

POWER RELAY

20A type Relay

FTR-K3 Series

RoHS Compliant

■ FEATURES

- Heavy duty 20A power relay for compressor loads and inverter loads.
- High sensitivity in small package - Nominal power 780mW.
- High insulation with reinforced insulation system (between coil and contact).
 - Clearance distance 8mm, Creepage distance 9.5mm
 - Dielectric strength 5,000 VAC
 - Surge strength 8,500 V
- Plastic materials conform to UL94 flame class V-0 and CTI>250 (UL CTI level class 2).
- Contains no lead and features cadmium-free contacts.
- Conforms to UL, CSA, VDE, CQC safety standards.
- RoHS Compliant since production



■ ORDERING INFORMATION

[Example] FTR-K3 J B 012 W
 (a) (b) (c) (d) (e)

(a)	Series Name	FTR-K3: FTR-K3 Series			
(b)	Contact Arrangement	A	: 1 form A (PCB terminal)		
		J	: 1 form A (TAB terminal (#250) + PCB terminal)		
(c)	Coil Type	B	: Standard type (780mW)		
(d)	Nominal Voltage	005	: 5 VDC,	006 : 6VDC,	009 : 9VDC
		012	: 12VDC,	018 :18 VDC	024 : 24VDC 048 : 48VDC
(e)	Contact Material	W	: AgSnO2		

Actual marking does not carry the type name : "FTR"

E.g.: Ordering code: FTR-K3JB024W

Actual marking: K3JB024W

■ COIL DATA CHART

Standard type

MODEL	Nominal Voltage	Coil Resistance (± 10%)	Must Operate Voltage	Must Release Voltage	Nominal Power (± 10%)
FTR-K3 Series					
FTR-K3()B005W	5VDC	32	3.5VDC	0.5VDC	780
FTR-K3()B006W	6VDC	46	4.2VDC	0.6VDC	780
FTR-K3()B009W	9VDC	105	6.3VDC	0.9VDC	780
FTR-K3()B012W	12VDC	185	8.4VDC	1.2VDC	780
FTR-K3()B018W	18VDC	415	12.6VDC	1.8VDC	780
FTR-K3()B024W	24VDC	740	16.8VDC	2.4VDC	780
FTR-K3()B048W	48VDC	2955	33.6 VDC	4.8 VDC	780

Note: All values in the table are measured at 20°C.

FTR-K3 SERIES

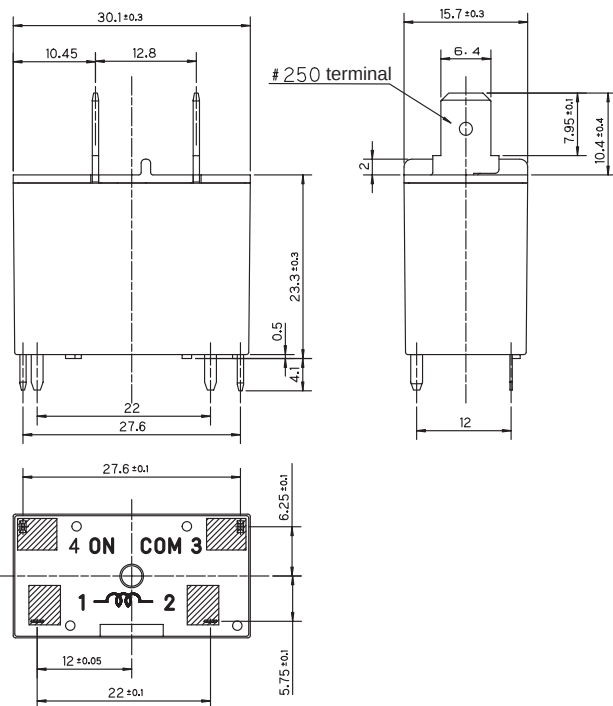
■ SPECIFICATIONS

Item			FTR-K3 Series
			FTR-K3 (A, J) B () W
Contact	Arrangement		1M (1 Form A)
	Material		AgSnO ₂
	Resistance (initial)		100m (at 1A 6VDC)
	Rating (resistive)		250VAC, 20A
	Maximum Carrying Current		25A
	Maximum Switching Power		6,250 VA
	Maximum Switching Voltage		250VAC
	Maximum Switching Current		25A
	Minimum Switching Load (reference value)		100 mA, 5VDC
Coil	Nominal Power		780mV
	Nominal Voltage		5, 6, 9, 12, 18, 24, 48 V
	Operate Power (at 20° C)		Maximum 70% of Nominal Voltage
	Release Voltage (at 20° C)		Minimum 10% of Nominal Voltage
	Operating Temperature		-40° C to +60° C (no frost)
Time Value	Operate (nominal coil voltage, without diode)		Maximum 20ms
	Release (nominal coil voltage, without diode)		Maximum 20ms
Insulation	Resistance		Minimum 1,000M , at 500 VDC
	Dielectric Strength	between open contacts	1,000 VAC (50/60 Hz), 1 min.
		between open coil-contact	5,000 VAC, (50/60 Hz), 1 min.
	Surge Strength	1.2 x 50μ s Standard wave form	8,500V
Life	Mechanical		20 x 10 ⁵ operations minimum (18,000 operations/hr)
	Electrical	resistive load at nominal voltage (1,200 operations/hr)	1 x 10 ⁵ operations minimum
		Motor load (1,200 operations/hr)	Inrush 250VAC 80A (0.3s) cosφ=0.7; steady 20Acosφ=0.9; 2 x 10 ⁵ operations minimum
		Inverter load (3 sec. ON, 5 Sec. OFF)	Inrush 100VAC 200A (crest value); steady 20A; 3 x 10 ⁴ operations minimum
Other	Vibration Resistance	Misoperation (ref. value detection 1ms)	10 to 55 Hz double amplitude of 1.5mm
		Endurance (ref. value)	10 to 55 Hz double amplitude of 1.5mm
	Shock Resistance	Misoperation (ref. value detection 1ms)	200m/s ² (11±1ms)
		Endurance (ref. value)	1,000m/s ² (6±1ms)
	Weight		Approximately 25g

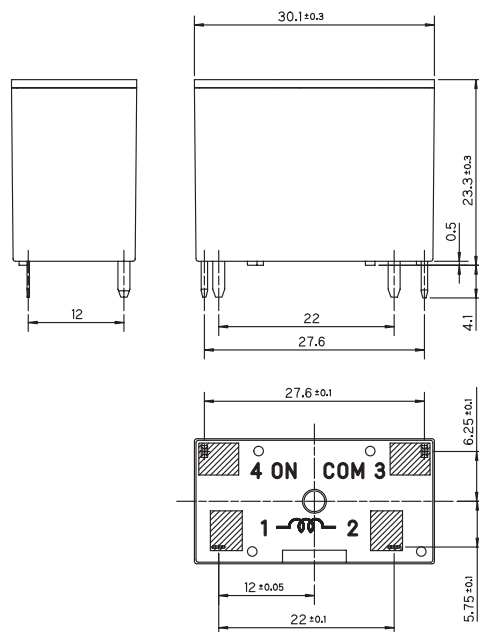
■ DIMENSIONS

● Dimensions

TAB terminal type

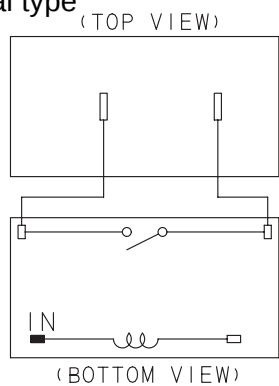


PCB mounting type

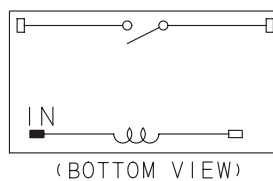


● Schematics

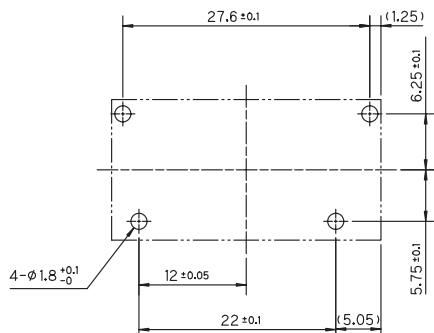
TAB terminal type



PCB mounting type



PC board mounting hole layout



Unit: mm

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