

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 |
|------|---|---------------------|
| | | U |

- 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. | n /ice | |
| Select "Creat | e Config.″ button | in order to create | e a new configu | vration | |
| | | | | | |
| | | | | | |
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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 |
|---------------------------|----------------|---|---------------------------|---------------------------|-----|
| T | | | | 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 > | | | | |
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- 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) | | |
| Alarm 2 - Not configured 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 9 - Not configured Alarm 9 - Not configured | Output 2 | > | 2 | On: 0 Off: 0 | | . 1 |
| 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 | | | Alarm 2 - 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 | | | 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 | | | |
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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 | |
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- 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 | \$ |
| Create Config | Import Co | nfig. | | | |
| | Create Config | uration | | × | |
| | General > | Phase Loss Threshold | | | |
| | Thresholds > | 85 % | | | |
| | Alarm > | Neutral Loss Threshold 20% | | | |
| | Output 1 > | | | | |
| | Output 2 > | | | | |
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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 | | |
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- 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 | | |
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- 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 | |
| | | | | | |
| | | | | | |
| Select "A | Apply Conf | iguration" in orde | r to app | ly the configuration | to the device |
| | | | | | |
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• 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 | | |
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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 | | | | |
| 8/11/2016 | | 28/68 | | |



| 🔻 Carlo Gavazzi Configuration Software | | - 0 × |
|--|--|---------------------------|
| . | | 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 |
|--|--|-------------|---------------|---------|----------|
| े र 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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| Lo | bad configur | ation | 6 |
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| 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 | | |
| | | () 3 PH | () 3 P | H + N |
| | | Delta voltage | | koo |
| | | | | - <u>₩00</u> \ |
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| | | | | |
| 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 | () 3 P | H + N | |
| St | ar voltage | | haa | |
| | | • | - <u>230</u> ∨ | |
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- \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





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|---------------------------------|----------------------|--|--|--|
| 🗧 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







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







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







- 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%



18/11/2016



























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|--|------------------|--|--|
| \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





CREATE NEW CONFIGURATION – Priority Alarm thresholds





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% $\,$





CREATE NEW CONFIGURATION – Outputs settings

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|-----------|-----------------------------|------------|----------------|
| ← 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)





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|--|-----------------------|--|--|
| \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 | | | |



| | | | | | | CARLO GAVAZZI |
|---|----------------|--------------------------------|--|--------------|------------------|---------------|
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| | | < ► ► | lew Configu | ration | ÷ | |
| | | PRIOF | RITY ALARM | OUTPUT 1 | OUTPUT 2 | |
| | | () N | ormally Energized | O Norma | lly De-Energized | |
| | | FORMULA ((Voltage Asymme | e > 440 V OR 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) | | |
| | | | | | |) |



 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)





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|----------|------------------------------|--------------|--------------|
| ← 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)











CREATE NEW CONFIGURATION – Configuration settings summary page



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



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



• Proceed to configure a DPD with a new configuration







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





CREATE A NEW CONFIGURATION – Delete a configuration



• Delete a configuration





CREATE A NEW CONFIGURATION – Modify a configuration

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|---|-----------------|
| DPD | : |
| MODEL ID: 1 Fan Mains Chiller fan mains monitoring | 1/10 |
| APPLY EDIT DELETE | |
| MODEL ID: 1 Motor 1 Motor 1 monitoring | â 6/10 |
| APPLY EDIT DELETE | |
| MODEL ID: 1 Motor 2 Motor 2 Monitoring | ▲ 1/10 |
| | |

• Select a configuration and proceed with modifies





CREATE A NEW CONFIGURATION – Lock/Unlock configurations

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|------------------------------|---------------------|--|--|--|
| 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 | 1/10 | | | |
| Motor 2 | | | | |
| Motor 2 Monitoring | + | | | |
| | NEL ETE | | | |

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







CREATE A NEW CONFIGURATION – Lock/Unlock configurations



- 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





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 | |

