Retransmission of the totalized value by the isolated digital output (Open Collector).

Retransmission of the totalized value by the isolated digital output (Upen Collector).

Totalizer value is saved on non-volatile memory.

Filter programmable at 20 levels to stabilise reading.

Totalizer reset by auxiliary digital input, buttons pressureor Modbus register.

4, 6, 8 or 11 (4+7) Digits display.

In case of optional card use, two relay alarms are activable on the input measurement frequency (maximum, minimum, automatically resettable or not).

Alarms status visible through two leds on the frontal panel.

RS485 serial communication with MODBUS RTU protocol (by optional board), maximum 32 nodes.

• Two relay outputs (available on the optional card) for alarms signalling.
• Easy navigation on the programming Menu by three buttons on the frontal pane
• Quick configuration of the alarm thresholds by the Quick Alarms Menu.
• Display contrast settable.

-pnp 24 V (3 wires) -NAMUR -Photoelectric -Hall -24 V Input /ariable Reluctance V_{MAX}: Sensors Power Supply: Frequency Range: 0.00015 Hz - 10 kHz Frequency Resolution
Analog Output: :0.05% Senerated Current: 0 - 20 mA, max load resistance: 500 Voltage: 0 - 10 V, min load resistance: 1 k Configurable Start and Full scale values.

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MI001503-E OPTIONAL BOARD CONNECTIONS
Relay Output 1 (8 A/250 Vac) Relay Output 2 (8 A/250 Vac)

Ø 11

Resolution: 2 A/1 mV.

N.C. — Ø 13

N.A. — 🕢 12

Com.

B - 21 A —Ø 20 GND **─**Ø 19

Auxiliary Digital Input: Totalizer Reset (external power supply)

24 V ext

6. MENU PARAMETERS Parameters settable from Menu : [. [.

Paramete Symbol Indicator = function of frequency measurement and 0 : Fred FUnC Functioning Type = enables the reset of the totalizer from pane nd auxiliary digital input. = disables the reset of the totalizer from pane 1 rE5 auxiliary digital etting a value different from 5477, the assword (always 5477) will be required at the 5477: PRSS Password for the

aramete 3: npn 24 V (3 wires LYPE = Retu 7 = Hall = npn 2 wires 7 = Hall = npn 2 4 V (3 wires) 8 = 24 V Input = pnp 24 V (3 wires) 9 = TTL Input = NAMUR 10 = Variable Reluctance ull scale value of the frequency measurement. tdefines also the frequency value of the digital nput signal, associated to the display maximum value (HI - d). HI - F

Parameters settable from Menu : |

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9. SUMMARY OF BUTTONS ACTIONS (in view mode) On the following table we give a summary of the actions which may be performed during the view phase (not programming phase). To effectively execute the actions, it is necessary to press the buttons for some seconds.

MI001503-E

Access to Programming Menu OK Access to Quick Alarms Menu By pressing the button for some seconds and if FUnC=0 has been set, the indicator switches to the frequency view (except 11 digits model).

By pressing the button for some seconds and if FUnC=0 has been set, the indicator switches to the totalizer view (except 11 digits model). NENÙ Retained Alarms reset. + + + OK MENÙ

EErr: at the start may signal an error on the calibration memory. The functioning of the module is blocked while the Modbus communication is available (if optional card).

11. ORDER CODES Code Model S311D Display **Description**Indicator - totalizer with universal digital input. Power Supply 50..200 VAL.

10..40 Vpc / 19..28 VAc

Optional card: RS485 ModBus Port, 2 relay alarms and auxiliary digital input.

Isolation: 1500 VAc among each port

Calibration and configuration Service.

12. MODBUS REGISTERS (Optional Card)

The S311D-XX-L and S311D-XX-H lines indicators have MODBUS 16 bits (words) registers, accessible by RS485 serial communication (available in case of optional card use).

12.1 Supported MODBUS Commands

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Function Description
Read Holding Registers Reading of word registers up to 16 at a time. Writing of a word register.
Writing of word registers up to 16 at a time.

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⊕ OLITEON	WIIOU 1303-E	1011-1	0/20
Bit [7:0]	Set the Alarm 2 functioning: 0° = Alarm disabled 1 = Alarm on the minimum threshold 2 = Alarm on the maximum threshold 3 = Retained alarm on the minimum threshold (reset is not automatic) 4 = Retained alarm on the maximum threshold		
	(reset is not automatic)		
HI_T_LONG_MSW	Displayed frequency value corresponding to the maximum output value (most significant value).	40020	R/W
Bit [15:0]	Displayed frequency value corresponding to retransmitted output maximum value. Set the value referred to the view scale but without decimal point. Example: if the value referred to the view scale is 10,0, set 100. Default: 1000. The maximum and minimum limits are the same of HI_D_LOMG (40004-5).		
HI_T_LONG_LSW	Displayed frequency value corresponding to the maximum output value (least significant value).		R/W
LO_T_LONG_MSW	Displayed frequency value corresponding to the minimum output value (most significant value).		R/W
Bit [15:0]	Displayed frequency value corresponding to retransmitted output minimum value. Set the value referred to the view scale but without decimal point. Example: if the value referred to the view scale is 10,0, set 100. Default: 0. The maximum and minimum limits are the same of HI_D_LOMG (40004-5).		
LO_T_LONG_LSW	Displayed frequency value corresponding to the minimum output value (least significant value).		R/W
CONTRAST/RATIO	Register for the setting of the display contrast and of the totalizer reducing ratio.	40024	R/W
Bit [15:8]	Set the display contrast: values from 1 (minimum contrast) to 20 (maximum contrast). Default: 10		
Bit [7:0]	Set the value the totalizer will be divided for.		

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Digital Output :	Type: Open Collector, Imax: 50 mA, Vmax: 30 V.
Relay output:	Capacity: 8 A / 250 Vac (available only by the optional boar
Auxiliary digital input :	Opto isolated, Vmin: 10 V, Vmax: 30 V (available only by optional board).
Error of Voltage / Current output (referred to max measuring range):	Calibration Error: 0.1 % Thermal Coefficient: 0.01%/°K Linearity error: 0.05 % EMI (electromagnetic disturbance): < 1 %.
Response Time:	5 ms.
Environmental Conditions:	Temperature: -10 - +60°C Humidity min: 30%, max 90% at 40°C non condensing. Storage Temperature: -20 - +85°C.
Isolation:	1500 Vac among each pair of ports (included the optic card ports).
Connections:	-Removable screw terminals, 3.5 mm / 5.08 mm pitchThree buttons for menu navigation.
Protection:	IP65 (on the frontal with the apposite furnished seal).
Dimensions (L x W x H)	98.2 x 88.5 x 48 mm
Standards:	EN61000-6-4/2002-10 (electromagnetic emission, indust environment). EN61000-6-2/2006-10 (electromagnetic immunity, indust environment). EN61010-1/2001 (safety). All circuits must be isolated from the other circuits und dangerous voltage with double isolation. The power sup transformer must comply with EN60742: "Isolat transformers and safety transformers".

3. FUNCTIONING DESCRIPTION

3.1 Setting Modalities

All the parameters of the instrument may be set by the *Programming Menu* or RS485 (by the optional card). The alarms thresholds may be quickly set by the *Quick Alarm Menu*. Besides the Z-NET3 software has been developed for the programming and the configuration of the module (consult the web site www.seneca.it).

The instrument allows the following retransmission modalities: **Analog Output**: The digital input frequency measurement is translated into an analog output MI001503-E

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N.C. — Ø 16

N.A. — 🕢 15

Com. — Ø 14

Example of Totalizer Reset by the auxiliary digital input, internally supplied by the module

17 7 10 18

999

Full scale value of the frequency measurement. It defines also the frequency value of the digital input signal, associated to the display

Dozomotor	D	D	D - f 14
	Parameters s	settable from Menu : 5 []	
dPI n		0 = no decimal point (ex: 0000999) 1 = first digit (ex: 000099.9) 2 = second digit (ex: 000099.9) 3 = third digit (ex: 00009.999) 4 = fourth digit (ex: 0000.9999, only for 6 and 8 digits models)	0 = No decimal Point
		maximum value (H - d).	

				.T. L.	
Parameter Symbol	Parameter Name		on and setting		Default Value
L0-d	Start scale of frequency	Value displayed if Value on the follow		frequency is 0.	0
	measurement view	Display Digits Number	Min. Limit	Max. Limit	
		4	-1999	9999	
		6	-199999	999999	
		8	-19999999	99999999	
		11 (4+7)	-1999	9999	
HI - d	Full scale of frequency	Value displayed in HI - F. Value on the			1000
	measurement view	Display Digits Number	Min. Limit	Max. Limit	
		4	-1999	9999	
		6	-199999	999999	
		8	-19999999	99999999	
		11 (4+7)	-1999	9999	
dP_d	Decimal Point position on frequency measurement view	digits equal to 3.	234567.8)		0 = No decimal point
FILE	Filter level	0 = no filter 1 - 20			3
Aul	Number of samples on which the frequency average is calculated.	Selectable Value	s: 1 - 10.		1

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12.2 Holding Registers The 16-bit Holding Registers have the following structure

Most significant Bit Bit Index Least significant bit

15 14 13 12 11 10 9 8 7 6 5 4 3 2 1 0 **Word (16 bits): MODBUS Register** →

In the table the notation Bit [x:y] indicates all bits from x to y. For example Bit [2:1] indicates bit 2 and bit 1, and serves to illustrate the meaning of the various united combinations of the values of the two bits. Default values are indicated with the *symbol.

REGISTER	Description	IND.	R/W
MACHINE ID	Bit [15:8]: module ID (38 decimal) Bit [7:0]: external firmware revision	40001	R
FW_CODE	Register containing the internal code of the firmware.		
TYP_INP/AVI	Register for the setting of the input type and of the samples number on which the frequency average is calculated.		R/W
Bit [15:8]	Set the digital input type: 1: Reed 6: Photoelectric 2: npn 2 wires 7: Hall Sensor 3*: npn 24 V (3 wires) 8: 24 V Input 4: pnp 24 V (3 wires) 9: TTL Input 5: NAMUR 10: Variable reluctance		
Bit [7:0]	Set the samples number on which the frequency measurement average value will be calculated. Admitted Values: 1*-10.		
HI_D_LONG_MSW	Full Scale value of frequency measurement view (Most significant word).	40004	R/W
Bit [15:0]	Set the full scale value of the frequency measurement view scale (integer, most significant word): display value associated to Hi-F value (40009-10) of the input frequency. The decimal point on the set integer value is given by dP_d (40008). Default: 1000. Minimum Value (depending on the digits number): 4 Digits: -19999 6Digits: -199999 11(4+7) Digits: -1999 Maximum Value (depending on the digits number): 4 Digits: 39999 6Digits: 9999999 11(4+7) Digits: 99999999 11(4+7) Digits: 999999999999999999999999999999999999		
HI_D_LONG_LSW	Full Scale value of frequency measurement view (Least significant word).	40005	R/W

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PASSWORD	Enables / disables the password for the access to the Programming Menu.	40025	R/W
Bit [15:0]	By setting a value different from 5477, at the start of		
	the programming menu, the password will be		
	required (always 5477). Default: 5477.		
RLY1 AL1/RLY2 AL	2 Sets the normal status of relay outputs 1 and 2	40027	R/W
	(if optional board).	40027	
Bit [15:8]	Set the relay 1 functioning (if optional board):		
	0* = normally opened relay.		
	1 = normally closed relay.		
Bit [7:0]	Set the relay 2 functioning (if optional board):		
טונ ני.טן	0* = normally opened relay.		
	1 = normally closed relay.		
UP DOWN/TYP OUT		40020	D/M
FILT	retransmitted output type, Filter.	40020	IK/VV
Bit [15:12]	Set the the totalizer as UP-counter or DOWN-		
DIC [13.12]	counter:		
	0*= the totalizer increases of a unit at each rising		
	edge of the digital input.		
	1 = the totalizer decreases of a unit at each rising		
	edge of the digital input.		
Bit [11:8]	Retransmitted output type:		
Dit [11.0]	1 = 0 - 10 V output		
	2* = 4 - 20 mA output		
	3 = 0 - 20 mA output		
	4 = totalizer impulsive digital output.		
Bit [7:0]	Set the filter level.		
טונ ני.טן	Admitted Values: 0 = no filter, 1 - 20, Default: 3.		
ADDR PAR	Register for the setting of module address and	40020	D/M
ADDK_FAK	parity control.	40023	17/44
Bit [15:8]	Set the address of the module. Admitted values from		
Dit [10.0]	0x00 a 0xFF (decimal values on the range 1-255,		
	Default: 1).		
Bit [7:0]	Set the control parity:		
J. [7.10]	00000000 (0)*: no parity (NONE)		
	00000001 (1): even parity (EVEN)		
	00000010 (2): odd parity (ODD)		
BAUDR / DELAY	Register for the baud rate and the answer	40030	D/M
DAODIC/ DELAT	delay time setting.	40030	17/44
Bit [15:8]	Serial communication speed in baud:		
Dit [13.0]	00000000 (0x00):1200 00000100 (0x04): 14400		
	00000001 (0x01): 1200 00000100 (0x04): 14400 00000001 (0x01): 2400 00000101 (0x05): 19200		
	0000001 (0x01): 2400 00000101 (0x03): 19200 00000010 (0x02): 4800 00000110 (0x06)*: 38400		
	00000011 (0x02): 4800 00000110 (0x06) : 58400 00000011 (0x03): 9600 00000111 (0x07): 57600		

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Digital Output: The output generates an impulse at every increment / decrement of the totalizer. An impulse with duration >= -100 ms is generated. The output follows the totalizer up to approximately 4.7 Hz maximum frequency. At the raising of the counting frequency (up the maximum value above indicated), pulses are lost until an always low output is obtained. The output is compalled this his location.

outputs normally at high logic level.

3.3 Alarms on the frequency measurement (by optional board)
Two alarms may be activated on the digital input frequency measurement. Each ala set on the following way:
1) Alarm on the minimum thershold.
2) Alarm on the maximum thershold.

1) Alarm on the minimum thershold. 2) Alarm on the maximum thershold. 3) Retained Alarm on the minimum threshold (the reset is not automatic). 4) Retained Alarm on the maximum threshold (the reset is not automatic). 4) Retained Alarm on the maximum threshold (the reset is not automatic). For each alarm, it is possible to set Threshold and Hysteresys. If the alarm is set as high, the alarm will turn OFF when the input value is Threshold-Hysteresys; instead if the alarm is set as low, the alarm condition will end if the input value is Threshold-Hysteresys; instead if the alarm is set as low, the alarm condition will end if the input value is Threshold-Hysteresys. The alarms status is displayed by two leds on the frontal panel and by the relays (in case of optional card use). The relays toggle at the alarm condition and return to the initial status at the end of the alarm condition or at the reset (if retained). The retained alarms are reset by pressing the buttons UP + OK/MENÚ for some seconds (on normal view functioning).

As an alternative to the digital input frequency measurement, it is possible to display the totalizer value (saved on non-volatile memory). On the 11 digits (4+7) indicators both the values are simultaneously available.

values are simultaneously a value. The totalizer may be:
-UP-counter: it is increased of a unit at each rising edge of the digital input.
-DOWN-counter: it is decreased of a unit at each rising edge of the digital input.
Once the maximum or minimum limit has been reached, the counting is reset and starts agont to the counting it is eatly a reducing ratio the totalizer value will be divided for; so Besides it is possible to set a **reducing ratio** the totalizer value will be divided for; so the resulting value will be displayed.
The reset may be performed on the three following ways:
By the auxiliary digital input (if enabled).
By the pressure of the three buttons simultaneously for some seconds (if enabled).

-Via Modbus register.

3.5 Frequency measurement value or totalized value display Three Functioning Types may be set (except for the 11 digits indicators which display both the frequency value and the totalized value) which define the view modalities:

1) Type 0: both frequency and totalizer value view.

By pressing the UP button for some seconds the frequency measurement view is selected, instead by pressing DOWN for some seconds the totalized value is displayed. At the passage to the frequency value the writing !5 \(\text{appears for some seconds}\), while passing to the totalized value, the writing \(\text{E}\)0 appears.

2) Type 1: only frequency weasurement view.

3) Type 2: only totalizer value view.

3) Type 2 only totalizer value view.
3.6 Average and filter on the frequency measurement
It is possible to calculate the frequency measurement average on a settable number of samples.
The mean value is then filtered by a 20 levels over 1.

3.7 VLF Mode
If the Full scale value (in Hz) of the frequency measurement (#! -F) is 1 Hz the indicator shifts to Very Low Frequency Mode (VLF) where the minimum frequency value detectable is equal to 0.00015 Hz (1 impulse every 111 minutes).

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Parameters settable from Menu : A.L. I. / A.L.Z. Alarm 1 parameters: accessible from R.L. I.. menu and identified by the final index 1. Alarm 2 parameters: accessible from R.L. .?.. menu and identified by the final index 2

Parameter Symbol	Parameter Name	Descripti	on and settin	g range	Default Value
SEL I	Alarm 1 Threshold	Value referred to (decimal point set Settable value on	by dP_d).		500
SEŁ2	Alarm 2 Threshold	Display Digits Number	Min. Limit	Max. Limit	1000
	Alarm 1 Hysteresys	4	-1999	9999	10
H95 I		6	-199999	999999	
		8	-19999999	99999999	
H952	Alarm 2 Hysteresys	11 (4+7)	-1999	9999	10
ESP I	Alarm 1 Type	0 = Alarm disabled 1 = Alarm on the m 2 = Alarm on the m 3 = Retained alar	ninimum thresh naximum thres	hold	0: Al 1 disabled
FAb5	Alarm 2 Type	(the reset is not au 4 = Retained alar (the reset is not au	utomatic) m on the maxi		0: Al 2 disabled
rLY I	Relay 1: N.O./N.C.	Relay Functioning		1	0: N.O.
rLY2	Relay 2: N.O./N.C.	1 = normally close			0: N.O.

Pai	rameters settable	from Menu :	0.U.E.		
Parameter Symbol	Parameter Name	Descripti	on and setting	g range	Default Value
L0-E	Frequency Display Value associated to the minimum value	Limits for the scali Decimal point set Settable values or	L. ID I		0
	of the output.	Display Digits Number	Min. Limit	Max. Limit	
HI - F	Frequency Display	4	-1999	9999	
U1 - E	Value associated to	6	-199999	999999	1000
	the maximum value		-19999999	99999999	
	of the output.	11 (4+7)	-1999	9999	
LYPE		1 = 0 - 10 V 3 = 0 - 20 mA	2 = 4 - 20 mA 4 = totalizer dig	gital output	2: 4 - 20 mA

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LO D LONG MSW	Start Scale value of frequency measurement	40006	R/W
	view (most significant word).		
Bit [15:0]	Set the start scale value of the frequency		
	measurement view scale (integer, most significant		
	word): display value associated to a null input		
	frequency. The decimal point on the set integer		
	value is given by dP_d (40008).		
	Default: 0. The limits are the same of HI_D_LONG		
	(40004-5).		
LO_D_LONG_LSW	Start Scale value of frequency measurement	40007	R/W
	view (Least significant word).		
DP D/DP IN/DP TOT	Decimal point position on the frequency, HI-F	40008	R/W
	parameter and totalizer values.		
Bit [15:12]	Not used.		
Bit [11:8]	Decimal point position on the view of the frequency		
2.1.1.0	measurement (dp_D):		
	0* = no decimal point (ex: 12345678),		
	1 = first digit (ex: 1234567.8), 2 = second digit		
	N display digits-1.		
	11 digits (4+7): maximum number of decimal digits		
D' 17 41	equal to 3.		
Bit [7:4]	Decimal point position on Hi-F parameter (40009- 10) (dp IN):		
	0* = no decimal point (ex: 12345678).		
	1 = first digit (ex: 1234567.8), 2 = second digit		
	1 - III St digit (cx. 1204007:0), 2 - 3ccorid digit		
	Maximum number of decimal digits depending on		
	the display digits number:		
	4 digits: 3, 6 digits: 4, 8 digits: 4, 11 digits (3+7): 3		
Bit [3:0]	Decimal point position on the totalizer view		
	(dp_TOT):		
	0* = no decimal point (ex: 12345678)		
	1 = first digit (ex 1234567.8), 2 = second digit		
	N display digits-1.		
	11 (4+7) digits indicators: maximum number of		
	decimal digits equal to 6.		
HI-F LONG MSW	Full scale of frequency measurement in Hz	40009	R/W
	(Most significant Word).		
Bit [15:8]	Full scale of frequency measurement in Hz (integer,		
2	most significant word): associated to the view		
	frequency full scale HI D LONG (40004-5). The		
	decimal point on the set integer value is decided by		
	dP_IN (40008). Default: 1000. The maximum and		
	minimum limits are the same of HI_D_LONG		
	(40004-5).		

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Bit [7:0]	Response delay time. It represents the number of pauses of 6 characters each to be entered between the end of the Rx message and the start of the Tx message. Default value: 0.		
FREQ_LONG_MSW	Displayed value of the frequency measurement (Long format, most significant word).	40041	R
FREQ_LONG_LSW	Displayed value of the frequency measurement (Long format, least significant word).	40042	R
TOT_LONG_MSW	Totalizer value (Long format, most significant word).	40043	R
TOT_LONG_LSW	Totalizer value (Long format, least significant word).	40044	R
FREQ_FLOAT_MSW	Frequency Measurement value in Hz (Floating Point Format, most significant word).	40045	R
FREQ_FLOAT_LSW	Frequency Measurement value in Hz (Floating Point Format, least significant word).	40046	R
FREQ_SHORT	Frequency measurement in 0-10000 scale.	40047	R
	Frequency measurement in 010000 scale. 0: if the displayed value FREQ_LONG (40041-42) is equal to LO_T_LONG (40022-23, frequency		
	displayed value corresponding to the retransmitted output minimum value). 10000: if the displayed value FREQ_LONG (40041-42) is equal to HI_T_LONG (40020-21, frequency displayed value corresponding to the retransmitted output maximum value). Limitled: 011000.		
STATUS	output minimum value). 10000: if the displayed value FREQ_LONG (40041-42) is equal to HI_T_LONG (40020-21, frequency displayed value corresponding to the fretransmitted output maximum value).		R
	outpuf minimum value). 10000: if the displayed value FREQ_LONG (40041-42) is equal to HILONG (40020-21, frequency displayed value corresponding to the retransmitted output maximum value). Limited: 0+11000.		R
Bit [15:9]	output minimum value). 10000: if the displayed value FREQ_LONG (40041-42) is equal to HI_T_LONG (40020-21, frequency displayed value corresponding to the retransmitted output maximum value). Limited: 0+11000. Errors and alarms Signalling.		R
Bit [15:9] Bit 8	output minimum value). 10000: if the displayed value FREQ_LONG (40041-42) is equal to HI_T_LONG (40020-21, frequency displayed value corresponding to the retransmitted output maximum value). Limited: 0+11000. Errors and alarms Signalling. Not used		R
Bit [15:9] Bit 8 Bit 7	output minimum value): 10000: if the displayed value FREQ_LONG (40041-42) is equal to HI_T_LONG (40020-21, frequency displayed value corresponding to the retransmitted output maximum value). Limited: 0.+11000. Errors and alarms Signalling. Notused 1: Alarm 2 ON.		R
STATUS Bit [15:9] Bit 8 Bit 7 Bit 6 Bit 5	output minimum value). 10000: if the displayed value FREQ_LONG (40041-42) is equal to HI_T_LONG (40020-21, frequency displayed value corresponding to the retransmitted output maximum value). Limited: 0.+11000. Not used 1: Alarm 2 ON.		R
Bit [15:9] Bit 8 Bit 7 Bit 6	output minimum value). 10000: if the displayed value FREQ LONG (40041-42) is equal to HI_T_LONG (40020-21, frequency displayed value corresponding to the retransmitted output maximum value). Limited: 0+11000. Errors and alarms Signalling. Not used 1. Alarm 2 ON. 1. Alarm 1 ON. Not used.		R
Bit [15:9] Bit 8 Bit 7 Bit 6 Bit 5	output minimum value). 10000: if the displayed value FREQ_LONG (40041-42) is equal to HI_T_LONG (40020-21, frequency displayed value corresponding to the retransmitted output maximum value). Limited: 0+11000. Errors and alarms Signalling. Not used 1: Alarm 2 ON. 1: Alarm 1 ON. Not used 1: At the value to display is > HI - d of the 2,5 %.		R
Bit [15:9] Bit 8 Bit 7 Bit 6 Bit 5 Bit 4	output minimum value). 10000: if the displayed value FREQ_LONG (40041-42) is equal to HI_T_LONG (40020-21, frequency displayed value corresponding to the retransmitted output maximum value). Limited: 0.+11000. Not used 1: Alarm 1 ON. Not used. 1: Ho value to display is > HI - d of the 2,5%. Not used. 1: Failure on totalizer saving. Not used.		R
Bit [15:9] Bit 8 Bit 7 Bit 6 Bit 5 Bit 4 Bit 3	output minimum value). 10000: if the displayed value FREQ LONG (40041-42) is equal to HI_T_LONG (40020-21, frequency displayed value corresponding to the retransmitted output maximum value). Limited: 0+11000. Errors and alarms Signalling. Not used 1: Alarm 2 ON. 1: Alarm 1 ON. Not used. 1: the value to display is > HI - d of the 2,5%. Notused. 1: Failure on totalizer saving.	40048	R

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3.7 Password for access to the menu It is possible to enable the protection of the *Pro* The *Quick Alarm Menu* is instead password from the protection of the protection of

4. BUTTONS AND TERMINALS POSITION FRONTAL PANEL: BUTTONS / LEDS



7 8 9 10

Terminals from 11 to 21 are present only in case of optional board use.

5. ELECTRICAL CONNECTIONS

POWER SUPPLY: Verify the code on the label applied to the indicator.

Code S311D-XX-H

10 + 40 Vpc 19 + 28 Vac 3.0 W 0 2A 85 ÷ 265 VAC 3.0 W 9 2B DIGITAL INPUT
npn 2 wires npn 24 V (3 wires) pnp 24 V (3 wires) NAMUR 0 10 10 8 Ø 10 8 L__+0 7 Variable 24 V Input TTL Input

10 10 0 10 8 8 9 9 7 **-Ø** 10 **Ø** 10 9 10 J-₀ 7 $V_{\mu k}$ > 100 mV $_{\mu k}$. The 17 Vpc internal power supply for the sensors, is available by 7 (+) and 10 (-) terminals DIGITAL OUTPUT ANALOG OUTPUT Voltage **Generated Current** Ext. Power Supply 9 3 + V **-⊘** 3 **▶**-⊘ 4 **-**Ø3 **(A)** 4 1 5 5

Active Output (powered) Unpowered passive to connect to passive output to be connected to Imax=V/R=50 mA inputs. **SSENECA** MI001503-E

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Parameters settable from Menu : 6.115... Default Value MODBUS Add ttable values: from 1 to 255 Addr Parity control typ =None 1= Even 2 =Odd 0: Non PAr dEL PUNA communication speed

Parameters settable from Menu : 5.4.5... Description and setting range Default Value /alues from 1 (minimum contrast) to 20 [Ont Display Contrast = the totalizer increases of a unit at each rising UPdn Totalizer type 0: UP dge of the digital input.

= the totalizer decreases of a unit at each sing edge of the digital input.

= Overwrite the set values with the default Default Setting dFLL

Parameters settable from Menu : L.D.L. Default Value Symbol sets the value the totalizer will be divided for dmitted Values: 1 - 250. Totalizer Reducino Ratio -ALI no decimal point (ex: 123456) first digit (ex: 12345.6) second digit (ex: 1234.56) dP_E านจุบาลy aigits-1. 11 digits models (4 + 7): max number of decidigits equal to 6.

By confirming with **OK/MENÜ**, all the parameters are saved in flash memory and after some instants the module is reset.

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MI001503-E

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Full scale of frequency measurement in Hz (Least significant Word). HI-F_LONG_LSW SET1_LONG_MSW Alarm 1 Threshold (most significant word). 40011 R/W view scale but without decimal point.
For example if the value referred to the view scale is 20,0 set 200.
See HI_D_LONG (40004-5) for the maximum and minimum limits of the parameter. Default: 500.

SET1_LONG_LSW Alarm 1 Threshold (least significant word). 40012 R/W HYS1_LONG_MSW Alarm 1 Hysteresis (most significant word).

Bit [15:0] Alarm 1 hysteresis (blue referred to the formula.)

Alarm 1 hysteresis Value referred to the formula. See HI D LONG (40004-5) for the maximum and minimum limits of the parameter. Default: 10.

HYS1_LONG_LSW | Alarm 1 Hysteresis (least significant word). | 40014 R/W SET2_LONG_MSW Alarm 2 Threshold (most significant word). 40015 R/W view scale but without decimal point.
For example if the value referred to the view scale is 20,0 set 200.
See H_D_LONG (40004-5) for the maximum and minimum limits of the parameter. Default: 1000.

SET2_LONG_LSW Alarm 2 Threshold (least significant word). 40016 R/W See **HI_D_LONG** (40004-5) for the maximum and minimum limits of the parameter. Default: 10.

Alarm 2 Hysteresis (least significant word). 40018 R/W HYS2_LONG_LSW TYP_AL1/TYP_AL2 Setting of alarms functioning. 40019 R/W Set the Alarm 1 functioning: 0* = Alarm disabled I = Alarm on the minimum threshold Alarm on the maximum threshold 3 = Retained alarm on the minimum threshold (res

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Bit 0

MI001503-E 1: Calibration Eeprom is damaged

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ontact Seneca srl to solve the problem RESET Module Reset. 40049 R/W ting 0xC1A0 (decimal 49568), rese



osal of Electrical & Electronic Equipment (Applicable three European countries with separate collection programs)



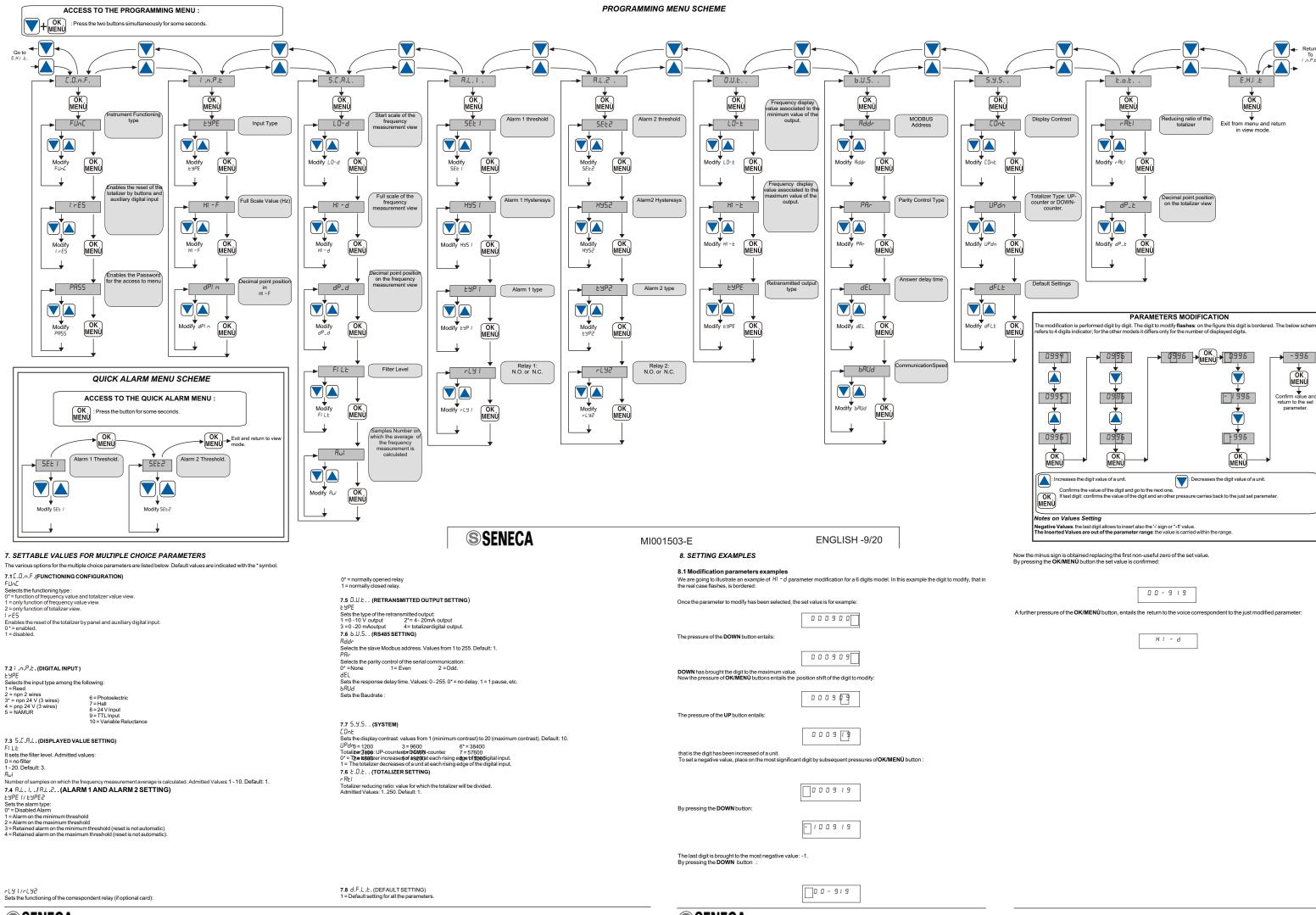
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