"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 B C D E F G H J K L M N P Q S	0.1 – 0.15 0.15 – 0.24 0.24 – 0.36 0.36 – 0.54 0.48 – 0.72 0.64 – 0.96 0.8 – 1.2 0.95 – 1.45 1.4 – 2.2 1.7 – 2.6 2.2 – 3.4 2.8 – 4.2 4 – 6 5 – 8 6 – 9 7 – 11	0A, 0F, 0G	TK-0N
4NK0H*%	A B C D E F G H J K L M N P Q S T V	0.1 – 0.15 0.15 – 0.24 0.24 – 0.36 0.36 – 0.54 0.48 – 0.72 0.64 – 0.96 0.8 – 1.2 0.95 – 1.45 1.4 – 2.2 1.7 – 2.6 2.2 – 3.4 2.8 – 4.2 4 – 6 5 – 8 6 – 9 7 – 11 9 – 13 12 – 18	0Q, 0R, 0H	TK-5-1N

EXPLANATION OF PART NUMBER SYSTEM

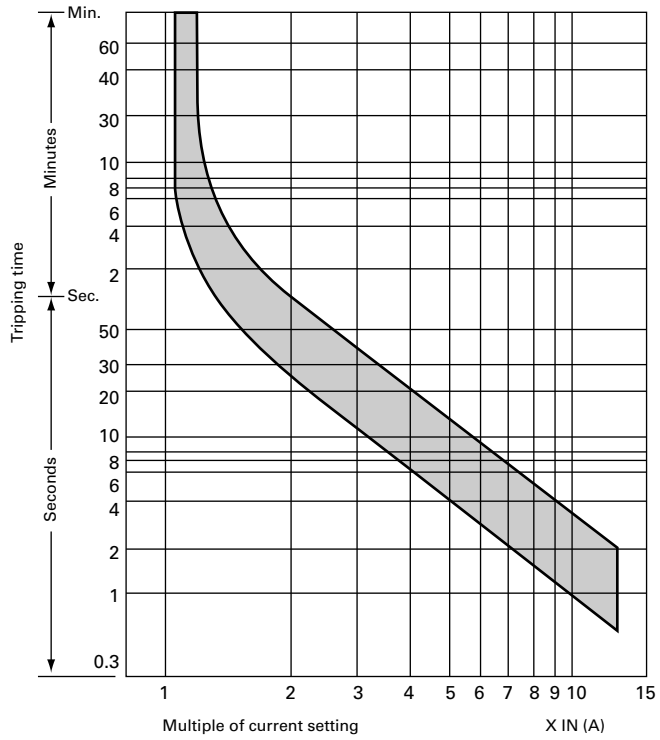
4 N K 0 A * %

- ***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

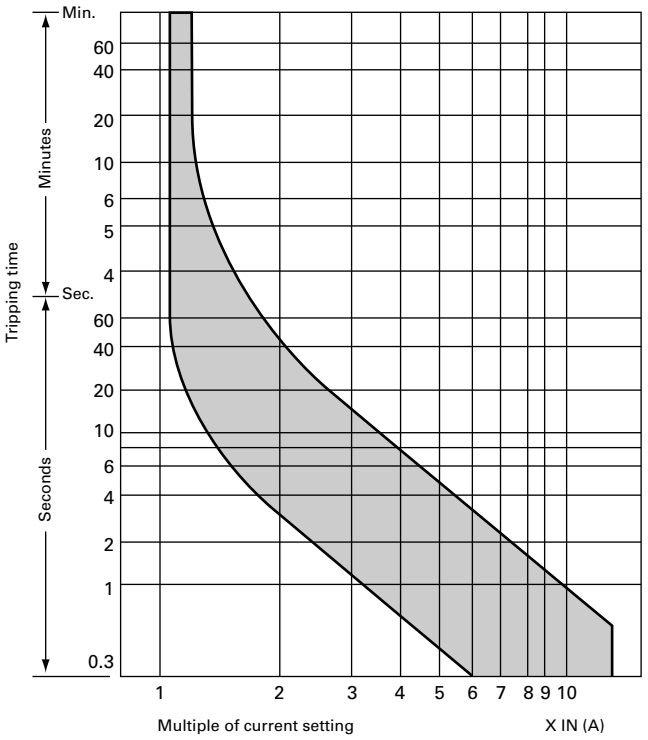
"ORANGE LINE" THERMAL OVERLOAD RELAYS
Overload Trip Curves

■ THERMAL OVERLOAD RELAYS/OPEN-PHASE PROTECTION TYPE K

Cold Start



Hot Start

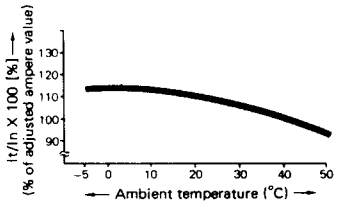


Cat. No.: 4NK0A*, 4NK0H*
FUJI type: TK-0N, TK-5-1N

■ 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.

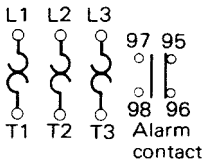
Compensation characteristics (Average value)



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

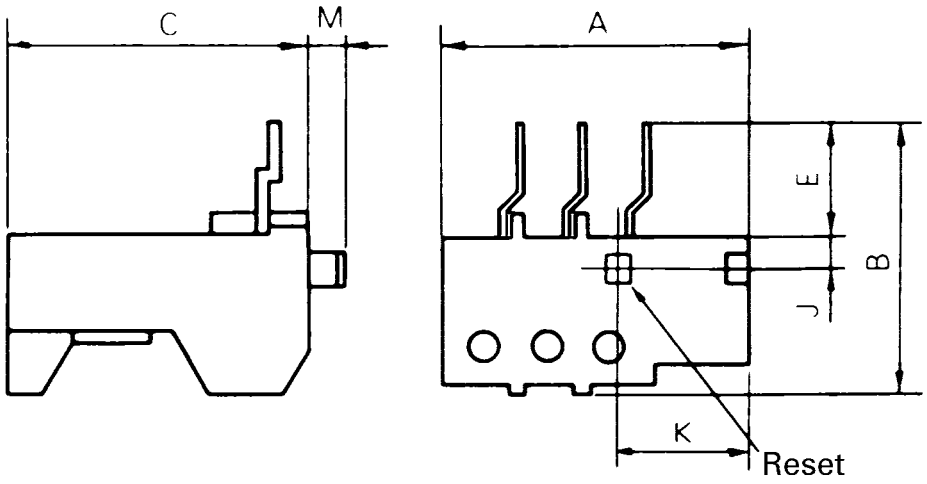
Base unit for separate mounting

■ 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

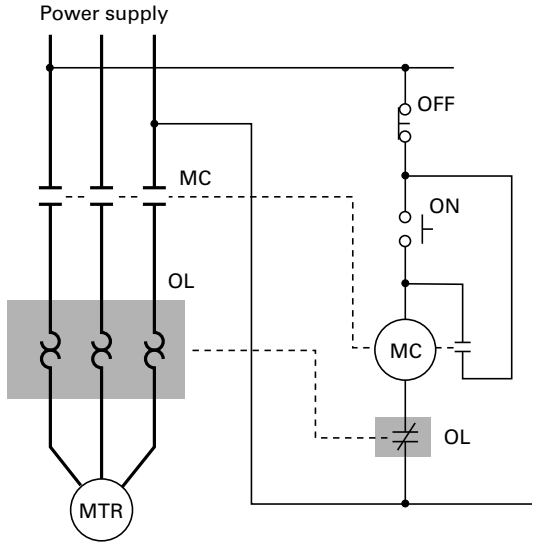
■ *THERMAL OVERLOAD RELAYS* **Approximate Dimensions, mm**

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



Terminal Tightening Torque Chart

Type No.		Terminal Size		Cable Size Maximum		Applicable Max. Width for Ring Terminal		Tightening Torque	
Contactor or Starter	Thermal Overload Relay	Contactor	Thermal Overload Relay	Contactor	Thermal Overload Relay	Contactor	Thermal Overload Relay	Contactor	Thermal Overload Relay
4NC0A0 4NC0F0 4NC0G0 4NW0A0 4NW0F0 4NW0G0	4NK0A	M3.5	M3.5	12AWG (3.3mm^2)	12AWG (3.3mm^2)	7.7mm	7.7mm	7-9 in.lbs. 0.8-1 Nm	7-9 in.lbs. 0.8-1 Nm
4NC0Q0 4NC0R0 4NC0H0 4NW0Q0 4NW0R0 4NW0H0	4NK0H	M4	M4	10AWG (5.3mm^2)	10AWG (5.3mm^2)	9.7mm	9.7mm	11-13 in.lbs. 1.2-1.5 Nm	11-13 in.lbs. 1.2-1.5 Nm
3NC0T0 3NC1Q0 3NW0T0 3NW1Q0	3NK1Q	M5	M5	6AWG (13.3mm^2)	6AWG (13.3mm^2)	12.4mm	12.4mm	18-22 in.lbs. 2-2.5 Nm	18-22 in.lbs. 2-2.5 Nm
3NC2F0 3NC2H0 3NW2F0 3NW2H0	3NK2H	M6	M6	2AWG (33.6mm^2)	4AWG (21.2mm^2)	16.8mm	16.7mm	35-44 in.lbs. 4-5 Nm	35-44 in.lbs. 4-5 Nm
3NC2T0 3NC3F0 3NW2T0 3NW3F0	3NK3F	M6	M6	1/0AWG (53.5mm^2)	2AWG (33.6mm^2)	22.3mm	16.7mm	35-44 in.lbs. 4-5 Nm	35-44 in.lbs. 4-5 Nm
3NC3H0 3NW3H0	3NK3H	M8	M8	1/0AWG (53.5mm^2)	1/0AWG (53.5mm^2)	22.3mm	22.3mm	80-97 in.lbs. 9-11 Nm	80-97 in.lbs. 9-11 Nm
3NC4F0 3NW4F0	3NK4F	M8	M8	3/0AWG (85mm^2)	1/0AWG (53.5mm^2)	28.9mm	22.3mm	80-97 in.lbs. 9-11 Nm	80-97 in.lbs. 9-11 Nm
3NC4Q0 3NW4Q0	3NK4Q	M10	M10	300MCM (152mm^2)	300MCM (152mm^2)	36.5mm	36.5mm	133-177 in.lbs. 15-20 Nm	133-177 in.lbs. 15-20 Nm
3NC4H0 3NW4H0	3NK4H	M10	M10	300MCM (152mm^2)	300MCM (152mm^2)	36.5mm	36.5mm	133-177 in.lbs. 15-20 Nm	133-177 in.lbs. 15-20 Nm
3NC5F0 3NC5H0 3NW5F0 3NW5H0	3NK5H	M12	M12	400MCM (203mm^2)	400MCM (203mm^2)	44.5mm	44.5mm	310-399 in.lbs. 35-45 Nm	310-399 in.lbs. 35-45 Nm
3NC6F0 3NC6H0	–	M16	–	600MCM (304mm^2)	–	51.0mm	–	663-884 in.lbs. 75-100 Nm	–