



CD1-SG-Ana

Analog and USB output amplifier for strain gauge sensors

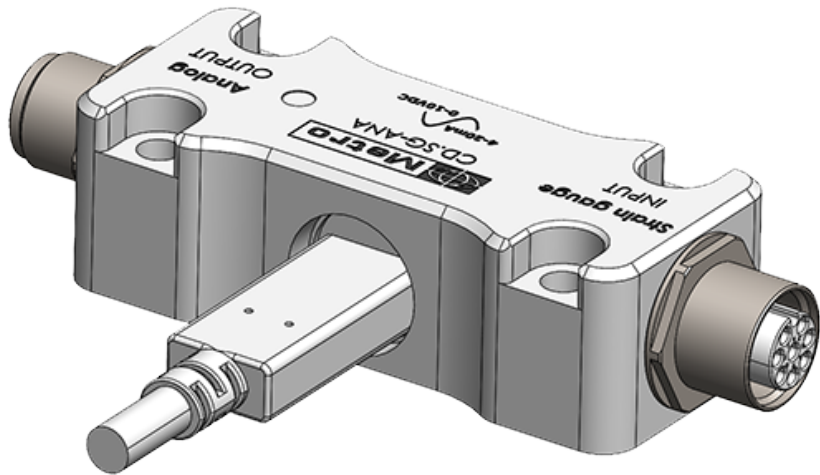
Laboratory accuracy, simplified implementation

CD1-SG-Ana

Analog and USB output amplifier for strain gauge sensors

- Sturdy, waterproof construction
- Accurate
- Many features

The CD1-SG-Ana can be used in a wide variety of applications.



Unlike traditional analog conditioners, the CD1-SG-Ana performs signal processing directly in digital form. **This design eliminates the need for manual adjustments using potentiometers.** Users get a calibrated, traceable, and ready-to-use product, while still retaining the ability to precisely adjust the analog outputs to suit their application.

Each amplifier comes with a **calibration certificate** guaranteeing reliable, traceable measurements that meet quality requirements.

IN BRIEF

Inputs and measurements

- 1 input for 4- or 6-wire full-bridge strain gauge sensors TEDS 0-wire compatible (plug-and-play sensors)
- Direct readings and dynamic measurements (peak, etc.) → output via USB using the software

Precision and performance

- Accuracy: 0.01% of full scale (amplifier only, 80–5000 Ω) → USB output
- Accuracy: 0.05% of full scale (amplifier only, 80–5000 Ω) → analog output
- 4800 Hz sampling rate with multiple filtering options
- Calibration certificate included

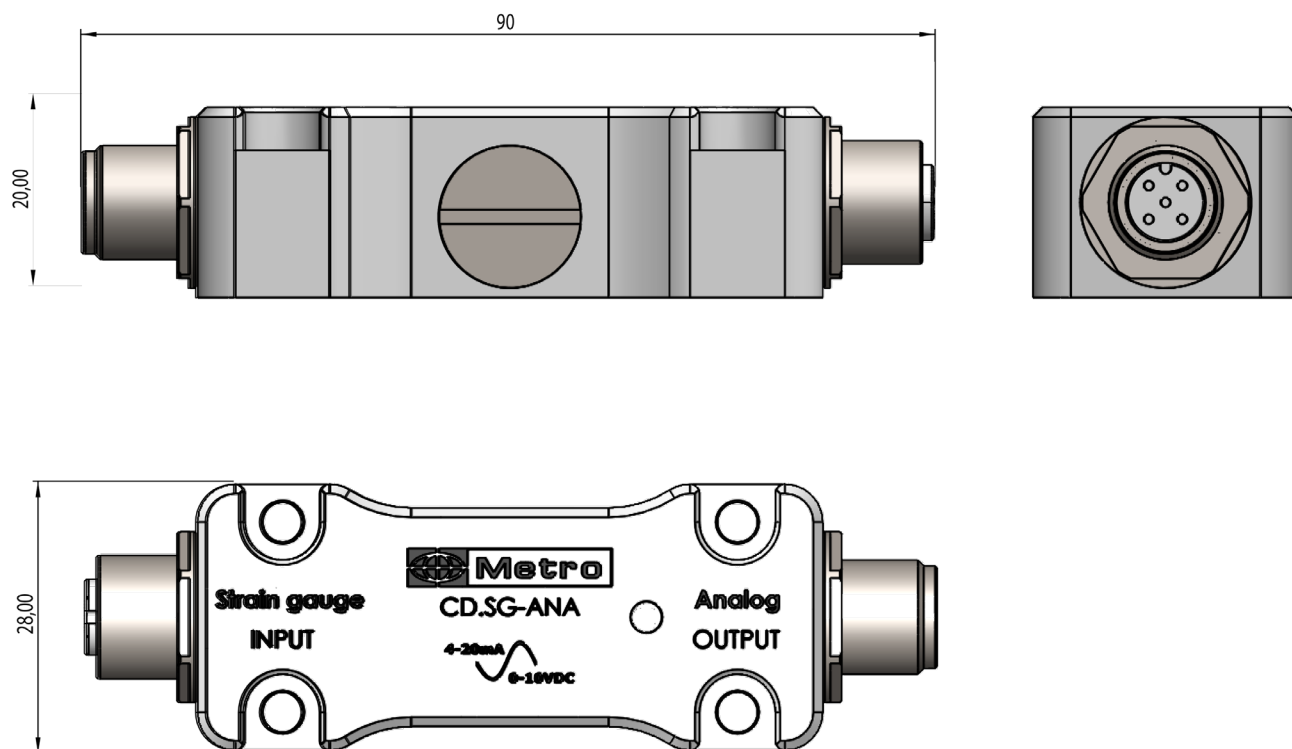
Reliability and Integration

- Suitable for the harshest industrial environments thanks to its machined aluminum housing and electronic design

GENERAL CHARACTERISTICS

Display model	Unit	CD1-SG- Ana
Mode		Direct reading, minimum and maximum values (via USB output, through software)
Measurement input		1 input for strain gauge, full bridge
Transducer technology		Full bridge with 4 and 6 wires for strain gauge
Relative linearity error	%	USB digital output: Accuracy: 0.01% ≤ 30 m, 0.05% ≤ 100 m Analog output: Accuracy: 0.05% ≤ 30 m
Transducer impedance	Ω	80-5000 Ω
Measurement ranges	mV/V	2, 5, 10, 20, 100
Converter frequency	Hz	4 800
Calibration mode		Selectable via USB interface : • Manufacturer data entry • TEDS • User calibration (2 points)
Bridge excitation voltage	V	5
Sensor connector		Female M12 connector, A-coded, 8-pin
Maximum sensor cable length	m	100 with 6-wire connector
A/D conversion	bits	24
N/A conversion	bits	16
Digital filters		Bessel, Butterworth, exponential moving average
Transducer identification		TEDS, IEEE 1451-4 Zero wire
Noise (peak-to-peak) at 25 °C		
With 10 Hz Bessel filter	uV/V	0.2
With 100 Hz Bessel filter	uV/V	0.6
Without filter	uV/V	1
Non-linearity	%	0,005 of full scale
Zero drift	%/10K	0,01 of full scale
Full-scale zero drift	%/10K	0,01 de la valeur mesurée
Power supply	V	24
Nominal temperature range	°C	-20 / +80
Equipment protection rating		IP67
EMC requirements		Compliant with Group 1, Class B per EN 55022 (emission Compliant with Criterion B for ESD and surge per EN 61326-1 (immunity) IEC 802-2 (level II), IEC 801-3 (level III), IEC 801-4 (level III)
Weight	g	80
Dimensions	mm	20*28*90
Housing		Machined aluminum

Compact and sturdy



Weight : 80g
Housing : machined aluminum
Equipment protection : IP67

The **CD1-SG-Ana** features a machined aluminum housing that provides exceptional durability and an **IP67 protection rating**, ensuring optimal resistance to harsh industrial environments. Installation is simple and flexible: it can be mounted from the top using **four M4 screws**

or from the bottom using **four M5 screws**, depending on mounting requirements. It also features a **removable cap** on the side — protected by an O-ring— that provides access to the USB connector.

Product	REF
CD1-SG-Ana	12510
List of adapters (for connecting sensors with different types of connectors)	upon request



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