"ORANGE LINE" THERMAL OVERLOAD RELAYS
Selection Guide

■ *FEATURES*

- 1NO+1NC alarm contact (Automatic reset available.)
- Provided with a built-in heater, thus ensuring accurate operations.
- Calibrated Rated Current Dial.
- With manual trip device.
- With open-phase protection device.

■ *THERMAL OVERLOAD RELAYS* UL File No.E44592 CSA File No.LR20479

Overload Part#	Ampere Range Code Letter	Adjustable Ampere Range	Used on Contactor Frames	Japanese Part Number for Overload
4NK0A*%	A	0.1 – 0.15	0A, 0F, 0G	TK-0N
	B	0.15 – 0.24		
	C	0.24 – 0.36		
	D	0.36 – 0.54		
	E	0.48 – 0.72		
	F	0.64 – 0.96		
	G	0.8 – 1.2		
	H	0.95 – 1.45		
	J	1.4 – 2.2		
	K	1.7 – 2.6		
	L	2.2 – 3.4		
	M	2.8 – 4.2		
	N	4 – 6		
	P	5 – 8		
	Q	6 – 9		
	S	7 – 11		
4NK0H*%	A	0.1 – 0.15	0Q, 0R, 0H	TK-5-1N
	B	0.15 – 0.24		
	C	0.24 – 0.36		
	D	0.36 – 0.54		
	E	0.48 – 0.72		
	F	0.64 – 0.96		
	G	0.8 – 1.2		
	H	0.95 – 1.45		
	J	1.4 – 2.2		
	K	1.7 – 2.6		
	L	2.2 – 3.4		
	M	2.8 – 4.2		
	N	4 – 6		
	P	5 – 8		
	Q	6 – 9		
	S	7 – 11		
	T	9 – 13		
	V	12 – 18		

EXPLANATION OF PART NUMBER SYSTEM

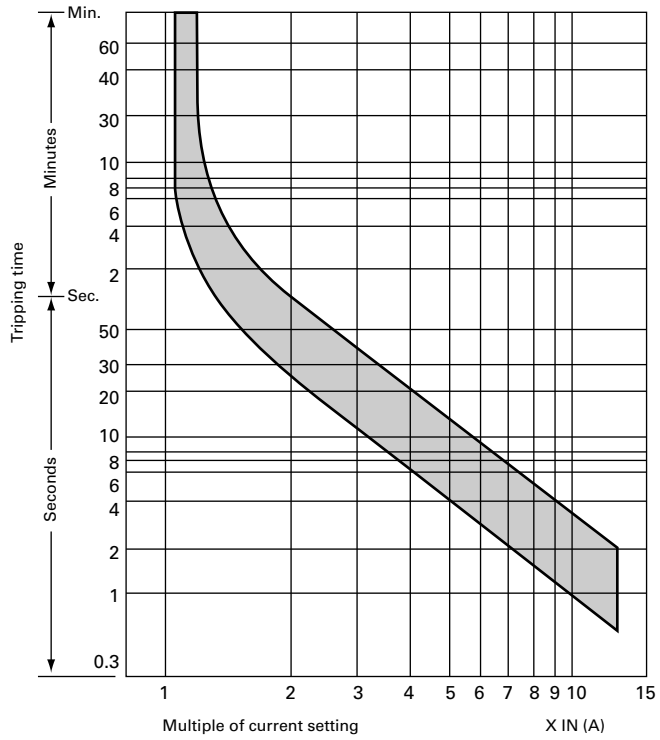
4 N K 0 A * %

- ***PRODUCT LINE***
  4N= Orange Line
- ***STYLE***
  K=Open Phase Protection offered as a standard
- ***ENCLOSURE***
  0=None, Open Frame
- ***TERMINAL OPTION***
  Blank: Standard
  Y: Optional, non removable terminal cover accessory.
- ***AMPERE RANGE CODE***
  See above chart
- ***FRAME SIZE***
  A or H

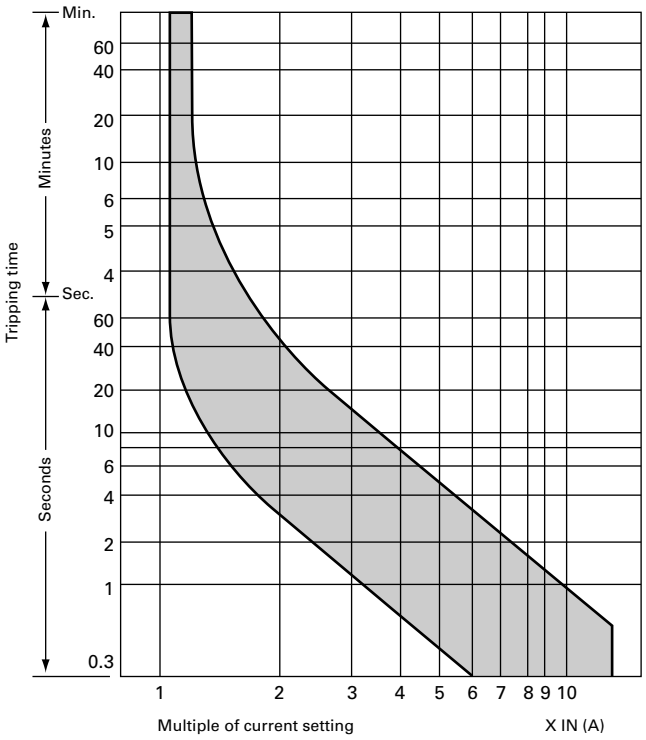
"ORANGE LINE" THERMAL OVERLOAD RELAYS
Overload Trip Curves

■ THERMAL OVERLOAD RELAYS/OPEN-PHASE PROTECTION TYPE K

Cold Start



Hot Start

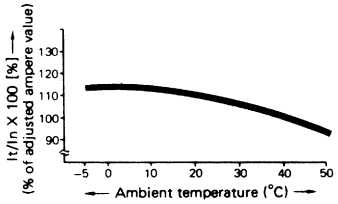


Cat. No.: 4NK0A*, 4NK0H*
FUJI type: TK-0N, TK-5-1N

■ AMBIENT TEMPERATURE COMPENSATOR

FUJI overload relays are provided with an ambient temperature compensator. Their characteristics limit ampere value changes to approx. 10% as the ambient temperature changes between –5˚C and 40˚C.

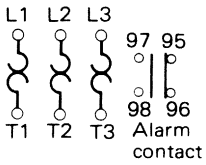
Compensation characteristics (Average value)



It : Operational current
In : Rated current

■ WIRING DIAGRAMS

(4NK0A* through 4NK4Q*)



Independent mounting of Orange Line thermal overload relays is possible through the use of an additional mounting bracket.

For 4NK0A* overloads, use mounting bracket part # SZ-HB
For 4NK0H* overloads, use mounting bracket part # SZ-HC

Base unit for separate mounting

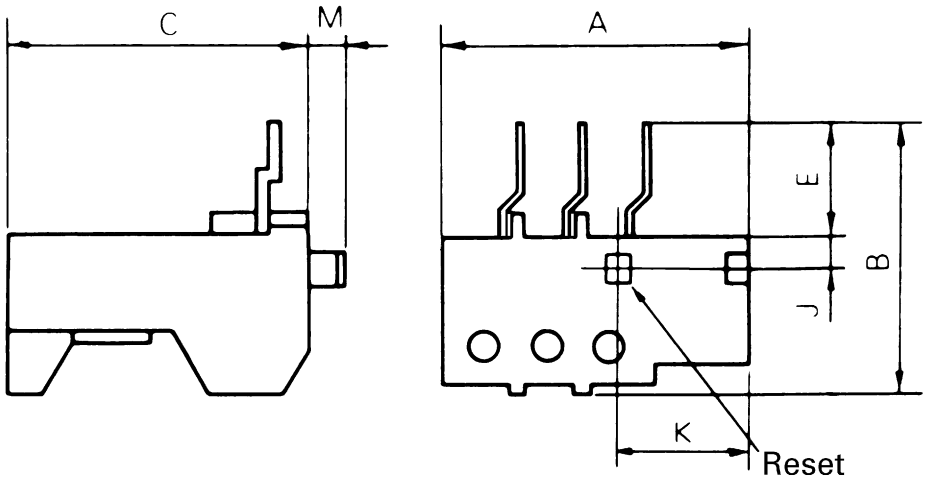
■ ALARM CONTACT RATINGS

Contact rating Code Designation	Continuous Ampere Rating	Current–Make/Break (A)			
		110 to 120V	220 to 240V	440 to 480V	550 to 600V
C600	2.5	15/1.5	7.5/0.75	3.75/0.375	3.0/0.3

"ORANGE LINE" Dimensions

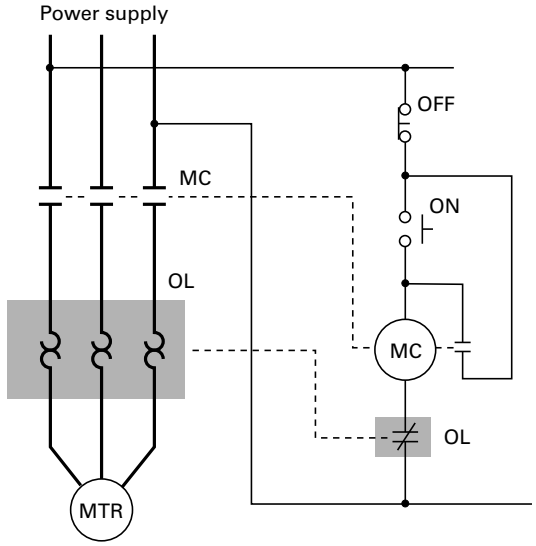
■ ***THERMAL OVERLOAD RELAYS*** **Approximate Dimensions, mm**

FIG. 5



U.S. CAT. No.	Fuji Type	Fig. No.	Dimensions, mm A	B	C	E	J	K	M	Net Weight (kg)
4NK0A	TK-0N	5	44	58.5	77	17	10.5	17.5	3	0.11
4NK0H*	TK-5-1N	5	53	60.5	77	14	14	26.5	3	0.12

Schematic Diagram



RoHS compliant products

Contactors, Motor starters

Description			Japanese Type or part number	US Part number	Time of enforcement
Motor starters	SW series	Enclosed type with phase loss protection thermal overload relay	SW-N2SC/2E SW-N3C/2E SW-N4C/2E SW-N5C/2E SW-N6C/2E SW-N7C/2E SW-N8C/2E SW-N10C/2E SW-N11C/2E SW-N12C/2E SW-N14C/2E	N/A	Enforced
Thermal overload relay		Standard type	TR-0N TR-5-1N TR-N2 TR-N3 TR-N5 TR-N6 TR-N7 TR-N8 TR-N10 TR-N12 TR-N14 TR-0NH TR-5-1NH TR-N2H TR-N3H TR-N6H TR-N10H TR-N12H TR-N14H	N/A	Enforced
		With 3 element	TR-0N/3 TR-5-1N/3 TR-N2/3 TR-N3/3 TR-N5/3 TR-N6/3 TR-N7/3 TR-N8/3 TR-N10/3 TR-N12/3 TR-N14/3 TR-0NH/3 TR-5-1NH/3 TR-N2H/3 TR-N3H/3 TR-N6H/3 TR-N10H/3 TR-N12H/3	N/A	Enforced
		With phase loss protection (Standard in North America)	TK-0N TK-5-1N TK-N2 TK-N3 TK-N5 TK-N6 TK-N7 TK-N8	4NK0A* 4NK0H* 3NK1Q* 3NK2H* 3NK3F* 3NK3H* 3NK4F* 3NK4Q*	Enforced