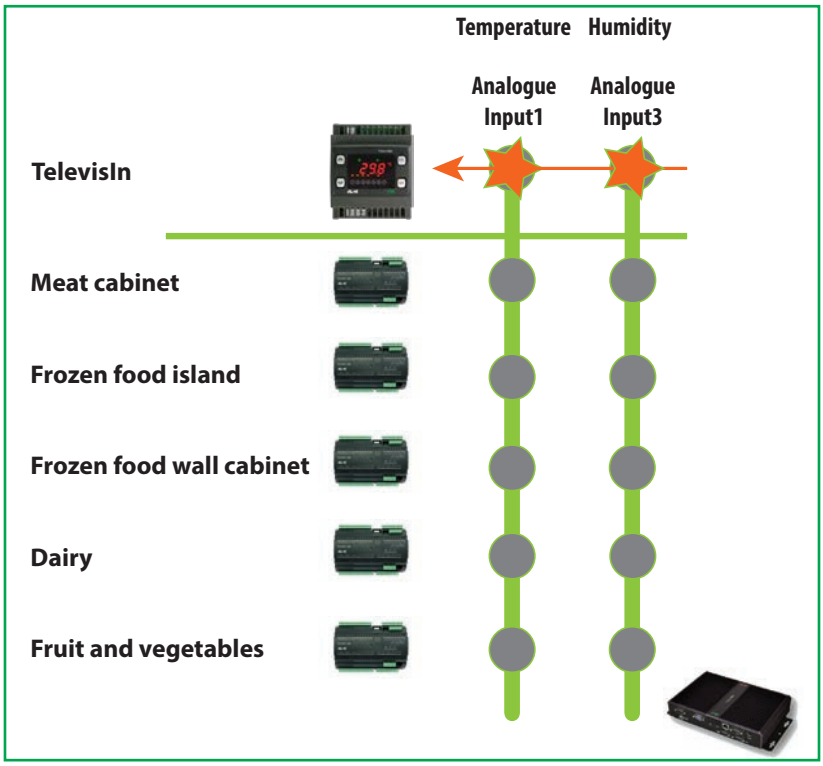
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## SELECTOR CHANGE EXAMPLE

The writing of the dewpoint value in the 1027_CentralizedDewPoint algorithm is applied to all the RTX models/cabinets as indicated by the predefined settings.
The user may only want to apply the change to a specific cabinet, to a group of display cabinets or to a dedicated group of controllers.

Below is illustrated an example of changing the **filter3** selector **(Selector of the cabinets)** for a subnetwork of low temperature cabinets with RTX controllers.

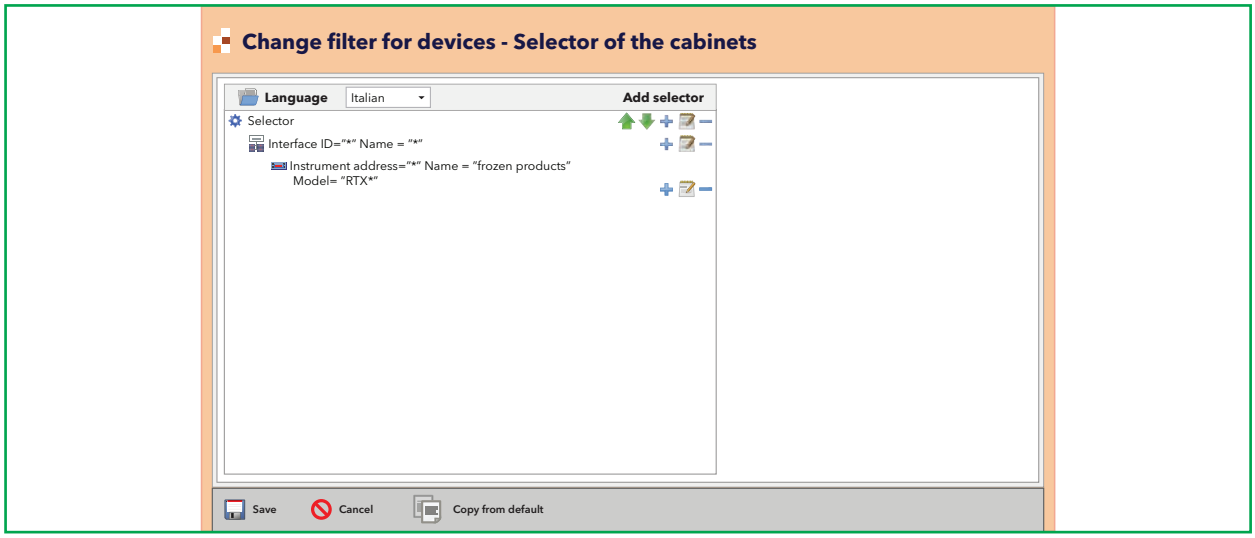
An example of a supermarket where potentially 5 cabinets are available:




To select only the **frozen food** cabinets the **selector criterion** will be by name **Name = frozen food** therefore the remaining cabinets will be excluded from the search.

The selector for model=**"RTX*"** means that the controller type must be RTX

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The instrument selector identifies therefore two instruments as shown in the following graphic:

