

## **User Guide**

**Code: 80168 - ENGLISH**

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# GF\_eXpress User Manual

## Introduction

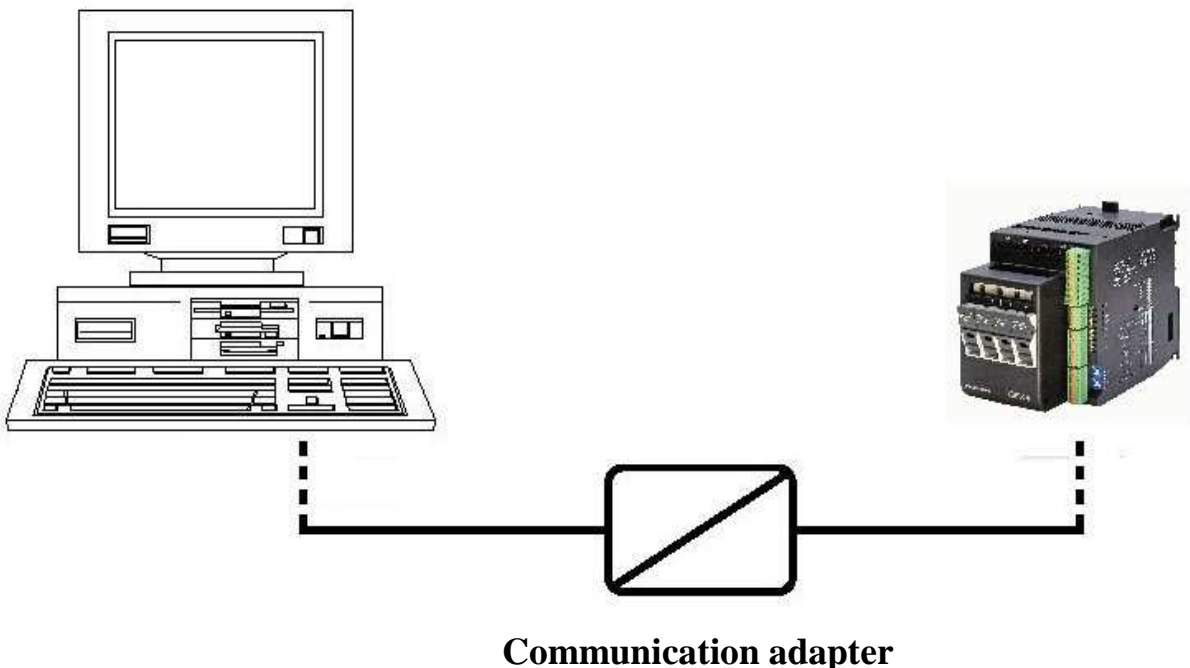
The GF\_eXpress configurator lets you configure and use GEFTRAN devices. To simplify configuration, the programme resembles a typical Windows™ environment, with toolbar and statusbar.

Possible operations:

- Serial communication with the device (SLINK3, CanOpen, Cencal, Modbus protocols)
- Parameter reading and writing
- Parameter saving in device flash memory
- Checking of device status

## PC requirements

- Pentium (or higher) processor
- Adapter for RS232/RS485/TTL and/or CANOPEN communication
- Windows 2000 (or higher) operating system



# Functional description

## Work session

To work with the GF\_eXpress you have to:

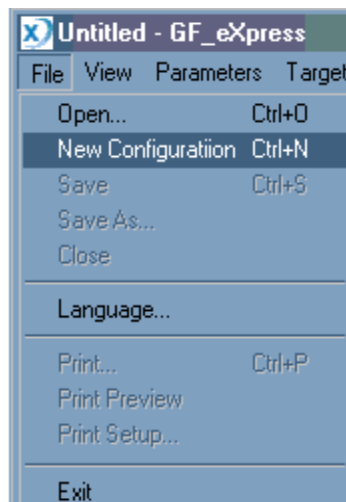
- create a new configuration or use a previous session by opening a file with extension “.gfe”
- Properly configure the communication options (protocol type, COM port, baud rate)

There are three ways to start a work session:

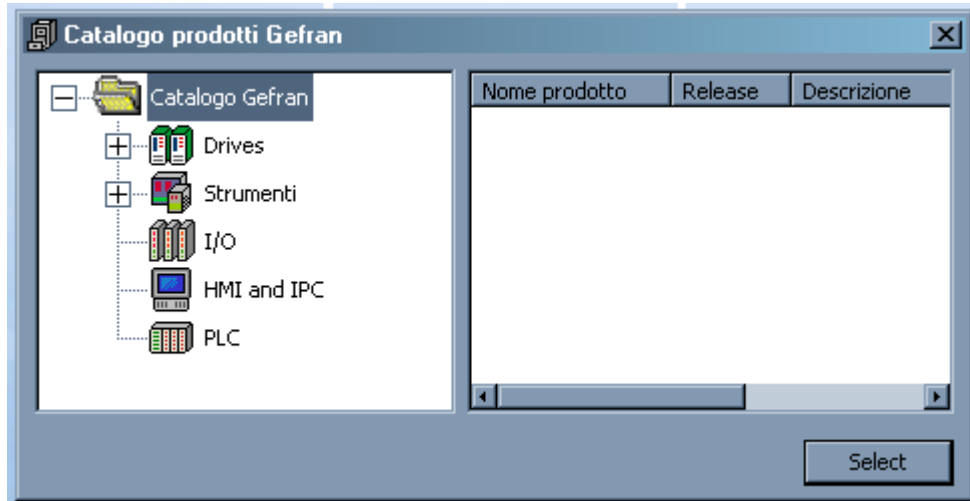
1. Open a parameters file with extension “.gfe” via the “Open” command on the “File” menu. Do this every time you want to work with a previously saved configuration.



2. Create a new configuration with “New configuration” on the “File” menu.



This command opens the “Gefran devices catalogue” window, which lets you choose a device from a list of devices grouped by category.



Selecting a device displays the main HTML page of the device.

3. Use wizard mode to create a new session. To do this, first click the appropriate device category and then the device needed.



**GEFRAN** GF\_eXpress

**Instruments**

**Controllers** ▾

+ 1200	
+ 1300	
+ 1600	3.20
+ 1600V	3.20
+ 1800	3.20
+ 1800V	3.20
+ 2500	
+ 400	3.00
+ 401	3.00
+ 600	1.00
+ 800	3.20
+ 800V	3.20

**Geflex** ▾



**Indicators** ▾



## Parameters file

After starting the GF\_eXpress work session by opening the appropriate parameters file, you can display the information for the parameters. Each parameter is defined by the following fields:

IPA	Nome	Tipo	Val...	Default value	Min	Max	Unit	Descrizione
0*	In.1	Float	3500	---	---	---		In.1 Input 1 [p.s.]
1*	In.2	Float	0	---	---	---		In.2 Input 2 [p.s.]
2*	In.3	Float	0	---	---	---		In.3 Input 3 [p.s.]
3*	In.4	Float	0	---	---	---		In.4 Input 4 [p.s.]
4*	FIn.A	Int	0	---	---	---		FIn.A Input maths function A [p.s.]
5*	FIn.b	Int	0	---	---	---		FIn.b Input maths function b [p.s.]
6	AL.1	Int	100	100	-19999	99999		AL.1 Alarm setpoint 1, if absolute Lo.
7	AL.2	Int	200	200	-19999	99999		AL.2 Alarm setpoint 2, if absolute Lo.
8	AL.3	Int	300	300	-19999	99999		AL.3 Alarm setpoint 3, if absolute Lo.
9	AL.4	Int	400	400	-19999	99999		AL.4 Alarm setpoint 4, if absolute Lo.
10	AL.5	Int	500	500	-19999	99999		AL.5 Alarm setpoint 5, if absolute Lo.

- IPA: identifies the parameter
- NAME: mnemonic name used to identify the parameter
- TYPE: type of parameter datum (ex.: int, enum...)
- VALUE: current parameter value
- DEFAULT VALUE: parameter default value
- MIN: minimum parameter value
- MAX: maximum parameter value
- UNIT: unit of measurement for the parameter value
- DESCRIPTION: explicit description of the parameter
- NOTES: optional information on the parameter

GF\_eXpress parameters can be organized in different menus; this lets you display the complete list or a subset of the parameters.

The user can change the values of only the read/write parameters.

If one or more parameters are changed and you want to close the work session, GF\_eXpress automatically asks if you want to save the configuration in a gfe file.

## Communication

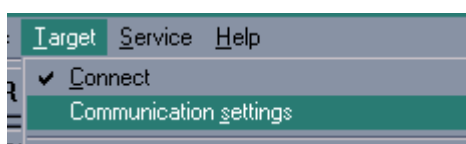
Communication with the device takes place via serial or CAN line.

To communicate with the device, you need an appropriate serial or CAN adapter.

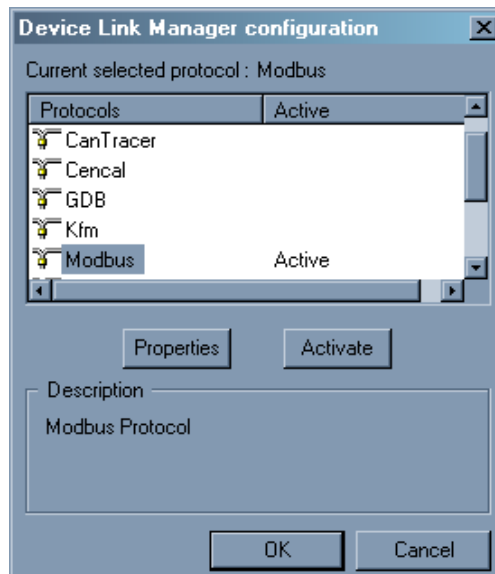
Communication with the device starts every time the user opens a parameters file or creates a new configuration.

The user can also enable or disable the connection via Connect on the target menu.

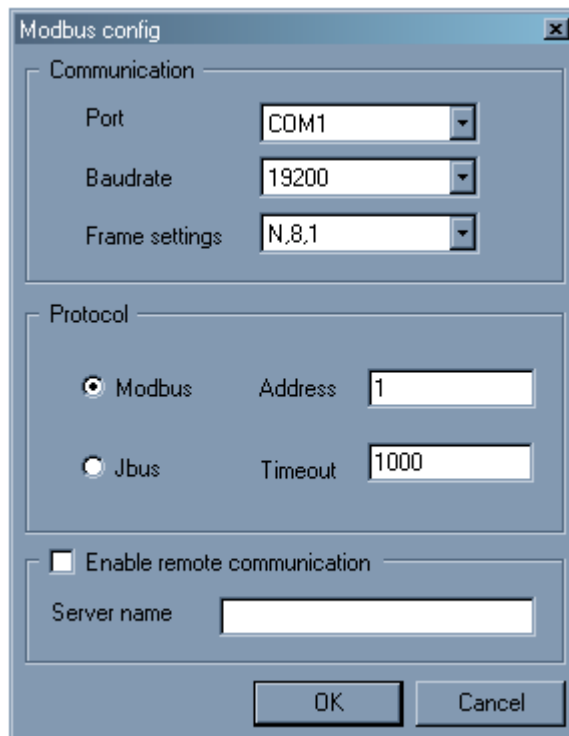
When the connection is active, the item Connect is checked and the toolbar button is pushed.



The “Communication settings” command lets you select and define communication options. A window lets you select and set the specific protocol.



To activate a specific protocol, select the protocol and click “Activate.” Click “Properties” to enable the configuration window for the specific protocol.



Each protocol has specific default values, which may vary from device to device.



EXAMPLES:

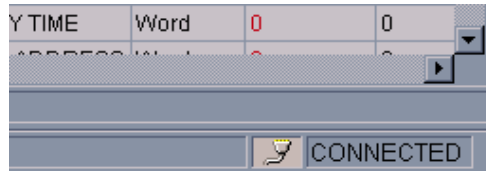
Device	Protocol	Communication properties
<b>XVY</b>	Slink3	COM1, 38400 baud, no parity, 8 data bits, 1 stop bit, address 0, time out 1000
<b>GFX4</b>	Modbus	COM1, 19200 baud, no parity, 8 data bits, 1 stop bit, address 0, time out 1000

**Note:** To correctly activate communication with the device, the device address must be the address set in GFEEXPRESS.

Once the right address is selected, the parameters have to be saved on the device flash to make the setting definitive.

GF\_eXpress displays every communication error in a message box containing the specific error code and its description.

Communication status is shown on the right side of the status bar.



## Parameter control

### Parameter value

When a parameter value is not updated with the device value, it is displayed in red. It is assumed that parameters are not updated when:

- they are just loaded after an “Open” procedure
- the user changes a value by editing it

It is assumed that the value is updated after a read or after a write procedure. A value can be changed via:

- Textbox

12	AL.1		500	500
13	AL.2	Float	100	100
14	AL.3	Float	700	700

- Combobox

49	Lb.P	Float		25.0
50	SP.r	Enum	0= set remote absolute, digital	0= set remote absolute, digital
51	tYP.	Enum	0= set remote absolute, digital	0= TC J degrees C 0/1000, 0.0
52	tP.2.	Enum	1= set remote deviation to load	0= none
53	FLt	Float	2= set remote absolute, set g	0.1
			3= set remote deviation to load	

- Specific forms (activated by specific button in grid)

19*	Ou.P	Float	100.0	
25	S.tu	Short	0	0
26	h.Pb	Float	1.0	1.0

## Read and write commands

To send a parameter value to the device, the user can use the “Write parameter” command.

The user can also read the current value of a parameter directly on the device with the “Read parameter” command.

The read and write commands refer to the currently selected parameter on the GF\_eXpress grid.

You can also read and write all parameters or a set of parameters by using the “Read all” and “Write all” commands.

To read or write all device parameters regardless of the currently selected menu, use the "Read all file values" and "Write all file values" commands.

By using “Write default file values" you can load the device with the default values contained in the parameters file.

For some devices, you can use “Load default values,” which tells the device to load its default values (these values are contained in the device).

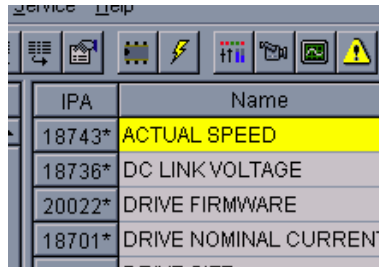
[ WIZARD ] - GF_eXpress			
Parameters	Target	Service	Aiuto
Read parameter			Ctrl+R
Write parameter			Ctrl+W
Read all			Ctrl+Shift+R
Write all			Ctrl+Shift+W
Read all file values			
Write all file values			
Write default file values			
Load default target values			
Compare parameters			
On line mode			
Save parameters			Ctrl+Alt+S
Properties			
Add to recipe...			Ctrl+A
Delete from recipe			Ctrl+D

## On-line mode

On-line mode, activated with the “Online” command, lets the GF\_eXpress update the value of every parameter each time the user selects a parameter on the grid. Likewise, the parameter is immediately transmitted to the device each time the user changes the value of the parameter selected on the grid.

## Read-only parameters

Some parameters are read-only and are called variables. Variables cannot be edited or written, and are marked by an asterisk next to the IPA of the parameter in the IPA field (see figure below).



IPA	Name
18743*	ACTUAL SPEED
18736*	DC LINK VOLTAGE
20022*	DRIVE FIRMWARE
18701*	DRIVE NOMINAL CURRENT

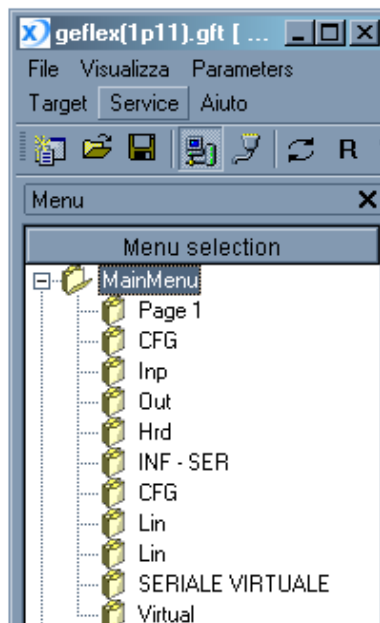
## Saving parameters

Parameters are saved in the device flash via the “Save parameters” command. Saving in the flash is required in order to permanently save values in the device. For some devices, this command is inactive because Write also includes saving directly in the device flash.

## Menu selection windows

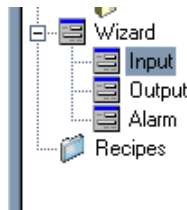
### Parameter selection menu

Parameters are divided into menus that are displayed in the Menu selection window and are organized in a tree structure for easy selection of parameter subsets.

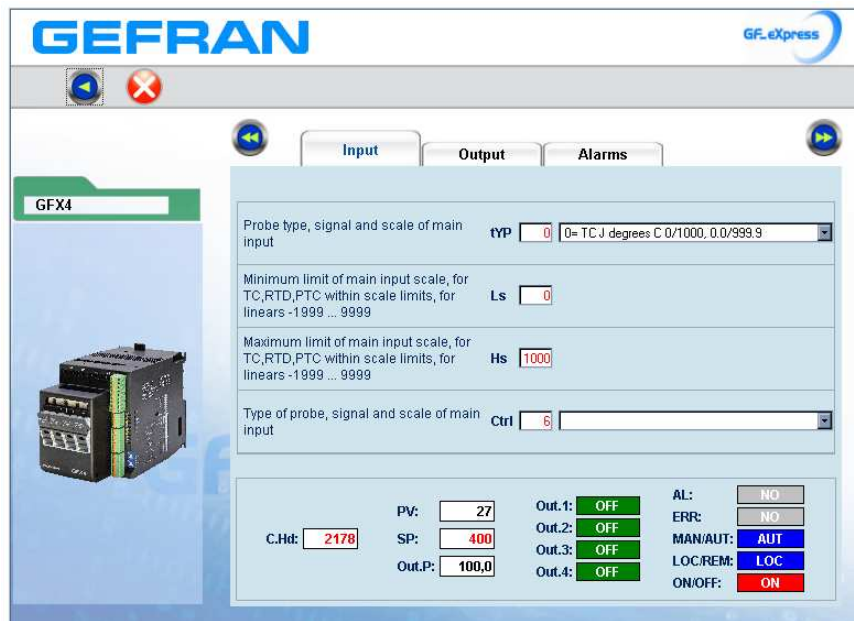


## Wizard selection menu

The Menu selection window can also contain a list of wizard pages and/or a list of recipes.



The wizard pages can be used to control some parameters as shown in the following figure:



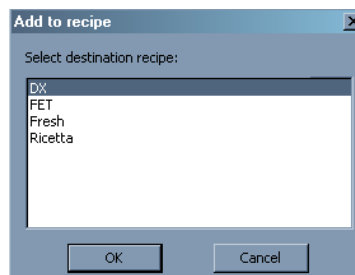
## Recipe selection

A recipe is a subset of parameters. This subset is a menu defined by the user.

To create a new recipe, just right-click the “recipes” menu, select “add”, and write the recipe name.

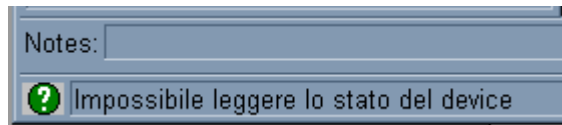
To insert a parameter in a recipe, just select the parameter from the grid and drag it to the recipe.

As an alternative, you can select the parameter you want, select “Add to recipe” on the “Parameters” menu, and select the destination recipe as shown in the figure.



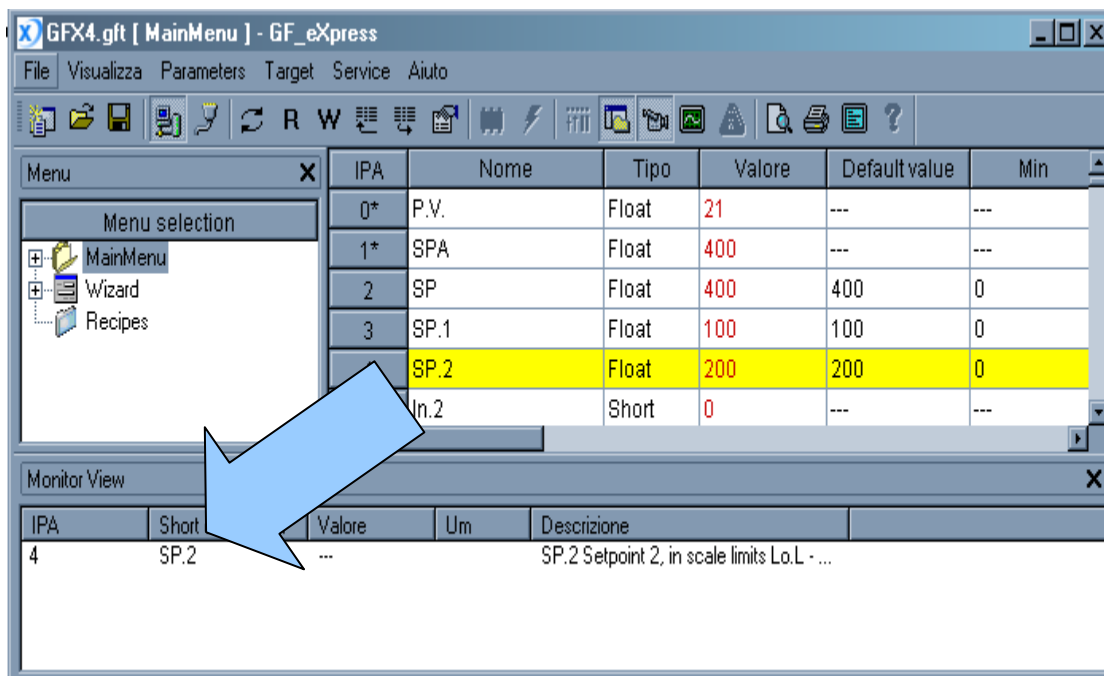
## Alarms

The current device status (normal work or alarm) is displayed on the right side of the status bar.



## Monitor window

The monitor window displays the value of the current parameter (or parameters). The value displayed in the monitor window is constantly updated with the current device value. The user can insert the required parameter in the monitor window by selecting it and dragging it from the parameters grid.



## Graphic window

The graphics window is a tool that displays the graphics flow of some parameter values. The parameters to be displayed can be dragged from the parameters grid to the graphics window. A track is assigned to each parameter; each track has a different colour. A maximum of 8 tracks can be displayed simultaneously. This window also has a series of graphics display tools, such as (for example) zoom and scale.

The screenshot displays the GF\_eXpress software interface. At the top, the title bar reads 'gefex(1p11).gft [ MainMenu ] - GF\_eXpress'. Below the title bar is a menu bar with options: File, Visualizza, Parameters, Target, Service, Aiuto. A toolbar with various icons is located below the menu bar. The main window is divided into several sections:

- Menu selection:** A tree view on the left showing a hierarchy of menus including Page 1, CFG, Inp, Out, Hrd, INF - SER, Lin, Lin, SERIALE VIRTUALE, Virtual, Wizard, and Recipes.
- Parameters Grid:** A table with columns: IPA, Nome, Tipo, Val., Default value, Min, Max, Unit, and Descrizione. The 'In.TA' parameter is highlighted in yellow.
- Graph View:** A plot area with a grid. The y-axis is labeled 'ms/div : 2112.42'. The x-axis has values 9133.37 and 30257.5. A red cursor and a blue cursor are visible on the plot.
- Track List:** A table below the graph showing parameters assigned to tracks. The parameters listed are SP, SP.1, AL.3, and In.TA.
- Status Bar:** At the bottom, it shows 'Impossibile leggere lo stato del device' and 'Modbus, Addr:1, Port:COM1' with a red 'X' icon and 'COMM ERR'.

IPA	Nome	Tipo	Val.	Default value	Min	Max	Unit	Descrizione
0*	P.V.	Float	110	---	---	---		P.V. Process variable
1*	SPA	Float	400	---	---	---		SPA Active setpoint (reading only)
2	SP	Float	400	400	0	1000		SP Local setpoint, within Lo.L - Hi.L scale
3	SP.1	Float	100	100	0	1000		SP.1 Setpoint 1, within Lo.L - Hi.L scale
4	SP.2	Float	200	200	0	1000		SP.2 Setpoint 2, within Lo.L - Hi.L scale
5*	In.TA	Float	0.0	---	0	999.9		In.TA Current transformer input value
6*	In.TV	Float	0.0	---	0	999.9		In.TV Voltage transformer input value
7	AL.1	Float	500	500	-1999	9999		AL.1 Alarm point 1, if absolute: Lo.L ... H
8	AL.2	Float	600	600	-1999	9999		AL.2 Alarm point 2, if absolute: Lo.L ... H
9	AL.3	Float	700	700	-1999	9999		AL.3 Alarm point 3, if absolute: Lo.L ... H
10	AL.4	Float	800	800	-1999	9999		AL.4 Alarm point 4, if absolute: Lo.L ... H
11	AL.5	Float	10.0	10.0	0	999.9		AL.5 Alarm point 5, if absolute: Lo.L ... H
12*	AL.6	Float	100.0	---	---	---		AL.6 Alarm point 6, if absolute: Lo.L ... H

Track	Um	Min value	Max value	v/div	Red cursor	Blue cursor	Horz cursor	Note
SP		340282346...	340282346...	0.000...	...	...		
SP.1		340282346...	340282346...	4.460...	...	...		
AL.3		340282346...	340282346...	4.460...	...	...		
In.TA		0.000	340282346...	4.253...	...	...		

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