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

• A, b, 3 of 11 (4+7) bigits 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

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.

Power Supply:	Code S311D-XX-L: 10-40 Vpc, 19-28 Vac 50-60 Hz, max 3 W
	Code S311D-XX-H: 85-265 Vac 50-60 Hz, max 3 W.
Digital Input:	-Reed
	-npn 2 wires
	-npn 24 V (3 wires)
	-pnp 24 V (3 wires)
	-NAMUR `
	-Photoelectric
	-Hall
	-24 V Input
	-TTL
	-Variable Reluctance
Absorbed Current:	Max 7 mA
VMAX:	28 Vnc
Sensors Power Supply:	17 Vpc
Frequency Range:	0.00015 Hz - 10 kHz
Frequency Resolution:	< 0.05 %
Analog Output:	Generated Current: 0 - 20 mA, max load resistance: 500 .
9	Voltage: 0 - 10 V, min load resistance: 1 k
	Configurable Start and Full scale values.
	Resolution: 2 A/1 mV.
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OPTIONAL BOARD CONNECTIONS
Relay Output 1 (8 A/250 Vac) Relay Output 2 (8 A/250 Vac)

N.C. — Ø 13 N.A. — 🕢 12

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**Ø** 11

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N.C. — Ø 16 N.A. — Ø 15

Com. — Ø 14

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

17 7 10 18

RS485	
В _	<b></b> Ø 21
Α _	<b>O</b> 20
GND _	<b>—⊘</b> 19

Auxiliary Digital Input: Totalizer Reset (external power supply)

24 V 18 D-V ext



Parameter Symbol	Parameter Name	Description and setting range	Default Value	
FUn[	Indicator Functioning Type	0 = function of frequency measurement and totalizer view. 1 = only function of frequency measurement value view. 2 = only function of totalizer view.	0 : Freq and Tot	
I rES	Enables the reset of the totalizer by buttons and auxiliary digital input	0 = enables the reset of the totalizer from panel and auxiliary digital input. 1 = disables the reset of the totalizer from panel and auxiliary digital input.	0 : Enabled	
PRSS	Enables the Password for the access to menu	Setting a value different from <b>5477</b> , the password (always 5477) will be required at the start of the menu.		
Parameters settable from Menu :   , , , , , , , , ,				

	7 17 121			
Symbol Parameter	Parameter Name	Description and setting range	Default Value	
FALE	Input type	1 = Reed 6 = Photoelectric 2 = npn 2 wires 7 = Hall 3 = npn 24 V (3 wires) 8 = 24 V Input 4 = pnp 24 V (3 wires) 9 = TTL Input 5 = NAMIR 10 = Variable Reluctance	3: npn 24 V (3 wires)	
HI -F	Full Scale Value (Hz)	Full scale value of the frequency measurement. It defines also the frequency value of the digital input signal, associated to the display maximum value (HI - d).	1000 Hz	
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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.

OK Access to Programming Menu	OK MENÙ Access to Quick Alarms Menu
By pressing the button for some seconds and if FUnE=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).
▲ OK MENÙ Retained Alarms reset.	A+V+OK MENÙ
	Totalizer Reset (if this functionality has been enabled by setting I rE5=0).

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).

Code			Description
Model S311E	)		Indicator - totalizer with universal digital input.
Display	-4		4 digits
	-6		6 digits
	-8		8 digits
-11			4+7 digits
Power Supply	-H		85265 VAC
-L			1040 Vpc / 1928 Vac
Options		-0	Optional card: RS485 ModBus Port, 2 relay alarms and
			auxiliary digital input.
		1	Isolation: 1500 Vac among each port
		/T	Calibration and configuration Service.

# 12. MODBUS REGISTERS (Optional Card)

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The S311D-XX-L and S311D-XX-H lir

a	accessible by RS485 serial communication (available in case of optional card use).  12.1 Supported MODBUS Commands						
	Code	Function	Description				
	03	Read Holding Registers	Reading of word registers up to 16 at a time.				
			Writing of a word register.				
	16	Write Multiple Registers	Writing of word registers up to 16 at a time.				

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D'/ /7 AT	Cattle Alama Of maticalians		
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	40020	R/W
	the maximum output value (most significant	40020	
	value).		
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_LONG (40004-5).		
HI_T_LONG_LSW	Displayed frequency value corresponding to	40021	R/W
	the maximum output value (least significant		
	value).		
LO T LONG MSW	Displayed frequency value corresponding to	40022	R/W
	the minimum output value (most significant		
	value).		
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_LONG (40004-5).		
LO_T_LONG_LSW	Displayed frequency value corresponding to	40023	R/W
	the minimum output value (least significant		
	value).		
CONTRAST/RATIO	Register for the setting of the display contrast	40024	R/W
COIIIAOIIIIAIIO	and of the totalizer reducing ratio.	70024	
Bit [15:8]	Set the display contrast: values from 1 (minimum		
Dit [7:0]	contrast) to 20 (maximum contrast). Default: 10		
Bit [7:0]	Set the value the totalizer will be divided for.  Admitted values: 1 - 250.		

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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 board
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 optio 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, industrenvironment). EN61000-6-2/2006-10 (electromagnetic immunity, industrenvironment). EN61010-1/2001 (safety). All circuits must be isolated from the other circuits und dangerous voltage with double isolation. The power supptransformer must comply with EN60742: "Isolat

3. FUNCTIONING DESCRIPTION

""" I shall be not frequency measurement or the totalizer value is translated into an analog or

### 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

griai (voitago or ourrorit).	
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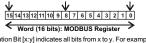
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	Full scale value of the frequency measurement. It defines also the frequency value of the digital input signal, associated to the display maximum value (HI - d).	1000 Hz
dPI n	0 = no decimal point (ex: 00009999) 1 = first digit (ex: 0000999.9) 2 = second digit (ex: 000099.99) 3 = third digit (ex: 00009.999) 4 = fourth digit (ex: 0000.9999, only for 6 and 8 digits models)	0 = No decimal Point

	Parameters s	settable from Mo	enu : 5.[	.A. L.	
Parameter Symbol	Parameter Name	· ·	on and setting		Default Value
L0-d	Start scale of frequency	Value displayed it 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			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	0 = no decimal po 1 = first digit(ex: 1 N display digits-1 11 digits models ( digits equal to 3.	1234567.8)	·	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



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)	40001	R
	Bit [7:0]: external firmware revision		
FW_CODE	Register containing the internal code of the	40002	R
	firmware.		
TYP_INP/AVI	Register for the setting of the input type and of		R/W
	the samples number on which the frequency		
	average is calculated.		
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.		
III D I ONO MOW		40004	D/14
HI_D_LONG_MSW	Full Scale value of frequency measurement view (Most significant word).	40004	K/W
	Set the full scale value of the frequency		
Bit [15:0]	measurement view scale (integer, most significant		
	word): display value associated to <b>Hi-F</b> value		
	(40009-10) of the input frequency. The decimal point		
	on the set integer value is given by <b>dP d</b> (40008).		
	Default: 1000.		
	Minimum Value (depending on the digits number):		
	4 Digits:-1999 6Digits: -199999		
	8 Digits: -19999999 11 (4+7) Digits: -1999		
	Maximum Value (depending on the digits number):		
	4 Digits: 9999 6 Digits: 999999		
	8 Digits: 99999999 11 (4+7) Digits: 9999		
HI D LONG LSW	4 Digits:9999 6Digits: 999999 8 Digits: 9999999 11 (4+7) Digits: 99999 Full Scale value of frequency measurement	40005	R/W

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PASSWORD	Enables / disables the password for the	40025	R/W
	access to the Programming Menu.		
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_A	L2 Sets the normal status of relay outputs 1 and 2	40027	R/W
	(if optional board).		
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):		
	0* = normally opened relay.		
	1 = normally closed relay.		
UP_DOWN/TYP_OU		40028	R/W
FILT	retransmitted output type, Filter.		
Bit [15:12]	Set the the totalizer as UP-counter or DOWN-		
	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		
D': 144 AT	edge of the digital input.  Retransmitted output type:		
Bit [11:8]	1 = 0 - 10 V output		
	2*=4-20 mA output		
	3=0-20 mA output		
	4 = totalizer impulsive digital output.		
Bit 17:01	Set the filter level.		
Dit [1.0]	Admitted Values: 0 = no filter. 1 - 20. Default: 3.		
ADDR PAR	Register for the setting of module address and	40029	R/M
ADDIX_FAIX	parity control.	40023	
Bit [15:8]	Set the address of the module. Admitted values from		
	0x00 a 0xFF (decimal values on the range 1-255,		
	Default: 1).		
Bit [7:0]	Set the control parity:		
	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	R/W
	delay time setting.		
Bit [15:8]	Serial communication speed in baud:		
	00000000 (0x00):1200 00000100 (0x04): 14400		
	00000001 (0x01): 2400 00000101 (0x05): 19200		
	00000010 (0x02): 4800 00000110 (0x06)*: 38400		
	00000010 (0x02): 4800 00000110 (0x06)*: 38400 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

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 alarm may be 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).
5 re ach 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. The alarm 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/MENU 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.

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 exposed.

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). **SENECA** MI001503-E

Parameters settable from Menu:

Alarm 1 parameters: accessible from R.L. I.. menu and identified by the final inde

Parameter Symbol	Parameter Name	Descripti	on and setting	g range	Default Value
SEL I	Alarm 1 Threshold	/alue referred to the displayed frequency value decimal point set by dP_d). Settable value on the following ranges:			500
SEŁ2	Alarm 2 Threshold	Display Digits Number	Min. Limit	Max. Limit	1000
	Alarm 1 Hysteresys	4	-1999	9999	10
HY5 1		6	-199999	999999	
		8	-19999999	99999999	
H952	Alarm 2 Hysteresys	11 (4+7)	-1999	9999	10
EAL I	Alarm 1 Type	0 = Alarm disabled 1 = Alarm on the m 2 = Alarm on the m	ninimum thresh naximum thres	hold	0: Al 1 disabled
FAb5	Alarm 2 Type	3 = Retained alarm on the minimum threshold - the reset is not automatic) 1 = Retained alarm on the maximum threshold the reset is not automatic)		0: Al 2 disabled	
rLY I	Relay 1: N.O./N.C.	Relay Functioning 0 = normally open		\	0: N.O.
LLY Y		1 = normally close			0: N.O.

Parameters settable from Menu :					
Parameter Symbol	Parameter Name	Descripti	on and setting	g range	Default Value
L0-E	Frequency Display Value associated to	Limits for the scali Decimal point set Settable values or	L		0
	the minimum value 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	
<b>LYPE</b>	Retransmitted output type	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 view (Least significant word).	40007	R/W
DP_D/DP_IN/DP_TOT	Decimal point position on the frequency, HI-F parameter and totalizer values.	40008	R/W
Bit [15:12]	Not used.		
Bit [11:8]	Decimal point position on the view of the frequency 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 equal to 3.		
Bit [7:4]	Decimal point position on Hi-F parameter (40009-10) (dp. Mi).  0' = no decimal point (ex: 12345678),  1 = first digit (ex: 1234567.8), 2 = second digit   Maximum number of decimal digits depending on the display digits number:		
Bit [3:0]	4 digits: 3, 6 digits: 4, 8 digits: 4, 11 digits (3+7); 3  Decimal point position on the totalizer view (dp_TOT):  0° = no decimal point (ex: 12345678)  1 = first digit (ex: 1234567.8), 2 = second digit		
HI-F LONG MSW	I – inistulgit (ex 124490 / o), 2 – second digit      N display digits-1.     11 (4+7) digits indicators: maximum number of deixed digits equal to 6.      Full scale of frequency measurement in Hz	40000	Day
HI-F_LUNG_MSW	(Most significant Word).	40009	R/W
Bit [15:8]	Full scale of frequency measurement in Hz (integer, 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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Sit [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.		
REQ_LONG_MSW	Displayed value of the frequency measurement (Long format, most significant word).	40041	R
REQ_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
REQ_FLOAT_MSW	<u>Frequency Measurement value in Hz (Floating Point Format, most significant word).</u>	40045	R
REQ_FLOAT_LSW	Frequency Measurement value in Hz (Floating Point Format, least significant word).	40046	R
REQ_SHORT	Frequency measurement in 0-10000 scale.	40047	R
	Frequency measurement in 0 10000 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). Limited: 0+11000.		
STATUS	Errors and alarms Signalling.	40048	R
Bit [15:9]	Notused		
Bit 8	1: Alarm 2 ON.		
Bit 7	1: Alarm 1 ON.		
Bit 6	Not used.		
Bit 5	1: the value to display is > H - d of the 2,5%.		
Bit 4	Not used.		
Bit 3	1: Failure on totalizer saving.		
Bit 2	Not used.		
Bit 1	The events (rising edges of the digital input) occur with too high frequency and the instrument suspends temporarily the measurement.		

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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 for

8888888

10 ÷ 40 Vpc 19 ÷ 28 Vac 3.0 W — O 2A

8 8 8

10 S Ø 8 8 S Ø 9 7

**6 0** 5

**-**Ø 6

DIGITAL OUTPUT

Imax=V/R=50 mA

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

OK MENÚ

DOWN UP

Parameters settable from Menu : 5.1.5... Default Value MODBUS Addr ttable values: from 1 to 255. Rddr Parity control typ =None 1= Even 2 =Odd 0: None dEL

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PAr 3: 3840 PUNA communication speed Parameters settable from Menu : 5.5.5.

Parameter Symbol	Parameter Name	Description and setting range	Default Value		
COnt	Display Contrast	Values from 1 (minimum contrast) to 20 (maximum).	10		
UPdn	Totalizer type: UP-counter or DOWN-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.	0: UP		
dFLL	Default Settings	1 = Overwrite the set values with the default values.			
Parameters settable from Menu : L.D.L.					

Totalizer Reducing Ratio t sets the value the totalizer will be divided for. Admitted Values: 1 - 250. -ALI no decimal point (ex: 123456) first digit (ex: 12345.6) second digit (ex: 1234.56) dP\_E 11 digits models (4 + 7): max number of decir digits 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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			0/20
HI-F_LONG_LSW	Full scale of frequency measurement in Hz (Least significant Word).	40010	R/W
SET1_LONG_MSW	Alarm 1 Threshold (most significant word).	40011	R/W
Bit [15:0]	Alarm 1 threshold: value referred to the frequency 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).	40013	_
Bit [15:0]	Alarm 1 hysteresis (most significant word).	40013	R/W
ың (15:0)	view scale but without decimal point. For example if the value referred to the review scale is 10,00 set 1000.  See <b>Hi_D_LONG</b> (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
Bit [15:0]	Alarm 1 threshold: value referred to the frequency view scale but without decimal point. For example if the value referred to the view scale is 20,0 set 200.  See HL 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
		70010	
HYS2_LONG_MSW	Alarm 2 Hysteresis (most significant word).	40017	
HYS2_LONG_MSW Bit [15:0]	Alarm 2 Hysteresis (most significant word).  Alarm 2 hysteresis. Value referred to the frequency view scale but without decimal point. For example if the value referred to the view scale is 10,00 set 1000.  See HI D_LOMG (40004-5) for the maximum and minimum limits of the parameter. Default: 10.	40017	
Віі [15:0]	Alarm 2 hysteresis. Value referred to the frequency view scale but without decimal point. For example if the value referred to the view scale is 10,00 set 1000.  See HI_D_LONG (40004-5) for the maximum and	40017	R/W
	Alarm 2 hysteresis. Value referred to the frequency view scale but without decimal point. For example if the value referred to the view scale is 10,00 set 1000.  See HI_D_LONG (40004-5) for the maximum and minimum limits of the parameter. Default: 10.	40017	R/W

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Bit 0	Contact Seneca srl to solve the problem.		
RESET	Module Reset.	40049	R/W
Bit [15:0]	-By writing 0xC1A0 (decimal 49568), reset command.		



Disposal of Electrical & Electronic Equipment (Applicable thro other European countries with separate collection programs)

other European countries with separate collection programs)
This symbol, found on your product or on its packaging, indicates that this product should not be treated as household waste when you wish to dispose of it. Instead, it should be handed over to an applicable collection point for the recycling of electrical and electronic equipment. By ensuring this product is disposed of correctly, you will help prevent potential negative consequences to the environment and human health, which could otherwise be caused by inappropriate disposal of this product. The recycling of materials will help to conserve natural resources. For more detailed information about the recycling of this product, please contact your local city office, waste disposal service or the retail store where you purchased this product. This document is property of SENECA srl. Duplication and reprodution are forbidden, if not authorized. Contents



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**SENECA** 

7 8 9 10 3 4 5 6

Ø 10 8

v (5) 9 8

**▶**-⊘ 4

1 5 5

active inputs.

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Alarm 1 Led

OK/MENÙ

DIGITAL INPUT
npn 2 wires npn 24 V (3 wires) pnp 24 V (3 wires) NAMUR

L\_\_\_+0 7

**Ø** 10

 $V_{\mu k}$  > 100 mV $_{\mu k}$ . The 17 Vpc internal power supply for the sensors, is available by 7 (+) and 10 (-) terminals

Ø 3 + Ø 3 A

inputs.

Voltage

0 3 + 0 3 0 4 V 0 4

9 10 9 9

24 V Input TTL Input Variable Reluctance

ANALOG OUTPUT

**-0** 3

**-0** 10

Generated Current Ext. Power Supply

Active Output (powered) Unpowered passive output to be connected to

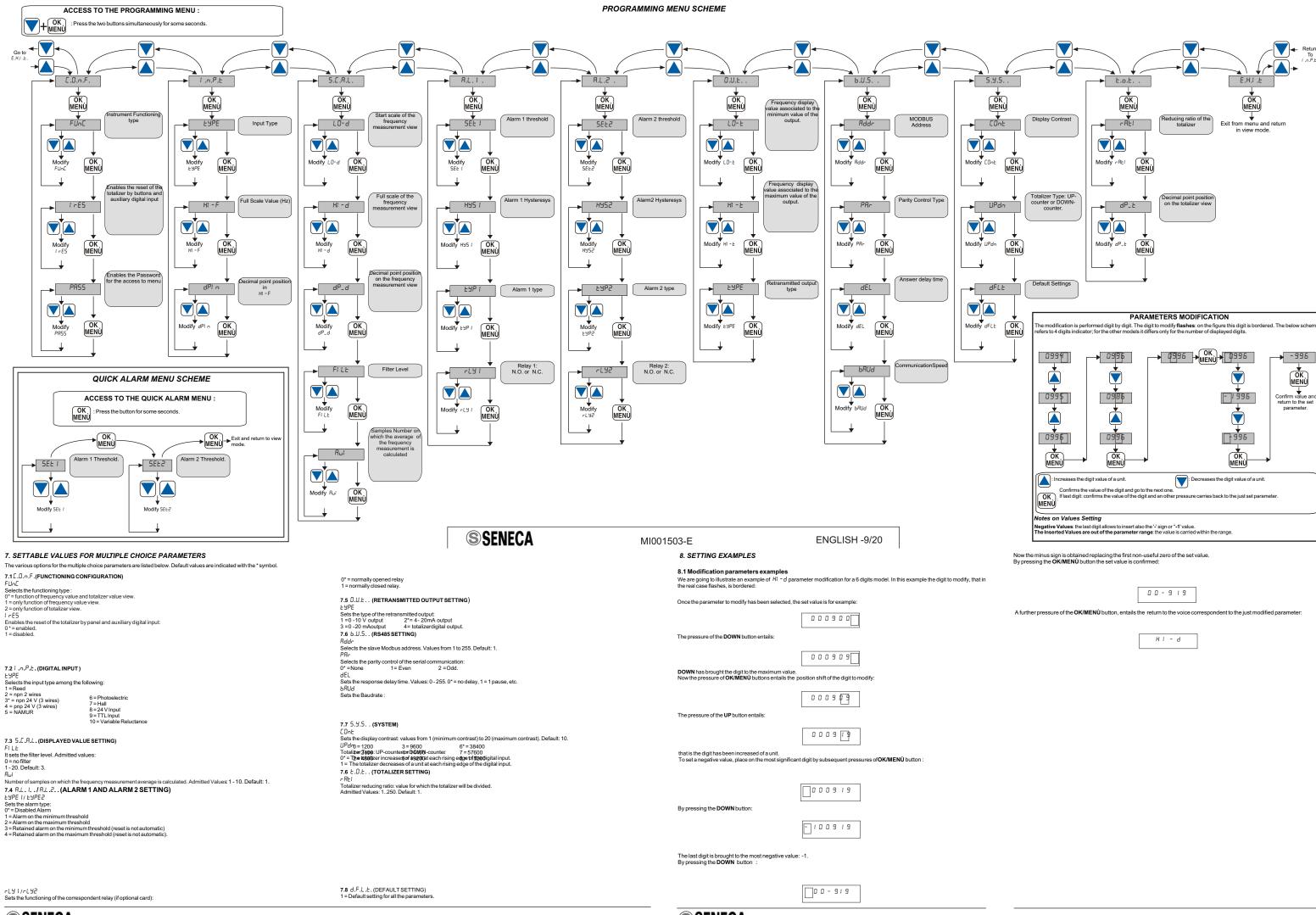
Terminals from 11 to 21 are present only in case of optional board use.

5. ELECTRICAL CONNECTIONS

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

Code S311D-XX-H 85 ÷ 265 V<sub>AC</sub> 3.0 W 2B

REAR SIDE: TERMINALS 5-Aux. Dig. Input Relay 2 R



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