SI-250

4-20mA current-loop dual converter

Description

The SI-250 converter is used to convert the current response of a 4-20mA sensor into a voltage response.

This equipment is particularly useful when using acquisition systems whose inputs work only with voltages.

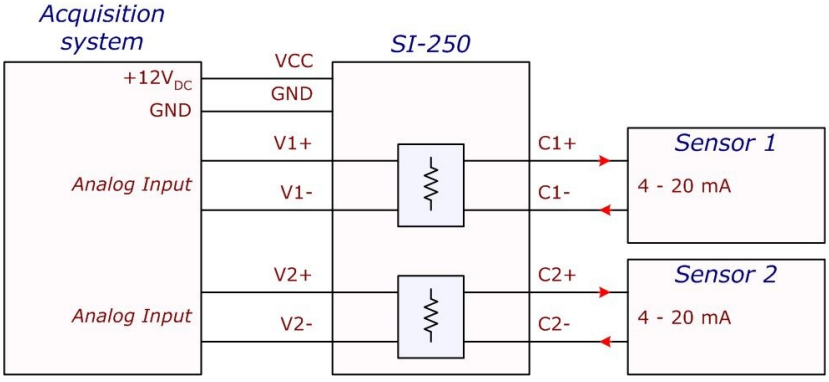
Each converter can connect up to two 4-20mA sensors.

General features

Dimensions	90 mm x 70 mm
Thickness	17,5 mm
Weight	65 g
Assembly	DIN rail
Connections	screw

Climatic conditions

Storage temperature	-40°C à +85°C
Operating temperature	-20°C à +70°C



Electrical features

The terminals of the current-loop sensor are denoted C_{x+} et C_{x-} where x = 1 or 2.

The voltage outputs are denoted V_{x+} et V_{x-} where x = 1 or 2.

Maximum settings

Power supply VCC - GND		
	min	$+5V_{DC}$
	max	$+24V_{DC}$
C_{1+} - C_{1-} loop max current		
	max	30mA
C_{2+} - C_{2-} loop max current		
	max	30mA

Current / Voltage conversion

The conversion is done by a 100Ω resistor.

The voltage output V_{x+} - V_{x-} is the following :

$V_{x+} - V_{x-} = 100 . I_{4-20}$

hence 0,4 V for a 4mA current in the loop

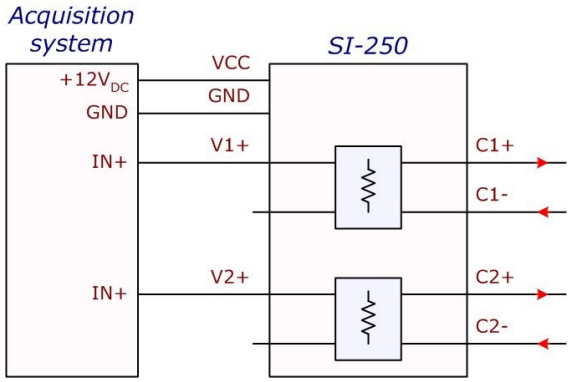
2,0 V for a 4mA current in the loop

The precision of the conversion is 0,1 %.

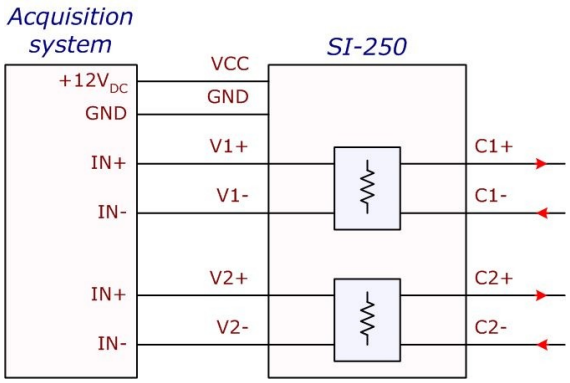
Connection to an acquisition system

For the acquisition systems using common-mode inputs, only the V_{x+} outputs have to be connected.

The GND terminal is used as the common reference.



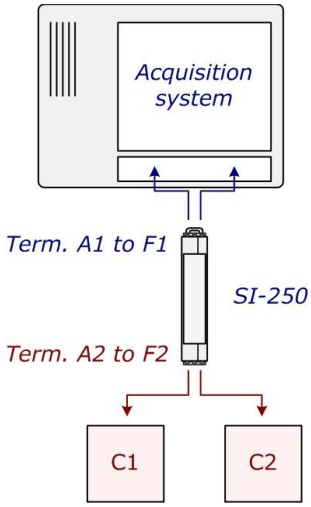
For the acquisition systems using differential-mode inputs, both outputs V_{x+} and V_{x-} have to be connected.



Terminal connections

The A1 to F1 terminals have to be connected to the acquisition system.

The A2 to F2 terminals are connected to the current loops.



Front view

Pinout

Signal	Pin
VCC	D1
GND	A1
V1+	E1
V1-	B1
V2+	F1
V2-	C1
C1+	E2
C1-	B2
C2+	F2
C2-	C2