SIMATIC ET 200S 1 COUNT

Product Data Sheet

6ES7138-4DA04-0AB0

24 V High-speed Counter Module

COUNTER CHANNELS	RATED COUNTING FREQUENCY	LOAD SUPPLY RANGE	MAXIMUM UNLOADED SUPPLY CURRENT
1, 32-bit	**100 kHz**	**20.4 to 28.8 V DC**	**42 mA**

Siemens 6ES7138-4DA04-0AB0 is the ET 200S 1 COUNT 24 V/100 kHz electronic module with a 32-bit counter. It accepts the documented incremental encoder, 24 V initiator or two-wire sensor arrangement and supports counting, frequency, period and speed measurement. An auxiliary digital input provides gate, synchronization or latch functions.

01 TECHNICAL DATA

Counter channels	1, 32-bit
Rated counting frequency	100 kHz
Load supply range	20.4 to 28.8 V DC
Maximum unloaded supply current	42 mA
Maximum 3.3 V backplane current	10 mA
Encoder supply voltage	L+ minus 0.8 V
Maximum encoder supply current	500 mA
Typical dissipation	1 W
Auxiliary digital inputs	1
Auxiliary digital outputs	1

02 ADDITIONAL PRODUCT DATA

Output current at 0 to 40 degrees C	2 A maximum
Output current at 60 degrees C	0.5 A maximum
Frequency measuring span	0.1 Hz to 100 kHz
Period measuring span	10 microseconds to 120 s
Speed measuring span	1 to 25000 revolutions/minute

03 PRODUCT FUNCTION

The 20.4 to 28.8 V DC load supply also feeds a protected encoder supply rated up to 500 mA. One digital output is provided, with its permissible current reducing from 2 A at up to 40 degrees C to 0.5 A at 60 degrees C. Filter selection affects the minimum pulse width and permissible shielded cable length; the module includes count-direction and channel-status indications.

04 SYSTEM COMPATIBILITY

Connect the 24 V load circuit within 20.4 to 28.8 V DC and budget its encoder load separately from the unloaded module current. The encoder supply is L+ minus 0.8 V and is limited to 500 mA. The digital output must also respect its temperature-dependent load capacity rather than being treated as a constant 2 A output.

05 REFERENCE

Siemens 6ES7138-4DA04-0AB0 Data Sheet, January 2017, pages 1-4.

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