MANUFACTURER DOCUMENT PACKAGE

Manufacturer's Manual

Reference package for procurement and maintenance review

SIEMENS

6ES7352-5AH10-0AE0

FM 352-5 HIGH-SPEED BOOLEAN PROCESSOR

Used with the applicable SIMATIC S7-300 configuration.

REFERENCE PACKAGE

OFFICIAL DOCUMENT

Selected official manufacturer pages follow this cover.

Source: Siemens technical documentation for 6ES7352-5AH10-0AE0

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Data sheet 6ES7352-5AH01-0AE0



Figure similar

spare part SIMATIC S7-300, FM352-5 with NPN output, high-speed Boolean processor, for high-speed linking, 12 DI, 8 DO, 1 encoder interface for RS-422 incremental/SSI encoder

Supply voltage	
Load voltage L+	
● Rated value (DC)	24 V
● permissible range, lower limit (DC)	20.4 V
● permissible range, upper limit (DC)	28.8 V
● Reverse polarity protection	Yes
Input current	
from load voltage1L+, max.	150 mA; typ. 60 mA
from load voltage 2L+ (without load), max.	200 mA; typ. 60 mA, DI/DO supply
from load voltage 3L+ (with encoder), max.	600 mA; typ. 80 mA plus encoder supply
from load voltage 3L+ (without load), max.	200 mA; typ. 80 mA
from backplane bus 5 V DC, typ.	135 mA
Encoder supply	
5 V encoder supply	
● 5 V	Yes
● Short-circuit protection	Yes; Electronic overload protection; no protection on applying a normal or counter voltage.
● Output current, max.	250 mA
24 V encoder supply	
● 24 V	Yes
● Short-circuit protection	Yes; Overvoltage and overheating protection if overloaded; diagnostics if output reaches temperature limit; no protection on applying a normal or counter voltage
● Output current, max.	400 mA
Power loss	
Power loss, typ.	6.5 W
Memory	
Type of memory	RAM
Memory size	128 kbyte; required for operation, MMC
Digital inputs	
Number of digital inputs	8; Standard and up to 12 with 24 V DC encoder inputs as digital inputs
Input voltage	
● Rated value (DC)	24 V
● for signal "0"	-30 to +5 V
● for signal "1"	+11 to +30V
Input current	
● for signal "0", max. (permissible quiescent current)	1.5 mA
● for signal "1", typ.	3.8 mA
Input delay (for rated value of input voltage)	

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● Input frequency (with a time delay of 0.1 ms), max.	200 kHz
● programmable digital filter delay	None, 5 µs, 10 µs, 15 µs, 20 µs, 50 µs, 1.6 ms
● Minimum pulse width for program reactions	1 µs, 5 µs, 10 µs, 15 µs, 20 µs, 50 µs, 1,6 ms
for standard inputs	
— at "0" to "1", max.	3 µs; typ. 1.5 µs
Cable length	
● shielded, max.	600 m
● unshielded, max.	100 m; Shielded cable recommended if filtering delay is set to less than 1.6 ms
Digital outputs	
Number of digital outputs	8
Current-sinking	Yes
Current-sourcing	No
Short-circuit protection	Yes; Overvoltage protection, thermal protection
● Response threshold, typ.	1.7 to 3.5 A
Limitation of inductive shutdown voltage to	2M -45 V typ., (-40 V to -55 V); comment: no protection against inductive kickback >55 mJ
Controlling a digital input	No
Switching capacity of the outputs	
● on lamp load, max.	5 W
Output voltage	
● Rated value (DC)	24 V
● for signal "0", max.	28.8 V
● for signal "1", max.	0.5 V
Output current	
● for signal "1" rated value	0.5 A; At 60 °C
● for signal "1" permissible range for 0 to 60 °C, min.	5 mA
● for signal "1" permissible range for 0 to 60 °C, max.	600 mA
● for signal "0" residual current, max.	1 mA
Output delay with resistive load	
● "0" to "1", max.	1 µs; 0.6 µs 50 mA / 1.0 µs 0.5 A
● "1" to "0", max.	1.5 µs; 1.7 µs 50 mA / 1.5 µs 0.5 A
Parallel switching of two outputs	
● for uprating	Yes; 2
Switching frequency	
● with resistive load, max.	100 kHz; 20 kHz at 0.5 A; 100 kHz at 0.25 A
● with inductive load, max.	2 Hz; 2 Hz at 0.5 A with external commutator diodes; 0.5 Hz at 0.5 A without external commutator diodes
● on lamp load, max.	10 Hz
Cable length	
● shielded, max.	600 m
● unshielded, max.	100 m
Encoder	
Connectable encoders	
● Incremental encoder (symmetrical)	Yes
● Incremental encoder (asymmetrical)	Yes
● Absolute encoder (SSI)	Yes
● 2-wire sensor	Yes
— permissible quiescent current (2-wire sensor), max.	1.5 mA
Encoder signals, incremental encoder (symmetrical)	
● Trace mark signals	A, notA, B, notB
● Zero mark signal	N, notN
● Input voltage	5 V difference signal (phys. RS 422)
● Input frequency, max.	500 kHz
● Cable length, shielded, max.	100 m; 100 m with 24 V supply and 500 kHz; 32 m with 5 V supply and 500 kHz
Encoder signals, incremental encoder (asymmetrical)	
● Trace mark signals	A, B
● Zero mark signal	N
● Input voltage	24 V
● Input frequency, max.	200 kHz

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