

## Measuring amplifier AI-2xSG

Item number: 13409



### Highlights

- 2-channel measuring amplifier for DIN rail
- for decentralized peripheral system ET200SP
- for PROFINET IO, PROFIBUS DP, EtherNet/IP or Modbus TCP

The analog input module "AI 2x SG 4-/6-Wire High Speed" is suitable for connecting strain gauge full bridges in 4- or 6-wire technology. It is used in the decentralized I/O system "SIMATIC ET 200SP" in conjunction with a CPU and a base unit type A0.

The resolution of the input module is 28 bits or 16 bits in the configuration with oversampling. The accuracy class is 0.05%.

The input module provides a bridge supply voltage of 4.85V for each channel. Full bridges with a resistance of 80 ohms to 5000 ohms can be connected to each channel.

The decentralized I/O system provides various CPUs/interface modules for connection to PROFINET IO, PROFIBUS DP, EtherNet/IP or Modbus TCP.

By using fail-safe CPUs, applications for safety technology can be implemented.

A comprehensive range of I/O modules expands the application area of the ET 200SP system.

The SIMATIC ET 200SP system is designed to IP 20 protection and is intended for installation in a control cabinet.

The input module is particularly suitable for connecting force/torque sensors. For the 6 channels in 4-wire technology, 3 input modules are required, as well as a "light base unit 6ES7193-6BP00-0DA0" with supply voltage input and two dark base units 6ES7193-6BP00-0BA0 bridged to the left to forward the supply voltage.

The force/torque sensors are connected using an adapter module "SubD44HD/f/spring terminal" (item no. 14080) or a pre-assembled cable "MP11/90-Ferrules".

## Technical Data

| Basic Data         |                                      | Unit            |
|--------------------|--------------------------------------|-----------------|
| Dimensions         | 73 x 58 x 15                         | mm <sup>3</sup> |
| Housing            | Din rail                             |                 |
| Connection         | federklemme                          |                 |
| Number of channels | 2-channel                            |                 |
| Schnittstelle      | Profinet IO, Ethernet IP, Modbus TCP |                 |

| Input analog                             |      | Unit |
|--|------|------|
| Number of analog inputs                  | 2    |      |
| input sensitivity-stepsless from         | 0.5  | mV/V |
| input sensitivity-stepsless to           | 320  | mV/V |
| Strain-gauge-full-bridge resistance from | 80   | Ohm  |
| Strain-gauge-full-bridge resistance to   | 5000 | Ohm  |

### Output analog

| Accuracy data                                   |       | Unit  |
|---|-------|-------|
| Accuracy class                                  | 0,05% |       |
| Relative linearity error                        | 0.025 | %FS   |
| Temperature effect on the zero point            | 0.25  | μV/K  |
| Temperature effect on the measuring sensitivity | 10    | ppm/K |
| Resolution                                      | 16    | bit   |

| Measuring frequency |        | Unit |
|---------------------|--------|------|
| Data frequency from | 0      | Hz   |
| Data frequency to   | 10000  | Hz   |
| Sampling frequency  | 140000 | S/s  |

| Supply                     |      | Unit |
|----------------------------|------|------|
| Supply voltage from        | 19.2 | V    |
| Supply voltage to          | 28.8 | V    |
| Current consumption from   | 70   | mA   |
| Strain gauge bridge supply | 4.85 | V    |

| Interface |  | Unit |
|-----------|--|------|
|-----------|--|------|

| Environmental Data           |      | Unit |
|------------------------------|------|------|
| Rated temperature range from | -25  | °C   |
| Rated temperature range to   | 50   | °C   |
| Environmental protection     | IP20 |      |