




# SIGNAL SPLITTER WITH GALVANIC SEPARATION Z170

## **GENERAL FEATURES**

- input programmable via dip switches for current signals 0 - 20 mA and 4 - 20 mA with active and passive connection or voltage signals 0 - 5 V, 1 - 5 V, 0 - 10 V and 2 - 10 V;
- two independent outputs programmable via dip switches for current signals 0 - 20 mA and 4 - 20 mA with active and passive connection or voltage signals 0 - 5 V, 1 - 5 V, 0 - 10 V and 2 - 10 V;
- power supply on front panel indicator.
- 4 point insulation (power supply / input / output 1 / output 2): 1500Vac.

## **TECHNICAL FEATURES**

Power-supply:	19 – 40 Vdc, 19-28 Vac 50-60Hz, max 2.5W.			
Input:	- 0 - 20 mA and 4 - 20 mA current with active connection (loop power supply approximately 20 Vdc) or passive connection (input impedance 100 ohm). - 0 - 5 V, 1 - 5 V, 0 - 10 V and 2 - 10 V voltage (input impedance > 500 Kohm)			
Outputs:	Two independent outputs each programmable for: - 0 - 20 mA and 4 - 20 mA current signals with active connection (loop impedance < 600 ohm) or passive connection. - 0 - 5 V, 1 - 5 V, 0 - 10 V and 2 - 10 V voltage signals (load impedance > 2 Kohm)			
Environmental conditions:	Temperature: 0..50°C, Humidity min:30%, max 90% at 40°C not condensing (see also section <b>How to install</b> ).			
Errors referred to input's measure range:	Calibration error:	Thermal coeff.:	Linearity error:	other
	0.2%	0.02%/°C	0.05%	
Protection Output / power-supply:	against pulses overvoltages 400W/ms.			
Norms: 	Complying equipments with prescriptions: EN50081-2 (electromagnetic compability, industrial environment) EN50082-2 (electromagnetic immunity, Industrial environment) EN61010-1 (security)			

## **HOW TO INSTALL**

Z170 module is designed to be mounted on a DIN 46277 bar, in vertical position.

To obtain an optimal working and duration, it is necessary to assure an adequate ventilation to modules, avoiding to place raceways or other objects that can close abat-vents.

Avoid to mount modules over deviced that generate heat; we suggest to mount devices in the lower side of the panel.

### **HEAVY WORKING CONDITIONS:**

Heavy working conditions are:

- *High power voltage a (> 30Vdc / > 26 Vac)*
- *Input sensor feeded.*
- *Use of output in impressed current.*

When modules are put side by side it s possible that it is **necessary to separate them at least 5 mm** in the following cases:

- Upper board temperature higher than 45°C and at least one of the heavy working conditions verified.
- Upper board temperature higher than 35°C and at least two of the heavy working temperature verified.

## **ELECTRICAL CONNECTIONS**



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Web: [www.SenecaUK.com](http://www.SenecaUK.com) Mail: [Sales@SenecaUK.com](mailto:Sales@SenecaUK.com)  
Tel: 01943 602001 Fax 01943 816796

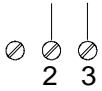
We recommend to use shielded cables to do signals connection; monitor must be connected to a preferential ground for devices. Besides it is a good rule avoid to pass wires near power installation cables like inverters, motors, induction furnaces etc.

## POWER SUPPLY

19-40Vcc  
19-28Vca

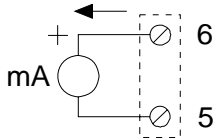
Power voltage must be in a range from 19 to 40 Vdc (indifferent polarity), from 19 to 28 Vac; see also section **INSTALLATION NORMS**.

**Upper limits must not be exceeded, if it happen there could be damages for module.**  
It is necessary to protect power source from possible module's failure by fuse correctly dimensioned.

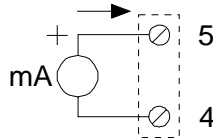


## INPUT – Connections and arrangement of dip switches

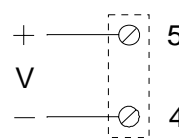
Current – active input



Corrente – passive input



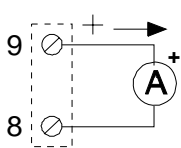
Voltage



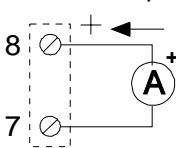
DIP-SWITCH SW1	
1234	
	0..20mA
	4..20mA
	0..5V
	1..5V
	0..10V
	2..10V

## OUTPUT 1 – Connections and arrangement of dip switches

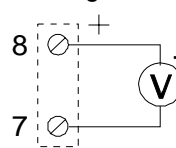
Current – active output



Current – passive output



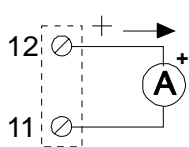
Voltage



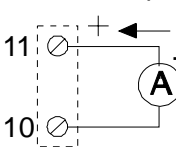
DIP-SWITCH SW2	
123456	
	0..20mA
	4..20mA
	0..5V
	1..5V
	0..10V
	2..10V

## OUTPUT 2 – Connections and arrangement of dip switches

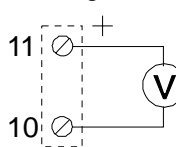
Current – active output



Current – passive output



Voltage



DIP-SWITCH SW3	
123456	
	0..20mA
	4..20mA
	0..5V
	1..5V
	0..10V
	2..10V

For the current input or output the **ACTIVE** connection must be used when the input or output loop is powered directly from the Z170 module; the **PASSIVE** connection must be used if the current loop power supply comes from the outside.



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The Z170 module can drive a maximum load of 600 ohm on the loop, with loop power supply protected against short circuits.

The Z170 module **CAN DRIVE ONLY TWO LOOPS SIMULTANEOUSLY**, so if the active connection is used for the input, it can be used only for one output whereas if the active connection is used for both outputs, it cannot be used for the input.



UNI EN ISO 9001



CERTIFICATE

Nr. 9115 SENE

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[www.SenecaUK.com](http://www.SenecaUK.com) [Sales@senecaUK.com](mailto:Sales@senecaUK.com)

Tel: 01943 602001 Fax: 01943 816796

**SENECAUK**

Unit 1 Golden Butts Road

LS29 8HS ilkley

West Yorkshire

United Kingdom



**SENECAUK**

Web: [www.SenecaUK.com](http://www.SenecaUK.com) Mail: [Sales@SenecaUK.com](mailto:Sales@SenecaUK.com)  
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