

# Fuji Odyssey Series 3N Overload Relays

## General information

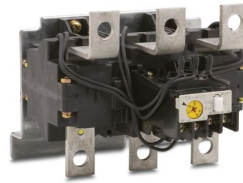
- Use with Odyssey 3N series contactors.
- Protects motor windings from burning due to overloads, locked rotor currents, or open phases.

## Agency approvals:

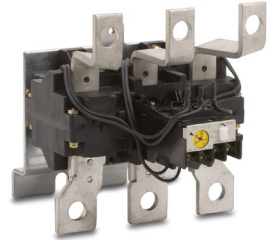
- UL listed file E42419, Standard UL 508
- cUL listed file E42419, Standard CSA C22.2 No. 14
- CE: LVD EN60947-4-1



3NK4QK



3NK4HN



3NK5HQ

Odyssey Series Overload Relays						
Part Number	Fuji Type	Price	Adjustable Current Range (A)	Frame Width	Compatible Contactor	Trip Class IEC 60947-4-1
3NK4QK	TK-N8	\$134.50	65 - 95	119mm	3NC4Qxxxx	10A
3NK4QL	TK-N8	\$134.50	85 - 125			
3NK4QN	TK-N8	\$134.50	110 - 160			
3NK4QP	TK-N8	\$134.50	125 - 185			
3NK4HL	TK-N10	\$160.00	85 - 125	138mm	3NC4Hxxxx	20A
3NK4HN	TK-N10	\$160.00	110 - 160			
3NK4HP	TK-N10	\$160.00	125 - 185			
3NK4HQ	TK-N10	\$160.00	160 - 240			
3NK5HN	TK-N12	\$262.50	110 - 160	142mm	3NC5Fxxxx 3NC5Hxxxx	20A
3NK5HP	TK-N12	\$262.50	125 - 185			
3NK5HQ	TK-N12	\$262.50	160 - 240			
3NK5HR	TK-N12	\$262.50	200 - 300			
3NK5HS	TK-N12	\$262.50	240 - 360			
3NK5HT	TK-N12	\$262.50	300 - 450		3NC5Hxxxx	

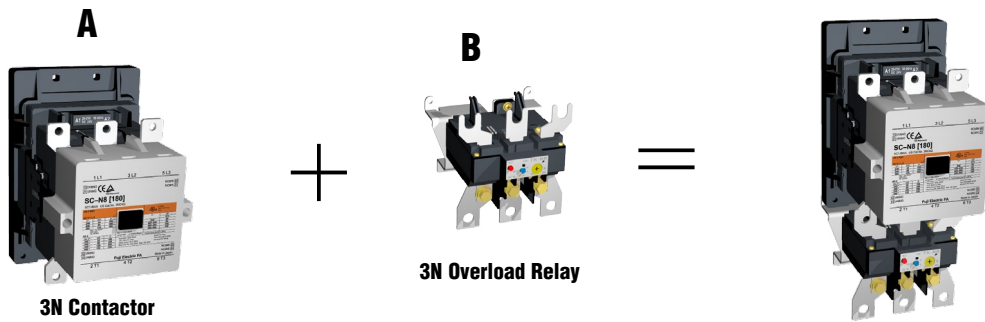
## Specifications

Overload Relay Alarm Contact Ratings				
AC Ratings <small>(note 1)</small>			DC Ratings <small>(note 1)</small>	
Designation	Making VA	Breaking VA	Designation	Making/Breaking VA
C600	1800	180	---	---

**Notes:**  
 1. NEMA ICS 5-2000. For more information, refer to Control Circuit Contact Electrical Ratings, page MRC-111.

Wire Terminal Tightening Torque Chart					
Part Number	Contactor or Starter	Terminal Size	Cable Size Maximum	Applicable Max. Width for Ring Terminal	Tightening Torque
3NK4Qx	3NC4Q0	M10	300MCM (152mm <sup>2</sup> )	36.5mm	133-177 in.lbs., 15-20 Nm
3NK4Hx	3NC4H0	M10	300MCM (152mm <sup>2</sup> )	36.5mm	133-177 in.lbs., 15-20 Nm
3NK5Hx	3NC5F0	M12	400MCM (203mm <sup>2</sup> )	44.5mm	310-399 in.lbs., 35-45 Nm
	3NC5H0				

# Fuji Odyssey Series 3N Overload Relays Selection Tables



Step 1. Select an Odyssey 3N contactor from Column A based on motor voltage and horsepower.

Step 2. Select an Odyssey 3N overload relay from Column B to work with the contactor selected in Step 1. The motor full load current (FLA) should be within the adjustable current range of the overload relay.

## 220-240V 3-Phase Motor (60 to 150 hp)

Motor Rating		A	B	
HP	Motor Full Load Amperage (FLA) (See Note 1)	Contactor	Overload Relay	
			Part Number	Adjustable Current Range
60	154	3NC4Q0x22	3NK4QN	110 to 160 Amps
75	192	3NC4H0x22	3NK4HQ	160 to 240 Amps
100	248	3NC5F0x22	3NK5HR	200 to 300 Amps
125	312	3NC5H0x22	3NK5HS	240 to 360 Amps
150	360	3NC5H0x22	3NK5HT	300 to 450 Amps

**Note 1:** Per NEC 2005 Table 430.250

## 440-480V 3-Phase Motor (125 to 300 hp)

Motor Rating		A	B	
HP	Motor Full Load Amperage (FLA) (See Note 1)	Contactor	Overload Relay	
			Part Number	Adjustable Current Range
125	156	3NC4Q0x22	3NK4QP	125 to 185 Amps
150	180	3NC4H0x22	3NK4HQ	160 to 240 Amps
200	240	3NC5F0x22	3NK5HR	200 to 300 Amps
250	302	3NC5H0x22	3NK5HS	240 to 360 Amps
300	361	3NC5H0x22	3NK5HT	300 to 450 Amps

**Note 1:** Per NEC 2005 Table 430.250

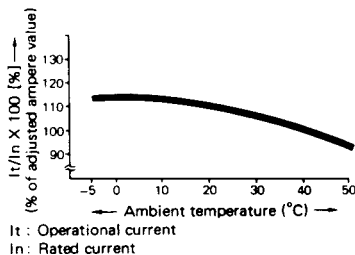
# Fuji Odyssey Series 3N Overload Relays

## Specifications

### Ambient temperature compensator

Overload relays are provided with an ambient temperature compensator. Their characteristics limit current value changes to approximately 10% as the ambient temperature changes between -5°C and 40°C.

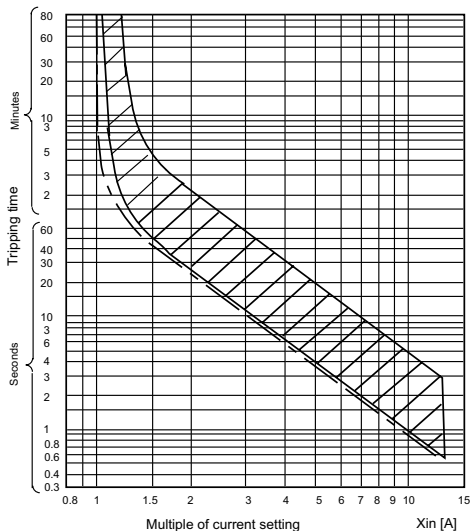
Compensation characteristics (Average value)



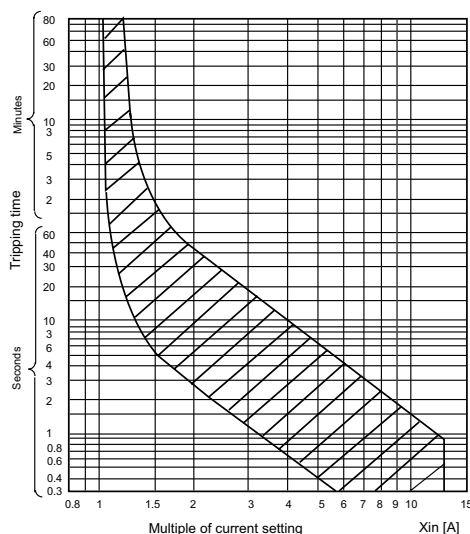
## Open-phase protection

### 3NK4Qx

#### Cold start

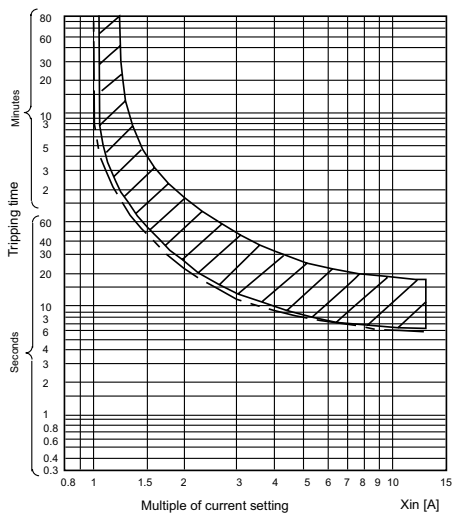


#### Hot start

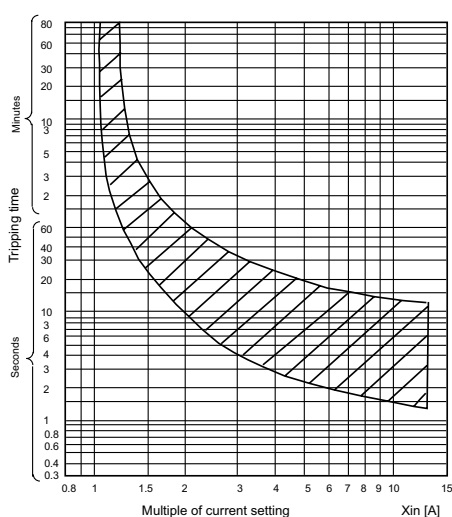


### 3NK4Hx, 3NK5Hx

#### Cold start



#### Hot start



# Fuji Odyssey Series 3N Overload Relays

## Optional accessories

### Terminal covers

NOTE: Larger terminal covers may require some adjustment for proper fit.



SZ-WN8T



SZ-WN10T

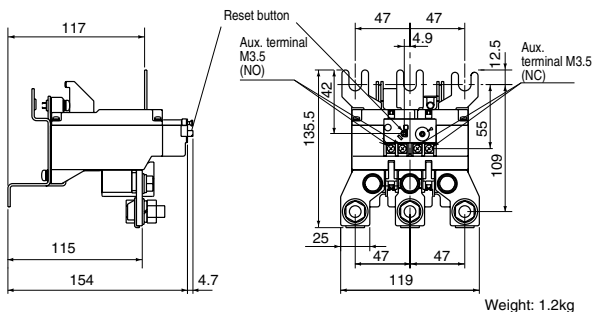


SZ-WN11T

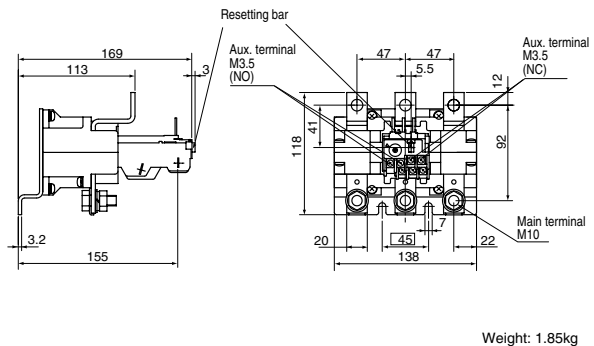
Odyssey Series Overload Relay Terminal Covers			
Part number	Price	Description	Applicable Contactors, Overload Relays
SZ-WN8T	\$66.50		3NK4Qx overload relays
SZ-WN10T	\$66.50	Terminal cover for load side. Prevents contact with electrified contactor terminals.	3NK4Hx overload relays
SZ-WN11T	\$76.50		3NK5Hx overload relays

### Dimensions (mm)

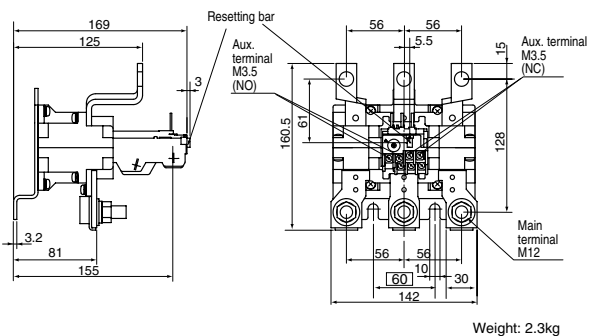
3NK4Qx



3NK4Hx

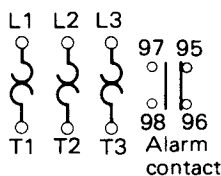


3NK5Hx



### Wiring diagrams

3NK4Qx



3NK4Hx, 3NK5Hx

