EN

FREQUENCY / CURRENT-VOLTAGE CONVERTER S111-1-ST

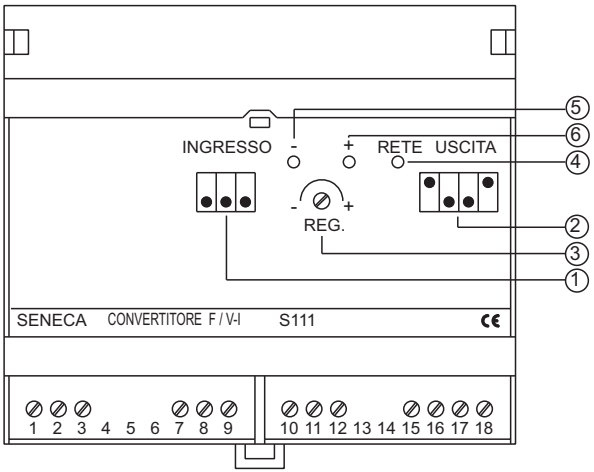
CE

Reference norms:
EN 61000-6-4 Industrial environment emission norm
EN 61000-6-2 Industrial environment immunity norm
EN 61010-1 Safety

S111 is a frequency/current converter made by digital technology, to allow a wide-range full-scale and input frequency programmation starting from very low frequencies without ripple's problem on output. S111 has optoisolated inputs that allows the connection with lot kinds of sensors : reed, NPN (2 or 3 wires connection), PNP, NAMUR, 24Vdc pulses, photoelectric sensors and Hall effect sensors.Three DIP-switches on front panel allow to select 8 different full-scale ranges, and a precision potentiometrer 20 rounds allows to control finely full-scale in the selected range. Four DIP-switches allows to select the output you want:

- current 4 - 20 mA (both active and passive)
- current 0 - 20 mA (both active and passive)
- voltage 1 - 5 Vdc (voltage 2 - 10 Vdc available on request)
- voltage 0 - 5 Vdc (voltage 0 - 10 Vdc available on request)

Box is made in autoextinguishing and sockproof ABS, to be fasten on 35 mm guide (DIN 6277), or to be fasten by screw.

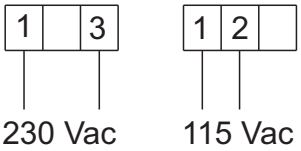


1) DIP-switch “INGRESSO” : selection of frequency input range
2) DIP-switch “USCITA” : selection of output
3) Potentiometer “REG.” : fine regulation of full-scale
4) Green LED “RETE” : warning powered instrument
5) Red LED “-” : warning input frequency lower than 3% full-scale
6) Red LED “+” : warning input frequency upper than 90% full-scale

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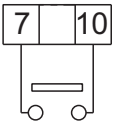
CONNECTIONS

- POWER SUPPLY

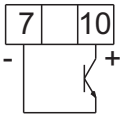


- INPUTS

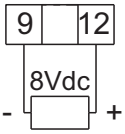
Reed



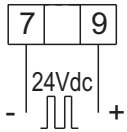
NPN (2 wires)



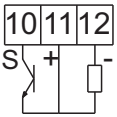
NAMUR



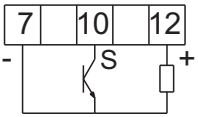
Pulses 24 Vdc



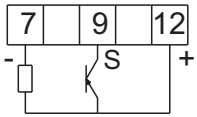
NPN 12V (3 wires)



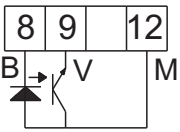
NPN 24V (3 wires)



PNP 24V (3 wires)



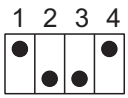
Photoelectric Sensor



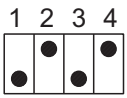
- OUTPUTS

DIP-switches «USCITA» prearrangement:

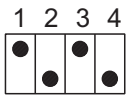
Current 4-20 mA



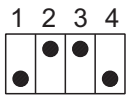
Current 0 - 20 mA



Voltage 1-5 Vdc

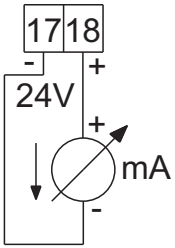


Voltage 0-5 Vdc

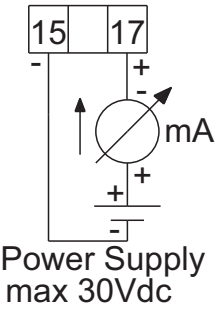


Output wiring schematics:

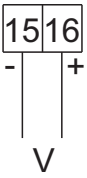
Active current output



Passive current output



Voltage output



SELECTION OF FREQUENCY RANGE AND FULL-SCALE CALIBRATION

This operation must be done only by an engeneer , it is necessary to have a frequency generator .
IF YOU REQUIRES IT, EQUIPMENT CAN BE SOLD CALIBRATED YET WITH THE FULL-SCALE YOU WANT.
The 8 full-scale ranges are choosen by DIP-switches “INGRESSO” , as shown in the table below.

	from 80 Hz to 680 Hz		from 0,15 Hz to 1,25 Hz
	from 10 Hz to 80 Hz		from 0,04 Hz to 0.34 Hz
	from 2,5 Hz to 20 Hz		from 0,01 Hz to 0,085 Hz
	from 0,65 Hz a 5 Hz		from 0,0025 Hz to 0,022 Hz

Optional is possible to program equipment for a full-scale very low, till 1 pulse per 34 minutes.

HOW TO CALIBRATE:

- Put DIP-switches' triggers “INGRESSO” in position corresponding the range having necessary full-scale .
- Connect at equipment's input a frequency generator and control it for an output corresponding at half full-scale you want.
- Put DIP-switches' triggers “USCITA” in position corresponding output's type you want.

If you select an output in current, connect an amperometer 20mA capacity between clamps 17 and 18 (17 negative and 18 positive).
If you select an output in voltage, connect a voltmeter 5Vdc capacity between clamps 15 and 16
(15 negative and 16 positive).

- Regulate potentiometer on equipment's front panel till you will read the following value:

  12 mA if output is prearranged for 4 - 20 mA current
  10 mA if output is prearranged for 0 - 20 mA current
  3 Vdc if output is prearranged for 1 - 5 Vdc voltage
  2,5 Vdc sif output is prearranged for 0 - 5 Vdc voltage

FEATURES

- POWER SUPPLY	:	115 - 230 Vac +/-10% 50/60 Hz
- CONSUMPTION	:	3 VA
- INPUTS	:	optoisolated for reed, open-collector NPN 2 and 3 wires, PNP, NAMUR, 24Vdc pulses, photoelectric sensors,Hall effect sensors
- PULSES FREQ.	:	from 1 pulse per 2 minutes till 640 Hz
- RESOLUTION	:	0,4%
- STABILITY	:	+/- 0,005% / °C
- TEMPERATURE	:	0° / +50°C
- UMIDITY	:	90% a 40°C (not condensing)
- SIZE	:	105 x 90 x 73 mm
- WEIGHT	:	450 g



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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 thè retail store where you purchased this product..

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