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ANALOG MEASURING AMPLIFIER

AES-N

IP20

Technical Datasheet

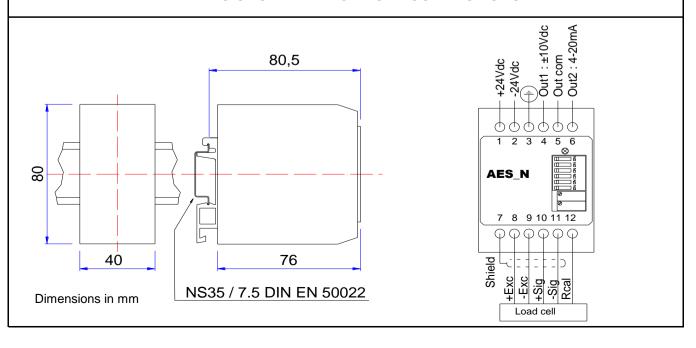
AESN/A/1

AES-N is a measuring amplifier for strain gages bridge, with zero and gain adjustment and two independent analog outputs (±10Vcc e 4-20mA) and with an integrity check on the load cell connection for the 4-20mA output.



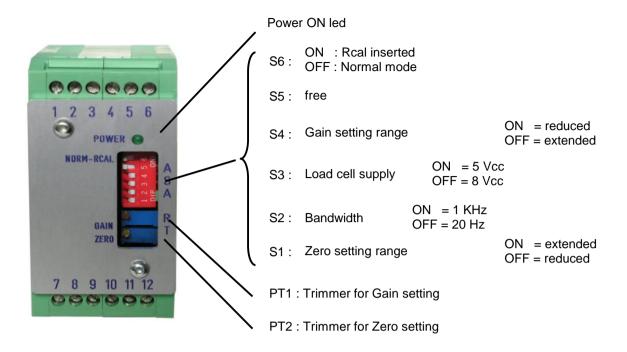
Technical Characteristics - Power supply (Vbb) 24Vdc ±10% / 80 mA Inverted polarity protection on power supply input included Precision in normal mode $< \pm 0.1\% Fs$ - Load cell supply 5Vdc / 8 Vdc selectable via dip-switch <=50mA ≡ 175 Ohm @ 8Vdc Maximal load on the load cell input (2 load cells with 350 Ohm or 4 load cells with 700 Ohm) Integrity check for the load cell connection active on the 4-20mA output Bandwidth for small signals 1 kHz / -3dB o 20 Hz / -3dB selectable ±10Vdc / 5mA (2k ohm load) Analogue output #1 (insulated from Vbb) short-circuit protected towards ground 4-20mA / 400 ohm maximal Analogue output #2 (insulated from Vbb) with integrity check Nominal working temperature -30° ...+50° C Assembly on DIN guide EN50022 - EN50035 Protection level

DIMENSIONS AND ELECTRICAL CONNECTIONS



AES-N.en.pdf 1/2 ASA-RT srl AES-N

SETTINGS



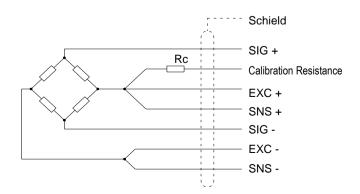
- When wiring the power supply of the amplifier, the negative pole (-24Vdc) must be connected to the earth node of the cabinet
- The calibration resistance of a load cell, when present, must be connected to the positive pole of the power supply of the cell itself (EXC+) and then wired to the pin 12 of the amplifier.
- The dip-switch S6 (set on ON) connects the calibration resistance, simulating a calibration force according to what reported on the test certificate of the load cell.
 In normal working conditions S6 must be set on OFF.
- The dip-switch S3 permits to set the power supply to the load cell(s); before setting this value the user must check the datasheet of the load cell(s) for not exceeding the allowed limits
- The dip-switch S4 permits to choose the range for setting the gain of the analogue output OUT1 via the trimmer PT2 (it is suggested to use always the smaller range as possible):

S4 = ON : G = 350...1500 S4 = OFF : G = 1200...4750

- The dip-switch S1 permits to choose the range for zeroing the analogue output OUT1 via the trimmer PT2 (it is suggested to use always the smaller range as possible):

S1 = OFF: Zero range = $\pm 2mV$ S1 = ON: Zero range = $\pm 6mV$

- Act on trimmes PT1 and PT2, for respectively set the gain and zero of the system.
- On the AES-N unit the main analogue output is the voltage output OUT1 (pin 4 / ±10Vdc) PT1 and PT2 act directly only on this output. The current output OUT2 (pin 6 / 4-20mA) is obtained from OUT1 according to a pre-defined relationship: 0V corresponds to 4mA and 10V to 20mA.
- The analogue output OUT2 (4-20 mA) is set to 0 mA in the event of a fault in the connection of the load cell(s)



AES-N.en.pdf 2/2