

AMIKON TECHNICAL DOCUMENTATION

Product Data Sheet

Siemens 6ES7138-6BA01-0BA0

Encoder Position Input Module

CHANNEL	INTERFACES	DIGITAL I/O	BASEUNIT
1 encoder	RS422 / SSI / TTL	2 DI / 2 DQ	Type A0

Siemens 6ES7138-6BA01-0BA0 is the single-channel TM PosInput 1 technology module for SIMATIC ET 200SP. It processes RS422 incremental or pulse signals, compatible TTL signals and SSI absolute-encoder data. Two digital inputs and two outputs support configurable capture, synchronization and comparison functions.

01

VERIFIED TECHNICAL INFORMATION

Encoder channel	1; RS422/TTL incremental or pulse encoder, or SSI absolute encoder
Count range	32 bits
Incremental input frequency	Maximum 1 MHz; maximum 4 MHz counting with quadruple evaluation
SSI telegram length	Configurable 10-40 bits; position value up to 32 bits
SSI clock frequency	125/250/500 kHz; 1/1.5/2 MHz
Load supply	24 V DC rated; permissible 19.2-28.8 V DC; reverse-polarity protection
No-load input current	Maximum 75 mA

Manufacturer evidence: Technology module TM PosInput 1 (6ES7138-6BA01-0BA0); exact-model manual section and manufacturer data sheet.

02 TECHNICAL INFORMATION CONTINUED

Encoder supplies	5 V and 24 V; maximum 300 mA total encoder current; 5 V supply derating applies
Digital inputs	2 parameterizable 24 V inputs; IEC 61131 type 3
Digital outputs	2 sourcing transistor outputs; 0.5 A rated each, 1 A total maximum before derating
Address allocation	Normal: 16 input/12 output bytes; Motion Control: 16/4; Fast Mode: 4/0
BaseUnit compatibility	Type A0; ordered separately
Engineering compatibility	TIA Portal V16 or later; V2.0 function table identifies HSP0184 for V16
Typical power loss	1.5 W
Safety suitability	Not suitable for safety functions

03 SOURCE AND CONFIGURATION CHECKS

The firmware V2.0 module operates on an A0 BaseUnit and provides monitored 5 V and 24 V encoder supplies. Its operating mode determines the control and feedback interface. Selection should therefore match the encoder standard, signal frequency, required technology object and application wiring.

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

Siemens original documentation and product reference

AMIKON PRODUCT SUPPORT

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