MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6ES7134-4MB00-0AB0

HIGH FEATURE CURRENT INPUT MODULE

Used with the applicable SIMATIC ET 200S configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens ET 200S Manual A5E00514527-01, section 4.13, pp. 4-65 to 4-68

4.13 2AI I 2/4WIRE High Feature analog electronic module (6ES7134-4MB00-0AB0)

Properties

- 2 inputs for measuring current
- Input ranges:
  - ± 20 mA, resolution 15 bits + sign
  - 4 to 20 mA, resolution 15 bits
- Isolated from the load voltage L+
- Permitted common-mode voltage between the channels 100 VAC
- Supports two-wire or four-wire measuring transducers

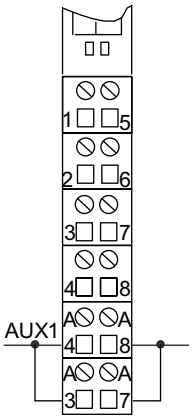
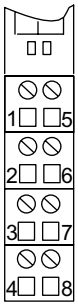
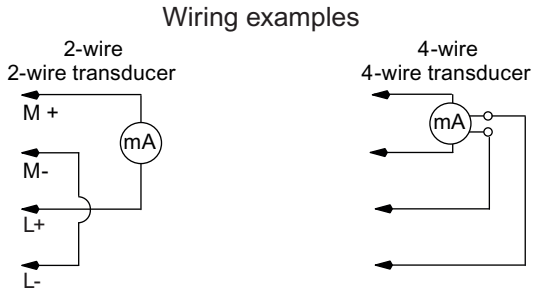
General terminal assignment

Note

Terminals 4, 8, A4, A8, A3 and A7 are only available at specified terminal modules.

Terminal assignment for 2AI I 2/4WIRE High Feature (6ES7134-4MB00-0AB0)				
Terminal	**Assignment**	**Terminal**	**Assignment**	**Notes**
1	M_{0+}	**5**	M_{1+}	**2-wire transducer:** • M_{n+}: Input signal "-", channel n • M_{n-}: connect to L- • L+ Input signal "+", channel n • AUX1: Protective-conductor terminal or potential bus (freely usable up to 230 VAC) **4-wire transducer:** • M_{n+}: Input signal "+", channel n • M_{n-}: Input signal "-", channel n • L+ Power supply for four-wire measuring transducer • L-: Return circuit for measuring transducer supply • AUX1: Protective-conductor terminal or potential bus (freely usable up to 230 VAC)
2	M_{0-}	**6**	M_{1-}	
3	L+	**7**	L+	
4	L-	**8**	L-	
A4	AUX1	**A8**	AUX1	
A3	AUX1	**A7**	AUX1	

Usable terminal modules

Usable terminal modules for 2AI I 2/4WIRE High Feature (6ES7134-4MB00-0AB0)		
TM-E15C26-A1 (6ES7193-4CA50-0AA0)	TM-E15C24-01 (6ES7193-4CB30-0AA0)	← Spring terminal
TM-E15S26-A1 (6ES7193-4CA40-0AA0)	TM-E15S24-01 (6ES7193-4CB20-0AA0)	← Screw terminal
TM-E15N26-A1 (6ES7193-4CA80-0AA0)	TM-E15N24-01 (6ES7193-4CB70-0AA0)	←Fast Connect
			

Block diagram

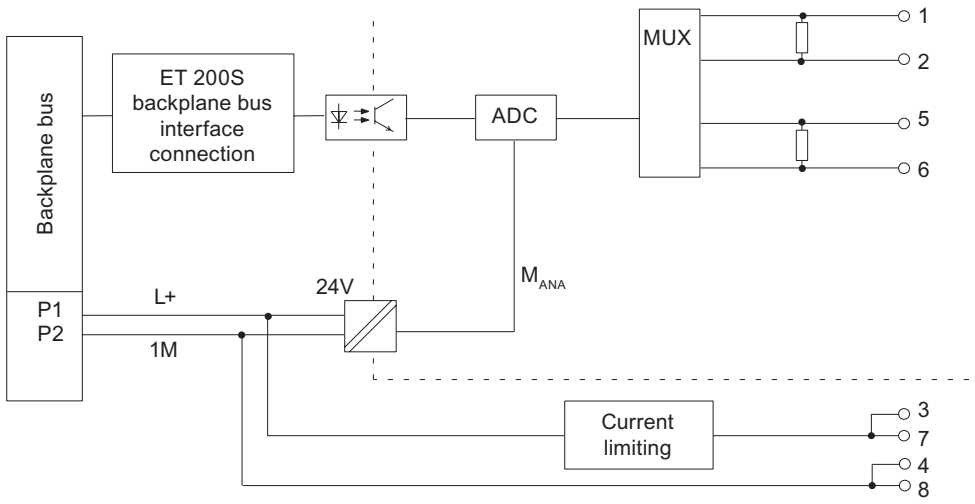


Figure 4-13 Block diagram of the 2AI I 2/4WIRE High Feature

2AI I 2/4WIRE High Feature Technical Specifications (6ES7134-4MB00-0AB0)

Dimensions and Weight			
Dimensions W × H × D (mm) (the total dimensions depend on the selected terminal module)	15 x 81 x 52		
Weight	Approx. 40 g		
Data for specific modules			
Supports isochronous operation	no		
Number of inputs	2		
Cable length			
• Shielded	max. 200 m		
Parameter length	4 bytes		
Voltages, currents, potentials			
Rated load voltage L+ (from the power module)	24 VDC		
• Reverse polarity protection	Yes		
Power supply of the transmitters	Yes		
• Short-circuit protection	Yes, 60 mA (for both channels)		
Galvanic isolation			
• Between the channels and backplane bus	Yes		
• Between the channels and load voltage L+	Yes		
• Between the channels and PE	Yes		
• Between the channels	no		
Permissible potential difference			
• Between the channels	140 VDC/100 VAC (with isolated power supply for the measuring transducer)		
Insulation tested	500 VDC		
Current consumption			
• From load voltage L+	max. 53 mA		
Power dissipation of the module	Typically 0.85 W		
Status, interrupts, diagnostics			
Diagnostics function			
• Group error	Red "SF" LED		
• Diagnostic functions readable	Yes		
Analog value generation			
Measuring principle	Integrative		
Integration and cycle time/resolution per channel:			
• Integration time can be assigned parameters	Yes		
• Interference frequency suppression in Hz	60	50	no
• Integration time in milliseconds	16.67	20	7.5
• Conversion time in ms – 1 channel active per module – 2 channels active per module	 25 58.3	 30 70	 10 26
• Cycle time in ms – 1 channel active per module – 2 channels active per module	 75 175	 90 210	 30 78
• Resolution (including overrange)	± 20 mA/15 bits + sign 4 mA to 20 mA/15 bits		

Suppression of interference, limits of error		
Interference voltage suppression for f = n x (f1 ± 0.5 %), (f1 = interference frequency)		
• Common-mode interference (U_{SS}) • Series-mode interference (peak interference value < rated value of input range)	min. 100 dB min. 90 dB	
Crosstalk between the inputs	min. -100 dB	
Operational limit[1] (over the entire temperature range, with reference to the input range)	± 0.1 %	
Basic error limit[1] operational limit at 25 °C with reference to input range	± 0.05 %	
Temperature error (with reference to the input range)	± 0.003 %/K	
Linearity error (with reference to the input range)	± 0.03 %	
Repeatability (in steady state at 25° C with reference to input range)	± 0.01 %	
Data for selecting a sensor		
Input range (rated value)/input resistance		
• Current	± 20 mA/50 Ω 4 mA to 20 mA/50 Ω	
Permitted input current (destruction limit)	40 mA (on a single channel)	
Load of the two-wire measuring transducer	max. 750 Ω	
Smoothing of the measured values	Yes, can be assigned parameters in 4 steps by means of digital filtering	
	Step None Weak Medium Strong	**Time constant** 1 x cycle time 4 x cycle time 32 x cycle time 64 x cycle time
[1] Run-time calibration can be enabled during module parameter assignment to periodically adjust for the offset voltage drift of the A/D converter. During the calibration interval, the updating of new data is delayed by 200 ms. The accuracy limits of the module will be met without run-time calibration.		