

8-Pin Plug Digital Counters

FS Series



Features

- Counting speeds: 1 cps / 30 cps / 2 kcps / 5 kcps
- Switch between voltage input (PNP) and no-voltage input (PNP) using DIP switch
- Operation modes: count-up, count-down
- Decimal point display function (fixed decimal point)
- 10 year memory protection (using non-volatile semiconductor)
- Output model types: single preset, indicator only
- Power supply
 - 100 - 240 VAC~ 50 / 60 Hz (AC type)
 - 24 VAC~ 50 / 60 Hz,
 - 24 - 48 VDC= (AC / DC universal type)

Specifications

Model	FS4-1P□	FS5-I4
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 k cps	
Return time	≤ 500 ms	
Min. signal width	RESET: ≈ 20 ms	
Input logic	Voltage input (PNP) - input impedance: ≤ 10.8 kΩ, [H]: 5 - 30 VDC=, [L]: 0 - 2 VDC= No-voltage input (NPN) - short-circuit impedance: ≤ 470 Ω, short-circuit residual voltage: ≤ 1 VDC= open-circuit impedance: ≥ 100 kΩ	
One-shot output time	0.05 to 5 sec	
Contact control output	Relay	-
Type	Instantaneous SPST (1a) × 1	-
Capacity	250 VAC~ 3 A, 30 VDC= 3 A resistive load	-
Unit weight (packaged)	≈ 90 g (≈ 130 g)	≈ 80 g (≈ 120 g)
Approval	CE  ENEC	
Voltage type	AC voltage	AC / DC voltage
Power supply	100 - 240 VAC~ ± 10 % 50 / 60 Hz	24 VAC~ ± 10 % 50 / 60 Hz, 24 - 48 VDC= ± 10 %
Power consumption (FS4-1P□)	≤ 4.6 VA	AC: ≤ 3.5 VA DC: ≤ 2.3 W
Power consumption (FS5-I4)	≤ 3.8 VA	-
External supply power	≤ 12 VDC= ± 10 % 50 mA	
Memory retention	≈ 10 years (non-volatile semiconductor memory type)	
Insulation resistance	≥ 100 MΩ (500 VDC= megger)	
Dielectric strength	Between all terminals and case: 2,000 VAC~ 50 / 60 Hz for 1 minute	
Noise immunity	± 2 kV square wave noise (pulse width: 1 μs) by the noise simulator	± 500 V square wave noise (pulse width: 1 μs) 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~ 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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