

**SENECA**

**S Line**

**S311AK-4-L**  
Module: Advanced analog indicator with 4 digits display.

**Installation manual**

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**SENECA s.r.l.**  
Via Germania, 34 - 35127 - Z.I. CAMIN - PADOVA - ITALY  
Tel. +39.049.8705355 - 8705359 - Fax +39.049.8706287  
e-mail: info@seneca.it - www.seneca.it

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Linearity error	0,05%
Electromagnetic interference	<1%
Sensor voltage supply	16V (Max 25 mA)
Galvanic insulation	1500Vac between measure port and power supply
<b>ENVIRONMENTAL CONDITIONS:</b>	
Operating temperature	-10...+65 °C
Storage temperature	-30...+85 °C
Humidity	30...90 % non-condensing
Altitude	Up to 2000 m above the sea level
<b>CONNECTIONS</b>	
Terminal block	Removable 2-way screw terminals, 5,08mm pitch
Terminal block	Removable 3 way screw terminals, 5,08 mm pitch
<b>DIMENSION / BOX</b>	
Size (L x W x H)	96 x 48 x 40 mm
Weight	200 g
Protection degree	IP 65
Case	Plastic
<b>STANDARDS</b>	
Standards	EN61000-6-4/2007 (electromagnetic emission, industrial environment) EN61000-6-2/2005 (electromagnetic immunity, industrial environment) EN61010-1/2001 (safety). <i>All circuits must be insulated from the other circuits under dangerous voltage with double insulation. The power supply transformer must comply with EN60742: "Insulated transformers and safety transformers"</i>

Parameter menu			
Parameter	Function	C.O.n.F.	Default value
PASS	Enable the password from the access menu	If you set a different value from 5477, the password (5477) will always be required at the start of menu.	5477: Disable password.
I.n.P.t.			
TYPE	Input Type	1= Current 0= Voltage	1
LO-E	Electrical start scale value	Start scale in V (Voltage input) or mA (current input). It defines the value of the input signal associated to the minimum value of view (LO-d). Minimum value=0, maximum value for current=20.00 maximum value for voltage=10.00.	4.00 (mA)
HI-E	Electrical full scale value	Full scale in V (Voltage input) or mA (current input). It defines the value of the input signal associated to the maximum value of view (HI-d). Minimum value=0, maximum value=99.99.	20.00 (mA)
S.C.R.L.			
LO-d	Start scale of display	Integer values between the following limits: minimum = -999 and maximum= 9999	0
HI-d	Full scale of display	Integer values between the following limits: minimum = -999 and maximum= 9999	1000

**Change parameter menu**

The change occurs digit to digit. The digit to modify flashes: on the figure below the digit that you will modify is bigger than others. The diagram represented an example with 4 digits.

△ Increase the digit of one unit. ▽ Decrease the digit of one unit.

OK/MENU Confirm the value of digit and pass to the next. If you are at the last digit: with one press confirm the value of digit, and with another press return at the setting parameters.

**Notes concerning the setting of the values.**

Negative values: The last digit also allows to enter the sign "-" or the value "-1"

**Notes: IF THE ENTERED VALUE IS OUT OF RANGE, THE S311AK-4L SETS AND SHOWS AUTOMATICALLY THE MAXIMUM VALUE ALLOWED FOR THAT PARAMETER.**

**Example:**  
If you set the value of HI-E at 40.00 this automatically will set at 20.00 because it is the maximum allowed. In the same way for negatives digits.

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**General description**

The S311AK-4-L can read voltage (0-10 V) or current (0-20 mA) signals with or without loop powered measure. All parameters and display configuration can be set by menu. The input will be shown and scaled on 4 digit display according to the setup. S311AK-4-L has an excellent resolution, precision and temperature stability. The compact dimensions allow to improve the assembly in electrical switchboard.

**General features**

HW	<ul style="list-style-type: none"> <li>Voltage Input 0-10V (protection +/- 30Vdc), input impedance ~ 25KΩ ADC to 16 bit.</li> <li>Current Input 0-20mA (protection +/- 25mA), input impedance ~ 20Ω ADC to 16bit.</li> <li>Loop powered measure (16V, Max 25mA)</li> <li>Easy navigation on the programming menu through three buttons on the front panel.</li> <li>Adjustable contrast.</li> <li>Galvanic insulation 1500Vac between measure port and power supply</li> <li>Protection index IP65 (with the provided seal)</li> </ul>
SW	<ul style="list-style-type: none"> <li>Input parameters and display configuration can be setting from menu.</li> <li>Programming menu with password.</li> </ul>

**Technical features**

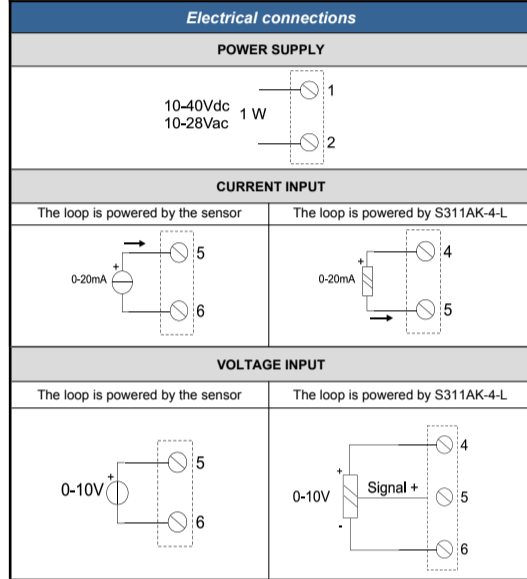
POWER SUPPLY	
Voltage	10-40 V DC o 19-28 V AC (50-60 Hz)
Max power consumption	0,9 Watt

**ERRORS REPORTED TO MAXIMUM INPUT RANGE VOLTAGE AND CURRENT MEASURED:**

Resolution	16 bit, 40000 dots max
Accuracy	0,05%
Thermal coefficient	0,005%/°K

**Installation Rules**

The module is designed to be installed in the electrical switchboard. In order to ensure optimum performance and the longest working life, the module(s) must be supplied with an adequate ventilation and no raceways or other objects that obstruct the ventilation slots. Never install modules above sources of heat.



dP-d	Decimal point position on display	0= no decimal point 1= Decimal point in the first digit: 000,0 2= Decimal point in the second digit: 00,00 etc	No decimal point.
Flt	Filter level	0= no filter 1...5 = Active	0
S.Y.S.			
dFlt	Default setting	1= Overwrite the set parameter with default value and exit from menu.	0
Con	Contrast	0...3= Regulate the contrast of display.	1
E.H.I.t.			
Exit from menu		If you confirm with OK/MENU the impostated parameter will be saved in a flash memory. The module is already ready to use with new setting.	

**Error Types**

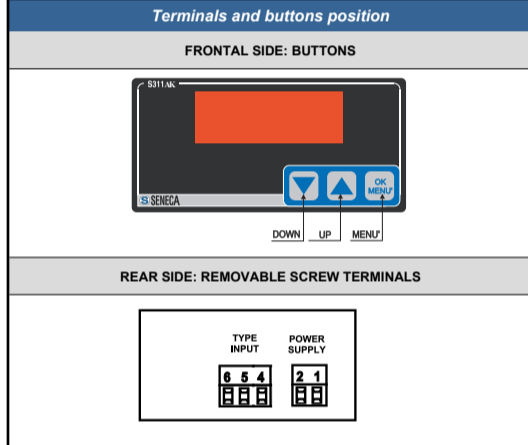
Display	Description of errors.
▬▬▬▬	A) The value to be shown is greater than 3% regarding the value of HI-d. B) The value to be shown is greater than 9999
▬▬▬▬	A) The value to be shown is lower than 3% regarding the value of LO-d. B) The value to be shown is lower than - 9999
▬▬▬▬	Fast transition from ▬▬▬▬ to ▬▬▬▬: protection from over current (input > 25mA).

**Parameter configuration example**

If you will set the S311AK-4-L with Voltage input 0-10 V and a type of filter following the instruction below.

- Enter upon menu pressing for 3 seconds DOWN + MENU /OK . Will appear I.n.P.t. menu.
- Open I.n.P.t. menu and modify the following parameters: S.Y.S.= 0, L.O.-E.= 00,00 H.I.-E.= 10,00
- Open S.C.R.L. menu and modify the following parameters: L.O.-d.= 0, H.I.-d.= 1000, d.P.-d.= 2 F.I.l.t.= 1

For a complete diagram of programming show the page number 9.

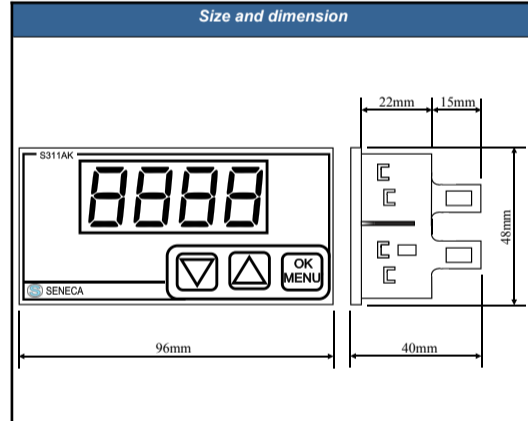
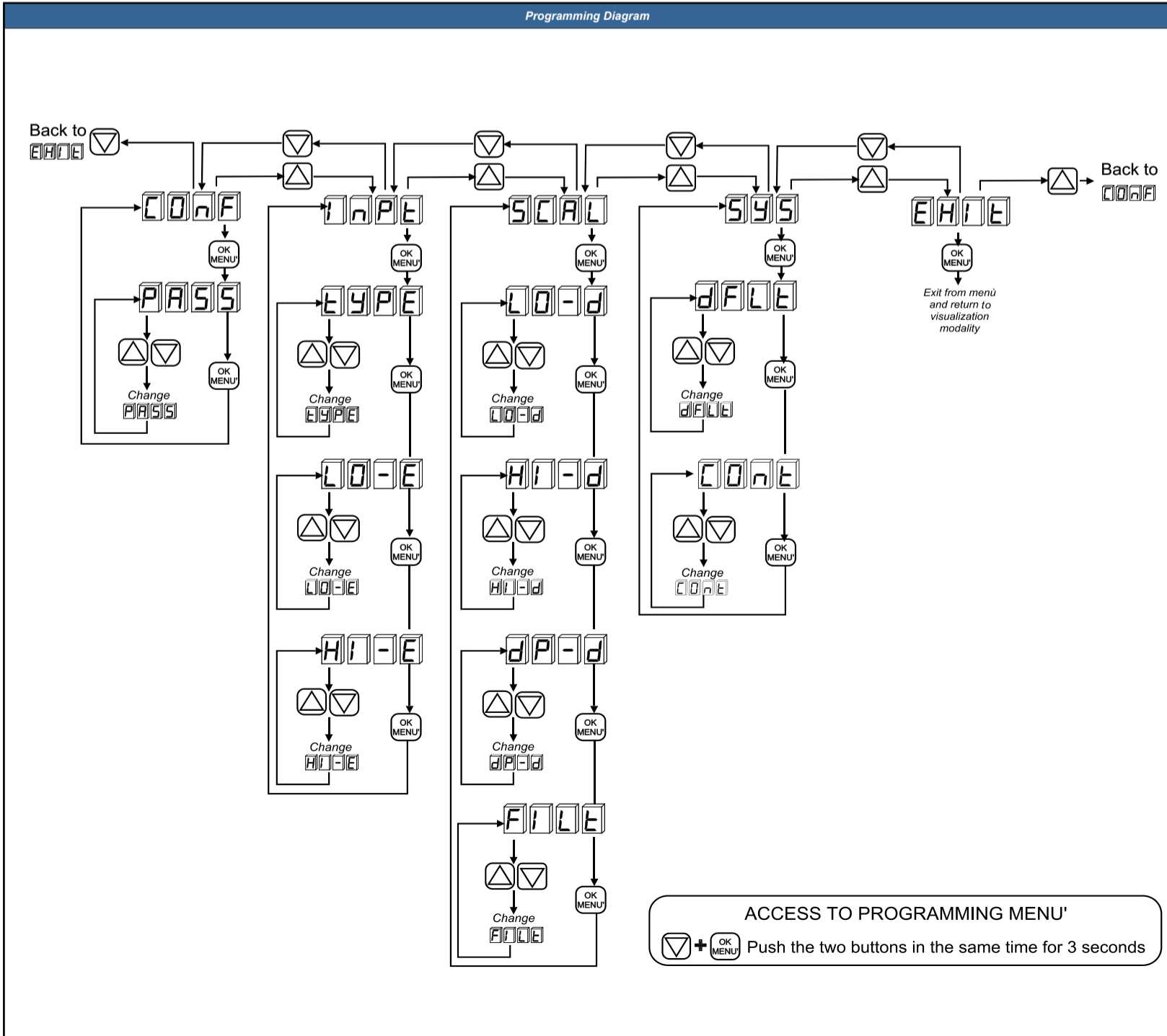


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**Waste disposal**

Disposal of Electrical & Electronic Equipment (Applicable throughout the European Union and 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.

**CSQ IQNet**  
ISO9001-2000

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