

MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS SIMATIC S7

6ES7650-8AK70-0AA0

16-CHANNEL ANALOG INPUT MODULE

Used with the applicable SIMATIC ET 200PA SMART I/O configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens official product documentation

ET 200PA SMART, analog input isolated, 16 AI, diagnostics;
resolution 15/16 bits, 40-pole, removing and inserting possible IM
650-8PH required

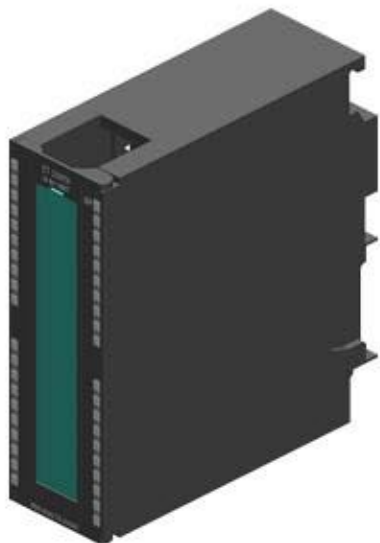


Figure similar

General information	
Product function	
• Isochronous mode	No
Supply voltage	
Load voltage L+	
• Rated value (DC)	24 V
• Reverse polarity protection	Yes
Input current	
from load voltage L+ (without load), max.	70 mA
from backplane bus 5 V DC, max.	100 mA
Output voltage	
Power supply to the transmitters	
• present	Yes
• Rated value (DC)	24 V
• short-circuit proof	Yes
• No-load voltage (DC)	22 V

• Supply current, max.	70 mA
Power loss	
Power loss, typ.	3.3 W
Analog inputs	
Number of analog inputs	16
permissible input current for current input (destruction limit), max.	70 mA; 40 mA continuous
Cable length	
• shielded, max.	800 m
Analog value generation for the inputs	
Measurement principle	Sigma Delta
Integration and conversion time/resolution per channel	
• Resolution with overrange (bit including sign), max.	24 bit
• Integration time, parameterizable	Yes
• Integration time (ms)	16.6 / 20 / 100 ms
• Basic conversion time, including integration time (ms)	19.8 / 23.8 / 119 ms
• Interference voltage suppression for interference frequency f1 in Hz	10 / 50 / 60 Hz
Smoothing of measured values	
• parameterizable	Yes
• Step: None	Yes
• Step: low	Yes
• Step: Medium	Yes
• Step: High	Yes
Encoder	
Connection of signal encoders	
• for current measurement as 2-wire transducer	Yes
— Burden of 2-wire transmitter, max.	750 Ω
• for current measurement as 4-wire transducer	Yes
Errors/accuracies	
Linearity error (relative to input range), (+/-)	0.01 %
Temperature error (relative to input range), (+/-)	0.001 %/K
Crosstalk between the inputs, min.	70 dB
Operational error limit in overall temperature range	
• Current, relative to input range, (+/-)	0.15 %
Basic error limit (operational limit at 25 °C)	
• Current, relative to input range, (+/-)	0.1 %
Interference voltage suppression for $f = n \times (f1 \pm 1 \%)$, f1 = interference frequency	