

# DPD

# THREEPHASE MULTIFUNCTION MONITORING RELAY

# with NFC Communication

# CONFIGURATOR USER MANUAL









DPD is a threephase 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 2 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 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.





# NFC READER and DPD DESKTOP CONFIGURATOR





#### INSTALLATION NFC READER AND DPD DESKTOP CONFIGURATOR

• System requirements for SW PC DESKTOP:

- OS	:	Windows 8 or higher
		<b>U</b>

- FREE MEMORY : 100 Mb of free memory for installation, 50 to 100Mb for use

- COMMUNICATION : Built in NFC reader / writer





## **INSTALLATION NFC READER**

NFC READER INSTALLATION - Driver Installation for correct PC Operating System

• Download the NFC READER from following web site:

http://www.productselection.net/Download/UK/ACR1252\_Winx86\_32bit.zip

http://www.productselection.net/Download/UK/ACR1252\_Winx64\_64bit.zip

o Download the driver as your system requirements, 32bit or 64bit





#### NFC READER INSTALLATION – Driver Installation download

- 🕌 ACS-Unified-MSI-Winx86-4100 32bit
- 🕌 ACS-Unified-MSI-Winx64-4100 64bit
  - ACS-Unified-MSI-Winx86-4100 32bit
  - ACS-Unified-MSI-Winx64-4100 64bit

- o Select correct driver, 32bit or 64bit as your system requirements
- $\circ$   $\;$  Extract the folder from the zip file  $\;$





• Launch the setup file, in order to start the installation of the NFC reader sw (In this example, there is selected a 32bit driver)





### INSTALLATION DPD DESKTOP CONFIGURATOR

DPD DESKTOP CONFIGURATOR INSTALLATION - Application Download

• Download the DESKTOP APP from Carlo Gavazzi web site:

http://www.productselection.net/Download/UK/Setup\_DPD.msi

 $\circ$  Open the downloaded folder





DPD DESKTOP CONFIGURATOR INSTALLATION – Application Starting



 $\circ$   $\;$  Launch the application in order to launch the DPD installation configurator  $\;$ 







- o The application file is on Windows Start button
- Click the application in order to start the DPD configurator



### DPD DESKTOP CONFIGURATOR SETUP

arlo Gavazzi Configuration Software		Sign configuration			- 0
Create Config. Import C	onfig.			Lock Device	Unlock Device
		Create a or import an Creat	a new configuration existing one from a dev to Config. Import Config.	<b>n</b> /ice	
<ul> <li>Select "Creat</li> </ul>	e Config.″ button	in order to create	e a new configu	vration	

#### IMPORT A CONFIGURATION – NFC reader for Import Configuration

- Select "Import Config." button in order to import a configuration from an already configured device
- It is necessary a NFC reader, otherwise you can not proceed with configuration, and an error window will appear



#### **CREATE NEW CONFIGURATION – Main settings**

🐺 Carlo Gavazzi Configura	ation Software			.—.	ð X
<b>T</b>				Lock Device Unlock Device	) ¢
Create Config.	Import Co	nfig.			
	Create Config	uration		×	
	General >	Configuration Name	Line Type		
	Thresholds >	PUMP Nº 1	SPH SPH+N		
	Alarm >	Description Mains monitoring for Pump N° 1	Delta voltage 🛆		
	Output 1 >		PLEASE SET MAX / MIN VALU	JES	
	Output 2 >				
				Next >	

- Fill in the "Configuration Name" field
- Fill in the "Description" field
- Select the Line Type (3PH / 3PH+N)
- Select the voltage line nominal value
  - Voltage 3PH range: 208 to 480V
  - Voltage 3PH+N range: 120 to 277V



Create Configuration     General     Threshold Alarms     Threshold Alarm 1     Alarm 1   Alarm 1   Alarm 1   Alarm 1   Alarm 1   Output 1   Output 2   0   Alarm 2- Not configured   Alarm 4- Not configured   Alarm 5- Not configured   Alarm 5- Not configured   Alarm 7- Not configured   Alarm 7- Not configured   Alarm 9- Not configured		mport Con	fig.			
General       >         Threshold Alarms         Thresholds       >         Alarm 1         Alarm 1         Alarm 1         Alarm 1         Output 1       >         Output 2       >         Qutput 2       >         Qutput 3       2         Qutput 4       >         Qutput 5       0m: 0         Qutput 6       Qutput 7         Qutput 7       >         Qutput 8       Qutput 9         Qutput 9       2         Qutput 9       Qutput 9         Qutput 9       Qutput 9	Create C	onfigu	ration		>	(
Thresholds   Alarm   Alarm   Output 1.   Output 2.   Output 2.   Output 2.   Alarm 2 - Not configured   Alarm 4 - Not configured   Alarm 5 - Not configured   Alarm 7 - Not configured   Alarm 8 - Not configured   Alarm 7 - Not configured   Alarm 8 - Not configured   Alarm 7 - Not configured   Alarm 8 - Not configured   Alarm 9 - Not configured   Alarm 9 - Not configured   Alarm 9 - Not configured	General	>	Threshold Alarms			
Alarm   Output 1   Output 2   Output 2     Alarm 2 - Not configured   Alarm 4 - Not configured   Alarm 5 - Not configured   Alarm 7 - Not configured   Alarm 7 - Not configured   Alarm 9 - Not configured   Alarm 9 - Not configured   Alarm 9 - Not configured	Thresholds	>	Alarm 1			
Alarm       Voltage       Under       200 \$ V         Output 1       V       Hysteresis (%)       Delay (s)         Output 2       2       On: 0       Off: 0         Alarm 2 - Not configured       Alarm 3 - Not configured       Alarm 4 - Not configured         Alarm 4 - Not configured       Alarm 5 - Not configured       Alarm 4 - Not configured         Alarm 7 - Not configured       Alarm 7 - Not configured       Alarm 7 - Not configured         Alarm 9 - Not configured       Alarm 9 - Not configured       Alarm 7 - Not configured         Alarm 9 - Not configured       Alarm 9 - Not configured       Alarm 7 - Not configured		÷	Alarm Threshold			
Output 1.       Hysteresis (%)       Delay (s)         Output 2       2       On: 0       Off: 0         Alarm 2 - Not configured       Alarm 3 - Not configured       Alarm 4 - Not configured         Alarm 4 - Not configured       Alarm 5 - Not configured       Alarm 4 - Not configured         Alarm 5 - Not configured       Alarm 4 - Not configured       Alarm 4 - Not configured         Alarm 7 - Not configured       Alarm 7 - Not configured       Alarm 7 - Not configured         Alarm 9 - Not configured       Alarm 7 - Not configured       Alarm 7 - Not configured         Alarm 9 - Not configured       Alarm 7 - Not configured       Alarm 7 - Not configured	Alarm	>	Voltage V Under V 200 C V			
Output 2     2     On:     0     Off:     0       Alarm 2 - Not configured     Alarm 3 - Not configured     Alarm 4 - Not configured     Alarm 4 - Not configured       Alarm 5 - Not configured     Alarm 7 - Not configured     Alarm 4 - Not configured       Alarm 8 - Not configured     Alarm 7 - Not configured       Alarm 9 - Not configured     Alarm 8 - Not configured       Alarm 9 - Not configured     Alarm 8 - Not configured	Output 1	>	Hystorasis (%)	Delay (s)		
Output 2       2       On: 0       Off: 0         Alarm 2 - Not configured       Alarm 3 - Not configured       Alarm 4 - Not configured         Alarm 5 - Not configured       Alarm 7 - Not configured       Alarm 7 - Not configured         Alarm 7 - Not configured       Alarm 7 - Not configured       Alarm 7 - Not configured         Alarm 8 - Not configured       Alarm 9 - Not configured       Alarm 7 - Not configured         Alarm 9 - Not configured       Alarm 9 - Not configured       Alarm 10 - Not configured	-		Tryster esis (70)	Delay (a)		
<ul> <li>Alarm 2 - Not configured</li> <li>Alarm 3 - Not configured</li> <li>Alarm 4 - Not configured</li> <li>Alarm 5 - Not configured</li> <li>Alarm 6 - Not configured</li> <li>Alarm 7 - Not configured</li> <li>Alarm 8 - Not configured</li> <li>Alarm 9 - Not configured</li> <li>Alarm 9 - Not configured</li> <li>Alarm 9 - Not configured</li> </ul>	Output 2	>	2	On: 0 Off: 0		. 1
<ul> <li>Alarm 3 - Not configured</li> <li>Alarm 4 - Not configured</li> <li>Alarm 5 - Not configured</li> <li>Alarm 6 - Not configured</li> <li>Alarm 7 - Not configured</li> <li>Alarm 8 - Not configured</li> <li>Alarm 9 - Not configured</li> <li>Alarm 10 - Not configured</li> </ul>			Alarm 2 - Not configured			-
<ul> <li>Alarm 4 - Not configured</li> <li>Alarm 5 - Not configured</li> <li>Alarm 6 - Not configured</li> <li>Alarm 7 - Not configured</li> <li>Alarm 8 - Not configured</li> <li>Alarm 9 - Not configured</li> <li>Alarm 10 - Not configured</li> </ul>			Alarm 3 - Not configured			11
Alarm 5 - Not configured     Alarm 6 - Not configured     Alarm 7 - Not configured     Alarm 8 - Not configured     Alarm 9 - Not configured     Alarm 9 - Not configured			Alarm 4 - Not configured			
Alarm 6 - Not configured Alarm 7 - Not configured Alarm 8 - Not configured Alarm 9 - Not configured Alarm 10 - Not configured			Alarm 5 - Not configured			
Alarm 7 - Not configured     Alarm 8 - Not configured     Alarm 9 - Not configured     Alarm 9 - Not configured     Alarm 10 - Not configured			Alarm 6 - Not configured			
Alarm 8 - Not configured     Alarm 9 - Not configured     Alarm 10 - Not configured			Alarm 7 - Not configured			
Alarm 9 - Not configured     Alarm 10 - Not configured			Alarm 8 - Not configured			
Alarm 10 - Not configured			Alarm 9 - Not configured			
			Alarm 10 - Not configured			
					<u> </u>	_
					Next	

CREATE NEW CONFIGURATION - Setpoint thresholds setting

- Combine a Non priority alarm (for example Alarm1) with the variable to be monitored, so select "Voltage" or "Frequency" or "Asymmetry" in "Alarm Threshold"
- Select if the Non priority alarm1 is "Over" or "Under"
- Select the Non priority alarm1 Over/Under threshold value, in according to the following ranges:
  - Voltage 3PH range: 177 to 552V
  - Voltage 3PH+N range: 102 to 318V
  - Frequency range: 45 to 440Hz
  - Asymmetry range: 0-30%
- Select the Hysteresis Value
  - $\circ$  range: 2% to 5%
- Select the Delay Value
  - o range: Delay ON 0 to 600, Delay OFF 0 to 600



Immont Config:       Create Configuration       General       Threshold Alarms       Alarm       Output 1	×
Create Configuration       General     >       Threshold Alarms       Alarm       Output 1         Over         Voltage         Voltage         Voltage         Ver         Voltage         Ver	×
General     >       Threshold     Alarm 1 - Voltage < 200V	
Thresholds     Alarm 1 - Voltage < 200V       Alarm     Alarm 7       Alarm     Alarm Threshold       Output 1     Voltage     Over	
Alarm ) Alarm Threshold Output 1 ) Voltage V Over V 300 V	
Output 1 > Voltage V Over V 300 V	
Output 2     >   Delay (s)	
2 On: 0 Off: 0	
Alarm 3 - Not configured	
Alarm 4 - Not configured	
Alarm 5 - Not configured	
Alarm 6 - Not configured	
Alarm / - Not configured	
Alarmo - Not configured	
Alarm 10 - Not configured	
- Harris Compared	

- If it is required from the application, combine another Non priority alarm (for example Alarm2) with the variable to be monitored, so select "Voltage" or "Frequency" or "Asymmetry" in "Alarm Threshold"
- Select if the Non priority alarm2 is "Over" or "Under"
- Select the Non priority alarm2 Over/Under threshold value
  - Voltage 3PH range: 77 to 552V
  - Voltage 3PH+N range: 102 to 318V
  - Frequency range: 45 to 440Hz
  - Asymmetry range: 0-30%
- Select the Hysteresis Value
  - $\circ$  range: 2% to 5%
- Select the Delay Value
  - o range: Delay ON 0 to 600, Delay OFF 0 to 600
- If it is required from the application, combine another a Non priority alarm (for example Alarm3, there are a maximum of 10 Non priority alarms)



#### **CREATE NEW CONFIGURATION – Priority Alarm thresholds**

Carlo Gavazzi Configu	ration Software			-	6 X
T			Lock Device	Unlock Device	<b>\$</b>
Create Config	Import Co	nfig.			
	Create Config	uration		×	
	General >	Phase Loss Threshold			
	Thresholds >	85 %			
	Alarm >	Neutral Loss Threshold 20%			
	Output 1 >				
	Output 2 >				
		1	1	lext >	



#### **IMPORTANT NOTICE!**

THESE FACTORY SETTINGS HAVE BEEN CAREFULLY SELECTED.

DO NOT MODIFY THEM IF YOU ARE UNSURE OF HOW THE SYSTEM BEHAVES IN RELATION TO REGENERATED ENERGY.

IF YOU WANT TO PROCEED WITH MODIFICATION, PLEASE FOLLOW THE INSTRUCTIONS BELOW:

- Select the Priority alarm "Phase Loss Threshold "value
   range: 60 to 90%
- Select the Priority alarm "Neutral Loss Threshold "value
  - $\circ$  range: 10 to 30%



#### **CREATE NEW CONFIGURATION – Outputs settings**

Create C	onfigu	uration		×
General	>	Output type		
Thresholds	>	Normally energized Normally de-energized		
		Formula		
Alarm	>	Alarms	Active	
Output 1	>	Alarm 1 - Voltage < 200V	Alarm 1 - Voltage < 200V	
		Alarm 2 - Voltage > 300V		
Output 2	>	Alarm 3 - Not configured		
		Alarm 4 - Not configured		
		Alarm 5 - Not configured		
		Alarm 6 - Not configured		
		Alarm 7 - Not configured		
		Alarm 8 - Not configured		
		Alarm 9 - Not configured		
		Marm 10 - Not comguted		
_				

- Select the "Output type" for the Output1, so select if the Output1 is "Normally energized" or "Normally de-energized"
- Combine the Output1 to a Non-priority alarm



	ar 1951			
create (	Import Cor	iration		×
General	>	Output type		
Thresholds	5	Normally energized Normally de-energized		
	· · ·	Formula		
Alarm	>	Alarms	Active	
Output 1	>	Alarm 1 - Voltage < 200V	Alarm 2 - Voltage > 300V	
		Alarm 2 - Voltage > 300V		
Output 2	>	Alarm 3 - Not configured		
		Alarm 4 - Not configured		
		Alarm 5 - Not configured		
		Alarm 6 - Not configured		
		Alarm 7 - Not configured		
		Alarm 8 - Not configured		
		Alarm 9 - Not configured		
		Alarm 10 - Not configured		

- Select the "Output type" for the Output2, so select if the Output 2 is "Normally energized" or "Normally de-energized"
- Combine the Output2 to a Non-priority alarm
- Select "Save" in order to save the configuration



#### CREATE NEW CONFIGURATION – Apply configuration

2					Lock Device Unlock Device
Create Config.	Import Config.	PUMP Nº 1			/ 1
1odel ID: 1	***	Model ID: 1			
UMP Nº 1	>	Mains monitoring for Pump Nº 1			
Apply		SPH - 400V			
		Threshold Alarms			
		Alarm 1 Voltage < 360V	rm 2 age > 440V		
		Priority Alarms			
		Neutral Loss Threshold: 20% Phase Loss Threshold: 85%			
		Output 1		Output 2	
		Voltage < 360V		Voltage > 440V	
<ul> <li>Select "A</li> </ul>	Apply Conf	iguration" in orde	r to app	ly the configuration	to the device





• Place the Relay on the NFC reader (dongle)





- Verify the serial number and the model of relay
- o If they are ok, with the relay on the NFC reader, select " Confirm relay"





 $\circ$   $\;$  The Configuration has been applied with success  $\;$ 





• If the relay is not on the NFC reader, you can not proceed with configuration, and an error window will appear



### CREATE NEW CONFIGURATION - Edit a configuration

₹ Carlo Gavazzi Configur	ation Software			Lock Device Unlo	- 🗗 X
Create Config Model ID: 1 Test1 Alarms: 2/10 Apply	General Thresholds	Art Config. Toct 1 Uration Configuration Name Test1 Description	Line Type       Image: Symplemic and Symplemic	×	
	Alarm Output 1 Output 2	) Test1	400		oly Configuration
				Next>	

• Select "Edit configuration" in order to modify a configuration, as the application requires



s	Import Config.	Tost1		
Edit Cor	nfiguration			×
General	) Out	put type		
Thresholds	,	Normally energized Normally de-energized		
Alarm	Forr	nula		
		Alarms	Active	
Output 1	>	Alarm 1 - Voltage < 200V	Alarm 1 - Voltage < 200V	
01.10		Alarm 2 - Voltage > 300V	OR AND	
Output 2	,	Alarm 3 - Not configured	Alarm 2 - Voltage > 300V	
		Alarm 5 - Not configured		
		Alarm 6 - Not configured		
		Alarm 7 - Not configured		
		Alarm 8 - Not configured		
	C	Alarm 9 - Not configured		
		Alarm 10 - Not configured		
				Neut

CREATE NEW CONFIGURATION - Modify a configuration

 Combine the Output1 also to another Non-priority alarm, with "OR/AND" logic operation, as the application requires (there are a maximum of 10 Non priority alarms)



				Lock Device	Unlock D
Edit Con	import Con Ifigural	Toot1			×
General	>	Output type			
Thresholds	>	Normally energized Normally de-energized			- 1
Alarm		Formula			
Alahi	<u> </u>	Alarms	Active		_
Output 1	>	Alarm 1 - Voltage < 200V	Alarm 1 - Voltage < 200V		
Output 2	2	Alarm 2 - Voltage > 300V	OR AND		
Output 2	×	Alarm 4 - Not configured	Alarm 2 - Voltage > 300V		
		Alarm 5 - Not configured			
		Alarm 6 - Not configured			
		Alarm 7 - Not configured			
		Alarm 8 - Not configured			ph
		Alarm 9 - Not configured			
		Alarm 10 - Not configured			

- Combine the Output2 also to another Non-priority alarm, with "OR/AND" logic operation, as the application requires (there are a maximum of 10 Non priority alarms)
- Select "Save" in order to save the configuration



#### CREATE NEW CONFIGURATION – Configuration setting summary

🐺 Carlo Gavazzi Configuration Software		- 0 >	(
$\overline{\mathbf{v}}$	Lock Device	Unlock Device	ŀ
Create Config.     Import Config.       Model ID: 1.     ***       Test1     >       • Alarms: 2/10     >       Apply     >	Test1         Model ID: 1         Test1         Line Type         3PH - 400V         Threshold Alarms         Image: Alarm 1         Voltage < 200V         Priority Alarms         Neutral Loss Threshold: 25%		2001
	Output 1 Voltage < 200V on Voltage > 300V Voltage < 200V on Voltage > 300V	Apply Configuration	

- $\circ$   $\;$  Select "Apply Configuration" in order to apply the configuration to the device
- o It is necessary a NFC reader



# CREATE NEW CONFIGURATION – Lock/Unlock configurations

Carlo Gavazzi Configuration Software	re			– O X
Create Config. Model ID: 1 PUMP Nº 1 Alarms: 2/10 Apply	Import Config.	PUMP N° 1 Model ID: 1 Mains monitoring for Pump № 1 Line Type 3PH - 400V Threshold Alarms Alarm 1 Voltage < 360V Priority Alarms Neutral Loss Threshold: 20% Phase Loss Threshold: 85% Output 1 Voltage < 360V	Output 2 Voltage > 440V	ApplyConfiguration
Ο				
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🔻 Carlo Gavazzi Configuration Software		- 0 ×
<b>.</b>		Lock Device Unlock Device
Create Config. Import Config. ModelID: 1 *** PUMP N° 1	PUMP N° 1 Model ID: 1 Mains monitoring for Pump N° 1	/ #
Alarms:2/10	Line Type 3PH - 400V Threshold Alarms Alarm 1 Voltage < 366 Priority Alarms Neutral Loss Thresh Phase Loss Thresh	
	Output 1     Output 2       Voltage < 360V	Apply Configuration

• Place the Relay on the NFC reader (dongle)



#### CREATE NEW CONFIGURATION - Lock/Unlock configurations

🐺 Carlo Gavazzi Configuration Software		- 0 ×
₹		Lock Device Unlock Device
Create Config. Import Config. Model ID: 1 **** PUMP N° 1	PUMP N° 1 Model ID: 1 Mains monitoring for Pump N° 1	/ 1
PUMP N° 1 >	Line Type 3PH - 400V Threshold Alarms Alarm 1 Voltage < 36C Priority Alarms Neutral Loss Thresho Output 1 Voltage < 360V Change relay Confirminately Change relay Confirminately	Apply Configuration

- Verify the serial number and the model of relay
- o If they are ok, with the relay on the NFC reader, select " Confirm relay"



#### CREATE NEW CONFIGURATION - Lock/Unlock configurations

🔻 Carlo Gavazzi Configuration Software			-	٥	$\times$
े <del>र</del> र		Lock Device	Unlock Device		Φ.
Create Config. Import Config. Model ID: 1 **** PUMP N° 1 Alarms: 2/10	PUMP N° 1 Model ID: 1 Mains monitoring for Pump N° 1				-
Apply	Line Type 3PH - 400V Threshold Alarms Alarm 1 Voltage < 360 Priority Alarms Neutral Loss Thresho Output 1 Voltage < 360V Output 2 Voltage > 440V				
	Cancel		Apply Conf	guratio	n

 Proceed to protect your configurations: to proceed you will have to input a 4 DIGIT password



#### CREATE NEW CONFIGURATION – Lock/Unlock configurations

• Click "Lock" button in order to lock DPD



# CREATE NEW CONFIGURATION – Lock/Unlock configurations

Create Config.     Import Config.     PUMP N° 1       Model ID: 1     Model ID: 1       PUMP N° 1     >	
Create Config.     Import Config.       Model ID: 1     Model ID: 1       PUMP N° 1     Mains monitoring for Pump N° 1	٥.
A Alarme: 2/10	•
Apply 3PH-400V Threshold Alarms	
Alarm 1     Xoltage < 36C	
Output 1         1         2         3         4         Output 2           Voltage < 360V	
Cancel Lock Apply Configura	on

o It is necessary to power the device, in order to proceed with Lock/Unlock procedures





# DPD ANDROID CONFIGURATOR











### INSTALLATION DPD ADROID CONFIGURATOR

- System requirements for ANDROID APP:
- OS : Android operating system 4.1 or higher
- COMMUNICATION : Built in NFC reader / writer
  - Download the ANDROID APP from Google Store

https://play.google.com/store/apps/details?id=us.belka.dpd&hl







 $\circ$   $\;$  Save the App on smartphone  $\;$ 





### DPD ANDROID CONFIGURATOR SETUP

#### CREATE A NEW CONFIGURATION - Start configuration





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DPD			:
No com	figuratio	ns founa	
Lo	bad configur	ation	6
N	ew Configur	ation	[]
			$\hat{}$

- $\circ$   $\;$  Load an existing configuration
- Create a new configuration





# CREATE NEW CONFIGURATION - Main settings



Motor 1 Supply monitoring

- Create a new configuration
- Fill in the "Configuration Name" field
- Fill in the "Description" field





# CREATE NEW CONFIGURATION – Non Priority Alarm thresholds

		KNAUF : KNAUF	F ti invita al Forun	n di Prev
		← New Co	nfiguration	$\rightarrow$
		N GRID TYPE	SET POINTS	PRIORITY ALARM
		LINE TYPE		
		<b>()</b> 3 PH	() 3 P	H + N
		Delta voltage		koo
				- <u>₩00</u> \
0	Select the Line T Select the voltag o Voltage 3	ype (3PH / 3PH+ e line nominal vo BPH range: 208 t	-N) alue for 3PH li o 480V	ine





Saving screenshot				
÷	New Co	$\rightarrow$		
N G	GRID TYPE	SET POINTS	PRIORITY ALARM	
LINE	ТҮРЕ			
C	) 3 PH	<b>()</b> 3 P	H + N	
St	ar voltage		haa	
		•	- <u>230</u> ∨	

- $\circ$  Select the Line Type (3PH / 3PH+N)
- Select the voltage line nominal value for 3PH+N line
  - Voltage 3PH+N range: 120 to 277V





🐵 🖬 🖬 🗛 🖪 🗔 👧 🔺 🛜 👍 83% 🖬 14:58				
🗧 New Configu	ration $\rightarrow$			
	DRITY ALARM OUTPUT 1			
ALARM 1	ALARM 2			
Not configured	Not configured			
ALARM 3	ALARM 4			
Not configured	Not configured			
ALARM 5	ALARM 6			
Not configured	Not configured			
ALARM 7	ALARM 8			
Not configured	Not configured			
ALARM 9	ALARM 10			
Not configured	Not configured			

• Set up to 10 Non priority alarm, as required by application







- Combine a Non priority alarm (for example Alarm1) with the variable to be monitored, so select "Voltage" or "Frequency" or "Asymmetry" in "Alarm Threshold"
- Select if the Non priority alarm1 is "Over" or "Under"
- Select the Non priority alarm1 Over/Under threshold value, in according to the following ranges:
  - Voltage 3PH range: 177 to 552V
  - Voltage 3PH+N range: 102 to 318V
  - Frequency range: 45 to 440Hz
  - Asymmetry range: 0-30%
- Select the Hysteresis Value
  - $\circ$  range: 2% to 5%



18/11/2016





- Select the Delay Value
  - o range: Delay ON 0 to 600, Delay OFF 0 to 600

![](_page_43_Picture_4.jpeg)

![](_page_44_Picture_0.jpeg)

![](_page_44_Picture_1.jpeg)

 $\circ$   $\;$  Set correctly the values of the variable to be monitored

![](_page_44_Picture_3.jpeg)

![](_page_45_Picture_0.jpeg)

![](_page_45_Picture_1.jpeg)

 $\circ$   $\;$  Set correctly the values of the Delay for alarm

![](_page_45_Picture_3.jpeg)

![](_page_46_Picture_0.jpeg)

![](_page_46_Picture_1.jpeg)

- If it is required from the application, combine another Non priority alarm (for example Alarm3) with the variable to be monitored, so select "Voltage" or "Frequency" or "Asymmetry" in "Alarm Threshold"
- Select if the Non priority alarm2 is "Over" or "Under"
- o Select the Non priority alarm2 Over/Under threshold value
  - Voltage 3PH range: 77 to 552V
  - Voltage 3PH+N range: 102 to 318V
  - o Frequency range: 45 to 440Hz
  - Asymmetry range: 0-30%
- Select the Hysteresis Value
  - o range: 2% to 5%

![](_page_46_Picture_11.jpeg)

18/11/2016

![](_page_47_Picture_0.jpeg)

![](_page_47_Picture_1.jpeg)

![](_page_47_Picture_2.jpeg)

![](_page_48_Picture_0.jpeg)

![](_page_48_Picture_1.jpeg)

![](_page_48_Picture_2.jpeg)

![](_page_49_Picture_0.jpeg)

![](_page_49_Picture_1.jpeg)

![](_page_49_Picture_2.jpeg)

![](_page_50_Picture_0.jpeg)

![](_page_50_Picture_1.jpeg)

![](_page_50_Picture_2.jpeg)

![](_page_51_Picture_0.jpeg)

99 🗖 🖪 🛸 🙀 💀	🔋 🔏 90% 🖬 16:20		
$\leftarrow$ New Configuration $\rightarrow$			
E SET POINTS PRIORITY ALARM OUTPUT 1			
ALARM 1	ALARM 2		
Voltage > 440 V	Asymmetry > 10 %		
ALARM 3	ALARM 4		
Voltage < 360 V	Not configured		
ALARM 5	ALARM 6		
Frequency > 55 Hz	Not configured		
ALARM 7	ALARM 8		
Frequency < 45 Hz	Not configured		
ALARM 9	ALARM 10		
Asymmetry > 30 %	Not configured		

 $\circ$   $\;$  Check all the configured Non priority alarms

![](_page_51_Picture_3.jpeg)

![](_page_52_Picture_0.jpeg)

#### **CREATE NEW CONFIGURATION – Priority Alarm thresholds**

![](_page_52_Picture_2.jpeg)

![](_page_52_Picture_3.jpeg)

MODIFICATION OF THESE VALUES COULD CAUSE EXECESS OF SENSITIVITY DUE TO MAINS SLIGHT FLUCTUATIONS OR VICEVERSA INSENSITIVITY TO PHASE LOSS DUE TO REGENERATED ENERGY.

- $\circ$   $\:$  Select the Priority alarm "Phase Loss Threshold "value
  - o range: 60 to 90%
- Select the Priority alarm "Neutral Loss Threshold "value
  - $\circ$   $\,$  range: 10 to 30%  $\,$

![](_page_52_Picture_9.jpeg)

![](_page_53_Picture_0.jpeg)

# CREATE NEW CONFIGURATION – Outputs settings

90 🖬 🚺	) S M 🛦 🖻	* 🐩 1	90% 📋 16:20
← N	lew Configur	ation	$\rightarrow$
PRIOF		OUTPUT 1	OUTPUT 2
	ormally Energized	O Normally	/ De-Energized
FORMULA			
Only prio	rity alarm		
	ALARM 1 Voltage > 440 V		
	ALARM 2 Asymmetry > 10	%	
	ALARM 3 Voltage < 360 V		
	ALARM 5 Frequency > 55 H	Ηz	
	ALARM 7 Frequency < 45 H	Hz	
	ALARM 9	0/	

 Select the "Output type" for the Output1, so select if the Output1 is "Normally energized" or "Normally de-energized" (Normally Energized means: OUTPUT RELAY DE-ENERGIZED UPON ALARM)

![](_page_53_Picture_4.jpeg)

![](_page_54_Picture_0.jpeg)

99 🛋 🖪 🛸 🏠 🛼 🛛 🖇	🛱 📶 90% 💼 16:20		
$\leftarrow$ New Configuration $\rightarrow$			
PRIORITY ALARM OUTPU	JT 1 OUTPUT 2		
Normally Energized O	lormally De-Energized		
FORMULA			
Only priority alarm			
ALARM 1 Voltage > 440 V			
ALARM 2 Asymmetry > 10 %			
ALARM 3 Voltage < 360 V			
ALARM 5 Frequency > 55 Hz			
ALARM 7 Frequency < 45 Hz			
ALARM 9			

![](_page_54_Picture_2.jpeg)

						CARLO GAVAZZI
		90 🗖 📱	ISMA 💀	*	1 90% 🗎 16:21	
		< ► ►	lew Configu	ration	÷	
		PRIOF	RITY ALARM	OUTPUT 1	OUTPUT 2	
		<b>()</b> N	ormally Energized	O Norma	lly De-Energized	
		FORMULA ((Voltage Asymme	e > 440 V <b>OR</b> Volta try > 30 %)	age < 360 V)	OR	
		0	ALARM 1 Voltage > 440 V OR	AND		
			ALARM 2 Asymmetry > 10	0 %		
		0	ALARM 3 Voltage < 360 V OR	AND -		
			ALARM 5 Frequency > 55	Hz		
0	Combine the Ou	itput1 to	Non-priority c	alarm(s)		
						)

![](_page_56_Picture_0.jpeg)

 Select the "Output type" for the Output2, so select if the Output1 is "Normally energized" or "Normally de-energized" (Normally Energized means: OUTPUT RELAY DE\_ENERGIZED UPON ALARM)

![](_page_56_Picture_2.jpeg)

![](_page_57_Picture_0.jpeg)

99 🛋 🖪	S 🖸 🛕 🔜 🚿	9 🎼 🛱 🖇	0% 🔳 16:21
← N	ew Configurati	on	~
PRIOR	ITY ALARM OUT	PUT 1	OUTPUT 2
	ormally Energized	) Normally I	De-Energized
FORMULA			
Frequenc	y > 55 Hz		
	ALARM I Voltage > 440 V		
	ALARM 2 Asymmetry > 10 %		
	ALARM 3 Voltage < 360 V		
0	ALARM 5 Frequency > 55 Hz		
0	ALARM 7 Frequency < 45 Hz		
	ALARM 9 Asymmetry > 30 %		

• Combine the Output2 to Non-priority alarm(s)

![](_page_57_Picture_3.jpeg)

![](_page_58_Picture_0.jpeg)

![](_page_59_Picture_0.jpeg)

![](_page_59_Picture_1.jpeg)

![](_page_60_Picture_0.jpeg)

CREATE NEW CONFIGURATION – Configuration settings summary page

![](_page_60_Picture_2.jpeg)

# OUTPUT 1

((Voltage > 440 V OR Voltage < 360 V) OR Asymmetry > 30 %)

OUTPUT 2 Frequency > 55 Hz OR Frequency < 45 Hz

APPLY CONFIGURATION

• Check the new configuration

![](_page_60_Picture_8.jpeg)

CREATE A NEW CONFIGURATION – NFC reader for download configuration to device

![](_page_61_Picture_1.jpeg)

• Proceed to configure a DPD with a new configuration

![](_page_61_Picture_3.jpeg)

![](_page_62_Picture_0.jpeg)

![](_page_62_Picture_1.jpeg)

 $\circ$   $\;$  The Configuration has been applied with success  $\;$ 

![](_page_62_Picture_3.jpeg)

![](_page_63_Picture_0.jpeg)

#### CREATE A NEW CONFIGURATION – Delete a configuration

![](_page_63_Picture_2.jpeg)

• Delete a configuration

![](_page_63_Picture_4.jpeg)

![](_page_64_Picture_0.jpeg)

# CREATE A NEW CONFIGURATION – Modify a configuration

🐵 🖬 🛋 🛢 🔺 🗟 🔺	🛜 📶 88% 🔳 16:30
DPD	:
MODEL ID: 1 <b>Fan Mains</b> Chiller fan mains monitoring	<b>1/10</b>
APPLY EDIT DELETE	
MODEL ID: 1 <b>Motor 1</b> Motor 1 monitoring	â 6/10
APPLY EDIT DELETE	
MODEL ID: 1 <b>Motor 2</b> Motor 2 Monitoring	▲ 1/10

• Select a configuration and proceed with modifies

![](_page_64_Picture_4.jpeg)

![](_page_65_Picture_0.jpeg)

#### CREATE A NEW CONFIGURATION – Lock/Unlock configurations

🐵 🖬 🖻 🖪 🛦	🔹 🗱 🛜 📶 88% 🗖 16:30			
DPD	Lock			
MODEL ID: 1	Unlock			
Fan Mains	Credits			
Chiller fan mains monitoring				
APPLY EDIT E	DELETE			
MODEL ID: 1				
Motor 1 monitoring				
APPLY EDIT DELETE				
MODEL ID: 1	<b>1/10</b>			
Motor 2				
Motor 2 Monitoring	+			
	NEL ETE			

 Proceed to protect your configurations: to proceed you will have to input a 4 DIGIT password

![](_page_65_Picture_4.jpeg)

![](_page_65_Picture_5.jpeg)

![](_page_66_Picture_0.jpeg)

#### CREATE A NEW CONFIGURATION – Lock/Unlock configurations

![](_page_66_Picture_2.jpeg)

- Proceed to protect your configurations: to proceed you will have to input a 4 DIGIT password
- Click "Lock" button in order to lock DPD
- o It is necessary to power the device, in order to proceed with Lock/Unlock procedures

![](_page_66_Picture_6.jpeg)

![](_page_67_Picture_0.jpeg)

#### DPD DEFAULT PARAMETERS

PARAMETER	VALUE		
	DEFAULT 1	DEFAULT 2	
	DPD02DM44	DPD02DM44B	
LINE TYPE	DELTA	DELTA	
RATED LINE VOLTAGE	400VAC	240VAC	
ALARM 1	OVERVOLTAGE U>	OVERVOLTAGE U>	
Voltage Value	440VAC	264VAC	
Frequency	Disabled	Disabled	
Asymmetry	Disabled	Disabled	
ALARM 2	UNDERVOLTAGE U <	UNDERVOLTAGE U <	
Voltage Value	360VAC	216VAC	
Frequency	Disabled	Disabled	
Asymmetry	Disabled	Disabled	
HYSTERESYS	2%	2%	
DELAY ON	Os	Os	
DELAY OFF	Os	Os	
PHASE LOSS	85%	85%	
NEUTRAL LOSS	20% (NOT ACTIVE)	20% (NOT ACTIVE)	
OUTPUT 1	ALARM 1	ALARM 1	
OUTPUT 1 LOGIC	NORMALLY ENERGIZED	NORMALLY ENERGIZED	
OUTPUT 2	ALARM 2	ALARM 2	
OUPUT 2 LOGIC	NORMALLY ENERGIZED	NORMALLY ENERGIZED	
LOGIC OPERATORS	NONE	NONE	

![](_page_67_Picture_3.jpeg)