

AMIKON TECHNICAL DOCUMENTATION

Product Data Sheet

Siemens 6ES7138-4DB03-0AB0

ET 200S SSI Interface

INTERFACE	ENCODER WIDTH	SIGNALS	LOAD SUPPLY
1 SSI encoder	13 to 25 bits	RS422	24 V DC

Siemens 6ES7138-4DB03-0AB0 is the ET 200S 1SSI electronic module for connecting one absolute SSI encoder to a controller. It supports encoder widths from 13 to 25 bits, with configurable data handling and standard or Fast operating modes.

01

VERIFIED TECHNICAL INFORMATION

Encoder connection	1 absolute SSI encoder; RS422 differential data and clock signals
Encoder width	13 to 25 bits; every integer width in this range is supported
Load supply	24 V DC rated; reverse-polarity protection
SSI clock and cable limits	125 kHz: 320 m; 250 kHz: 160 m; 500 kHz: 60 m; 1 MHz: 20 m; 1.5 MHz: 10 m; 2 MHz: 8 m; shielded twisted pairs, subject to shorter encoder limits
Encoder supply output	L+ minus 0.8 V; maximum 500 mA total at terminals 2 and 6; short-circuit protected
Encoder coding	Binary or Gray-to-binary conversion; optional odd or even parity checking
Encoder-value processing	Configurable normalization, trailing-bit count and direction reversal

Manufacturer evidence: SIMATIC ET 200S Technological Functions; exact-model manual section.

02 TECHNICAL INFORMATION CONTINUED

Digital input	1 input; 0 level -30 to +5 V, 1 level +11 to +30 V; maximum 300 us delay in either direction
Latch function	Standard mode only; rising, falling or both input edges; acknowledgement required to resume current encoder values
Comparison function	Standard mode only; 2 loadable comparison values with results in the feedback interface, not load-switching outputs
Non-isochronous update rate	Standard mode 1 ms; Fast mode 700 us; not a complete end-to-end position latency specification
Process-data interfaces	Standard: 8 input and 8 output bytes; Fast: 4 input bytes
No-load consumption	Maximum 10 mA from backplane and 40 mA from L+
Electrical isolation	SSI function isolated from backplane; not isolated from load voltage L+
Terminal modules	TM-E15S24-01 or TM-E15S26-A1

03 SOURCE AND CONFIGURATION CHECKS

Standard mode provides event-driven latching and two comparison results in the feedback interface. Fast mode reduces the available functions for rapid position acquisition. Encoder format, clock rate, cable length and station support must be matched before using the module in a maintained installation.

Packed dimensions and supplied-unit origin must be checked against the actual delivery. No verified gross shipping weight is inferred from module net mass.

Source: Siemens 06/2010, A5E00124867-07. See the original pages in the accompanying manufacturer manual.

AMIKON PRODUCT SUPPORT

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