

# **EASERGY P3**

**FAQ List** 

V 1.0

Prepared By: R. Lehto

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# 1 General Topics

#### 1.1 Installation

#### 1.1.1 Easergy P3 Standard Mounting

1.1.1.1 Flush Mounting

Q: Can I use an flush mounting accessory for Easergy P3 standard? A: Yes, a separate accessory is available to reduce the installation depth by 45mm, the reference number is REL52834

1.1.1.2 Detachable display

Q: Does Easergy P3 Standard support a detachable display option ?? A: Only Easergy P3 Advanced supports detachable display option, Easergy P3 Standard doesn't support this option

#### 1.1.2 Easergy P3 Advanced Mounting

1.1.2.1 Flush Mounting

Q: Can I use an flush mounting accessory for Easergy P3 Advanced? A: Yes, a separate accessory is available to reduce the installation depth by 45mm, the reference number is REL52832

1.1.2.2 Detachable display

Q: Does Easergy P3 Advanced support a detachable display option? A: Yes, Easergy P3 Advanced support detachable display, please refer to Easergy P3 catalogue section ordering for order code, starting from page 109.

#### 1.2 Maintenance

## 1.2.1 Easergy P3 Advanced and Standard Periodic Maintenance

Q: Is there any recommendations for periodic maintenance for Easergy P3?

A: Yes, please download the application note P3\_EN\_AN\_A010. WEB link:

https://www.schneiderelectric.com/en/download/document/P3 EN AN xxxx/

## 1.3 Technical Support

# 1.3.1 Easergy P3 Advanced and Standard Technical Support

Q: How can I get advanced technical support for Easergy P3? A: A dedicated technical support team to protection relays is at your disposal by email:

easergy.support@schneider-electric.com

## 1.3.2 Forgot Password

Q: The default password has been changed but I forgot it, how can I reset it?

A: The password can be reset only by receiving a temporary password from technical support team.

Please send mail to:

easergy.support@schneider-electric.com



#### 1.4 Order Codes

### 1.4.1 Easergy P3 Advanced and Standard order code configurator

Q: Does P3 have any software configurator in order to select correct model and application?

A: Yes, a dedicated web-configurator is accessible in Schneider Electric web-site to choose between the different Easergy P3 models, please refer to the link below and click on Product Selector link:

https://www.schneider-electric.com/en/product-range/64884-easergy-p3?parent-category-id=4700&filter=business-6-medium-voltage-distribution-and-grid-automation

**Product Selector** 

### 1.5 Event Handling

#### 1.5.1 Easergy P3 Advanced and Standard Event Handling

Q: Are events stored as non-volatile, if so how many can be stored in device?

A: Yes, events are stored as non-volatile. Default setting is 200 events but it can be increased to max 2000 by parameter "Event buffer size" under menu "Local panel conf"

Q: Can I store events as a file?

A: Yes, with eSetup Easergy Pro you can first read the events from device under menu LOGS/Event buffer and then right click in any row and choose Export. Both text and XML format is available.

Q: Can I change scroll order of events?

A: Yes, under menu "Local panel conf" you can select scroll order to New-Old or Old-New

## 1.6 eSetup Easergy Pro

#### 1.6.1 Installation

Q: How can I install eSetup Easergy Pro on my computer

A: eSetup Easergy Pro is published in Schneider Electric web-site, please refer to the link below:

https://www.schneider-

electric.com/en/download/document/eSetup\_Easergy\_PRO/

After downloading the .zip folder, extract files and click on Easergy Pro.exe in order to start the tool.

#### 1.6.2 Supported Windows Versions

Q: Which Windows versions can I use eSetup Easergy Pro with and do I need separate versions for each version?

A: eSetup Easergy Pro is tested with Windows 10 and Windows 7, same version can be used on 32 and 64 bit Windows versions



#### 1.6.3 Connecting the PC to the device

Q: How can I connect the PC to the device in order to do configurations?

A: eSetup Easergy Pro support connection from USB type B front port or through Ethernet connection. The front port is a standard USB cable and can be ordered from Schneider with code REL52822. For Ethernet connection use standard Ethernet cable.

Q: If I connect with USB serial connection, do I need to consider the communication speed?

A: Yes, please check / change speed setting from HMI. Scroll with arrow down until you reach "CONF" menu. The first row show the speed setting for front port

#### 1.6.4 Creation of Setting File in off-line mode

Q: If I do not have the device, how can I create a setting file and do settings in advance?

A: eSetup Easergy support create function, choose the create setting file icon (icon most left on icon bar) and then select the model and features which would be per the device used later.

#### 2 HMI

## 2.1 Open Password

Q: How can I open the password from HMI?

A: Press the i-button and then OK. Default password is 2 for configurator and 1 for operator. Use arrow buttons to right in order to select first digit, then arrow up to choose the correct number. After that press OK.

#### 2.2 Function Buttons

Q: How can I use the two function buttons F1 and F2?

A: F buttons are freely configurable for various purpose, both buttons are connected to an activation LED. Typical use of (but not limited to) the buttons:

- Control of an object
- Change setting group
- Activate/deactivate a function, e.g. auto recloser
- Reset latches
- Change or start/stop a programmable logic

Q: Can F button act as a pulse activation only?

A: Yes, the activation can be configured as pulse with settable time instead of permanent activation/de-activation.

## 2.3 Control Buttons

#### 2.3.1 Configuration in Easergy P3 Standard and Advanced

Q: Are the Open/Close control pushbuttons fixed to specific object?
A: No, Open/Close control pushbuttons can be defined to any of the 6 controllable objects by parameter "Object for control buttons" under Object menu. Same parameter can be found under Local panel conf menu.



#### 2.4 Control from LCD

#### 2.4.1 Easergy P3 Standard and Advanced

Q: I cannot select the object on LCD in order to do a control A: Check that the Object open and close signals are mapped to outputs in Output matrix. Only such objects can be selected on LCD for control.

#### 2.5 Alarm screen

### 2.5.1 Activation of Alarm screen in Easergy P3 Standard and Advanced

Q: Can I get alarm screen automatically activated after a trip?
A: Yes, from menu "Local panel conf" activate "Enable alarmscreen" parameter.

Q: Can I reduce the alarm screen activation?

A: Yes, from menu "Logs", reduce the activations in "Event enabling" sub-menus.

#### 2.6 Reset Latches

#### 2.6.1 Reset of latches in Easergy P3 Standard and Advanced

Q: How can I reset the device if latched configuration is used for outputs and LEDs?

A: Initially you need to have the password opened. Press the i-button and then arrow key to right. You will se the sub-menu where you can select "Release".

Q: Can I use only one push button without password to reset the latches?

A: Yes, by using one of the F buttons. In function buttons menu, define F1 "Selected control" F1 and give a pulse time, e.g. 1s. In "Release latches" menu define "DI to release latches" as F1. Alternatively, you can use F2.

### 2.7 Facia Labels for Easergy P3 Standard and Advanced

#### 2.7.1 Print Facia Label Texts for Easergy P3 Standard and Advanced

Q: Is there any template to print out exact dimensions for texts?
A: Yes, you can find templates on web for writing and printing the texts.
Please download from:

https://www.schneiderelectric.com/en/download/document/P3 EN AN xxxx/

#### 3 Protection Functions

## 3.1 General about scaling

### 3.1.1 Easergy P3 Standard Phase CT Inputs

Q: Why can I only see 5A as nominal input for phase currents A: The device CT hardware inputs are calibrated to 5A nominal but you can connect an 1A phase CT to the same inputs. The CT secondary can be scaled between 1-10A



Q: What is the meaning of Frequency adaptation mode parameter and what is the adapted frequency?

A: The device has an algorithm to automatically caqlculate the network frequency, learned frequency is shown in "Adapted frequency field".

Q: How will the device learn the network frequency?
A: When the "Frequency adaptation mode" is set to "Auto" the frequency will be automatically updated. When the device has measured voltage for approximately 45 seconds the adapted frequency field will update even it has been set previously.

In case the adaption mode is set to "manual" you can set the frequency in adapted frequency field which will not be updated even the measured frequency is different but relay will internally use the calculated frequency whenever available.

"Fixed" mode means that frequency will not have any update from measured voltage and the set value only will be used. This mode is recommended to be used especially with line differential function.

Q: My device only have one voltage input, will the adaptation of frequency still be from that voltage input?

A: No, In case the device only have one voltage input the frequency adaptation is taken from measured currents.

#### 3.2 General about protection functions

#### 3.2.1 Easergy P3 Standard and Advanced Protection Stage Activation

Q. Do I need to activate separately each protection stage in order to get an activation?

A: Yes, each stage need to be set to enable in order to get an activation for reaching the threshold in the "Valid protection stages" menu. The same setting is also available in each protection stage menu.

### 3.2.2 Easergy P3 Standard Feeder and Motor Application Mode

Q: Can I use the same device for either feeder or motor protection?
A: Yes, by selecting the "Application mode" either to "Motor" or "Feeder" mode.

Q: What are the main differences between feeder and motor mode? A: In feeder mode scaling is calculated from the CT nominal while in Motor mode the scaling is calculated from the motor nominal (Imot). Some protection functions will appear or disappear depending on mode selection, e.g. auto recloser is shown only in feeder mode, motor start-up supervision and other typical motor protection functions only in motor mode. Many of the protection functions like overcurrent will be identical except for the fact that scaling depends on mode.

#### 3.2.3 Block Protection Function

Q: How can I block a protection stage using a hardware input, GOOSE message etc.?

A: In menu MATRIX/Block matrix set the dot to connect an input signal from left to the function you want to block on top row.



Q: If the block signal is released, will the function activate or will the timer be reset?

A: Block matrix will only block when block signal is active, in case the signal is released the function will activate. Timer is not reset from block function

# 3.2.4 Missing Protection Functions in Easergy P3 Standard and Advance Protection menu

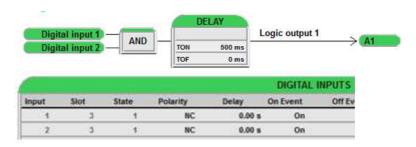
Q: Why I can't find some of the expected protection functions in the "Protection" menu?

A: Easergy P3 has a dynamic behaviour and will hide functions which are not possible to use e.g. due to missing measurement. Please check your voltage measurement mode initially. Notice also that some of functions might allow to use calculated value but some not. E.g. intermittent earth fault function must have a measured Uo value so a 3LN voltage measurement mode will hide this function.

# 3.2.5 How to Configure Trip Circuit Supervision in Easergy P3 Standard and Advanced

Q: How can I define Trip Circuit Supervision?

A: Trip Circuit Supervision require a logic function to be created. In this example covering TCS with 2 inputs DI1 and DI2 is used for breaker open and close status. The inputs must be inverted (below NC selection). Please refer to manual for connections. For e.g. Easergy P3 standard, refer to chapter 6.16



#### 3.2.6 Easergy P3 Standard and Advanced Restricted Earth Fault Protection

Q: Is restricted earth fault protection supported in Easergy P3?
A: Yes, please download the application note P3\_EN\_AN\_A011. WEB link:

https://www.schneiderelectric.com/en/download/document/P3\_EN\_AN\_xxxx/

# 3.2.7 Easergy P3 Standard and Advanced Setting Groups

Q: How many setting groups is supported?

A: Totally 4 independent setting groups are available

## 3.2.8 Easergy P3 Standard and Advanced Fault Records

Q: How many fault records (trip context records) is supported?

A: Totally 8 fault records per each stage is available

#### 3.2.9 Clear Easergy P3 Standard and Advanced Fault Records

Q: How can I clear all fault records (trip context records)?

A: In menu "Protection stage status 2", set parameter "Clear fault logs" to Clear and send to device.

# 3.2.10 Easergy P3 Standard and Advanced Temperature monitoring and mA outputs/inputs

Q: Can I connect temperature sensors and use mA outputs and inputs in Easergy P3?

A: Yes, the external module VIO need to be connected. For details please download the application note VVIO12A\_EN\_M\_C001. WEB link:

https://www.schneiderelectric.com/en/download/document/P3 EN AN xxxx/

Q: When I connect the value to mA output it seems not to change value in VIO module?

A: You must write x1000 to the module. For 4-20 mA, you should then define Modbus Min to 4000 and Modbus Max to 20000

Q: Can I chain several VIO modules to same communication port?

A: Yes, you can connect two VIO modules in daisy chain.

# 3.2.11 Extend Protection Functions in Easergy P3 Standard and Advanced by Using Programmable Stages

Q: What are the eight programmable stages used for?

A: The stages can be used to extend your protection functions or add more stages. You can freely select an analogue measurement to be coupled to the stage, set comparision condition and then set a threshold for the comparision. The programmable stages can be connected to ouputs in output matrix.

Q: The device has only two stages of neutral voltage displacement protection (59N) but customer request three stages

A: Please activate one of the eight programmable stages and select Uo as coupling. Then set the threshold in same way as in one of the dedicated stages.

Q: The device has only one overcurrent stage with inverse time characteristics but I need two stages

A: In case your device have also the directional overcurrent stages you can set the stage as non-directional.

Q: Customer do not accept the naming of stage to be programmable stage

A: You can use language file to change the name of any stage, please refer to chapter 10 for language support details

# 3.2.12 Integrated ARC Protection Functions in Easergy P3 Standard and Advanced

Q: Can I use integrated ARC protection in all Easergy P3 models? A: Integrated ARC protection is supported in Easergy P3 Advanced models except for the P3L30 model which do not support ARC protection

Q: How many sensors can I connect and is the sensor same as for dedicated arc protection devices?

A: Totally 4 sensors can be connected and the sensor is same as the point sensor for dedicated Schneider ARC protection.

# 3.3 P3 Synchro Check Function

# 3.3.1 Activate Synchro Check Function in Easergy P3 Standard and Advanced

Q: How can I activate the synchro check function?

A: Synchro check function appear when correct voltage measurement mode has been activated. Select a mode where y-letter is shown.

Q: Can I have more than one synchro check function?

A: Yes, if a voltage measurement mode where y/z-letters are shown. In this case the second synchro check stage will appear.

#### 3.4 How to use Auto Recloser

#### 3.4.1 Activate auto recloser Function Easergy P3 Standard

Q: How can I activate the auto recloser function?

A: Auto recloser appear only in Feeder application mode so it need to be set to that. After that, you can activate the stage.

#### 3.4.2 Activate auto recloser Function Easergy P3 Advanced

Q: How can I activate the auto recloser function?

A: Auto recloser appear only in Feeder and Line application models. After that, activate the stage.

# 3.4.3 Testing auto recloser Function Easergy P3 Standard and Advanced

Q: When I test with auto recloser activated it goes to BLOCKED mode? A: Auto recloser need to have the breaker status and you need to cut current infeed when breaker open. Hence it's not possible to use virtual injector for testing of this function.



For details of configuring autoencoder please download the application note ANGEN.EN005.

WEB link:

https://www.schneiderelectric.com/en/download/document/P3\_EN\_AN\_xxxx/

# 4 Logic Functions

# 4.1 General about Logic Function in Easergy P3 Standard and Advanced

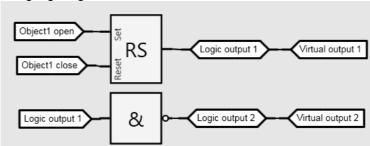
### 4.1.1 Amount of logic signals

Q: How many logic inputs and outputs is supported in Easergy P3 standard and advanced?

A: The device support 20 virtual inputs and 20 virtual outputs

## 4.1.2 Breaker simulator

Q: I don't have a real breaker connected, can I create one using logic? A: Yes, please see this example how to configure a breaker simulator using logic signals:



Virtual output 1 and 2 will now represent the DI:s for object





# 5 Disturbance Recorder

# 5.1 General about Easergy P3 Standard and Advanced Disturbance Recorder

### 5.1.1 Disturbance Recorder Configuration

Q: Is disturbance recorder always activated or need to be configured? A: Each triggering need to be configured in output matrix by adding a dot to the DR output

Q: What is the maximum recording time?

A: Maximum recording time depends on configuration; number of channels set to be recorded and sampling rate for the recordings. If the recording time for one record is shorter than maximum time the device will have more buffers. Maximum number of buffers is 12.

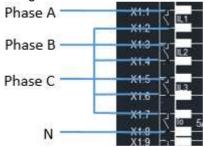
Q: What will happen when maximum recordings has been reached? A: Depend on setting, if saturated mode then no new recordings will take place until old recordings has been deleted, if overflow mode is selected then old records will be overwritten with FIFO principle.

Q: Why can't I add IoCalc to the recorder channels?
A: Calculated values can only be added to recorder channels if the trend mode is selected, e.g. 1/10.

Q: I need the waveform disturbance recording for lo without core balance CT connected?

A: Use so called Holmgren connection instead of IoCalc mode and choose measured lo as channel.

Holmgren connection:



# 6 Communication

#### 6.1 Modbus

#### 6.1.1 Easergy P3 Standard and Advanced Modbus registers

Q: Which type of Modbus registers are supported? A: All signals are stored in holding registers

#### 6.1.2 Easergy P3 Standard and Advanced Modbus scaling

Q: How does the scaling in Modbus configuration work? A: The scaling calculation is based on differentiation. Example: The frequency is internally (in the relay) stored as an integer value which also holds three decimal places, that is,  $50.000 \, \text{Hz}$  is represented as 50000. This is a value too large to be represented with  $16 \, \text{bits}$  (signed integer). Frequency is by default scaled with the points: (x1, y1) = (0, 0) and (x2, y2) = (10, 1) enabling it to be sent over Modbus.

The slope is thus:  $m = \frac{y^2 - y^1}{x^2 - x^1} = \frac{1 - 0}{10 - 0} = 0.1$ 

1. Value on the receiving side (the Modbus value) will be: 0.1\*50000=5000

#### 6.2 Profibus

#### 6.2.1 Easergy P3 Standard and Advanced Profibus Configuration

Q: Does P3 support Profibus?

A: Yes, P3 support Profibus DP with external accessory REL52815 (VPA3CGSE)

## 6.2.2 Easergy P3 Standard Profibus Connection

Q: How to connect external accessory REL52815 (VPA3CGSE) to P3U device?

A: In device, you need a communication card with serial port and the cable REL52827(VX084). For the power supply to VPA you need to connect external 12 Vdc to the cable

#### 6.2.3 Easergy P3 Advanced Profibus Connection

Q: How to connect external accessory REL52815 (VPA3CGSE) to P3 Advanced device?

A: In the device, you need a communication card with serial port and the cable REL52824 (VX072). No additional power supply needed.

## 6.3 Examples of configuring 61850

# 6.3.1 Easergy P3 Standard and Advanced IEC61850 communication Configuration

Q: How to configure IEC61850 communication in P3?

A: Please download the application note P3\_EN\_AN\_A001. WEB link: https://www.schneider-

electric.com/en/download/document/P3 EN AN xxxx/



#### 6.3.2 Easergy P3 Standard and Advanced Configure GOOSE messages

Q: How many GOOSE signals can be published?

A: Totally 32 signals can be defined for GOOSE publishing

Q: How many Boolean GOOSE signals can be subscribed?

A: Totally 64 signals can be subscribed in case the quality don't need to be subscribed

Q: Is Analogue GOOSE messages supported?

A: Yes, some of the analogue values can be published and 5 analogue signals can be subscribed

Q: How can I utilize Analogue GOOSE messages in subscriber? A: The subscribed analogue GOOS messages are named VAI1-5, you can directly define the measurement in mimic measurements or make a comparison in programmable stages.

Q: I cannot find protection function signals like TRIP or START in GOOSE dataset, how can I publish such signals?

A: You need to create the signal using logic. E.g. below the first stage overcurrent trip is published as logic output 3



## 6.3.3 Creation of SCL file in off-line mode

Q: If I do not have the device, how can I create a SCL file for all the signals?

A: First create an off-line setting file, make sure you select Ethernet port(s) in hardware selection and IEC61850 as Ethernet port protocol. In next step select all signals used to "In use" under Communication/data maps. Then select tool icon and "Export ICD/SCL file...". Before generation you need to define if RCB names should include indexes (typically selected) and if the file should be in Ed.1 or Ed.2 format. If Edition 2 extensions are selected the file will be created in Ed.2 format, otherwise Ed.1 format. When saving the file there is the possibility to save the format as .icd, .iid or .cid.



#### 6.3.4 Creation of SCL file in on-line mode

Q: If I connect to the device, how can I create a SCL file for all the signals?

A: Initially ensure that all menus are uploaded, after connecting to the device with eSetup Easergy Pro select upload icon and

|  | ∩n |     | CELIVERNA ON |                       | No | N |
|--|----|-----|--------------|-----------------------|----|---|
|  | On | 113 | IOC3GGIO144  | Fault current of I>>> | No | N |
|  | On | 112 | IOC2GGIO143  | Fault current of I>>  | No | N |
|  | On | 111 | IOC1GGIO142  | Fault current of I>   | No | N |
|  |    |     |              |                       |    |   |

"Read all settings". Next select all signals used to "In use" under Communication/data maps. Then select tool icon and "Export ICD/SCL file...". Before generation you need to define if RCB names should include indexes (typically selected) and if the file should be in Ed.1 or Ed.2 format. If Edition 2 extensions ae selected the file will have Ed.2 format, otherwise Ed.1 format. When saving the file there is the possibility to save the format as .icd, .iid or .cid.

#### 6.3.5 Send fault currents over IEC61850

Q: Can I get fault values when using IEC61850
A: Yes, Logical Nodes IOC1GGIO142, IOC2GGIO143 and IOC1GGIO144 include the fault currents of each overcurrent stage.

#### 6.3.6 Change setting group with IEC61850

Q: How can I change setting group when using IEC61850 A: By writing "True" to one of Logical Nodes SG1GGIO135, SG2GGIO136 and SG3GGIO135 SG4GGIO135. E.g. SG1GGIO135 will set all protection stages to group 1.

#### 6.3.7 Multiple Protocols in P3 Standard and Advanced

Q: Can I use both IEC61850 some other Ethernet protocol like DNP or Modbus at the same time?

A: Yes, two Ethernet protocols can be used simultaneously

Q: Does it require dual Ethernet port option?

A: No, single port is enough.

Q: Can I also use a serial protocol at the same time with Ethernet protocols?

A: Yes, if the hardware support serial port you can also use e.g. Modbus/RTU at the same time.

#### 6.4 Ethernet IP

Q: What is Ethernet IP and is it supported in P3?

A: Ethernet/IP is an adaptation of the common industrial protocol (CIP) that is an open standard and its supported in P3 when the Ethernet communication board is available. For details of Ethernet IP, please download the application note P3\_EN\_AN\_A003. WEB link:

https://www.schneider-

electric.com/en/download/document/P3\_EN\_AN\_xxxx/

# 6.5 Redundancy protocols

#### 6.5.1 RSTP

Q: What is RSTP and is it supported in P3?

A: RSTP is abbreviation of Rapid Spanning Tree Protocol and supported in Easergy P3 when the double port Ethernet communication board is available. For details of RSTP, please download the application note P3\_EN\_AN\_A002. WEB link:

https://www.schneiderelectric.com/en/download/document/P3 EN AN xxxx/

Q: What is maximum number of devices in one RSTP spanning tree? A: Maximum number of devices is 39.

#### 6.5.2 PRP

Q: What is PRP and is it supported in P3?

A: PRP is abbreviation of Parallel Redundancy Protocol and supported in Easergy P3 when the double port Ethernet communication board is available. For details of PRP, please download the application note P3\_EN\_AN\_A004. WEB link:

https://www.schneiderelectric.com/en/download/document/P3\_EN\_AN\_xxxx/

# 7 Time Synchronisation

## 7.1.1 Easergy P3 Standard and Advanced Time Synchronisation Protocols

Q: Which synchronisation methods can be used?
A: P3 support SNTP, IRIG-B, minute pulse and synchronisation via protocol. Notify that availability of SNTP and IRIG-B depend on hardware selection

#### 7.1.2 Active Time Synchronisation Protocol

Q: How do I know if the device receive selected synchronisation? A: From HMI, scroll down to menu CONF, then press arrow right until you reach menu CLOCK SYNC. The parameter SySrc show the active synchronisation method. In case the value is "Internal" no synchronisation source is received. From eSetup Easergy Pro you can find same information under General/Clock sync.

#### 7.1.3 Easergy P3 Standard Synchronisation configuration IRIG-B

Q: How can I activate IRIG-B?

A: IRIG-B do not need any configuration but the proper hardware must be selected. You need the model with serial port and the cable REL52826 (VX083) in order to connect the IRIG-B signal.

#### 7.1.4 Easergy P3 Advanced Synchronisation configuration IRIG-B

Q: How can I activate IRIG-B?

A: IRIG-B do not need any configuration but the proper hardware must be selected. You need the communication card with serial port in slot 9 in order to connect the IRIG-B signal to pins 4 and 5.



#### 7.1.5 Easergy P3 IRIG-B modes supported

Q: Which IRIB-B modes are supported?

A: Easergy P3 support unmodulated mode 003 and 004

# 7.1.6 Easergy P3 Standard and Advanced Synchronisation configuration for SNTP

Q: How can I activate SNTP?

A: You need to set the IP address for your SNTP server under protocol configuration. There are two IP addresses, main and backup. The device will initially connect to the main server and if connection is lost device will automatically connect to the backup server.

# 7.1.7 Easergy P3 Standard and Advanced Synchronisation with Minute Pulse

Q: How can I activate minute pulse time synchronisation and how does it work?

A: In menu "Clock sync", set parameter "Minute sync pulse DI" to the digital (or virtual) input which will give the pulse. Two consecutive minute pulses must be given before the synchronisation start. The clock will be adjusted to the nearest minute each time the pulse is received, i.e. seconds and ms will be reset. Minute pulse can also be received with a GOOSE signal.

# 8 Virtual Injector

## 8.1 How to use Virtual Injector in P3 Standard and Advanced

#### 8.1.1 How to Enable the Virtual Injector

Q: How can I enable the virtual injector?

A: Virtual injector can only be activated when you are connected to the device and logged in as configurator. A green left arrow appears in upper right corner and by selecting that the virtual injector configuration screen appears and you can select Enable virtual injections.

#### 8.1.2 Test mode for Virtual Injector

Q: Can I set the device in test mode during injection or will the protection function always trip?

A: The virtual injector will feed samples to the hardware inputs, hence the device will trip for any function activated which exceed the threshold setting and the outputs connected will be activated. There is no setting to prevent an activation specific for virtual injection.

#### 8.1.3 Measurements in IEC61850

Q: Will measurements be sent over IEC61850 when virtual injection is used?

A: Yes, the measurements will be seen with same magnitude as injected with quality bit set to "TEST"



# 9 Easergy P3 Smartphone & tablet application

# 9.1 How to use Easergy P3 Smartphone & tablet application in P3 Standard and Advanced

#### 9.1.1 Install SmartAPP

Q: How can I install Easergy P3 Smartphone & tablet application on my Android device?

A: Go to Google Play and take search for "Easergy P3 SmartAPP" and choose install. After install you can find the icon in your applications folder and you can tap it to start the application. In order to get the login credentials, you need to first do the registration.

#### 9.1.2 Configure and use Easergy P3 Smartphone & tablet application

Q: How can I connect to the device?

A: First you need to connect a wireless router to your device. Then you need to match the IP address range in DHCP settings of your router with the IP address of your device under menu COMMUNICATION/Protocol configuration. After that the Easergy P3 Smartphone & tablet application will find the device based on the IP address you enter when you do the connection.

#### 9.1.3 Use DHCP Service with Wireless Router

Q: Can I have the router to assign the IP Address?
A: Yes, under COMMUNICATION/Protocol configuration you can activate DHCP service instead of giving the IP address and the router will set the address dynamically. Please also select "Enable IP verification service" to avoid duplication of IP addresses.

## 9.1.4 Functionality of SmartAPP

Q: What kind of functionality can I achieve with Easergy P3 Smartphone & tablet application?

A: Easergy P3 Smartphone & tablet application offers a complete functionality to change parameters, see the mimic diagram, see alarms, do control, see events and much more. Contact your local Schneider sales for detailed information.

# 10 Language Support

## 10.1 Local Language in Easergy P3 Standard and Advanced

#### 10.1.1 Supported Languages

Q: Which languages are supported by default?

A: By default, the device includes only English language

Q: How can I change to a local language?

A: Local language package need to be installed and in some cases, also specific fonts. In case you need the language package please contact support as described in chapter 1.3

Q: If I install a local language package, will the default English texts be erased?

A: No, default English language is always one of the languages. In case there is some text in language package which is not translated English text will be shown.

# 11 WEB Server

# 11.1 Web server support in Easergy P3 Standard and Advanced

#### 11.1.1 General

Q: What is meaning of WEB server?

A: When WEB server is enabled you can connect to the device by using your browser, e.g. Explorer. It means you can use any PC to connect to your device without installing setting tool.

Q: After connection, which functionality is available? A: You can read logs, do control, change settings etc.

#### 11.1.2 Configure and use WEB server

Q: How can I enable WEB server?

A: Select parameter "Enable HTTP Server" under COMMUNICATION / Protocol configuration. You can also select access level to be read/write or read only.

Q: How can I log in after connection to WEB server?
A: The user name is "conf" for configurator, "operator" or "user" and

password by default 2, 1 or 0 depending on if the password has been changed or not.

# 12 FTP Server

## 12.1 FTP server support in Easergy P3 Standard and Advanced

#### 12.1.1 General

Q: What is FTP server?

A: FTP is abbreviation for "File Transfer protocol", you can use this to download files from the device, e.g. the disturbance records.

# 12.1.2 Configure and use FTP server

Q: How can I enable FTP server?

A: Select parameter "Enable FTP Server" under COMMUNICATION / Protocol configuration. You can also set the password, by default its "config"

Q: How can I connect to the FTP server?

A: Use any FTP server program, e.g. FileZilla or you can also use Explorer. Write ftp:// and the IP address of device, e.g. ftp://10.158.45.40

Q: How can I log in?

A: User is fixed "easergy" and password is the setting, by default "config"

Q: In addition to disturbance records I can notice some files with extension .gz, what are these files?

A: These files are templates for creating .icd file in off-line mode. Normally you do not need to download these files.



## 13 Green Premium

# 13.1 What stands Green Premium for in Easergy P3 Standard and Advanced

#### 13.1.1 Definition and Standards

## Q: What is definition of Green Premium?

A: Green Premium is the Schneider Electric eco-mark that brings more value to our customers and stands for complete, transparent, and easily available information about products. Our Green Premium eco-mark encompasses a broad range of environmental criteria, meeting and exceeding international regulations and industry standards.

#### Q: What is REACH declaration?

A: Registration, Evaluation, Authorization and restriction of Chemical substances. REACH is a European Regulation impacting all manufacturing industries, which entered into force in June 2007 "Any manufacturers or importers of substances inside European Community ensure that they manufacture and place on the market substances that do not adversely affect human health or the environment"

#### Q: What is RoHS?

A: The European Directive 2002/95/EC -"Restriction of Hazardous Substances" (RoHS) effective July 1st, 2006, its recast 2011/65/EU of June 8th, 2011, the Delegated Directive (EU) 2015/863 of March 31st 2015, forbid the use in Europe of lead, mercury, cadmium, Hexavalent chromium, the polybrominated biphenyls (PBB), polybrominated diphenyl ethers (PBDE) flame retardant and Bis(2-ethylhexyl) phthalate (DEHP), Butyl benzyl phthalate (BBP), Dibutyl phthalate (DBP), Diisobutyl phthalate (DIBP) from July 21st 2019 in certain electrical and/or electronic equipment's.

#### Q: What is PEP?

A: A Product Environmental Profile (PEP) is a quantitative Type III Environmental Declaration in compliance with ISO 14025 which ensures appropriate reliability and transparency. Based on a life cycle assessment (LCA) of the product along its whole life-cycle, the document presents the different impacts such as energy consumption, carbon footprint, consumption of raw materials, and pollution of air, water and soil.

#### Q: What is EoLI?

A: Product End of Life Instruction: In order to complement the Bill of Material and recyclability rate contained in the PEP, the EoLI instruction optimises recycling and recovery.