

Digital Counters / Timers

FXS Series



Features

- Counting speed: 1 cps / 30 cps / 2 kcps / 5 kcps
- Selectable voltage input (PNP) or no-voltage input (NPN)
- Input mode: Up, Down, Up / Down
- Dot for Decimal Point, Hour / Min / Second by RESET key
- Wide range of input power supply
: 100 - 240 VAC $\sim$ 50 / 60 Hz, 24 VAC $\sim$ 50 / 60 Hz, 24 - 48 VDC $\equiv$ universal
- Selectable Counter / Timer by DIP switch

[Counter]

- 20 input modes / 18 output modes

[Timer]

- 16 output modes
- Various time setting range
 - 5-digit model: 0.01 sec to 9999.9 hour
 - 4-digit model: 0.01 sec to 9999 hour
- Output: indicator, 1-stage setting

Specifications

Model	FX4S-1P□	FX5S-I□
Display digits	4-digit	5-digit
Character size	W 3.8 × H 7.6 mm	W 4 × H 8 mm
Max. counting speed	1 / 30 / 2 k / 5 kcps	
Return time	≤ 500 ms	
Min. signal width	INHIBIT, RESET: ≈ 20 ms	
Input logic	Voltage input (PNP) - input impedance: ≤ 10.8 k Ω , [H]: 5 - 30 VDC $\equiv$, [L]: 0 - 2 VDC $\equiv$ No-voltage input (NPN) - short-circuit impedance: ≤ 470 Ω , short-circuit residual voltage: ≤ 1 VDC $\equiv$ open-circuit impedance: ≥ 100 k Ω	
One-shot output time	0.05 to 5 sec	
Error	Repeat / SET / voltage / Temp.: ≤ ± 0.01 % ± 0.05 s	
Contact control output	Relay	-
Type	Instantaneous SPDT (1c) × 1	-
Capacity	250 VAC $\sim$ 3 A, 30 VDC $\equiv$ 3 A resistive load	-
Solid-state control output	NPN open collector × 1	-
Capacity	≤ 30 VDC $\equiv$, 100 mA	-
Unit weight (packaged)	≈ 110 g (≈ 171 g)	≈ 95 g (≈ 156 g)
Approval	CE  ENEC	
Voltage type	AC voltage	AC / DC voltage
Power supply	100 - 240 VAC $\sim$ ± 10 % 50 / 60 Hz	24 VAC $\sim$ ± 10 % 50 / 60 Hz, 24 - 48 VDC $\pm$ 10 %
Power consumption (FX4S-1P □)	≤ 4.6 VA	AC: ≤ 3.5 VA DC: ≤ 2.3 W
Power consumption (FX5S-I □)	≤ 3.8 VA	AC: ≤ 3 VA DC: ≤ 1.8 W
External supply power	≤ 12 VDC $\equiv$ ± 10 % 50 mA	
Memory retention	≈ 10 years (non-volatile semiconductor memory type)	
Insulation resistance	≥ 100 M Ω (500 VDC $\equiv$ megger)	
Dielectric strength	Between all terminals and case: 2,000 VAC $\sim$ 50 / 60 Hz for 1 minute	
Noise immunity	± 2 kV square wave noise (pulse width: 1 μ s) by the noise simulator	± 500 V square wave noise (pulse width: 1 μ s) by the noise simulator
Vibration	0.75 mm double amplitude at frequency of 10 to 55 Hz (for 1 minute) in each X, Y, Z direction for 1 hour	
Vibration (malfunction)	0.5 mm double amplitude at frequency of 10 to 55 Hz (for 1 minute) in each X, Y, Z direction for 10 min	
Shock	300 m/s ² (≈ 30 G) in each X, Y, Z direction for 3 times	
Shock (malfunction)	100 m/s ² (≈ 10 G) in each X, Y, Z direction for 3 times	
Relay life cycle	Mechanical: ≥ 5,000,000 operations Electrical: ≥ 100,000 operations (250 VAC $\sim$ 3 A resistive load)	
Ambient temperature	-10 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)	
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)	
Protection rating	IP20 (front part, IEC standard)	



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