

Analog Input Module 8 x I/V/PT 100, Floating

(6ES5 460-7LA13)

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| Technical Specifications | | Error indication for | |
| Number of inputs | 8 voltage/current inputs or 8 inputs for PT 100 | - overranging | yes (exceeding 4095 units) |
| Floating | yes (not for PT 100) | - wire break of the sensor line | can be designed for the ranges 50 mV, 500 mV and PT 100 (only measuring leads) |
| Input ranges (rated values) | ±50 mV; ±500 mV; PT 100; ±1 V; ±5 V; ±10 V; ±20 mA; +4 to 20 mA (can be selected for four channels at a time using range cards) | Wire-break test current (disconnectable) | configurable |
| Input resistance | ±50 mV: 10 M ±500 mV: 10 M PT 100: 10 M ±1 V: 90 k ; 2 % ±5 V: 50 k ; 2 % ±10 V: 50 k ; 2 % ±20 mA: 25 ; 1 % ±4 to 20 mA: 31.25 ; 1 % | Noise suppression for f=n x (50/60 Hz±1 %) n=1, 2, ... | |
| Type of connection for sensors | Two-wire connection; four-wire connection for PT 100 | - common mode noise min. (V_s<1 V) | 100 dB |
| Digital representation of the input signal | 12 bits plus sign or 13 bits two's complement (2048 units=rated value) | - series mode noise min. (peak noise value < rated value of the range) | 40 dB |
| Measuring principle | integrating | Basic error limits | ±50 mV : ±2 ‰ ±500 mV : ±1.5 ‰ PT 100 : ±2 ‰ ±1 V : ±3.5 ‰ ±5 V : ±3.5 ‰ ±10 V : ±3.5 ‰ ±20 mA : ±2.5 ‰ +4 to 20 mA : ±2.5 ‰ |
| Conversion principle | voltage-time conversion (dual-slope) | Operational error limits (0°C to 55°C) | ±50 mV : ±5 ‰ ±500 mV : ±4.5 ‰ PT 100 : ±5 ‰ ±1 V : ±7.7 ‰ ±5 V : ±7.7 ‰ ±10 V : ±7.7 ‰ ±20 mA : ±6.7 ‰ +4 to 20 mA : ±6.7 ‰ |
| Integration time (adjustable for optimum noise suppression) | 20 msec. at 50 Hz 16.6 msec. at 60 Hz | Cable length - shielded | maximum 200 m (656 ft.); 50 m for ± 50 mV |
| Coding time (Single coding for 2048 units) | maximum 60 msec. at 50 Hz 50 msec. at 60 Hz | Front connector | 46 pins |
| Cycle time for - 8 inputs | 0.48 sec. at 50 Hz | Isolation rating | according to VDE 0160 |
| Permissible voltage between inputs and between inputs and central grounding point (destruction limit) | maximum 18 V or 75 V for max. 1 msec. and a duty cycle 1 : 20 | Rated isolation voltage (channel to channel) - tested with | 500 V |
| Permissible voltage between the reference potential of a nonfloating sensor and the central grounding point | maximum 75 V DC /60 V AC | Rated isolation voltage (channel to \perp) - tested with | 500 V |
| | | Current consumption - rated value | 24 V DC |
| | | - ripple V_{pp} | 3.6 V |
| | | - permissible range (including ripple) | 20 to 30 V |
| | | Current consumption - from 5 V (internal) typically | 0.15 A |
| | | - from 24 V (external) typically | 0.1 A |
| | | Power losses of the module | typically 3 W |
| | | Weight | approx. 0.4 kg (0.88 lb.) |