

Siemens 6ES7450-1AP00-0AE0 Manual

Brand	Siemens
Product Series	Siemens
Product Type	RS 422

Description

6ES7450-1AP00-0AE0

SIMATIC S7-400, FM 450-1 FUNCTION MODULE F.

COUNT.FUNCT. WITH 2 CHANNELS INCL. CONFIG. PACKAGE
ON CD

Supply voltage

Load voltage 1L+

- Reverse polarity protection Yes

Load voltage 2L+

- Reverse polarity protection Yes

Auxiliary voltage 1L+, load voltage 2L+

- Rated value (DC) 24 V

- permissible range, lower limit (DC) 20.4 V; dynamic 18.5 V

- permissible range, upper limit (DC) 28.8 V; dynamic 30.2 V

non-periodic skip

— Duration 500 ms

— Recovery time 50 s

— Value 35 V

Input current

from load voltage 1L+ (without load), max. 40 mA

from backplane bus 5 V DC, max. 450 mA

Encoder supply

5 V encoder supply

- 5 V Yes; 5.2 V +/-2%

- short-circuit protection Yes

- Output current, max. 300 mA

24 V encoder supply

- 24 V Yes; 1L+ (-3 V)

- Short-circuit protection Yes

- Output current, max. 300 mA

Power loss

Power loss, typ. 9 W

Digital inputs

Number of digital inputs 6

Functions 1 for gate start, 1 for gate stop, 1 for setting the counter

Input voltage

- for signal "0" -28.8 ... +5V

- for signal "1" +11 to +28.8V

Input current

- for signal "1", typ. 9 mA

Input delay (for rated value of input voltage)

- Input frequency (with a time delay of 0.1 ms), max.

200 kHz

for standard inputs

— parameterizable Yes

— at "0" to "1", max. 2.5 μ s; $\geq$ 2.5 μ s (200 kHz); $\leq$ 25 μ s (20 kHz)

Digital outputs

Number of digital outputs 4

Short-circuit protection Yes; Clocked electronically

Limitation of inductive shutdown voltage to 2L+ (-39 V)

Output voltage

- for signal "0", max. 3 V
- for signal "1", min. 2L+ (-1,5 V)

Output current

- for signal "1" rated value 0.5 A
- for signal "1" permissible range for 0 to 60 °C,

min.

5 mA

- for signal "1" permissible range for 0 to 60 °C,

max.

0.6 A

Output delay with resistive load

- "0" to "1", max. 300 μ s

Encoder

Connectable encoders

- Incremental encoder (symmetrical) Yes; With 2 pulse trains offset by 90°

Incremental encoder (asymmetrical) Yes

- 24 V initiator Yes
- 24 V directional element Yes; 1 pulse train, 1 direction level

Interrupts/diagnostics/status information

Status indicator Yes; 14 green LEDs for status of CR, DIR, inputs and outputs

Diagnostic functions Yes

Alarms

- Diagnostic alarm Yes; Parameterizable
- Hardware interrupt Yes; Parameterizable

Diagnostic messages

- Diagnostic information readable Yes

Diagnostics indication LED

- Description 2 red LEDs for internal and external errors
- Status indicator digital input (green) Yes
- Status indicator digital output (green) Yes

Counter

Number of counter inputs 2; 32 bit or $\pm$ 31 bit

Counter input 5 V

- Type RS 422
- Terminating resistor 220 Ω

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- Differential input voltage min. 0.5 V
- Counting frequency, max. 500 kHz

Counter input 24 V

- Input voltage for signal "0" -30 to +5V
- Input voltage for signal "1" +11 to +30V
- Input current for signal "1", typ. 9 mA
- Counting frequency, max. 200 kHz
- Minimum pulse width $\geq 2.5 \mu\text{s}$ (200 kHz); $\leq 25 \mu\text{s}$ (20 kHz) (parameterizable)

Parameter

Remark Assigned binary addresses: 64 bytes/64 bytes

Potential separation

Potential separation digital inputs

- between the channels and backplane bus Yes; Optocoupler

Potential separation digital outputs

- between the channels and backplane bus Yes; Optocoupler

Potential separation counter

- between the channels and backplane bus Yes; Optocoupler

Permissible potential difference

between different circuits 75 V DC/60 V AC

Isolation

Isolation tested with 500 V

Connection method

required front connector 1x 48-pin

Dimensions

Width 25 mm

Height 290 mm

Depth 210 mm

Weights

Weight, approx. 650 g

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