

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS SIMATIC S7

6ES7431-7KF10-0AB0

ISOLATED HIGH-RESOLUTION 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

SIMATIC S7-400

Analog modules

SM 431 analog input modules

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Technical specifications (continued)

	6ES7 431-7QH00-0AB0	6ES7 431-7KF00-0AB0	6ES7 431-7KF10-0AB0
Supply voltages			
Load voltage L+			
• Rated value (DC)	24 V; only required for supplying 2-wire transmitters		
• reverse polarity protection	Yes		
Current consumption			
from load voltage L+ (without load), max.	400 mA	400 mA	400 mA
from backplane bus DC 5 V, max.	700 mA	1 200 mA	650 mA
Current consumption/ power loss			
Power loss, typ.	4.5 W	4.6 W	3.3 W
Analog inputs			
Number of analog inputs	16	8	8
Number of analog inputs for voltage/current measurement	16	8	
Number of analog inputs for resistance measurement	8		8
cable length, shielded, max.	200 m; 50 m with thermocouples and input ranges ≤ 80 mV	200 m	200 m; 50 m with thermocouples and input ranges ±80 mV
Input ranges (rated values), voltages			
• 1 to 5 V	Yes	Yes	
• -1 V to +1 V	Yes	Yes	
• -10 V to +10 V	Yes	Yes	
• -100 mV to +100 mV		Yes	
• -2.5 V to +2.5 V	Yes	Yes	
• -20 mV to +20 mV		Yes	
• -25 mV to +25 mV	Yes		
• -250 mV to +250 mV	Yes	Yes	
• -5 V to +5 V	Yes	Yes	
• -50 mV to +50 mV	Yes	Yes	
• -500 mV to +500 mV	Yes	Yes	
• -80 mV to +80 mV	Yes	Yes	
Input ranges (rated values), currents			
• 0 to 20 mA	Yes	Yes	
• -10 to +10 mA	Yes	Yes	
• -20 to +20 mA	Yes	Yes	
• -3.2 to +3.2 mA		Yes	
• 4 to 20 mA	Yes	Yes	
• -5 to +5 mA	Yes	Yes	
Input ranges (rated values), thermoelements			
• Type B	Yes	Yes	
• Type E	Yes	Yes	
• Type J	Yes	Yes	
• Type K	Yes	Yes	
• Type L	Yes	Yes	
• Type N	Yes	Yes	
• Type R	Yes	Yes	
• Type S	Yes	Yes	
• Type T	Yes	Yes	
• Type U	Yes	Yes	