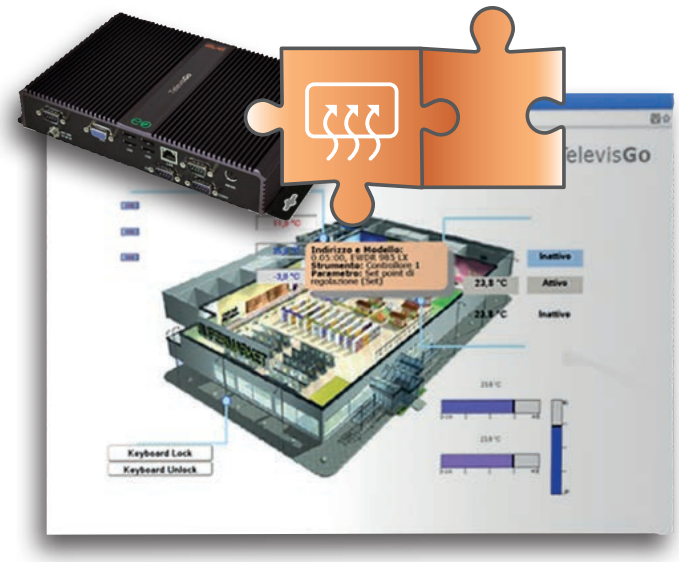
Controlling the demisting heaters using the dewpoint



DEFINITIONS AND COMPATIBLE RELEASES

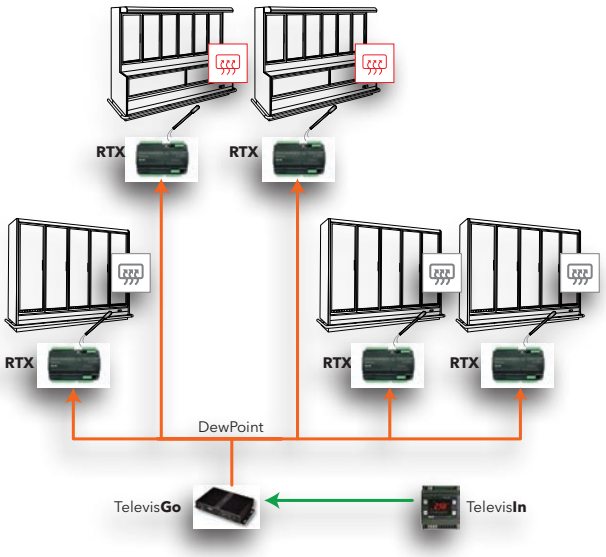
- Televis**Go** is the Embedded PC platform by Eliwell, that is a monitoring and supervision system with web interface.
  Televis**Go** **is a system that can be expanded with plug&play algorithms**
- **Instance**: Each algorithm can be instantiated, each instance is represented as a virtual instrument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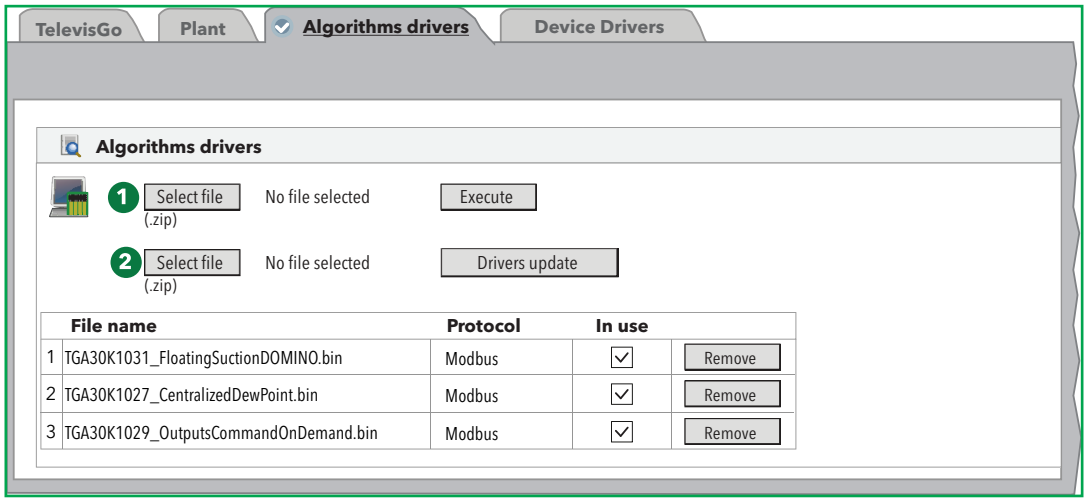
Algorithm Installation

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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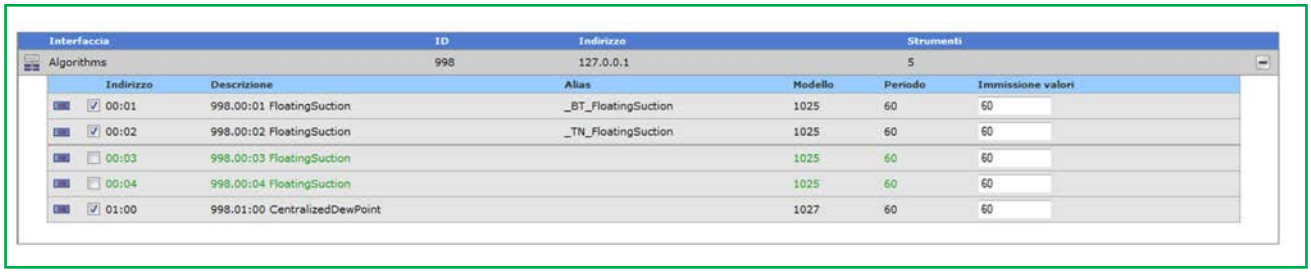
ACTIVATION

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:

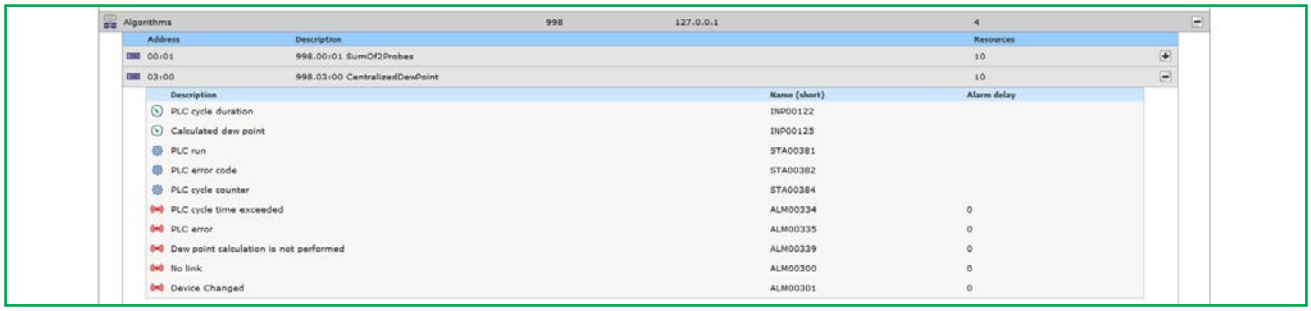
- **green:** **new** algorithm found in the virtual network
- **black:** algorithm **already present** in the virtual network

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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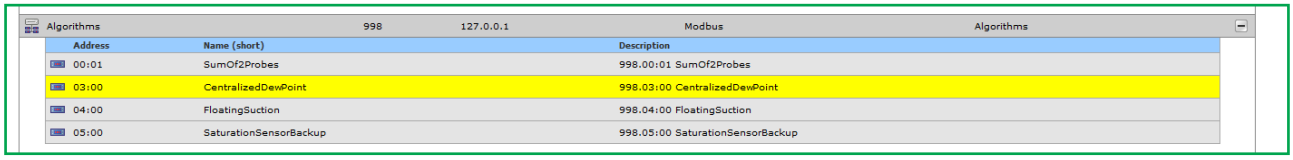
TELEVISGO CONFIGURATION

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:

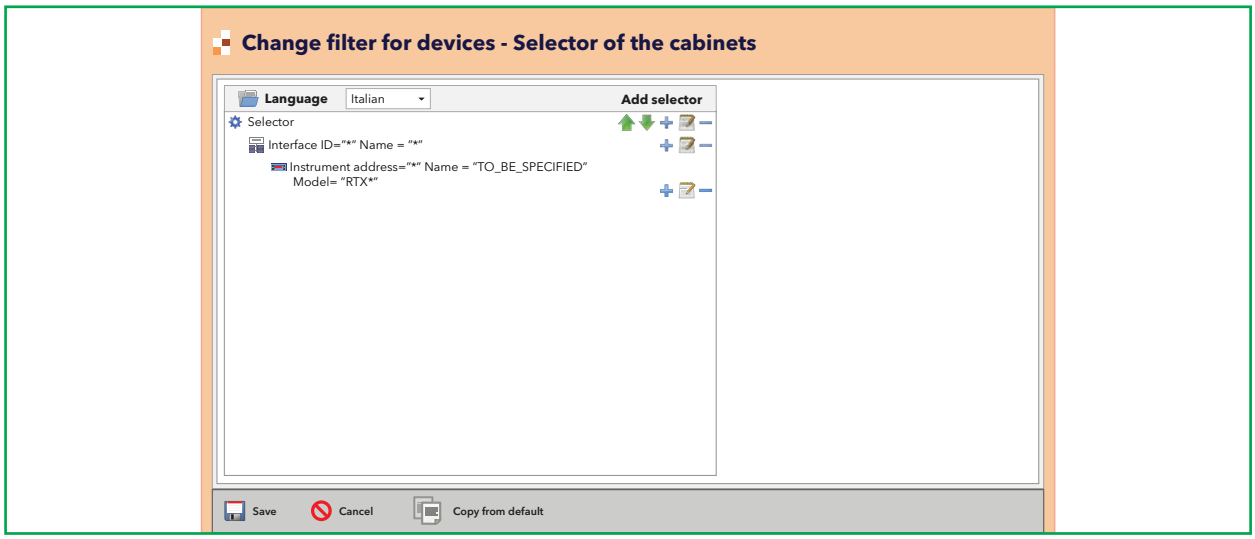
Instrument selector (device)
rule to select the devices on which the algorithm works.
Input resource selector (subsidiary)
rule to select an input resource on which the algorithm works.
Output resource selector (subsidiary)
rule to select an output resource on which the algorithm works.

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. The dewpoint value will no longer be transmitted and the calculated dew point will take on the conventional value of -99999. 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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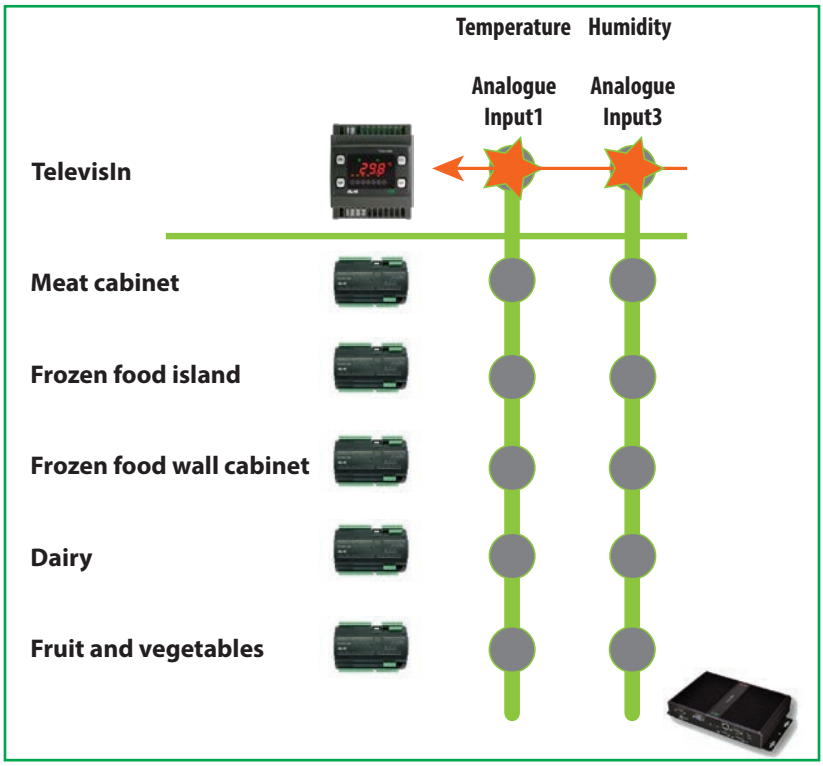
SELECTOR CHANGE EXAMPLE

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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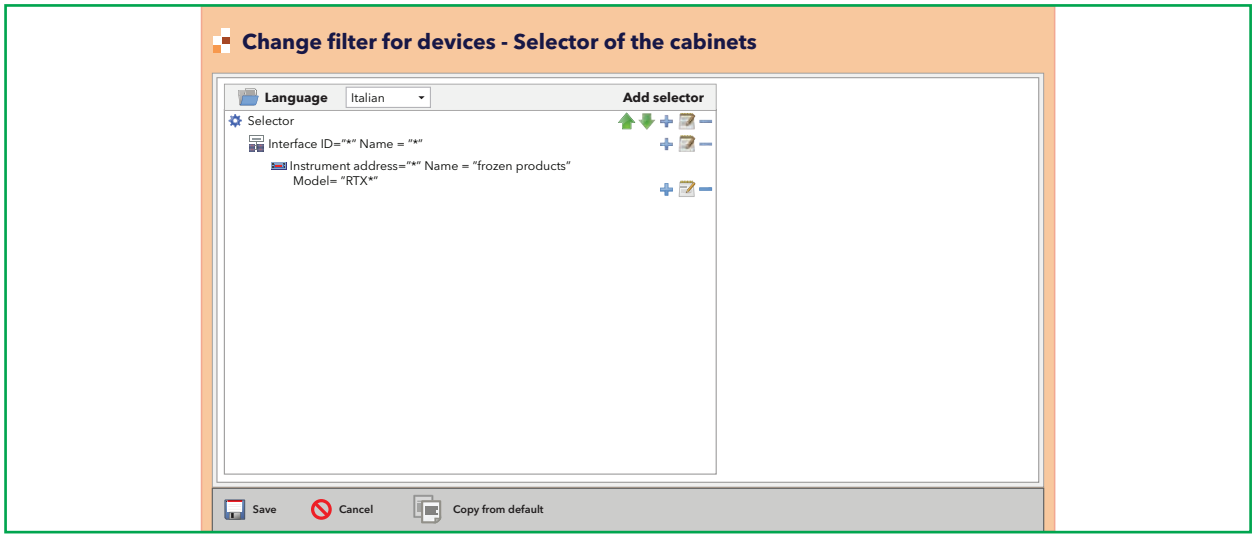

The instrument selector identifies therefore two instruments as shown in the following graphic: