USER GUIDE - FLUXMETER DATALOGGER   EDP20-FLUX

DESCRIPTION

The EDP20-FLUX, composed by a EDP20_DATALOGGER and the option EDP20_FLUX, allows the read, the storage, and the management of campaign of measures with several sort of SEREM amp meter probes.

Campaigns downloads and results uploads are available with an USB link to a PC. Campaigns on EDP20 can be downloaded by the Android application "Air Link".

CHARACTERISTICS

Input :		0 to 40KA$_{DC}$ (with ammeter clamp),
Accuracy:		> 0,5% ±1 pt,
Temperature drift:		< 100 ppm / °C,
Operator interface:	Screen:	4 lines of 21 characters (OLED), 1 red LED for battery charge state, and 1 green LED for functioning state,
	Keypad:	4 keys (→, ←, ESC, ENT),
Communication interface:		USB ("Mass Storage" acces type), BLE with "Air Link" Android software,
Temperature range:		- 10 to 60°C,
Supply:		by batteries 6V / 2Ah NiMH, charge on micro-USB plug,
Casing:		painted aluminum and black ABS box (H$_X$W$_X$D: 50x115x115mm),
Weight:		560 g,
Calibration temperature:		20 to 25°C,

No continuous magnetic field influence
up to 150 Gauss in X, Y, Z dimensions.

Rev. A
05/12/2022

INCLUDED ACCESSORIES

1 shoulder strap,
1 USB-A / micro-USB-B cord,
1 adapter 5VDC for USB cord.

CONNECTIONS

Charger and PC
micro-USB socket

SEREM amp meter
probe input

Serem ELECTRONIQUE INDUSTRIELLE

Rev. A
05/12/22

USER GUIDE

Turn on: Push the key 'ESC'.

Turn off: Push the key 'ESC' many times until the EDP20 asks a confirmation of shutdown. The EDP20 will shutdown too after a period of inactivity, this auto-shutdown duration is programmable from 0 to 30 minutes.

Charging: By connecting micro-USB cord to a PC or the 5V adapter delivered

Browsing: The name of the active menu is displayed on the 1st line of the screen and the browsing in this menu is made thanks to the 2 keys '→' and '←'. Push the key 'ENT' to enter into the sub-menu displayed, and push the key 'ESC' to quit.
!!! by default at startup, EDP20 launches last measures mode selected.

Menu tree:

< MEASURES >	< SYSTEM SETTINGS >	< FLUX SETTINGS >
< SIMPLE >	< AUTO-OFF TEMPO >	< CLAMP SELECTION >
< BLUETOOTH MODE >	< SERIAL NUMBER >	< MAIN CALIBRATION >
< CAMPAIGN >	< TIME/DATE >	< SIGNED MEASURES >
		< DRIFT ZEROING >
		< LIGHTS TEMPO >
		< CLAMP #x SETTINGS >
		< CALIBRATION >
		< OVERHEAT SENSOR >
		< DRIFT ZEROING >

FUNCTION BY MENU

1_ MEASURES:

The EDP20 must be coupled with SEREM Electronics amp clamp like PA or PAR.

Once you choose the appropriate mode below, the EDP20 will indicate the selected clamp setting and measure value still remains at --.-- kA until you make a reset by the 'ENT' key or push-button on the probe.

1_1 SIMPLE:

This function allows to use the EDP20 as a basic fluxmeter.
The 'ENT' key makes a reset of the measure.

1_2 BLUETOOTH MODE:

This function allows to use the EDP20 linked to the Android application "AIR LINK" to uploading/downloading campaign with a smartphone.

1_3 CAMPAIGN:

This function allows the user to take and memorize many measures following a programmed campaign.

The 1st step consists in the choice of the campaign among all uploaded in the EDP20. Move into the listing with the keys '→' and '←' and validate the name of the campaign to start with 'ENT' key. Once the campaign is selected, you can choose between 2 options: continue after the last point saved or start a new campaign.

In campaign mode, the 1st line indicates the name of the current measure, the 2nd line indicates the current value measured and the 3rd the last value saved for this point,

Browsing into the campaign measures is possible with the keys '→' and '←'. By pushing the 'ENT' key or probe's push button until the message '-->Saving…', the current measure is saved at the point selected and the EDP20 goes to the next measurement point of the campaign.

2_ SYSTEM SETTINGS:

2_1 AUTO-OFF TEMPO:

This function allows the user to select the auto-shutdown duration from 0 to 30 minutes. If 0 is entered the auto-shutdown function is stopped.

2_2 SERIAL NUMBER:

This function displays the serial number of the EDP20.
2_3 TIME/DATE:

This function allows the user to adjust the clock of the EDP20.

Rev. A
05/12/22

3_ FLUX SETTINGS:

3_1 CLAMP SELECTION:

This function allows the user to choose a clamp setting from profiles 0 to 9.

3_2 MAIN CALIBRATION:

This function displays the main calibration of the fluxmeter at Serem facility.

3_3 SIGNED MEASURES:

This function allows the user to choose to have signed or unsigned values in measures mode.

3_4 DRIFT ZEROING:

This function allows the user to select how the EDP20 manages the drift zeroing of the fluxmeter: during each reset by user, during 1st reset in measures mode or by clamp profile setting.

3_5 LIGHT TEMPO:

This function allows the user to select the duration of activation of light of the clamp after each reset from 0 to 120 seconds.

3_6 CLAMP #x SETTINGS:

This menu allows the user to adjust the profile of selected clamp 'x' in section 3_1.

3_6_1 CALIBRATION:

This function allows the user to adjust gain of the current clamp either in automatic mode by entering the target value and take the measure, or in manual mode by entering gain value.

3_6_2 OVERHEAT SENSOR:

This function allows the user to trun on and turn off the overheating sensor of the current clamp.
!!!Turn off overheating sensor at your own risk.

3_6_3 DRIFT ZEROING:

This function allows the user to adjust the drift zeroing value of the current clamp either in automatic mode managed by EDP20, or in manual mode. If the option 'by clamp setting' is selected in section 3_4, this value will be used and never updated in measures mode.
!!! If a reset is done with this parameter, it will be necessary to launch an automatic mode to find the correct value of drift adjustment before going in measurements modes, and this automatic sequence can be long.

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4_MASS STORAGE MODE

Once the EDP20 is started and back in the main menu, by connecting USB cord to a PC, the EDP20 will be shown on PC as a mass storage.
You will find 3 folders necessary for the EDP20: SYSTEM, MODELS, and DATA.

4_1 FOLDER SYSTEM:

This folder contains files of firmware with a .hex extension. It may be used to reload or upgrade the firmware via a bootloader mode following Serem technician's instructions.

4_2 FOLDER MODELS:

This folder contains files with a .CSV extension. Each file is a campaign model and consist of a list of lines of 21 characters max. which is the label, displayed on the EDP, of the point of measure in the current campaign:
  -> A file with 56 lines will prepare a campaign of 56 measures.

4_3 FOLDER DATA:

This folder contains files with a .CSV extension too. Each file is a campaign result and consist of a list of lines with 3 fields separated by commas. 1st field is 21 characters max. which is the label of the measurement point, 2nd is the value saved, and last field is the date and time of the measurement.
!!! Each time you start a new campaign with the same name, the result file will be overwritten.