MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

S7-400

6ES7431-1KF00-0AB0

EIGHT-CHANNEL ANALOG INPUT MODULE

Used with the applicable SM 431 analog input module configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens official manufacturer documentation

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SM 431 analog input modules

Overview



- Analog inputs for the SIMATIC S7-400
- For connection of voltage and current sensors, thermocouples, resistors and resistance thermometers
- Resolution from 13 to 16 bit

Technical specifications

	6ES7 431-0HH00-0AB0	6ES7 431-1KF20-0AB0	6ES7 431-1KF00-0AB0	6ES7 431-1KF10-0AB0
Supply voltages				
Load voltage L+				
• Rated value (DC)	24 V; only required for supplying 2-wire transmitters	24 V; only required for supplying 2-wire transmitters	not necessary	24 V; only required for supplying 2-wire transmitters
• reverse polarity protection	Yes	Yes		Yes
Current consumption				
from load voltage L+ (without load), max.	400 mA; for 16 connected, fully controlled 2-wire transmitters	200 mA; for 8 connected, fully controlled 2-wire transmitters		200 mA
from backplane bus DC 5 V, max.	100 mA	1 000 mA	350 mA	600 mA
Current consumption/ power loss				
Power loss, typ.	2 W	4.9 W	1.8 W	3.5 W
Analog inputs				
Number of analog inputs	16	8	8	8
Number of analog inputs for voltage/current measurement	16	8	8	8
Number of analog inputs for resistance measurement		4	4	4
cable length, shielded, max.	200 m	200 m	200 m	200 m; 50 m with thermocouples and input ranges <= 80 mV
Input ranges (rated values), voltages				
• 1 to 5 V	Yes	Yes	Yes	Yes
• -1 V to +1 V	Yes	Yes	Yes	Yes
• -10 V to +10 V	Yes	Yes	Yes	Yes
• -2.5 V to +2.5 V				Yes
• -250 mV to +250 mV				Yes
• -5 V to +5 V				Yes
• -500 mV to +500 mV				Yes
• -80 mV to +80 mV				Yes