

## OVERLOAD RELAY SETTING

This bimetallic ambient compensated overload relay has an adjustable FLA range between 0.254 and 32.0 amperes, depending upon which heater packs are installed. With proper heater selection, the overload relay will ultimately trip at 125% FLA for a 1.15 service factor motor and at 115% FLA for a 1.0 service factor motor.

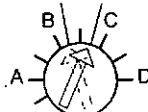
**HEATER SELECTION / INSTALLATION** - Select the appropriate heater pack number which corresponds to the motor FLA rating for your application. Insert each heater into the overload relay and tighten heater mounting screws to 9 pound-inches of torque.

**NOTE** - Three heater packs with the same number must be installed in the overload relay for the overload relay to work properly.

**FLA DIAL ADJUSTMENT** - For motors having a 1.15 service factor, rotate the FLA adjustment dial to correspond to the motor's FLA rating. Estimate the dial position when the motor FLA falls between two letter values as shown in the example.

FLA ADJUSTMENT DIAL

1.0      1.15  
SERVICE SERVICE  
FACTOR    FACTOR



Example of a 12.0 FLA setting for heater pack number H2011B showing position for 1.0 or 1.15 service factor motors.

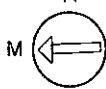
For motors having a 1.0 service factor, rotate the FLA dial one-half position counterclockwise (CCW).

● **NOTE:** After the above-referenced settings have been made, rotate the FLA dial one position clockwise for these heaters (see table). If less than one position is available, rotate dial to maximum. This note does not apply when these heaters are used with Catalog No. C306TB1 adaptor base.

**MANUAL / AUTOMATIC RESET** - The overload relay is factory set at "M" for manual reset operation as shown in the illustration. For automatic reset operation, turn the reset adjustment dial to the "A" position.

RESET ADJUSTMENT DIAL

A



Example of setting for manual reset

Automatic reset is not intended for two-wire control devices.

Ce dispositif de reencenchement automatique ne convient pas aux commandes a deux conducteurs.

**TEST FOR TRIP INDICATION** - To test overload relay for trip indication when in manual reset, pull out the blue reset button. An orange flag will appear indicating that the device has tripped. Push reset button in to reset.

**WARNING** - To provide continued protection against fire or shock hazard, the complete overload relay must be replaced if burnout of the heater element occurs.

**AVERTISSEMENT:** Le relais de surcharge doit être remplacé si l'élément porteur de courant est grillé.

### LOAD TERMINATION TIGHTENING TORQUE

20 lb-in

For -T16 Catalog Numbers,  
Torque to 17 lb-in  
-T16 is for ring lug connection only

Use 75°C Copper Conductors Only  
Max. Wire Size - #8 AWG

### HEATER PACK SELECTION

MOTOR FLA RATING				STD TRIP CLASS
FLA DIAL POSITIONS				
A	B	C	D	20
.254	.306	.359	.411	
.375	.452	.530	.607	H2002B
.560	.676	.791	.907	H2003B
.814	.983	1.15	1.32	H2004B
1.20	1.45	1.71	1.96	H2005B

1.79	2.16	2.53	2.90	H2006B
2.15	2.60	3.04	3.49	H2007B
3.23	3.90	4.56	5.23	H2008B
4.55	5.50	6.45	7.40	H2009B
6.75	8.17	9.58	11.0	H2010B

9.14	10.8	12.4	14.0	H2011B
14.0	16.9	19.9	22.8	H2012B
18.7	22.7	26.7	30.7	H2013B
23.5	28.5	33.5	---	H2014B

### HEATER PACK SELECTION

MOTOR FLA RATING				FAST TRIP CLASS
FLA DIAL POSITIONS				
A	B	C	D	10
.260	.313	.367	.420	
.384	.464	.543	.623	H2102B
.570	.688	.806	.924	H2103B
.846	1.02	1.20	1.37	H2104B
1.28	1.55	1.83	2.10	H2105B

1.92	2.33	2.74	3.15	H2106B
2.30	2.79	3.28	3.77	H2107B
3.38	4.10	4.82	5.54	H2108B
4.96	6.03	7.09	8.16	H2109B
7.07	8.58	10.1	11.6	H2110B

9.60	11.2	12.8	14.4	H2111B
14.4	17.5	20.7	23.8	H2112B
18.7	21.8	25.0	28.1	H2113B
23.5	27.3	31.0	34.8	H2114B

9.60	11.2	12.8	14.4	H2111B
14.4	17.5	20.7	23.8	H2112B
18.7	21.8	25.0	28.1	H2113B
23.5	27.3	31.0	34.8	H2114B

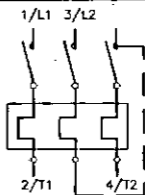
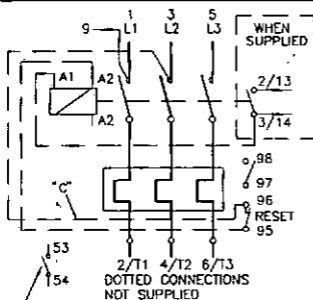
◆ For Motor FLA values not listed, turn the dial clockwise for higher or counterclockwise for lower ratings.

### MAXIMUM RATINGS

NEMA SIZE	AMPS	SIZE *	AMPS
00	9.0	A	7.0
0	18.0	B	10.0
1	27.0	C	12.0
		D	18.0
		E	25.0
		F	32.0

\* Size is the fifth digit in the catalog number.  
Example: AE16A~~ND~~

# AC FULL VOLTAGE MAGNETIC STARTER



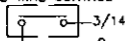
FIELD CONVERSION TO 1 PHASE - ADD DOTTED CONNECTION.

### SEPARATE CONTROL

IF THE STARTER IS WIRED COMPLETE INCLUDING THE DOTTED CONNECTIONS REMOVE WIRE "C". CONNECT SEPARATE CONTROL LINES TO THE NO. 9 TERMINAL ON THE REMOTE PILOT DEVICE AND THE 96 TERMINAL ON THE OVERLOAD RELAY.

IF A TOP MOUNTED INTERLOCK IS USED FOR THE HOLDING CIRCUIT  
REMOTE PILOT DEVICES

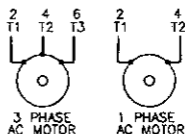
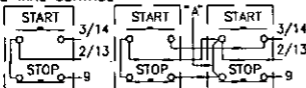
### 2 WIRE CONTROL



NOT FOR USE WITH AUTO RESET OL RELAYS.

WHEN MORE THAN ONE PUSHBUTTON STATION IS USED OMIT CONNECTOR "A" AND CONNECT PER SKETCH BELOW.

### 3 WIRE CONTROL



Short Circuit Withstand  
5000A rms, 600VAC

## POWER TERMINATIONS

Use 75°C Copper Wire Only

### LINE TERMINALS

Torque to 15 lb-in.

For catalog numbers with -T16,  
Torque to 17 lb-in.

-T16 is for ring lug connection only

### LOAD TERMINALS

Refer to Overload Relay Setting  
Publication for Torque Ratings

## AUXILIARY CONTACTS

### SIDE MOUNTED

Catalog No.	Contacts
C320KGS1	N.O.
C320KGS2	N.C.
C320KGS3	N.O. - N.C.
C320KGS4	2 N.O.
C320KGS5	2 N.C.
C320KGS6	N.O. - N.C.(I.)
C320KGS7	N.O. (E.C.) - N.C.(L.O.)
C320KGS8	N.C.(I.)

### CONTROL CIRCUIT FUSEHOLDER KIT

Catalog No.	Fuse Type
C320FBR	Class CC

### RENEWAL PARTS

Magnet Coil - Specify the number stamped on coil.

### PNEUMATIC TIMERS

Catalog No.	Timing Range
C320TP1	0.3 to 10 Sec.
C320TP2	10 to 180 Sec.

## AUXILIARY CONTACTS

### TOP MOUNTED

Catalog No.	Contacts
C320KGT1.	N.O.
C320KGT2	N.C.
C320KGT3	N.O. - N.C.
C320KGT4	2 N.O.
C320KGT5	2 N.C.
C320KGT6	N.O. - N.C.(I.)
C320KGT7	N.O. (E.C.) - N.C.(L.O.)
C320KGT8	N.C.(I.)
C320KGT9	3 N.O.
C320KGT10	2 N.O. - 1 N.C.
C320KGT11	1 N.O. - 2 N.C.
C320KGT12	3 N.C.
C320KGT13	4 N.O.
C320KGT14	3 N.O. - 1 N.C.
C320KGT15	2 N.O. - 2 N.C.
C320KGT16	1 N.O. - 3 N.C.
C320KGT17	4 N.C.
C320KGT18	3 N.O. - 1 N.C.(I.)
C320KGT19	2 N.O. - 1 N.C.(I.) - 1 N.C.
C320KGT20	2 N.O. - 1 N.O.(E.C.) - 1 N.C.(L.O.)

### MOUNTING PLATE

Catalog No.	C321MP3
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### FIELD WIRING KITS for -T16

Starter	Kit No.
AE16D	C325KAL32 & C325KAL35
AE16E	C325KAL33 & C325KAL35
AE16F	C325KAL34 & C325KAL35

Cutler-Hammer **F.T.N.**