

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 ³
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
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Environmental Data		Unit
Rated temperature range from	-25	°C
Rated temperature range to	50	°C
Environmental protection	IP20	