



**CARLO GAVAZZI**

**Windows™ Desktop App**

**DPD**

**Threephase Multifunction Monitoring  
Relay with NFC Communication**

**User Manual**



DPD is a three-phase multifunction configurable monitoring relay suitable for both Delta and Star mains.

It protects loads from wrong phase sequence, neutral and phase loss, additionally voltage, frequency and asymmetry thresholds can be set and provide output signals.

DPD is delivered with a set of factory settings, among the two available ones, which are the most commonly used.

If factory default parameters are not completely suitable they can be modified according to own requirements, by a Windows PC or Android tablet and smartphone.

A Desktop and an Android apps are available, allowing to select on screen the required settings, save them, for future use and send the new configuration to the device to be configured.

NFC communication can also be used, by means of the proper app, to download the configuration from one device and to send the same configuration to n devices.

About factory settings, see "DPD DEFAULT PARAMETERS" table on the last page.



# DPD Windows™ Desktop App



ACR1252U



DPD02DM44  
or  
DPD02DM44B



### **System requirements**

- OS : Windows 8 or higher
- FREE MEMORY : 200 Mb of free memory for installation and use
- COMMUNICATION : USB Port or Built in NFC reader / writer

### **ACR1252U NFC Reader Installation**

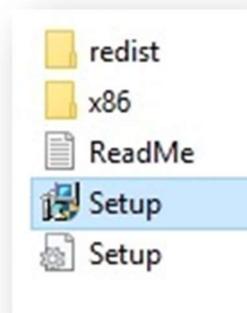
The ACR1252U NFC Reader need the Driver installation for correct operation.

- o Download the proper ACR1252U correct driver from one of following links:

[http://www.productselection.net/Download/UK/ACR1252\\_Winx86\\_32bit.zip](http://www.productselection.net/Download/UK/ACR1252_Winx86_32bit.zip)

[http://www.productselection.net/Download/UK/ACR1252\\_Winx64\\_64bit.zip](http://www.productselection.net/Download/UK/ACR1252_Winx64_64bit.zip)

- o Select the 32 or 64bit driver according to your system requirement.
- o Launch the setup for the NFC reader driver installation



## DPD Windows Desktop App Installation

### Application Download

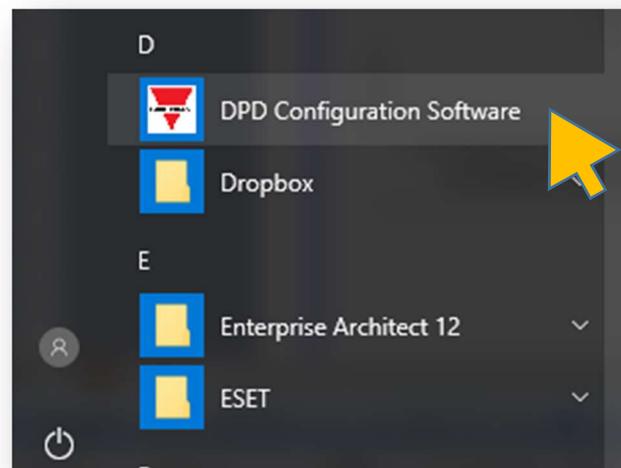
- Download the Desktop APP from Carlo Gavazzi web site:

[http://www.productselection.net/Download/UK/Setup\\_DPD.msi](http://www.productselection.net/Download/UK/Setup_DPD.msi)

- Open the downloaded folder
- Launch setup

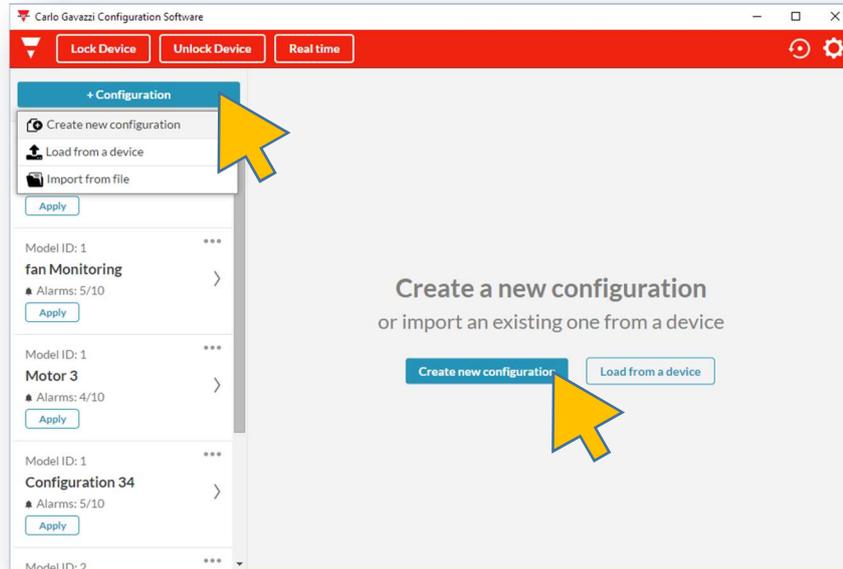


- Launch the DPD Application from Windows start menu.

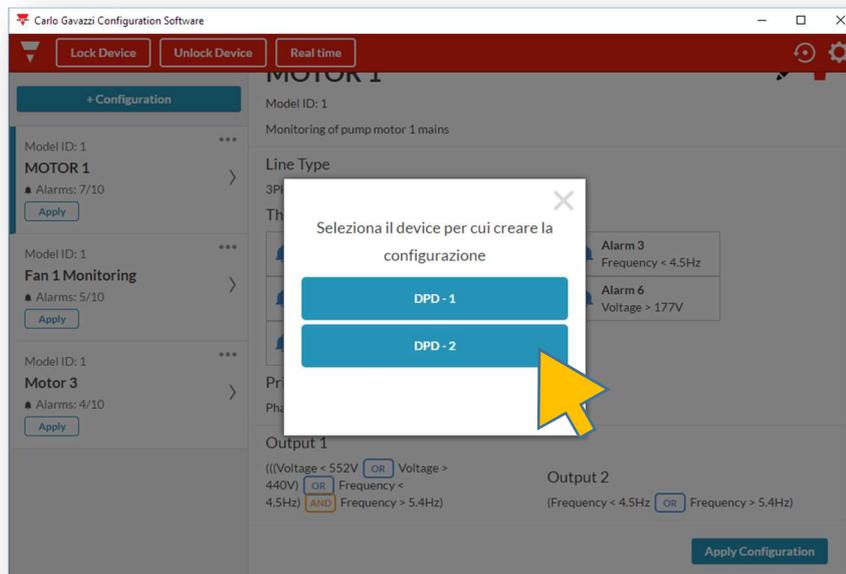


# DPD DESKTOP APP

## CREATE A NEW CONFIGURATION

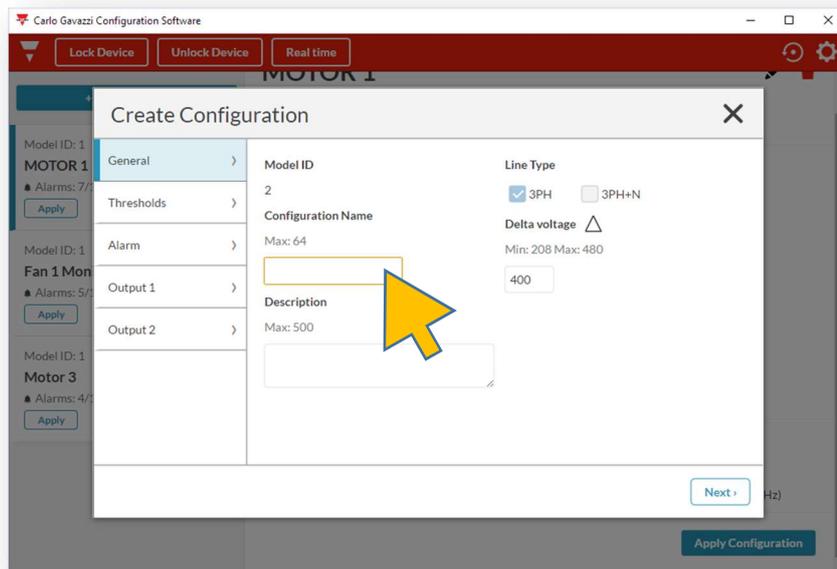


- Select "Create new Configuration" Either from screen centre button or from "+Configuration" of top left menu.

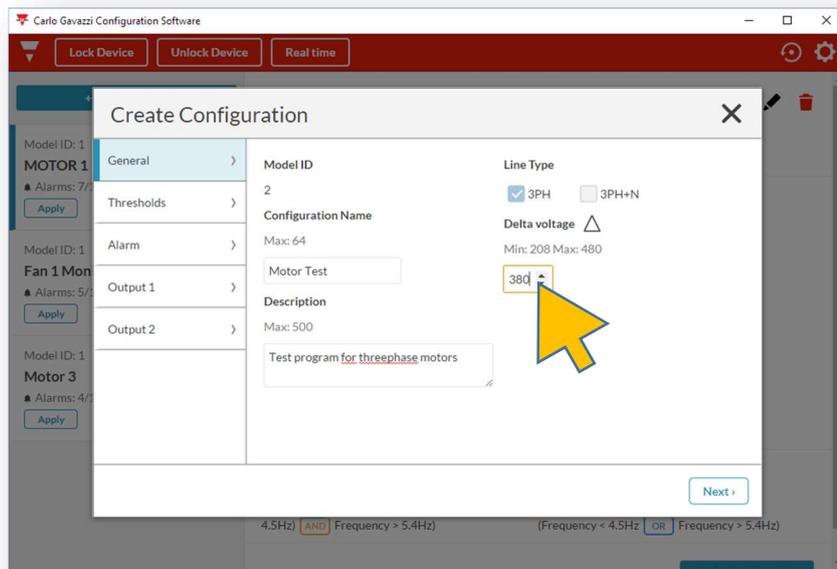


- Select DPD-2 ( DPD-1 only for older units from 2017 or earlier )



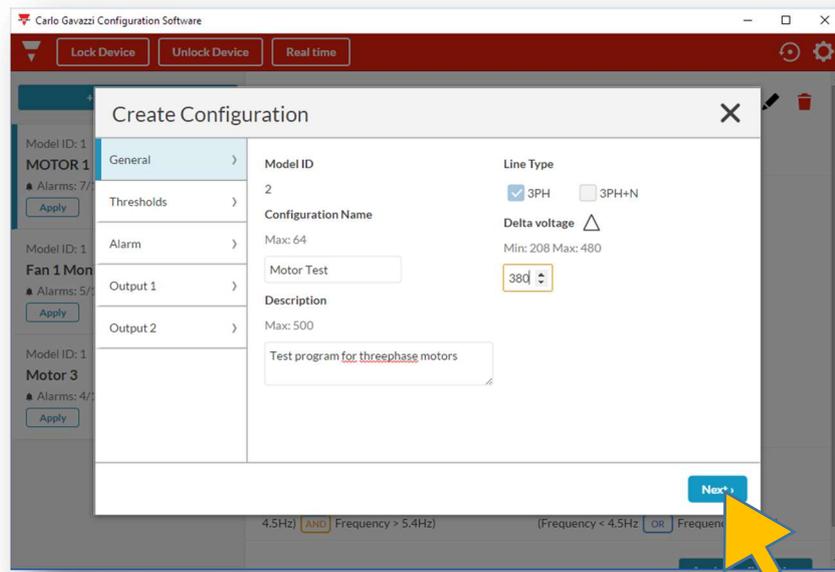


- Insert "Configuration Name" max 64 characters, and project "Description" max. 500 characters.

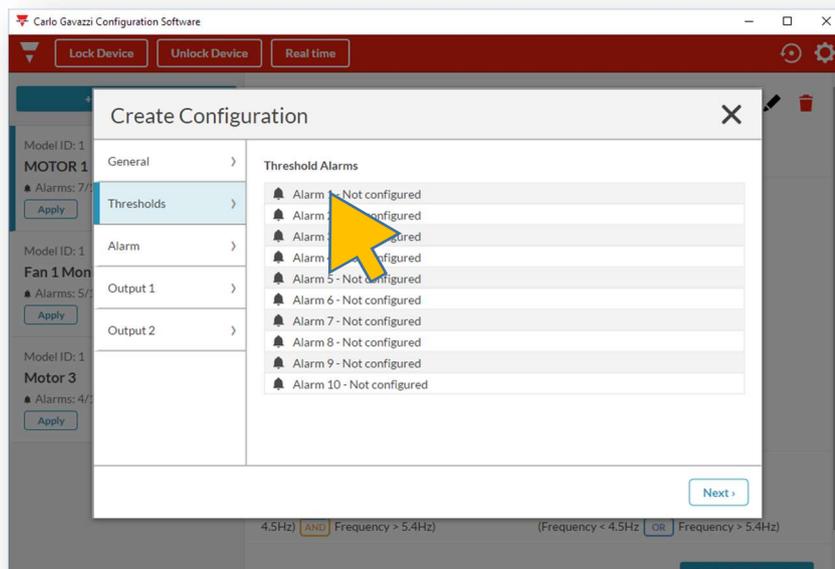


- Select "Line type" between 3 Phase ( Delta ) or 3 Phase + Neutral ( Star )
- Insert the Line rated voltage: from 208V to 480V in case of Delta mains or 120V to 277V in case of Star mains ( Line to Neutral voltage )



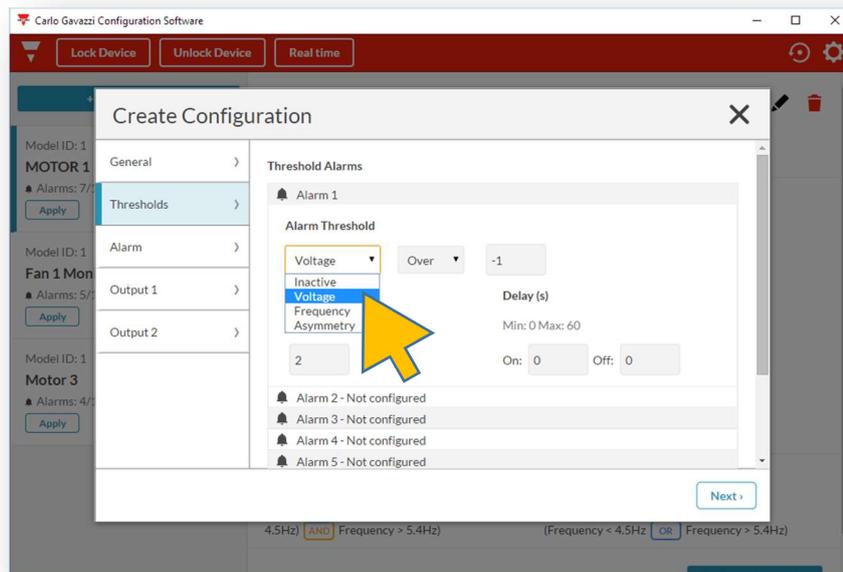


- When finished with this page press the "Next" button

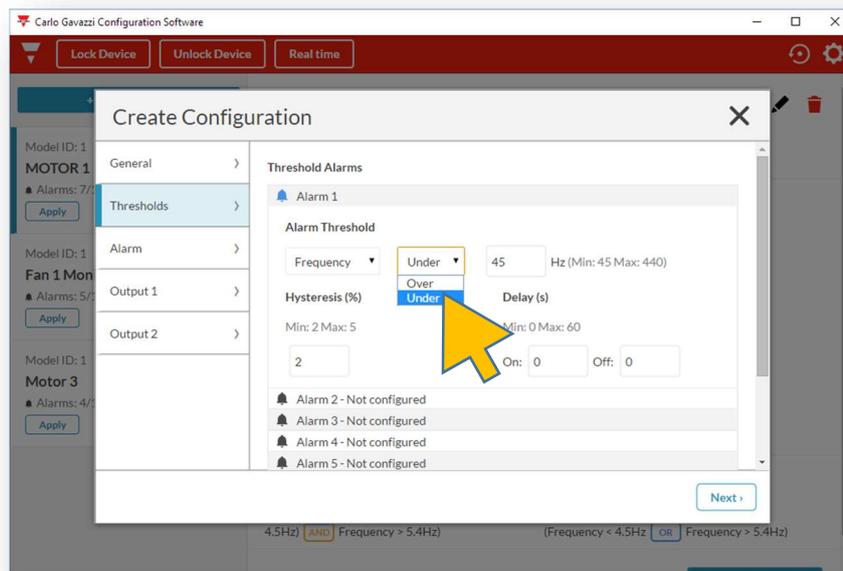


- On the following page the list of alarms is presented. Select one Alarm to enter its configuration.



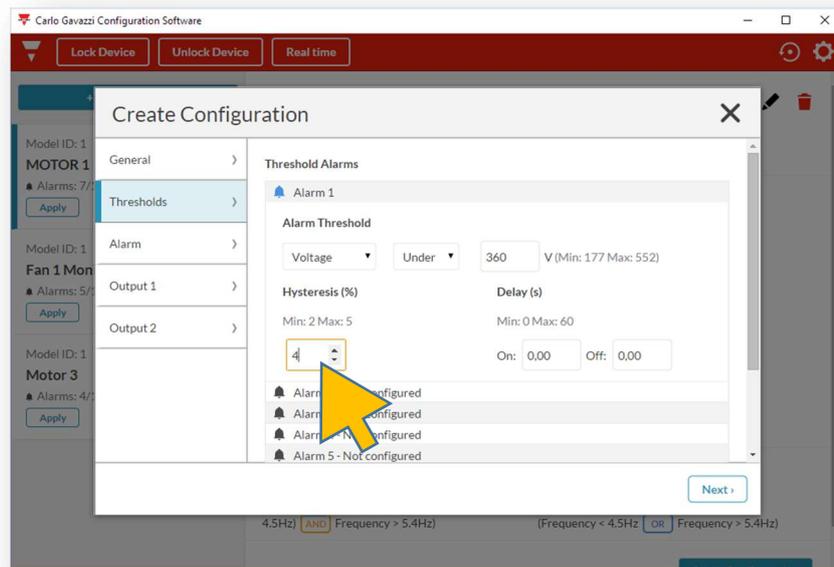


- Once the alarm to be configured is selected the above windows opens. Select type of alarm between "Voltage", "Frequency" or "Asymmetry".

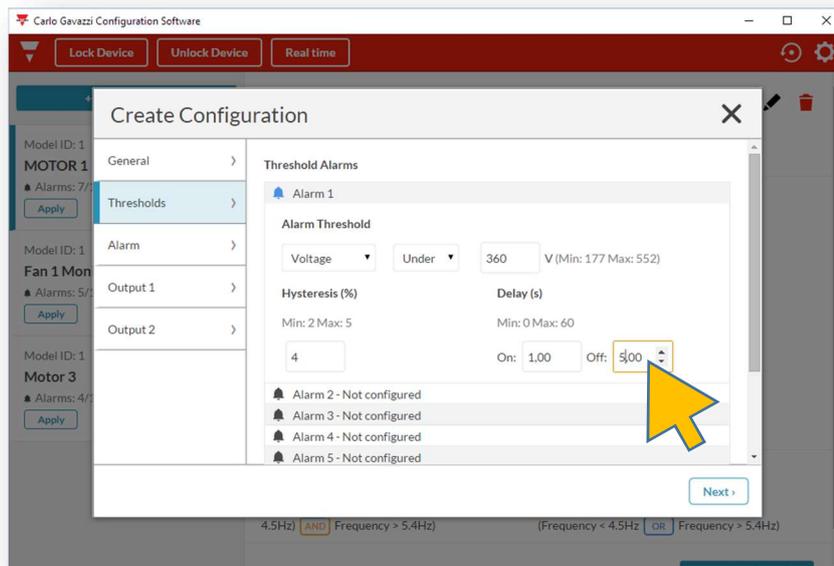


- For Voltage or Frequency select "Over" or "Under" if it necessary to detect Over-voltage / Under-voltage or Over-frequency / Under-frequency. For Asymmetry this selection is disabled
- Input the threshold value in the right window.



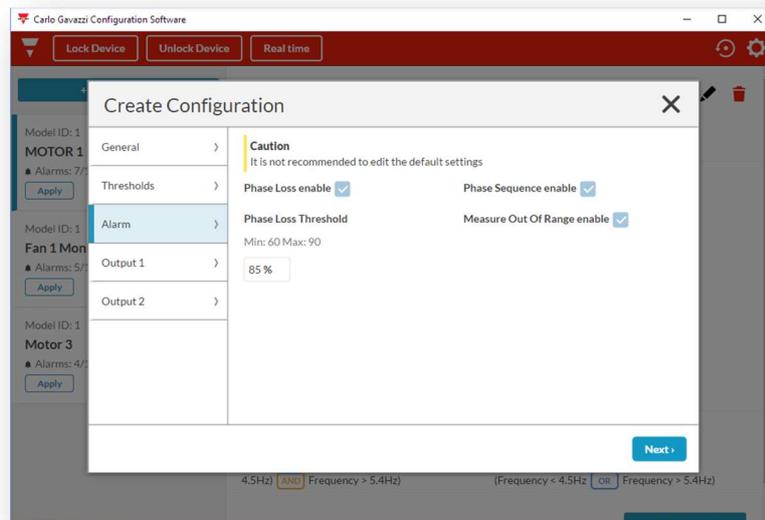


- Input the "Hysteresis" value between 2% and 5%.



- Input, if required, a "Delay ON Alarm", from 0.1s to 60s, and / or a "Delay OFF Alarm" from 0.1s to 600s ( 10' )
- Press  to proceed to following page.

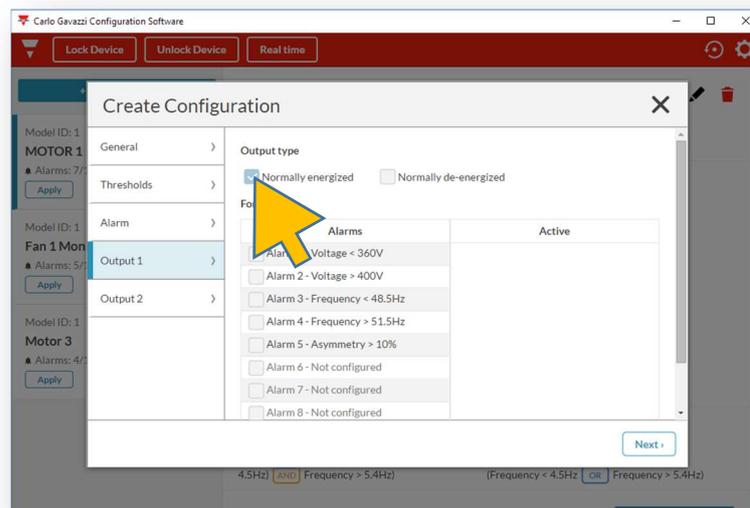




- In the alarm page it is possible to disable the "Phase Sequence", the "Phase Loss" and the "Out of Range Measurement" detection alarms. It is also possible to set the "Phase Loss" and the "Neutral Loss" ( when configured as "Star" mains )

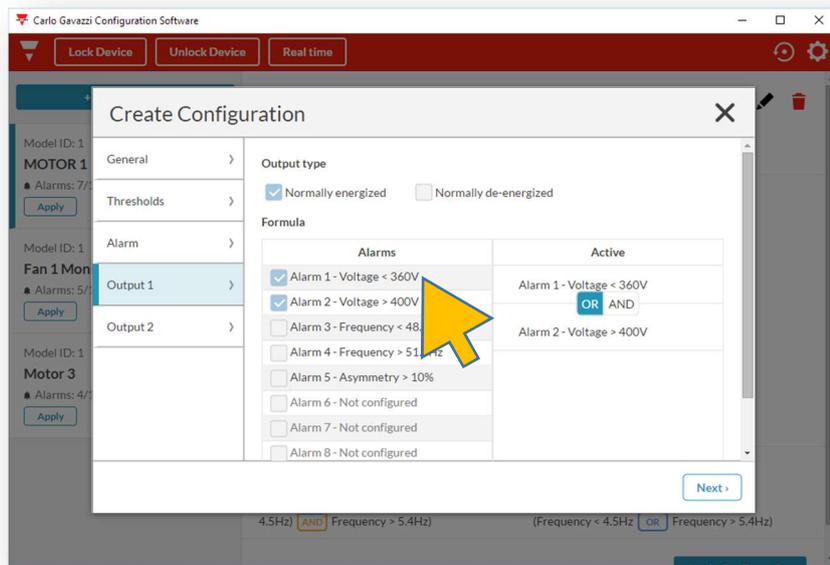
DO NOT MODIFY THESE DEFAULT SETTINGS UNLESS AWARE OF THEIR FUNCTION.  
IMPROPER SETTING MAY IMPAIR THE MAIN DEVICE PURPOSE.

- Press  to proceed to following page.

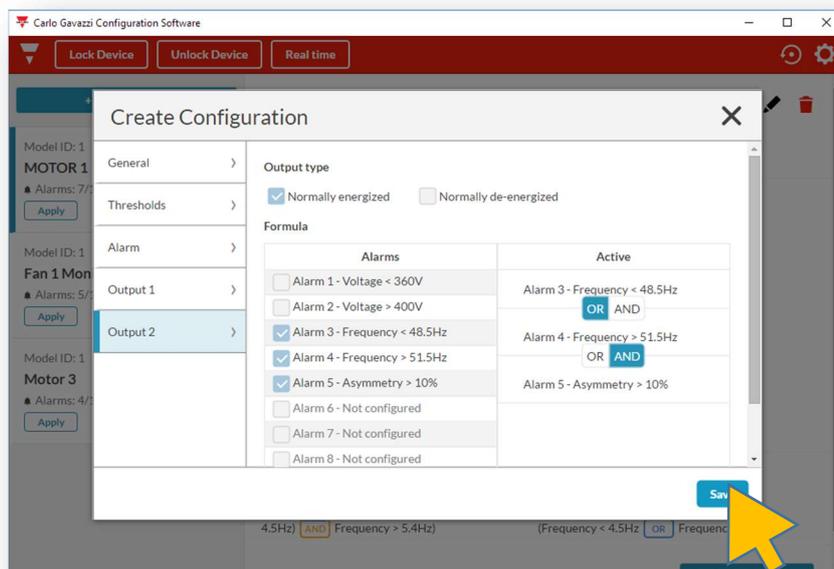


- On this page it is possible to associate configured alarms to "Output 1". Output can be configured to operate as "Normally Energized" or "Normally De-Energized"



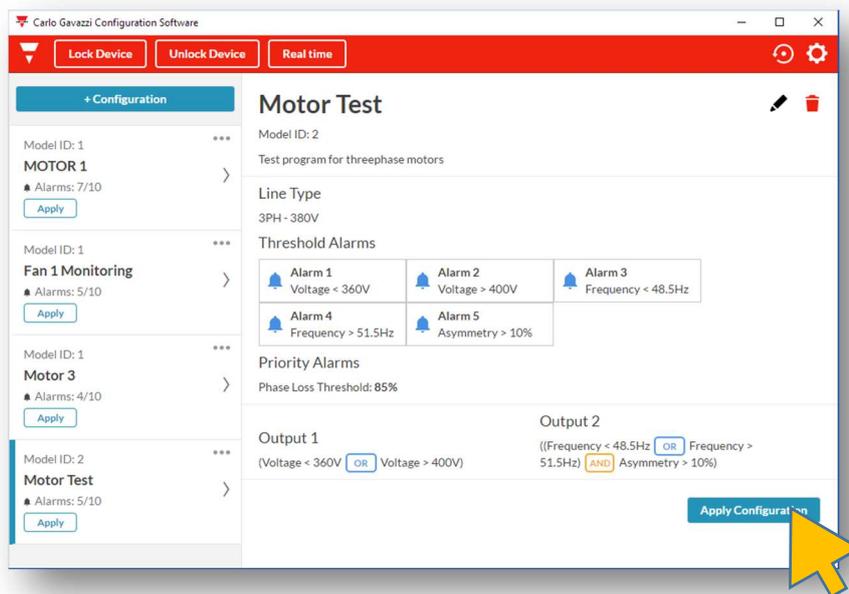


- Select one or more alarms to be associated to the Output.
- If more than one alarm are selected the "OR" / "AND" option appears. In this case the alarms will operate according to the Boolean operator used in between them.

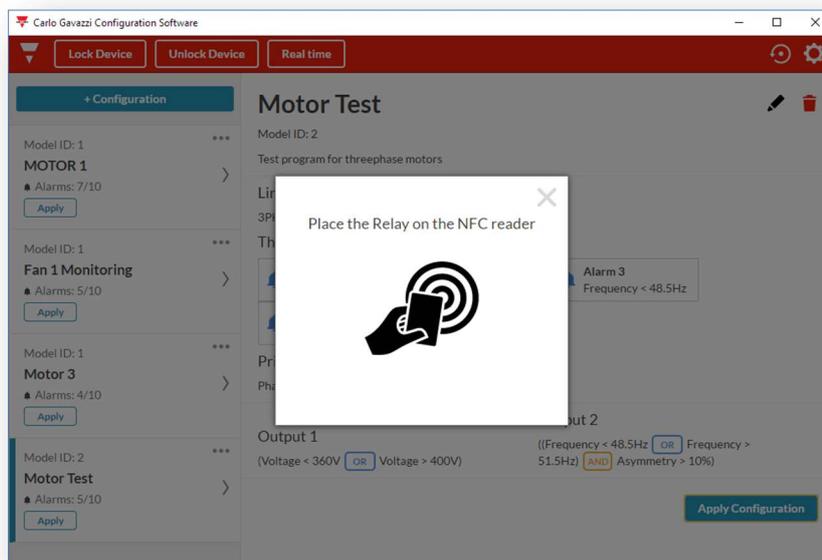


- Once the alarms have been associated on both "Outputs". Press "Save" to exit configuration and save the configuration.



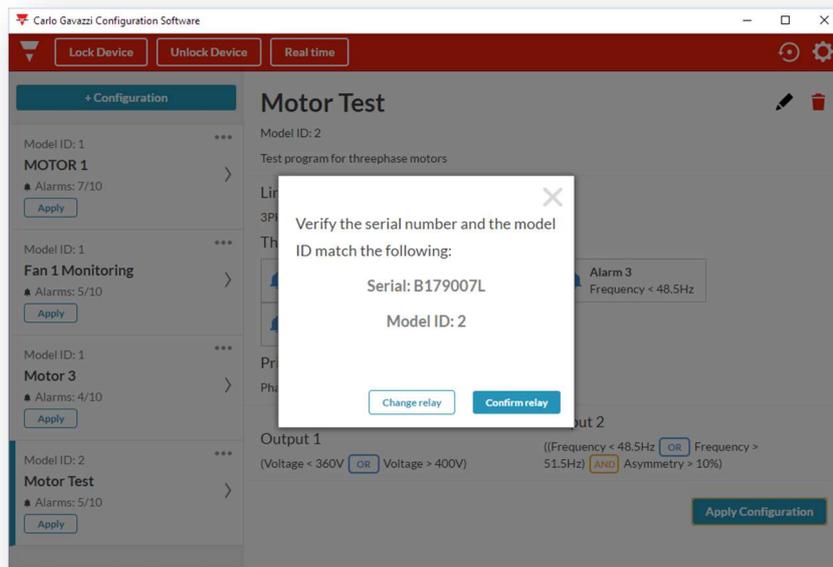


- A last page is displayed summarising all the settings of the just created configuration.
- If everything is correct press "Apply Configuration" to send the configuration to the target DPD(s).



- Place the reader next to front face of DPD



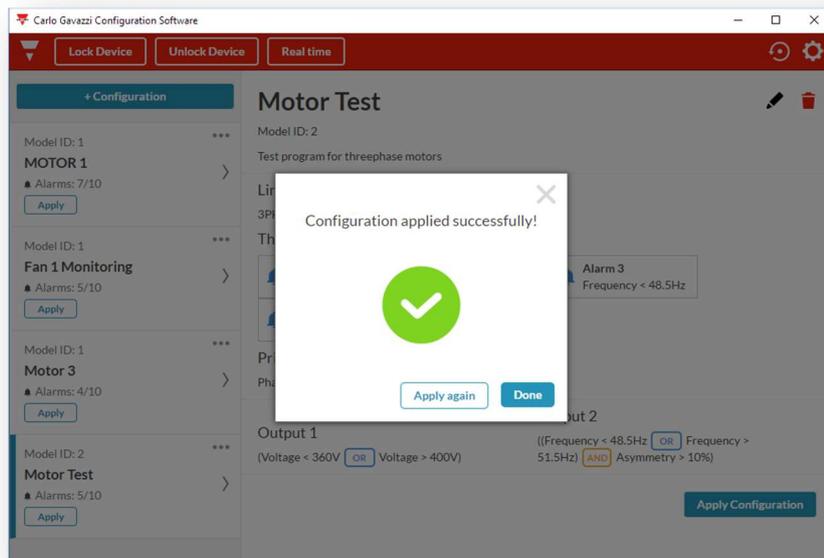


- As soon as the reader detects the DPD the above window appears with the indication of the Serial number detected.



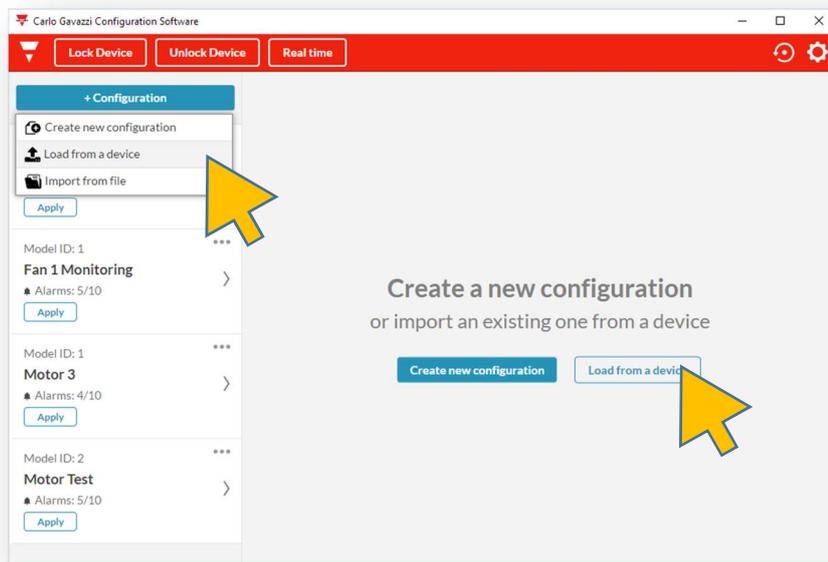
- If the serial number of the target DPD corresponds to this one the press "Confirm relay" Else select "change relay" and try again.





- When the configuration has been uploaded to DPD the above window appears.
- If it is necessary to configure another DPD with the same configuration press "Apply Again". Else press "Done"

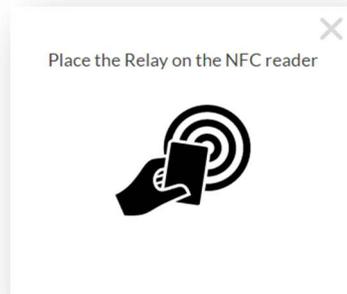
## LOAD CONFIGURATION FROM ANOTHER DPD



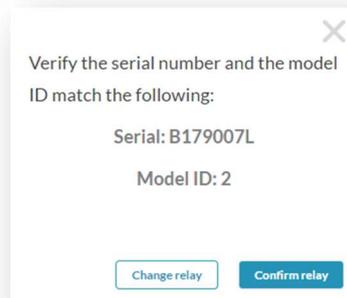
- With the DPD App it is possible to download the configuration from another DPD and then store it, modify it or send it to another DPD.



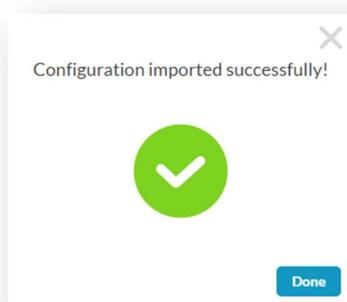
- To select this function, from main page, either select "Load from a Device" in the screen centre or "+Configuration" then "Load from a Device".
- In both cases the following pop-up appears.



- When the reader detects the DPD the following pop-up appears

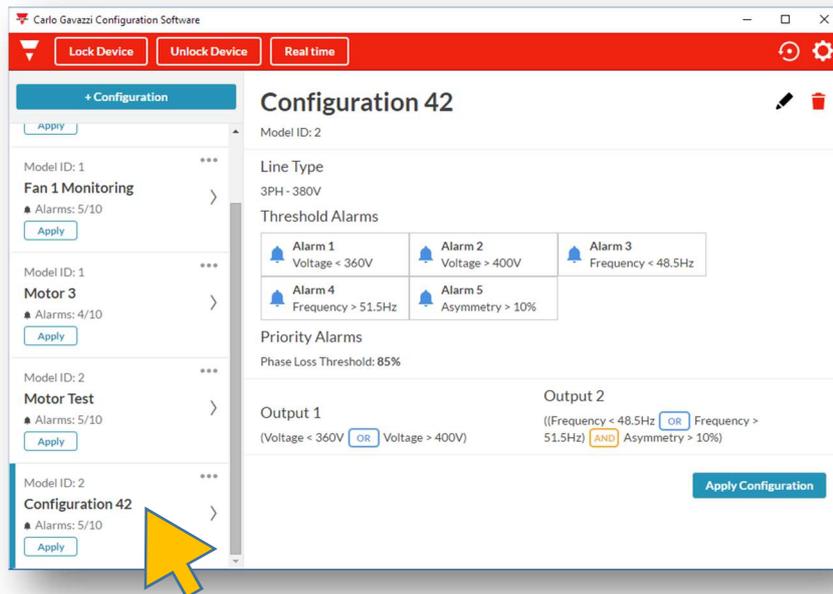


- If the Serial Number of the device from which is necessary to download the configuration is correct press "Confirm Relay" else press "Change Relay" and try again.

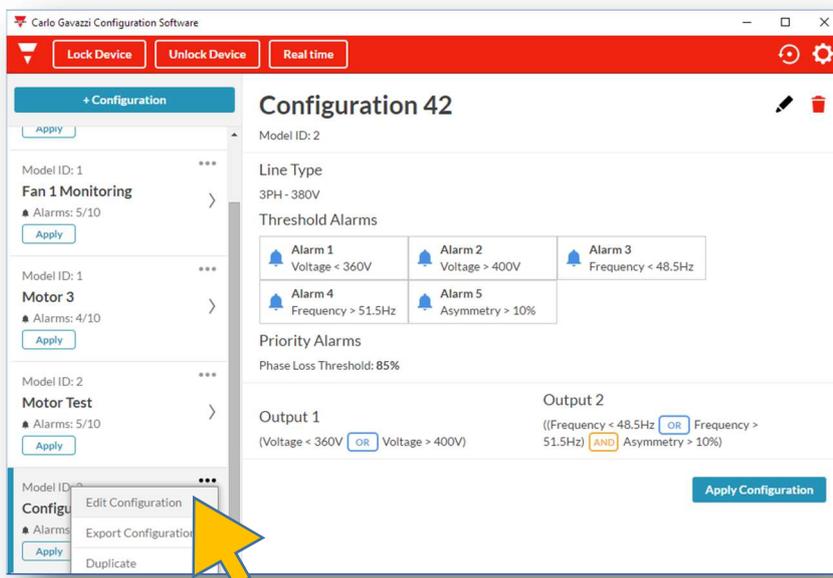


- When the above pop-up appears the configuration has been successfully downloaded.
- Press "Done" to see the summary of the downloaded configuration.





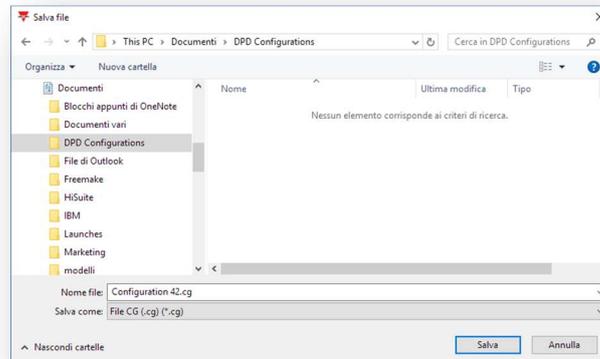
- Downloaded configuration is automatically saved with an automatically generated name: "*Configuration nn*" where nn is a sequential numbering.
- The configuration can be uploaded to another DPD as it is by pressing "*Apply Configuration*".



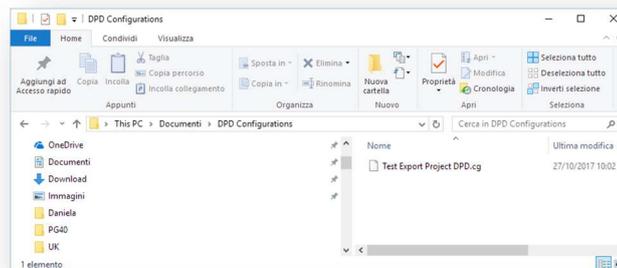
- Configuration can be edited by pressing "*Edit Configuration*" or the top right pencil.
- Duplicated by pressing "*Duplicate*".



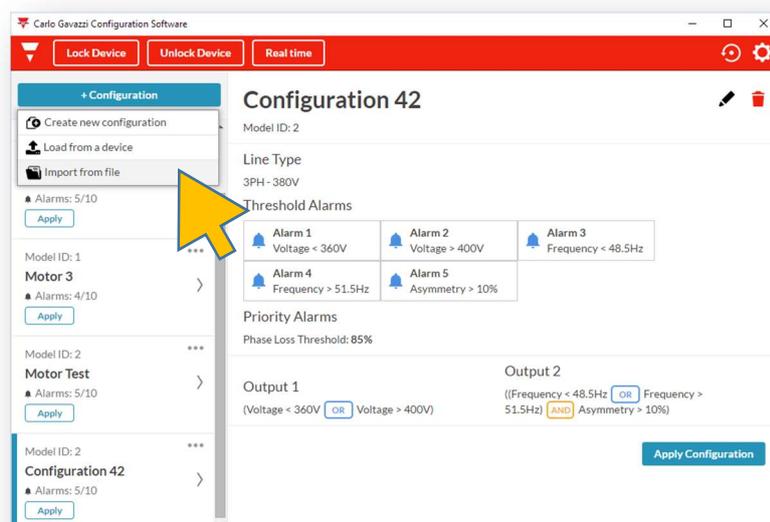
- Exported as a windows file, to any desired location, as "*filename.cg*", by pressing "*Export Configuration*".



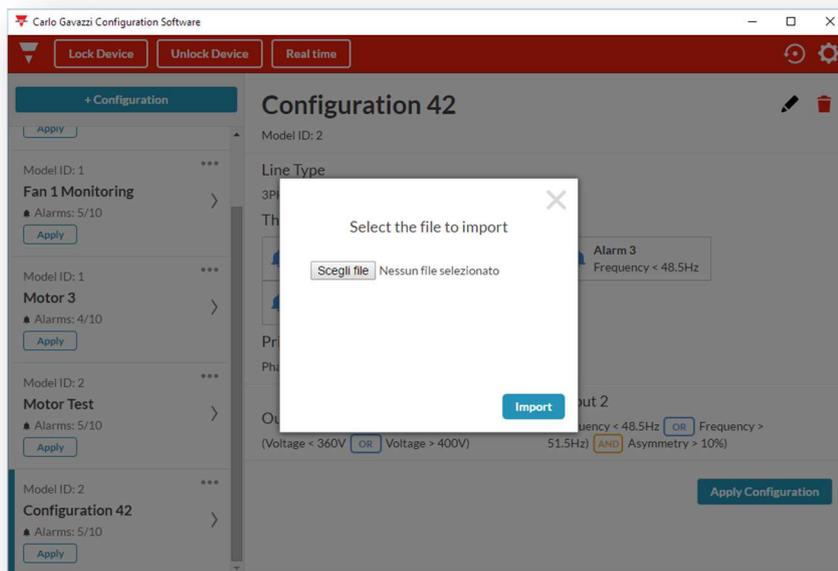
- Exported files can be used as any other windows file once exported



- Exported file can be imported.

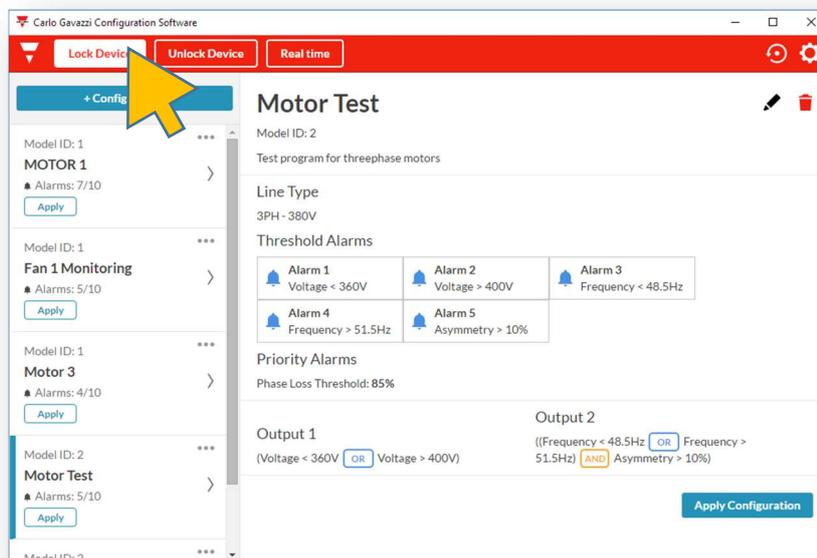


- Press "+Configuration" and then "Import from File"



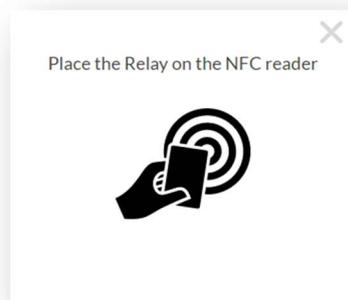
- Select the file you want import from the computer directories. And then press "Import".

## DEVICE LOCKING / UNLOCKING ( Only possible when DPD is powered)

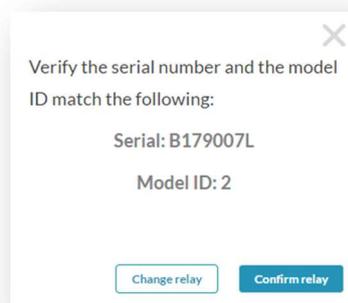


- After the DPD(s) is configured it may be necessary to lock the device in order to avoid unauthorised access and modification of configuration data.
- Press "Lock" to enter the locking procedure.

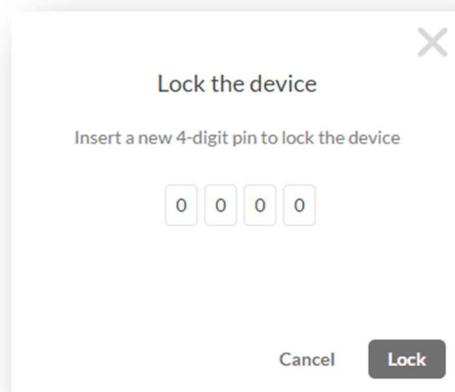




- When the above pop-up appears place the reader next to DPD to be locked front face.



- Check the serial number of the device to be locked. If correct press "Confirm Relay"

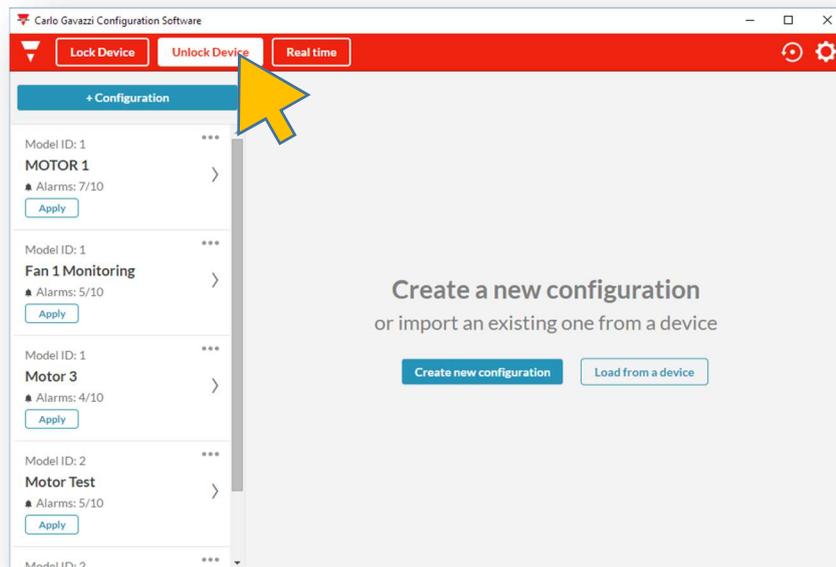


- Insert a 4 digit numerical pin and the press "Lock"

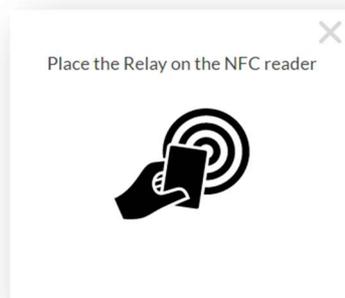
TAKE NOTE OF THE INSERTED PASSWORD FOR FUTURE REFERENCE IN CASE IT WILL BE NECESSARY TO MODIFY THE DEVICE CONFIGURATION!



- If it is required to modify the configuration on a locked device it is first of all necessary to proceed with the device unlocking.



- Press "Unlock" to start unlocking procedure

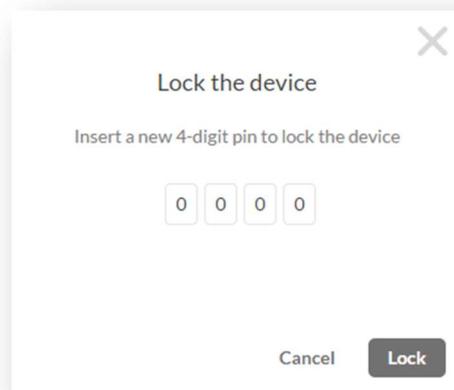


- When the above pop-up appears place the reader next to DPD front face.





- Confirm the relay correct serial number



- Input the 4 Digit numerical PIN that has been used for locking the device.

NOTE: if the PIN has been lost please contact Carlo Gavazzi customer service providing the device serial number. The password provided will only work on the unit for which it has been released.

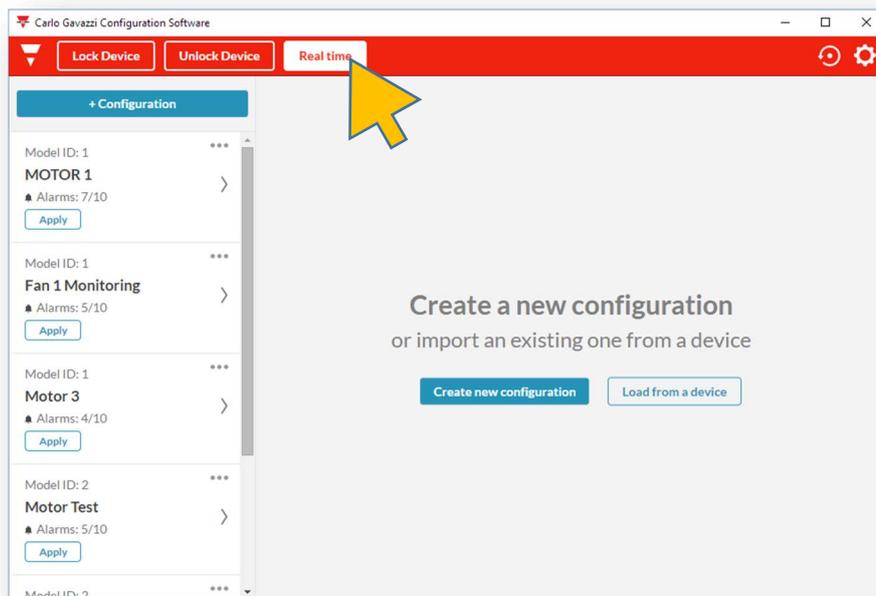
- Once the password has been used for device unlocking the old password is lost and it is possible to input a new one.



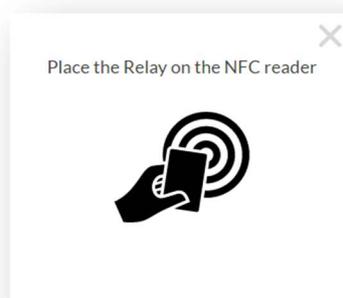
## REAL TIME MONITORING ( Only possible when DPD is powered)

On the DPD with model ID: 2 it is possible to read the operation status at any time during operation.

The real time allows the reading of all the Alarms status, the last alarm occurred and the measurement values: L1, L2 and L3 voltages, frequency and asymmetry.

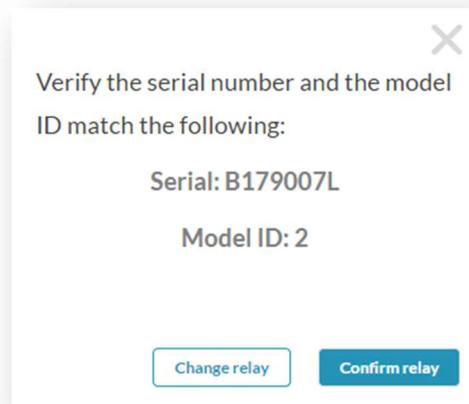


- Select "Real Time".

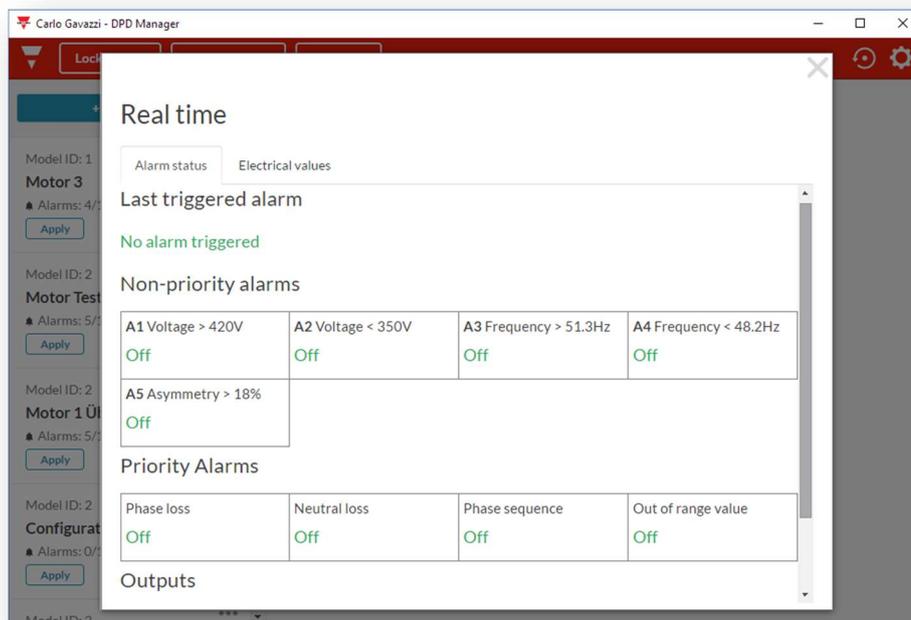


- Place the NFC reader next to the DPD front face



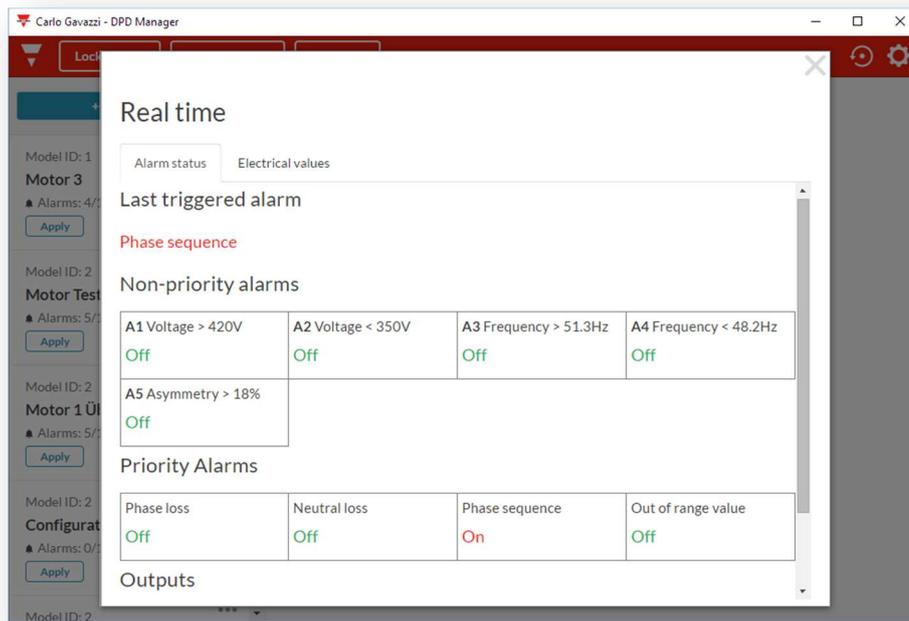


- Confirm the source device Serial number

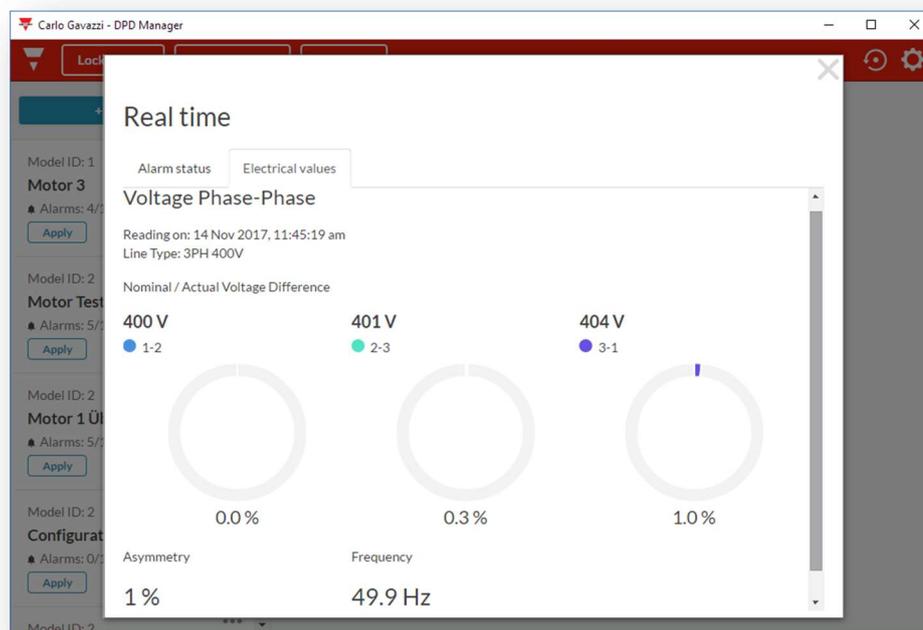


- After around 2 seconds the real time screen appears.
- The real time function contains 2 pages: Alarm status and Electrical values.
- Alarm status displays the status of all the configured non priority alarms and the status of all priority alarms. When everything is OK characters are GREEN.



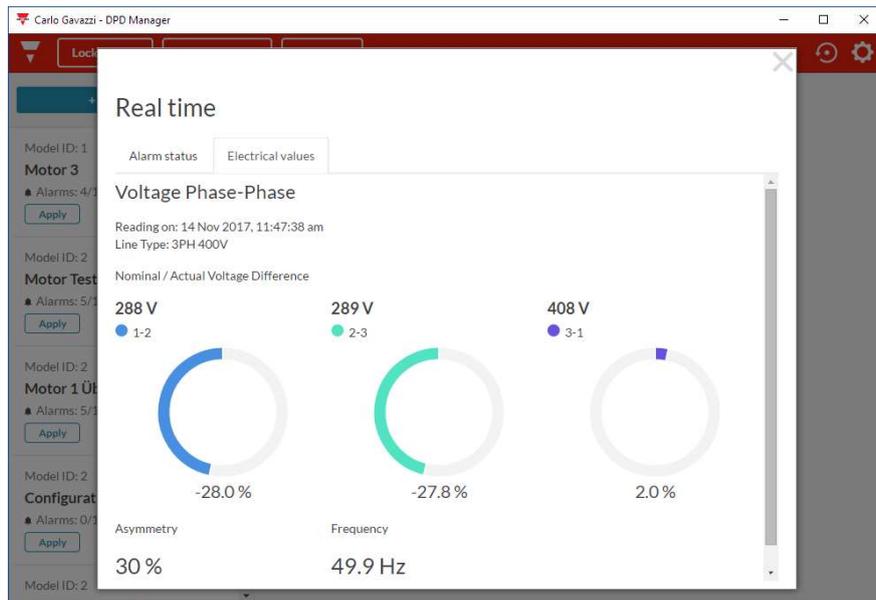


- Anomalies are displayed in RED.
- The last triggered alarm displays the last alarm that was chronologically triggered by the DPD. This alarm is kept until the DPD is powered.



- Electrical values page displays the Line to Line voltages. 3Ph + Neutral systems also show the Line to Neutral voltages.





- The graphs below readings show graphically the amount of deviation between the set value and the actual reading. The less colour the better it is!
- The graph goes from -30% ( CCW) to +30% (CW).
- Below -30% and above 30% the graph remains the same.
- Asymmetry value and grid frequency are also displayed.



## DPD DEFAULT PARAMETERS

PAGE	ITEM	PART NUMBER	
		DPD02DM44	DPD02DM44B
GRID TYPE	LINE TYPE	DELTA	DELTA
	RATED LINE VOLTAGE	400VAC	240 VAC
	POWER ON DELAY	0s	0s
SETPOINTS	ALARM 1	OVERVOLTAGE	OVERVOLTAGE
	Voltage Value	440VAC	264 VAC
	Hysteresis	2%	2%
	Delay ON	0s	0s
	Delay OFF	0s	0s
	ALARM 2	UNDERVOLTAGE	UNDERVOLTAGE
	Voltage Value	360VAC	216 VAC
	Hysteresis	2%	2%
	Delay OFF	0s	0s
PRIORITY ALARMS	PHASE LOSS ENABLE	ON	ON
	PHASE LOSS THRESHOLD	85%	85%
	NEUTRAL LOSS	NOT ACTIVE	NOT ACTIVE
	PHASE SEQUENCE ENABLE	ON	ON
	OUT OF RANGE MEASUREMENT	ON	ON
OUTPUT 1	ASSIGNMENT	ALARM 1	ALARM 1
	LOGIC	NORMALLY ENERGIZED	NORMALLY ENERGIZED
	LOGIC OPERATORS	NONE	NONE
OUTPUT 2	ASSIGNMENT	ALARM 2	ALARM 2
	LOGIC	NORMALLY ENERGIZED	NORMALLY ENERGIZED
	LOGIC OPERATORS	NONE	NONE

