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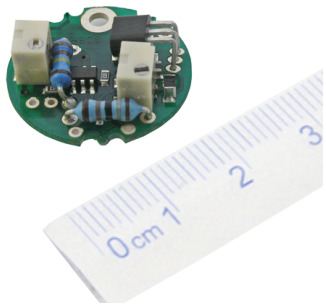
ANALOGUE AMPLIFIERS

STRAIN-GAUGE EMBEDDED ANALOGUE AMPLIFIERS

These analogue amplifiers convert the signal from a Wheatstone bridge (mV/V) into a robust industrial standardised analogue signal.

ANALOGUE AMPLIFIER



Features

o Internal or external mounting depending on the size of the transducer
o If external, cylindrical housing in nickel-plated brass (IP67) or rectangular box in aluminium (low-cost version) (IP65)
o Available version with shifted zero for bidirectional utilisation for versions 4...20 mA and 0...10 V.
o Protection against inversion of polarity
o Cable length: 0.15 m between the amplifier housing and the transducer (max. 0.5 m)

Application(s)

SENSY 's analogue amplifiers are perfectly designed for the following applications:

- Transmission of a weight measurement in an industrial site (4...20 mA),
- Acquisition of a force measurement in a PLC,
- Transmission of a load measurement through the festoon of an overhead crane (4...20 mA).

Function(s)

- Corresponds to the standardised analogue input signal of PLC and industrial measuring systems
- 4...20 mA version allows for a signal transmission of up to 1000 m with good immunity to electromagnetic disturbance

Specifications	4-20 mA 3 wires	4-20 mA 2 wires	4-20 mA C6	0...10 V	-10...0...+10 V	
Type	4-20 mA	4-20 mA	4-20 mA (ATEX and / or IECEx and / or CSA)	0...10 V	-10...0...+10 V	-
Wiring	3	2	2	3	3	wires
Input range	0.5...2.5...5.5 mV/V	0.5...2.5...5.5 mV/V	0.5...2.5...5.5 mV/V	0.5...2.5...5.5 mV/V	0.5...2.5 mV/V	-
Combined error (non-linearity + hysteresis)	<± 0.02	<± 0.02	< ± 0.02	<± 0.02	<± 0.02	% F.S.*
Sensor excitation	5 ± 0.1 VDC	0.5...2***	0.5...2***	5 ± 0.1 VDC	5 ± 0.1 VDC	-
Impedance of Wheatstone bridge	350...5000	350...5000	1000...5000	350...5000	350...5000	ohm(s)
Output signal	4...20	4...20	4...20	0...10	-10...0...+10	-
Load resistance	<= 1000	<= 750	<= 750	> 5000	> 10 000	ohm(s)
Bandwidth	DC...1000	DC...1000	DC...1000	DC...1000	DC...1000	Hz
Reference temperature	23	23	23	23	23	°C
Compensated temperature range	-10...+45	-10...+45	-10...+45	-10...+45	-10...+45	°C
Service temperature range	-40...+85	-40...+85	-40...+85	-40...+85	-40...+85	°C
Temperature coefficient of the sensitivity	0.02...0.051	0.07...0.14	0.07...0.14	0.02...0.051	0.02...0.051	% F.S.*/10°C
Temperature coefficient of zero signal	0.004...0.0015	0.01...0.05	0.01...0.05	0.004...0.015	0.004...0.015	% F.S.*/10°C
Power supply	10...30 VDC	7.5...30 VDC	7.5-9...28 VDC	13...30 VDC	15...18** VDC	-
Consumption (max.)	<= 45	Same as the measured signal	Same as the measured signal	<= 23	<= 25	mA

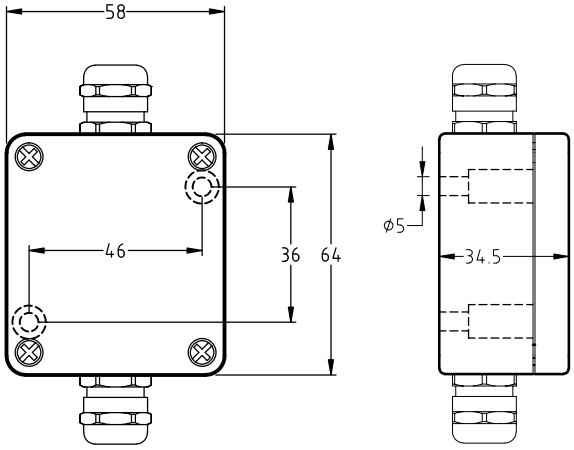
*F.S. : Full Scale.
** : 24 VDC is acceptable if impedance of the Wheatstone bridge >= 1000 ohms.
*** : according to the impedance of the Wheatstone bridge.
Specifications subject to change without notice.

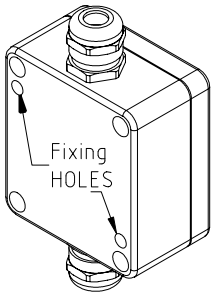
RoHS Compliant sira **ISO 9001** certified

rev. : 19/03/2019

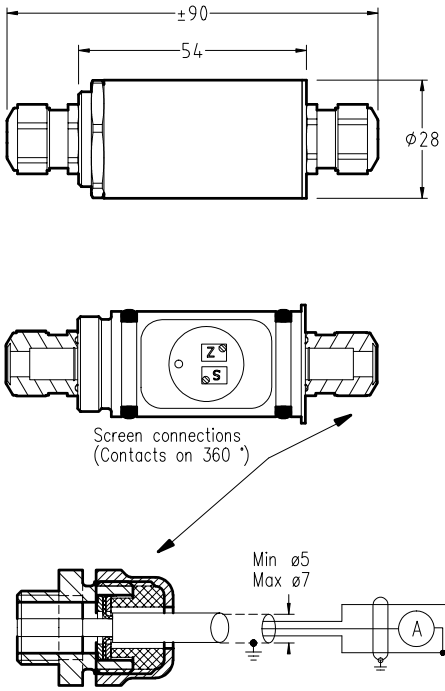
ANALOGUE AMPLIFIERS > STANDARD DIMENSIONS

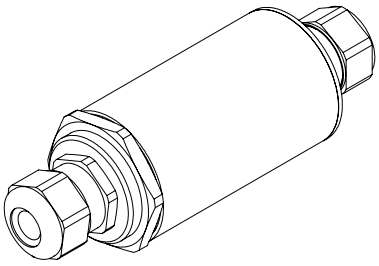
Rectangular box - IP65
Aluminium





Cylindrical housing - IP67
Nickel-plated steel

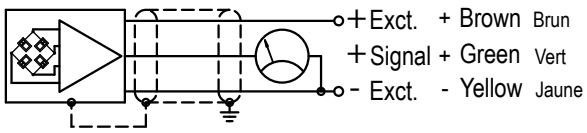




Dimensions in mm

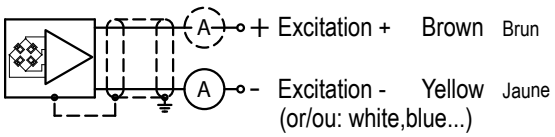
Terminals

WIRING S3-JT: **(4-20 mA 3 wires, 0 - 10 V, -10...0...+10 V)**



Cable screen connected to transducer
Faradisation connectée au capteur

WIRING C-C6: **(4-20 mA 2 wires, 4-20 mA C6)**



Cable screen connected to transducer
Faradisation connectée au capteur