1 GENERAL SPECIFICATIONS

GENERAL SPECIFICATIONS
 The S401-L module is a panel mounting indicator with OLED data display.
 The module has two RS485 serial ports, both supporting MODBUS-RTU protocol:
 -Master MODBUS-RTU Port: through it the data exchange with the connected slave

I/O modules is performed I/O modules is performed. -Slave MODBUS-RTU Port: through it the data acquired from the slave I/O modules

Slave MODBUS-RTU Port: through it the data acquired from the slave I/O modules and their elaborations are exchanged with a master device. Through this port it is besides possible the indicator software configuration.

Mew_Prossibility by a self-eading to visualize and read the data written from an modbus-rtu master module connected to the Modbus-rtu alsave port/when S401-t. is in modbus-rtu MaSTER modality.

Complete parameters—configurability both by the programming Menu and via software through the Slave RS482.

-Easy navigation on the programming Menu by three buttons on the frontal panel.

-Possibility to define and display up to 20 quantities.

New_Autoscroll for visualized values

-Possibility to fine and display up to 10 quantities. Obtained by the -Prossibility to define and display up to 10 quantities.

Optional calculation of the moving average for the acquired analog quantities.

Optional calculation of the moving average for the acquired analog quantities.

-Possibility to force the continuous or trigger writing of 10 quantities relative to the connected salves modules.

connected allow modules.

Possibility to define, for each elaborated quantity, an alamy with two individually activable thresholds.

Adams ignifiled by avening nessage or by trigger willing.

Adams ignifiled by avening nessage in the trigger willing.

Adams ignifiled by avening nessage in the master of the properties of the properties

-Selectable menu language: Italian, English, French. Settable display contras Settable display contrast.

Number of quantities to view on the same display screen: 1, 2 or 3 measurements.

-Settable number of decimal figures: automatic, 1, 2 or 3.

2. TECHNICAL SPECIFICATIONS

Slave MODBUS RTI

Temperature: -10,,60°C

-20.85°C. 1500 V among each pair of ports. -Removable screw terminals, 5,08 mm pitch. -Three buttons for menu navigation. IP65 (On the frontal panel with the provided seal).

96x 48 x 4 0 mm. EN61000-6-4/2002-10 (electromagnetic emission

industrial environment). EN61000-6-2/2006-10 (electromagnetic immunity

industrial environment). EN61010-1/2001 (safety). All circuits must be isolated from the other circ

under dangerous voltage with double isolation. The power supply transformer must comply with EN60742 "Isolated transformers and safety transformers".

2.1 Power Supply Specifications

[Power Supply : 10 40 Vdc. 19 28 Var

Max 12 Vdc, Max 350 W (8 X 20 us).

SENECA 3

2.3 Slave RS485 Specifications

Connections:

Protection Degree

 ϵ

3. FUNCTIONING DESCRIPTION

modality it can make a self-reading (at address #248 of the internal register fro 41000 at 41099) for the written data by Modbus-rtu master module connected to the

S401-L slave port.

The data exchange with the measurement modules is performed through the Master RS485 port, according to MODBUS-RTU Master protocol; so the acquired data may be viewed by the OLED display. In Master modality the S401-L can read the written data from an master module

connected to the S401-L slave port. The three buttons on the frontal panel allow to scroll the acquired data list and to accede

3.1 Setting Modalities
All the module parameters may be set both by the programming menu and through

the Slave RS485 port by the apposite Z-NET3 configuration tool.
3,2 Data Acquisition through the Master MODBUS-RTU Port

MI001285-F

3.2.1 Number and Types of acquirable data
The instrument may be programmed to acquire up to 20 quantities through the Master

RS485.
The following data types may be acquired: Floating-point

-Floating-point
-Long
-Word
-Robelan
-R

It is possible to activate for each Long, Word or Floating-point acquired quantities, the moving average calculation on the last 8 read measurements.

moving average calculation on the last or reau measurements.

3.3 Elaborated Quantities
It is possible to define and view up to 10 elaborated quantities, obtained by the application of mathematical and logical functions on the acquired or elaborated

quantities.

Functions and operations may be applied on all the acquirable data types.

The result may also be viewed or not by display.

An alarm with two individually activable thresholds and corresponding hysteresises

may be associated to each elaborated quantities 3.3.1 Applicable Functions and Operations

The user has at his disposal different operations to execute on the defined

renduces.

or example the following operations may be used: arithmetic average of two or ree quantities. Other operations are: sum, subtraction, multiplication, division, three quantities. Other operations are: sum, subtraction, multiplication, divisisquare, cube, square root, etc.
For the boolean quantities the following operations may be executed: AND and OR.

For the Docusien quantities the following operations may be executed. ANAL and UK. 3.4.2 Alarms on Ebborated quantities. An alarm may be associated to each not boolean elaborated quantity. Threshold, by the properties of the Properties on the Identity of the Properties of the Properties on the Identity of the Properties of the Properties on the Identities of the Properties of the Prop

n the quantity value is smaller than the Low Threshold, the low starm condition is

rrysteresis. The alarm conditions are displayed by an alarm message. alternated to the value of the quantity on the display list 3.4 Acquired and Flaborated Quantities Scaling During the definition of an acquired or elaborated quantity. It is possible to decide

also its scaling.

So the DATA OFFSET and the SCALE FACTOR parameters have to be set.

The resulting Scaled Quantityis:
SCALE FACTOR * Original quantity+ DATA OFFSET

MI001285-E

3.5 Display Data List lecide just during the definition phase of a reading or function, to display

> is value or not. Once the quantity insertion procedure has been finished, it is always possible sable its presence on the display list: also the position on the display list v he modified later 3.6 Data Writing through the Master MODBUS RTU port

3.6.1 Number and Types of writable data
The instrument may be set to write through the Master RS485 port, up to 10 quantities relative to the connected I/O modules
The same acquirable data types may be written:

3.6.2 Writing Modalities: Continuous or Trigger

3.6.2 writing Modalities: Continuous or Irigger It is possible to set up to 10 writings. Continuous Writing The writing is performed at every program cycle (if the quantity to write is available). It is possible to write on the selected I/O registers the value of a previously defined

acquired to enacon the second The writing is associated to the value of a previously defined elaborated quantity. If two alam thresholds or all east one of them have been defined for the quantity, it is possible to enable the writing only at the verifying of one of the alarm conditions. In case of single bit writing, an action of alarm and is performed, instead in case of analog register writing, at the end of the alarm condition the writing operation only endots to be executed.

3.7 Configuration through the Slave MODBUS RTU port

All the menu parameters may be programmed through the Slave RS485 port; so the complete programmation of the instrument is possible. The apposite Z-NET3 software is available; it allows an easy configuration of the module. 4. PROGRAMMING MENU

The programming menu allows to completely configure the module on all the functionalities described in Chapter 3.

functionalities described in Chapter 3.

4.1 Navigation modalities on the programming Menu.

4.1 Navigation modayates on the programming Menu When the module is in view phase, press throit Menu Button to accede to the menu: on the the module is in view phase, press throit Menu Button to accede to the menu: on the lower part of the display the following message appears: OK: MAIN MENU; until this melsays is visible (for approximately 40 sec), the pressure of the OK MENU button allows the case to the menu and to where MAIN MENU.

allows the access to the me 4.1.2 Buttons Meaning 4.1.2 Buttons Meaning
The instrument has three buttons: UP, DOWN, OK MENÙ.

MI001285-F

SENECA

ENGLISH - 1/21

ENGLISH - 2/21

ENGLISH - 4/21

On the programming menu, the buttons have the following functionalities UP Button - It allows to scroll the menu items towards the top, in order to place on the item of interest.

- It allows to scroll the menu items towards the top, in order to place on the item of interest. The selected then its marked by a flashing cursor stits left. - During the setting of the numeric or literal values, it allows to select the figure or the letter of interest; a pressure entails the passage to the figure of following numeric value (ex. 1–22) or to the next alphabetic letter (exx2–36).

(ex. 1-x)2 of to the next alphabetic elter (ex.A-26).

DOWN Buttor

DO

OK MENU BURON

-Access to the programming menu (see 4.1.1 Access to the programming menu)

-It allows to confirm the item selected by UP and DOWN buttons and so to pass at the next. - railows to commit the item selected by a flashing cursor at the left of the item.

- Puring the setting of numeric or literal values, it allows to confirm the figure or the left selected by the UP and DOWN buttons. Once the value of the figure or lefter has been confirmed, the procedure automatically continues with the figure or lefter in the

next position. At the end of the parameter setting, the confirmation of the set value is required. -Since the button has many functionalities, its meaning is sometimes indicated on the lower part of the display.

SENECA MI001285-F

The exit from the programming menu is performed by select from the Setup Menu. If the buttons are not used for appro-automatically exits from the menu and returns to view mode.

4.2 Menu Description

separation menu is structured into four basic submenus

i ne programming m 1) Readings Menu

3) Writings Seru 1) Setup Meru. 19 S

This menu allows to:

) Insert a new reading 2) Delete a previously defined reading.

position on the display list. Readings Setting Modalities

References to the state of the

Register address
Modbus address of the data to read on the corresp

The register for the self-reading are from 41000 to 41099 at address #248. Use the following addressing modality depending on the utilized Modbus function and on the data type to read: ADDRESSES DATATYPE

00120000	Boolean	02	
00140000	Float/Long Int/ Short Int	04	
00150000	Float/Long Int/ Short Int	03	
r example if we want to read an holding register with address 40002 then the Register dress has to be set at 40002			

MI001285-E

MI001285_E

The Functions Menu is illustrated on the schemes on pages 19 and 20

Data Format

In out of the data type to read. The following formats may be selected:

Long Integer: 32-bit integer format
 Short Integer: 16-bit integer format
 Boolean: boolean format

Reading Order (only for Float or Long Integer formats)
Order of the two words which constitute Float or Long Integer data. The following items

may be selected:

-MSW/first. The most significant word is read before, then the least significant one -LSW/first. The least significant one

Data Display Format (Decimal Figures) (only for Float or Long/Short Integer

formats))
Number of decimal figures to view after the decimal point:

rvanuer or oecimal rigures to view after the decimal point: -Automatic: Maximum Displayable Number of decimal figures. -Mex 1 Figures: 1 decimal figure after the decimal point: -Mex 2 Figures: 2 decimal figures after the decimal point. -Mex 3 Figures: 3 decimal figures after the decimal point. Boolean Logic (only for Boolean format)

Measure Units (only for Float, Long and Short formats)
It allows to insert a measure unit settable letter by letter

Data Offset (only for Float, Long and Short formats) It represents with the scale factor one of the two parameters defining the data scaling. The Data Offset value may be both long and fbat. The resulting scaled quantity depends on the Data Offset according to the following formula:

Scaled Quantity = Scale Factor * Read quantity + Data Offset

Scale Factor (only for Float, Long and Short formats)
It represents with the Data Offset one of the two parameters defining the data scaling.
The Scale Factor value may be both long and float. The resulting scaled quantity
depends on the Scale Factor according to the following formula:
Scaled Quantity = Scale Factor *Read quantity + Data Offset Time Average (only for Float, Long and Short formats)
By activation (YES) of this functionality, the moving average value is calculated on the last 8 readings. The mean value is displayed (if enaled).

<u>Display Data</u>
By selecting YES, the data will be displayed. Also the position on the display list may be

SENECA MI001285-E FNGLISH - 7/21

chosen. The **Readings Menu** is illustrated on the schemes on page 19

4.2.2 FUNCTIONS MENU U. Functions, obtained by the elaboration of one or more read or and) Insert a new function

Operation
Operation to execute. The selectable operations and the supported data types are listed

MI001285-E

Input N, 1 or 2 or 3
It selects the read or elaborated quantities among which the operation will be performed.
All the previously defined readings and functions (if their data type is supported may be selected. Depending on the operation type, it will be possible to select 1, 2 or 3 operands.

Data Display Format (Decimal Figures) (only for Float or Long/Short Integer Formats)
Number of decimal figures to view after the decimal point:
-Automatic: Maximum displayable number of decimal figures

Data Offset (only for Float, Long and Short formats)
It represents with the scale factor one of the two parameters defining the data scaling.
The Data Offset value may be both long and float. The resulting scaled quantity depends
on the Data Offset according to the following formula:

Scaled Quantity = Scale Factor * Elaborated not scaled quantity + Data Offset

It represents with the Data Offset one of the two parameters defining the data sca The Scale Factor value may be both long and float. The resulting scaled qua-depends on the Scale Factor according to the following formula: Scaled Quantity = Scale Factor * Elaborated not scaled quantity + Data Offset

and Float. -Low Threshold: Low Alarm thresohold. The value may both Long and Float.

retation logic of boolean Data: Vive: the displayed logic value is the operation result. ntive: the displayed logic value is the negation of the operation result.

Alarm Threshold (only for Float, Long and Short formats)

By activating this functionality (YES), it is possible to define the alarm thresholds.
These threshold may be both activated, both disbled or individually enabled. So the user

-I ow Threshold Hysteresis: Hysteresis of the low threshold. The value may both I onc.

s: isshold: High Alarm thresohold. The value may both Long and Float. ishold Hysteresis: Hysteresis of the high threshold. The value may both Long

Yee the data will be displayed. Also the position on the display list may be

Operands | Operands and Resulting

Roolean Boolean

Boolean

Quantity Format

Integer (Long/Word) and Float Integer (Long/Word) and Float

Integer (Long/Word) and Float Integer (Long/Word) and Float Integer (Long/Word) and Float Integer (Long/Word) and Float Integer (Long/Word) and Float

Integer (Long/Word) and Float

eger (Long/Word) and Float

ENGLISH - 8/21

ENGLISH - 9/21

) Delete a previously defined function A previously defined function and quickly modify only the alarm thresholds. 3) Modify a previously defined function and quickly modify only the alarm thresholds. 4) Decide if the elaborated data will be viewed or not and in the first case to select the data position on the sipaly list.

Functions Setting Modalities
For each function the following settings are possible:

Subtraction Multiplication

Cube Square Root

Math. Average of

Logical AND of 2

Logical AND of

Logical OR of 2 Logical OR of 3 Bit extraction 0..15

from register

Number of decimal ingures to view after the decimal point.

-Automatic:

Maximum displayable number of decimal
-Max 1 Figure:

1 decimal figure after the decimal point
-Max 3 Figure:

2 decimal figures after the decimal point

Measure Units (only for Float, Long and Short formats)

Scale Factor (only for Float, Long and Short formats)

Boolean Logic (only for Boolean format)

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ENGL|SH - 6/21

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Math. Average of 3

Square

Operation Code

0

Operation

4.1.2 Parameters Modify
Once the user has selected (by subsequent pressures of the 3 navigation buttons) an item which retails the setting of one or more parameters, the editing or modify of the parameters are performed figure by figure (in furner), better by letter (ill time).
Numeric Parameter Modify, press, the first figure flashes: the pressure of the UP button increases the value for a unit, to present or 5 DWN decreases the value of a unit, to present or 5 DWN decreases the value of a unit, to present or 5 DWN decreases the value for a unit, to present or 5 DWN decreases the value for a unit, to present or 5 DWN decreases the value for a unit by pressing the OK MENU button, the value set for the figure is confirmed and the procedure gos on with the nox figure. The position modify is marked by the flashing of the notifigure. In case of signed parameters, for the first figure only "* or "* signs may be selected (lawey by the UP and DWN) buttons). Once as the their stigrure has been modified, the

(always by the UP and DOWN buttoms). Once also the last figure has been modified, the pressure of the OK MEND buttom reliable the passage to the Confirmation Menu which allows to save the setting, etcum to the parameter setting or exit from the setting. During the editing or modify phase, the first setter fashers, the pressure of the UP button entails the view of the next alphabetic latter (a-A-B), the pressure of the UP button entails the view of the previous alphabetic latter (a-A-B) pressure of the DOWN button entails the view of the previous alphabetic latter (a-A-B) pressure of the DOWN button entails the view of the previous alphabetic latter (a-A-B) pressure of the DOWN button entails the view of the previous alphabetic latter (a-A-B) pressing the OK MEND button entails the view of the previous alphabetic latter (a-A-B) pressure of the DOWN button entails the passage to the Confirmation Menu which allows to save the setting, return to the parameter setting or exit from the setting.

ENGLISH - 5/21

amming many is performed by selecting Exit from the Main Many o

3) Modify a previously defined reading. 4) Decide if the read data will be viewed or not and in the first case to select the data

Readings Securing wodelines
For each defined reading, it is possible to set the following parameters

Description
Identification name for the reading.

The S4011-1, in master modality uses the addresses from #1 to #247 for communicate vs slaves module; it is also possible to execute the auto-reading function at the addresses from #248 for the modulus registers written previously from a master module connected to S401-1, RS485 slave port.

0000	Boolean	01	
120000	Boolean	02	
140000	Float/Long Int/ Short Int	04	
150000	Float/Long Int/ Short Int	03	
xample if we want to read an holding register with address 40002 then the Re			

4 2 3 WRITINGS MENU It allows to define some continuous or trig continuous or trigger writings on the quantities of an I/O module The Writings Menu allows to: 1) Insert a new writing. 2) Delete a previously defined writing. 3) Modify a previously defined writing.

The following settings are possible for each writing: Select Data It allows to select the read or elaborated quantity which will be involved on the writing operation. This quantity may be used on the following ways: 1) If we select a Read Quantity or a Function without active alarms: the value of this quantity (analog or digital) will be continuously written on the ID register which will be set by the

Address of the slave I/O module connected to the Master RS485 and where the data will be

Use the following addressing modality depending on the utilized Modbus function and on

MI001285-F

So if we want to write an Holding Register with address 40003 on the I/O slave, then the

Enable Trigger (only if a function with at least an active threshold has been selected in Data Selecti

in Data Serect) This functionality may be activated only if a function with at least an active threshold has

been set in *Data Select.* By selecting Yes, the trigger writing is enabled (the writing is executed only if the selected function is in alarm condition). If the trigger is disabled, the continuous writing is performed.

raign Investigat. It entables the winning at the objectioning of intelligence was enabled on the associated function; otherwise the option does not appear).

Low Threshold: It enables the writing if the function is inferior to the low threshold (only if it was enabled on the associated function; otherwise the option does not appear).

Data to Write (only if the trigger has been enabled in Trigger Enable)
It sets the data yee which will se written. The following formats may be selected:
It sets the data yee which will se written. The following formats may be selected:
It while at the sen's format of the selected in the selected of the selected of the selected to the selected of the selected to the selected to select the selected of the selected to select the selected to selected the selected to select the selected to select the selected to selected the selected t

written. In this case it is necessary to set the output format (see Output Format field). If the output format is long or float, it is also necessary to specify the writing data order (MSW first or LSW first). At the end of the alarm condition the function writing some

MI001285-F

In case of Float or Long integer formats, it is necessary to set also the Reading Order of the

rom 1 to 10000). Read-Modify-Write: the bit value is written by using the function 06 (write single register) of

16-bit register writing. In this case only the specified bit is modified while the remaining bits of the word are not changed. Pay attention to have opportunely set the register address in Register Address (in this case addresses from 40001 to 50000).

two words which compose the data:

-MSW first. The high word is transmitted first, then the low one.

-LSW first. The low word is transmitted first, then the high one.

rurrestitutus). Shold: It enables the writing at the overcoming of the blob threshold (only if it

Alarm Threshold (only if the trigger has been enabled in Trigger Enable)

threshold which will be associated to the writing (it is not possible to enable threshold which will be associated to the writing (it is not possible to enable the soft the writing (it is not possible to enable the soft the writing (it is not possible to enable the soft the writing (it is not possible to enable the soft the writing (it is not possible to enable the soft the writing (it is not possible to enable the soft the writing (it is not possible to enable the writing the writ

FUNCTION

l6 read-modify-write: write the single bit on the register withou

ENGLISH - 10/21

ENGLISH - 11/21

odifying the other ones.

Writings Setting Modalities

written, Values from 1 to 247 Register Address

SENECA

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-Float: 32-bit floating point format. -Long Integer: 32-bit integer format. -Short Integer: 16-bit integer format.

ADDRESSES DATA TYPE

Morthus address of the register which will be written

40001 50000 Float/Long Int/ Short Int 06/16

SYSTEM PARAMETERS It allows to set the Master Module

Reception I Imeout It represents the reception timeout of the master module: maximum time in which the master waits for an answer from the connected slaves modules before declaring the operation falled. Values from 10 ms to 2.55 c idefault 100 ms).

Parity Type of parity control of the port: absent, even, odd. Default: absent. 1x/rxx saud Kate It sets the port communication speed. Admitted values: 1200, 2400, 4800, 9600, 14400, 19200, 28900, 38400, 57600, 115200. Default: 38400.

Delay between polls

Delay time that the master waits before sending the request to a connected slave. Values from 10 ms to 2.55 s (default: 100 ms). эг writing only in case of alarm condition (with the correspondent alarm end action). In this last case it will be possible to write a constant, a bit or the quantity selected at the beginning

Address assigned to the instrument when it is used as a Modhus slave. Default: 1.

Type of parity control of the port: absent, even, odd. Default: absent.

It sets the port communication speed. Admitted values: 1200, 2400, 4800, 9600, 14400, 19200, 28800, 38400, 57600, 115200. Default:38400.

Answer Delay Number of nauses of 6 characters each to be entered between the end of the Rx message and the start of the Tx. Settable value: 0. 20. Default: 0. For more informations on Setup Menu, refer to the schemes on page 21

acroir Enable or disable the automatic scroll function for the visualized value

5. FUNCTIONING IN VIEW MODE
In view mode the indicator displays the values of the quantities defined on the display list; it may view 1, 2 or 3 data for screen. If all the data may not be viewed on the same screen, press the UP and DOWN buttons to move of a position the data on the list.

VAR2 10 W VAR3 10 W MI001285-E

6. TERMINALS AND BUTTONS POSITION FRONTAL PANEL: DISPLAY AND

A B GND

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Below an example of 3 data for screen:





000 8. ERROR SIGNALLINGS The errors are directly viewed by display.

The possible signallings and their meaning are listed below. They flashes instead of the quantity numeric value. If no data has been inserted on the Display list, the LIST EMPTY

Output Format (only if the trigger has not been enabled in Enable Trigger or if Data Value has been selected in Data to Write)
It sets the data type to write.
The following formats are selectable: through the master RS485 port.
SINGLE ERROR: presence of a generic error (of any nature).
8.2 Functions Error Signallings
BAD INPUT: the value of one or more operands is not available.
DIVISION_BY_ZERO: the operation involves a division by a null quantity.

8.3 Alarms Signallings
TOO HIGH: the function value is greater than the high threshold.
TOO LOW: the function value is smaller than the low threshold.

SENECA MI001285_E ENGLISH - 14/21

Bit Index (only if the data to write is boolean and if Read-Modify-Write has been selected in Writing Mode).

If the value to write is boolean and if the Read-Modify-Write writing mode has been selected, it allows to select the index of the bit to write within the 16-bit word. Settable value from 0 a

Acc. of the White III allows to set the system general parameters and the communication ports parameters:
1) Language Selection.
2) Number of data signifyed on the same screen.
4) Moditus Master port parameters.
4) Moditus Master port parameters.
5) Moditus Master port parameters.

The following settings are possible Language It allows to select the module language: Italian, English, French.

 $\frac{\textbf{Contrast}}{\text{It sets the display contrast.}} \label{eq:contrast} It sets the display contrast. Values from 1 to 15.$

message is displayed.

8. Reading Error Signallings

NO ANSWER: the I/O module connected through the master RS485 port does not answer.

SLAVE ERROR, a meror message has been received from the I/O module connected

RX ERROR: value not available due to an error on the answer of the I/O module connected

frough the master RS485 port.

ENGLISH - 13/21

10 + 40 Voc 19 + 28 VAC

TOO LOW: the function value is smaller than the low threshold.

9. MODBUR SERSISTERS ACCESSIBLE THROUGH THE SLAVE REASES PORT 9. MODBURS RESISTERS ACCESSIBLE THROUGH THE SLAVE REASES PORT and the scenario of the scenario o

Most significant bit Bit Index Least significant bit

Writing ModaElles (only if a boolean reading / function has been selected in Data Salect or if Boolean 1(0) | Boolean 0(1) has been set in Data to Write. It was want to write boolean value if a corecssary to specify the writing modalities: "Single Output." The value is written by using the function 05 (write single coil). Pay attention to to have opportunity one the register address in Register Address (in this case addresses to have opportunity one the register address in Register Address (in this case addresses to have opportunity one the register address in Register Address (in this case addresses to have opportunity one the register address in Register Address (in this case addresses to have opportunity one of the register address of the register addre 9.2 MEMORY MAP FOR READ AND ELABORATED QUANTITIES

The values are represented in flaoting point (32 bits -2 Modbus registers) Only one floating point value can be read a time.

ADDRESS: REGISTER NAME DDRESS: REGISTER NAME 40802 : DATA_LSW_READ1 0801 : DATA MSW READ1 0803 : DATA MSW READ2 40804 : DATA LSW READ2 10805 : DATA MSW READ3 40806 : DATA LSW READ3 0807 - DATA MSW/ READA ADROS - DATA I SWI READA 10809 : DATA_MSW_READ5 40810 : DATA_LSW_READ5 0811 : DATA MSW READS 40812 : DATA I SW READ6 10813 : DATA MSW READ7 40814 : DATA LSW READ7 0815 - DATA MSW READS 40816 : DATA_LSW_READ8 0817 - DATA MSW READ9 40818 : DATA LSW READ9 40820 : DATA_LSW_READ10 0819 : DATA MSW READ10 40822 - DATA LSW READ11 0821 - DATA MSW READ11

IORRE - DATA MSW/ READ13 40826 - DATA I SW READ13 40827 : DATA MSW READ14 40828 : DATA LSW READ14 40830 : DATA LSW READ15 40832 : DATA_LSW_READ16 40834 : DATA LSW READ17 ADBOR - DATA I SWI DEADAR 40838 : DATA LSW READ19 40840 - DATA I SW READ20

40824 : DATA LSW READ1:

ADDRESS: REGISTER NAME ADDRESS: REGISTER NAME

901 - DATA MSW FUNCTION: 40902 : DATA I SW FUNCTION: 40903 : DATA MSW FUNCTION2 40904 : DATA LSW FUNCTION2 40905 : DATA MSW FUNCTION3 40907 - DATA MSW FUNCTION4 40908 : DATA I SW FUNCTION4 0909 : DATA_MSW_FUNCTION5 40910 : DATA_LSW_FUNCTION5 0911 : DATA MSW FUNCTION6 40912 : DATA LSW FUNCTION6 40913 - DATA MSW FUNCTION? 40914 : DATA LSW FUNCTION? 40915 : DATA MSW FUNCTIONS 40916 : DATA LSW FUNCTIONS SENECA

0917 - DATA MSW FUNCTIONS 40918 : DATA_LSW_FUNCTION9 10919 - DATA MSW FUNCTION10 40920 : DATA I SW FUNCTION10

MI001285-E

ENGLISH - 16/21

SENECA MI001285-E

SENECA

MI001285-E

ENGLISH - 17/21

ENGLISH - 18/21

ENGLISH - 3/21 SENECA

Consumption : Max: 1 W, mean: 0,5 W

2.2 Master RS485 Specifications
Holf-dunlay PS485

MI001285-E Half-duplex RS485. 32 Standard nodes

2.3 General Technical Features Environmental Conditions: Storage Temperature:

Dimensions (LxHxW): Standards

The S401-L module is a front-panel display and it is configurable in ModBUS RTU "master" or "slave" modality. The S401-L module can display and process the data acquired from the modbus-flu slave modules in MASTER modality. In the same

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10. The **Writings Man**u is illustrated on the schemes on nages

vs to choose how many data (rows) to display on the same screen: 3 rows, 2 rows, 1

SSENECA MI001285-E ENGLISH - 12/21

SENECA

ENGLISH - 15/21 MI001285-E

40829 : DATA MSW READ15 10831 : DATA MSW READ16 0833 - DATA MSW READ17

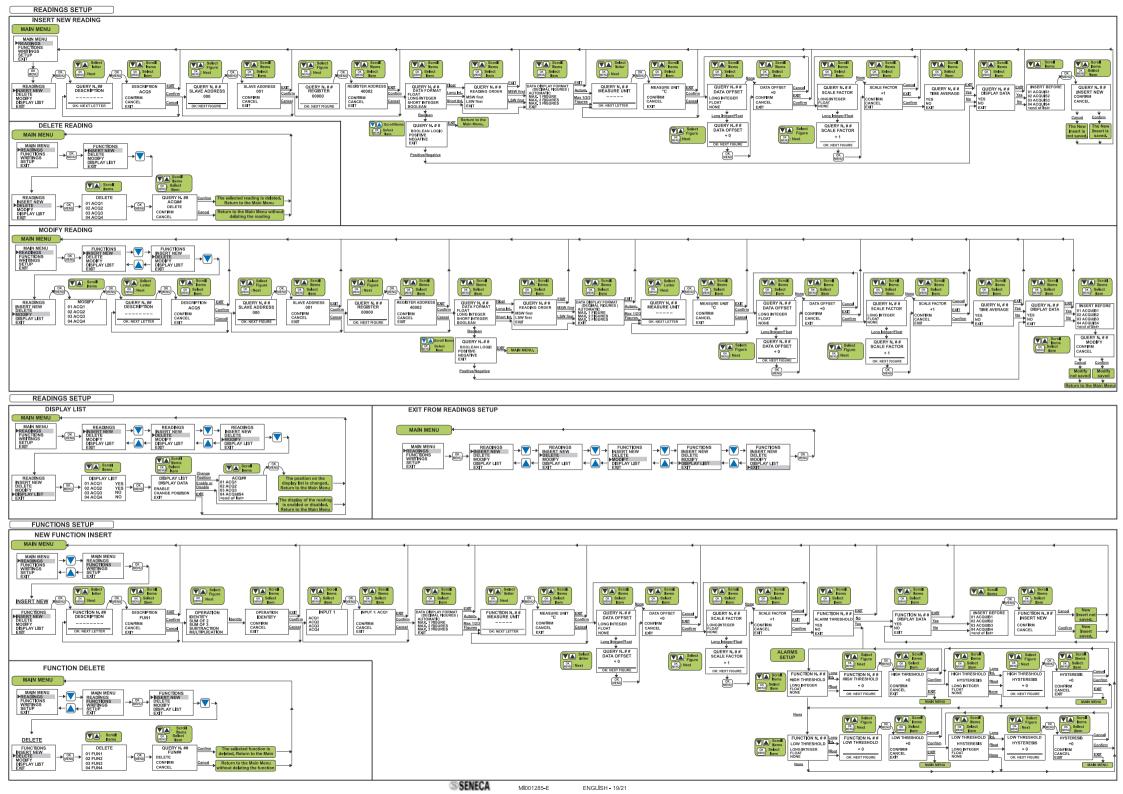
40823 : DATA MSW READ12

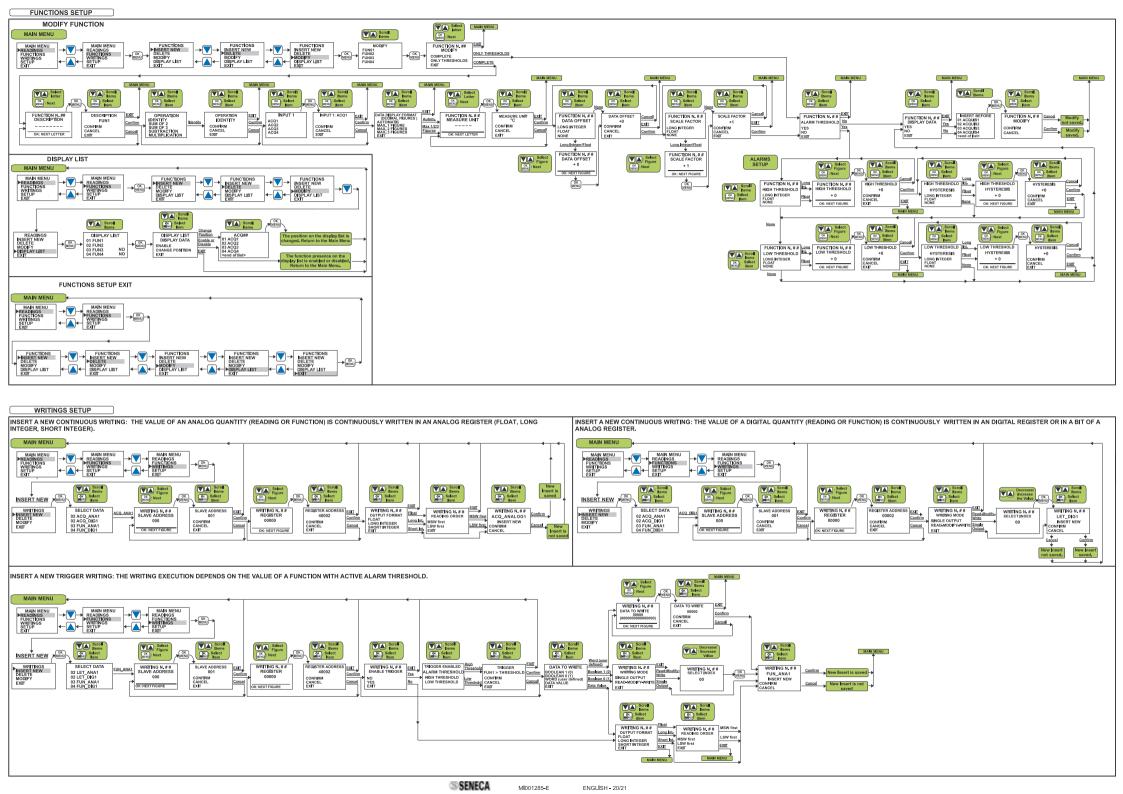
IORRE - DATA MEM DEADIR

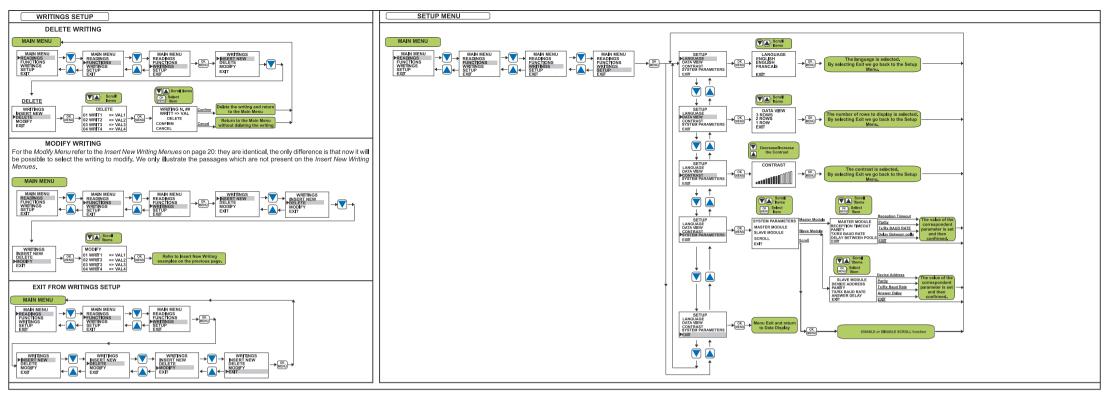
40837 : DATA MSW READ19

40839 - DATA MSW READ20

ELABORATED DATA The values are in floating point (32 bits 2 Modbus registers), only one floating point value can be read at a time.







Appendix A

We are going to list the characters which may be inserted for the literal parameters setting. They are listed in the order in which they may be selected by the **UP** and **DOWN** buttons.

Characters admitted for all the literal parameters except Measure Unit:

A...Z 0...9 %

Admitted Characters for Measure Unit literal parameter

A...Z a...z 2 αβ Γπ Σ σ μ τ Φ θ Ω δ φ ε % ' () / "

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