STARTERS AND CONTACTORS
Full Voltage AC, NEMA Sizes 00-9
Technical Data

A200

Fred # 278

TECHNICAL DATA, Continued

Size 00, 0, 1

Short-Circuit Protective Device (SCPD)	Max. Rating SCPD	Circuit Breaker Interrupting Rating	Short-Circuit Withstand Capability		Typical Disconnect Device Cat. No.
			Current	Voltage	
Class H Fuse	60A	—	5,000A	600V	DS161, DS162
Class J Fuse	60A	—	100,000A	600V	DS161, DS162
Class R Fuse	60A	—	100,000A	600V	DS161, DS162
Class T Fuse	60A	—	100,000A	600V	DS161, DS162
Magnetic Only❶ Type CB❷	30A	Marked HMCP	100,000A	480V	HMCP
			50,000A	600V	
Thermal/Mag Type CB❸	50A	65,000A	65,000A	480V	HFD
		25,000A	25,000A	600V	HFD
		100,000A	100,000A	480V	FDC
		35,000A	35,000A	600V	FDC
Mag Only Type CB + CL❹	30A	HMCP + Current Limiter	100,000A	600V	HMCP + EL
Thermal/Mag Type CLB❺	50A	150,000A	100,000A	480V	FCL

Size 2

Short-Circuit Protective Device (SCPD)	Max. Rating SCPD	Circuit Breaker Interrupting Rating	Short-Circuit Withstand Capability		Typical Disconnect Device Cat. No.
			Current	Voltage	
Class H Fuse	100A	—	5,000A	600V	DS263
Class J Fuse	100A	—	100,000A	600V	DS263
Class R Fuse	100A	—	100,000A	600V	DS263
Class T Fuse	100A	—	100,000A	600V	DS263
Magnetic Only❶ Type CB❷	50A	Marked HMCP	100,000A	480V	HMCP
			50,000A	600V	
Thermal/Mag Type CB❸	90A	65,000A	65,000A	480V	HFD
		25,000A	25,000A	600V	HFD
		100,000A	100,000A	480V	FDC
		35,000A	35,000A	600V	FDC
Mag Only Type CB + CL❹	50A	HMCP + Current Limiter	100,000A	600V	HMCP + EL
Thermal/Mag Type CLB❺	90A	150,000A	100,000A	480V	FCL

Size 3

Short-Circuit Protective Device (SCPD)	Max. Rating SCPD	Circuit Breaker Interrupting Rating	Short-Circuit Withstand Capability		Typical Disconnect Device Cat. No.
			Current	Voltage	
Class H Fuse	200A	—	5,000A	600V	DS364
Class J Fuse	200A	—	100,000A	600V	DS364
Class R Fuse	200A	—	100,000A	600V	DS364
Class T Fuse	200A	—	100,000A	600V	DS364
Magnetic Only❶ Type CB❷	100A	Marked HMCP	100,000A	480V	HMCP
			50,000A	600V	
Thermal/Mag Type CB❸	150A	65,000A	65,000A	480V	HFD
		25,000A	25,000A	600V	HFD
		100,000A	100,000A	480V	FDC
		35,000A	35,000A	600V	FDC
Mag Only Type CB + CL❹	100A	HMCP + Current Limiter	100,000A	600V	HMCP + EL
Thermal/Mag Type CLB❺	150A	50,000A	100,000A	480V	FCL

Size 4

Short-Circuit Protective Device (SCPD)	Max. Rating SCPD	Circuit Breaker Interrupting Rating	Short-Circuit Withstand Capability		Typical Disconnect Device Cat. No.
			Current	Voltage	
Class H Fuse	400A	—	10,000A	600V	DS465
Class J Fuse	400A	—	100,000A	600V	JD3250WK Interrupter
Class R Fuse	400A	—	100,000A	600V	JD3250WK Interrupter
Class T Fuse	400A	—	100,000A	600V	JD3250WK Interrupter
Magnetic Only❶ Type CB❷	150A	Marked HMCP	100,000A	480V	HMCP
			50,000A	600V	
Thermal/Mag Type CB❸	250A	65,000A	65,000A	480V	JDC
		25,000A	25,000A	600V	JDC
		100,000A	100,000A	480V	HJD
		35,000A	35,000A	600V	HJD
Mag Only Type CB + CL❹	150A	HMCP + Current Limiter	100,000A	600V	HMCP + EL
Thermal/Mag Type CB + CL❺	250A	200,000A	100,000A	600V	LA + TRI + PAC
Thermal/Mag Type CLB❺	250A	150,000A	100,000A	480V	LCL

K

Other Available Coil Voltages

AC Coils

Catalog Number Suffix	Coil Rating (Volts/Hertz)	Catalog Number Suffix	Coil Rating (Volts/Hertz)
A	120/60, 110/50	N	110/50
B	200-208/60	P	48/60
C❼	240/60 and 480/60	Q	Volts/Hertz Specified
D	440/50	R❼	120/60 and 240/60
E	600/60 Hz	U	440-480/50 or 60 Rect. to Dc
G	220/50	V	110/60
H	380/50	W	240/60
I	24/60	X	480/60
J	110-120/50 or 60 Rect. to Dc	Y	415/50
K	220-240/50 or 60 Rect. to Dc	Z	277/60

Dc Coils ❽❾❿

Catalog Number Suffix	Coil Rating
L	24 VDc
M	48 VDc
S	125 VDc
T	250 VDc

❶ Instantaneous Adjustable Trip.
❷ Circuit Breaker.
❸ Inverse Time Circuit Breaker.
❹ Instantaneous Adjustable Trip with Current Limiting Attachment.
❺ Inverse Time with Built-In Current Limiting Attachment.
❻ Inverse Time Current Limiting Breaker.
❼ **List Price Addition: $12, Sizes 00-4**
❽ **List Price Addition:**
Size 0,1: **$102**
Size 2: **114**
Size 3: **198**
Size 4: **264**
Sizes 5,6: **414**

❾ Dc coils for Size 5 and 6 contactors and starters are intermittent duty rated only. A mechanical latch is required.
❿ Dc coils. Use only on contactors originally supplied with a Dc coil.

COMBINATION STARTER HIGH FAULT RATINGS FOR CUTLER-HAMMER AND WESTINGHOUSE
CUTLER-HAMMER AND WESTINGHOUSE AS OF 8/96

CUTLER-HAMMER HIGH FAULT RATINGS (FREEDOM)				COMBO. STARTER SIZE	WESTINGHOUSE HIGH FAULT RATINGS (A200)				WESTINGHOUSE HIGH FAULT RATINGS (ADVANTAGE)			
HMCP		DISC. SWITCH			HMCP		DISC. SWITCH		HMCP		DISC. SWITCH *	
480V	600V	480V	600V		480VC	600V	480V	600V	480VC	600V	480V	600V
100KA	25KA	*100KA	*100KA	0	?	?	*100KA	**5KA	N/A	N/A	N/A	N/A
	25KA			1	65KA ^(100KA)	35KA	*100KA	**5KA	100KA 100KA - C/L	25KA #+ 100KA - C/L	100KA	65KA
	25KA			2	65KA ^(100KA)	35KA	*100KA	**5KA	100KA 100KA - C/L	25KA #+ 100KA - C/L	100KA	65KA
	30KA			3	65KA ^(100KA)	5KA	*100KA	**5KA	100KA 100KA - C/L	25 100KA - C/L	100KA	65KA
	25KA			4	65KA ^(100KA)	10KA	*100KA	**10KA	65KA 100KA # ++	25KA ++	100KA	65KA
	25KA W/ 250 HMCP 35KA W/ 400 HMCP			5	42KA	18KA	*100KA	**100KA	100KA W/ 250A & 400A HMCP	25KA W/ 250A & 400A HMCP	100KA	100KA

* W/ CLASS R FUSES
** W/ CLASS H FUSES
^ W/ CURRENT LIMITER

REQUIRES GAS BARRIERS
+ STYLE 6065C42H01
++ STYLE 6065C42H02
C/L - WHEN USED W/ CURRENT LIMITER

CITATION IC RATINGS

		@480V	@600V
A30 DISCONNECT	SIZE 0-3	100,000	100,000
	4	100,000	10,000
	5	10,000	10,000
A40 HMCP	SIZE 0-3	5,000	5,000
	4	10,000	10,000
	5	5,000	5,000

W200, W201, SIZES 1 AND 2, THREE-PHASE

I.L. 17401G

TABLE IX – SIZE 1 SHORT-CIRCUIT RATINGS

Short-Circuit Protective Device (SCPD)	Max. Rating SCPD	Circuit Breaker Interrupting Rating	Short-Circuit Withstand Rating		Typical Disconnect Device Cat. No.
			Current	Voltage	
Class H Fuse	60A	—	5,000A	600V	DS262R
Class J Fuse	60A	—	100,000A	480V	100A FD-K Molded Case SW
			65,000A	600V	
Class R or Class T Fuse	60A	—	100,000A	480V	100A FD-K Molded Case SW
			65,000A	600V	
Magnetic Only[1] Type CB[2]	3, 7, 15 or 30A	Marked GMCP	42,000A	240V	GMCP
			25,000A	480V	
Magnetic Only[1] Type CB[2]	3A or 7A	Marked HMCPS	100,000A	480V	HMCPS
			50,000A	600V	
Magnetic Only[1] Type CB[2]	15A or 30A	Marked HMCP	100,000A	480V	HMCP
			25,000A	600V	
Magnetic Only[1] Type CB[2]	15A or 30A	Marked HMCPS	100,000A	480V	HMCPS
			50,000A	600V	
Thermal/Mag. Type CB[3]	50A	25,000A	25,000A	600V	HFD
		65,000A	65,000A	480V	
		100,000A	100,000A	480V	FDC
		35,000A	35,000A	600V	
Magnetic Only[1] Type CB + CL[4]	30A	HMCP plus Current Limiter	100,000A	600V	HMCP + CL
Thermal/Mag. Type CB + CL[5]	50A	150,000A	100,000A	600V	HFD + CL

TABLE X – SIZE 2 SHORT-CIRCUIT RATINGS

Short-Circuit Protective Device (SCPD)	Max. Rating SCPD	Circuit Breaker Interrupting Rating	Short-Circuit Withstand Rating		Typical Disconnect Device Cat. No.
			Current	Voltage	
Class H Fuse	100A	—	5,000A	600V	DS263
Class J Fuse	100A	—	100,000A	480V	100A FD-K Molded Case SW
			65,000A	600V	
Class R or Class T Fuse	100A	—	100,000A	480V	100A FD-K Molded Case SW
			65,000A	600V	
Magnetic Only[1] Type CB[2]	50A	Marked GMCP	42,000A	240V	GMCP
			25,000A	480V	
Magnetic Only[1] Type CB[2]	50A	Marked HMCP	100,000A	480V	HMCP
			25,000A	600V	
Magnetic Only[1] Type CB[2]	50A	Marked HMCPS	100,000A	480V	HMCPS
			50,000A	600V	
Thermal/Mag. Type CB[3]	90A	65,000A	65,000A	480V	HFD
		25,000A	25,000A	600V	HFD
		100,000A	100,000A	480V	FDC
		35,000A	35,000A	600V	FDC
Magnetic Only[1] Type CB + CL[4]	50A	HMCP + Current Limiter	100,000A	600V	HMCP+CL
Thermal/Mag. Type CB + CL[5]	90A	150,000A	100,000A	600V	HFD + CL

ACCESSORIES

Description	Catalog Number
Internal Trip Indicator for W200	WLED
External (remote) Reset for W200, 24 in. Leads*	WRSK24
External (remote) Reset for W200, 72 in. Leads*	WRSK72
External (remote) Reset/Trip Indicator for W200, 24 in. Leads	WRSKL24
External (remote) Reset/Trip Indicator for W200, 72 in. Leads	WRSKL72
Control Circuit Terminal Block with 1.5A fuse and 2 Tie Points to accept solid, stranded or lugged conductors for W200 and W201	WTBF16
DIN Rail Mounting Kit	WDIN
Communications Module – Data, Status and Control	WPONI
Communications Module – Status and Control	WCTLPONI
Central Monitoring Unit to Receive WPONI output	WCMU
Alarm Module with one NO Contact	WBNOC

* There is no trip indication available when this accessory is used, other than via a communications network.

SHORT-CIRCUIT RATINGS

These motor controllers are suitable for use on circuits capable of delivering not more than the current (rms symmetrical amperes) shown, in circuits rated not more than the voltage shown in Tables IX and X, when protected by the SCPD shown.

TABLE NOTES:

1. Instantaneous-Adjustable-Trip
2. Circuit Breaker
3. Inverse-Time Circuit Breaker
4. Instantaneous-Adjustable-Trip Circuit Breaker with Current-Limiting Attachment
5. Inverse-Time Circuit Breaker with Current-Limiting Attachment

AC COIL DATA (TYPICAL VALUES) SIZES 1 AND 2

Inrush VA	Sealed VA	Sealed Watts
250	25	5

Use a 100VA machine-tool control transformer. Protect the coil and printed wiring board with a 1.5 ampere time-delay fuse. See Table XI.

TROUBLESHOOTING HINTS

If the controller does not operate as expected, check the following:

(a) All control power to terminals 3-P-E-C must be supplied from the same phase. See Figure 14.

(b) Terminal P must be energized to permit the contactor to pickup.

(c) Terminals E and C must be energized to obtain a tripped indication.

(d) A starter in a tripped condition caused by a phase-loss or a ground-fault must be reset with control power ON.

(e) Each DIP switch handle must be in the full ON or full OFF position.

A Type WCMU central monitoring unit can be of great assistance in troubleshooting.

W200, W201, SIZES 3 AND 4, THREE-PHASE

TABLE VIII – SIZE 3 SHORT-CIRCUIT RATINGS

Short-Circuit Protective Device (SCPD)	Max. Rating SCPD	Circuit Breaker Interrupting Rating	Short-Circuit Withstand Rating		Typical Disconnect Device Cat. No.
			Current	Voltage	
Class H Fuse	300A	—	5,000A	600V	DS364
Class J Fuse	200A	—	100,000A	480V	100A FD-K Molded Case SW
			65,000A	600V	
Class R or Class T Fuse	200A	—	100,000A	480V	100A FD-K Molded Case SW
			65,000A	600V	
Magnetic Only[1] Type CB[2]	60A or 63A	Marked GMCP	42,000A	240V	GMCP
			25,000A	480V	
Magnetic Only[1] Type CB[2]	100A	Marked HMCP	100,000A	480V	HMCP
			50,000A	600V	
Thermal/Mag.	150A	65,000A	65,000A	480V	HFD
		25,000A	25,000A	600V	
		100,000A	100,000A	480V	FDC
		35,000A	35,000A	600V	
Magnetic Only[1] Type CB + CL[4]	100A	HMCP plus Current Limiter	100,000A	600V	HMCP + CL
Thermal/Mag. Plus CL[5]	150A	150,000A	100,000A	600V	HFD + CL

TABLE IX – SIZE 4 SHORT-CIRCUIT RATINGS

Short-Circuit Protective Device (SCPD)	Max. Rating SCPD	Circuit Breaker Interrupting Rating	Short-Circuit Rating		Typical Disconnect Device Cat. No.
			Current	Voltage	
Class H Fuse	500A	—	10,000A	600V	DS465
Class J Fuse	400A	—	100,000A	480V	150A FD-K Motor Circuit Sw.
			65,000A	600V	
Class R or Class T Fuse	400A	—	100,000A	600V	250A JD-K Motor Circuit Sw.
Magnetic Only[1] Type CB[2]	150A	Marked HMCP	100,000A	480V	HMCP
			50,000A	600V	
Thermal/Mag. Type CB[3]	250A	100,000A	100,000A	480V	JDC
		35,000A	50,000A	600V	
		65,000A	65,000A	480V	HJD
		25,000A	25,000A	600V	
Mag. Only Type CB + CL[4]	150A	HMCP + Current Limiter	100,000A	600V	HMCP+CL

ACCESSORIES

Description	Catalog Number
Internal Trip Indicator for W200	WLED
External (remote) Reset for W200, 24 in. Leads*	WRSK24
External (remote) Reset for W200, 72 in. Leads*	WRSK72
External (remote) Reset/Trip Indicator for W200, 24 in. Leads	WRSKL24
External (remote) Reset/Trip Indicator for W200, 72 in. Leads	WRSKL72
Control Circuit Terminal Block with 2A fuse and 2 Tie Points to accept solid, stranded or lugged conductors for W200 and W201	WTBF34
Communications Module – Data, Status and Control	WPONI
Communications Module – Status and Control	WCTLPONI
Central Monitoring Unit to Receive WPONI output	WCMU
Alarm Module with one NO Contact	WBNOC

* There is no trip indication available when this accessory is used, other than via a communications network.

SHORT-CIRCUIT RATINGS

These motor controllers are suitable for use on circuits capable of delivering not more than the current (rms symmetrical amperes) shown, in circuits rated not more than the voltage shown in Tables VIII and IX, when protected by the SCPD shown.

TABLE NOTES:

1. Instantaneous-Adjustable-Trip
2. Circuit Breaker
3. Inverse-Time Circuit Breaker
4. Instantaneous-Adjustable-Trip with Current-Limiting Attachment
5. Inverse-Time Circuit Breaker with Current-Limiting Attachment

AC COIL DATA (TYPICAL VALUES) SIZES 3 AND 4

Inrush VA	Sealed VA	Sealed Watts
500	50	10

Use a 150VA machine-tool control transformer. Protect the coil and printed wiring board with a 2A time-delay fuse. See Table X.

TROUBLESHOOTING HINTS

If the controller does not operate as expected, check the following:

(a) All control power to terminals 3-P-E-C must be supplied from the same phase.

(b) Terminal P must be energized to permit the contactor to pickup.

(c) Terminals E and C must be energized to obtain a tripped indication.

(d) A starter in a tripped condition caused by a phase-loss or a ground-fault must be reset with control power ON.

(e) Each DIP switch handle must be in the full ON or full OFF position.

A Type WCMU central monitoring unit can be of great assistance in troubleshooting.

W200, W201, SIZES 5 AND 6, THREE-PHASE

TABLE VIII – SIZE 5 SHORT-CIRCUIT RATINGS

Short-Circuit Protective Device (SCPD)	Max. Rating SCPD	Circuit Breaker Interrupting Rating	Short-Circuit Withstand Rating		Typical Disconnect Device Cat. No.
			Current	Voltage	
Class H Fuse	600A	—	10,000A	600V	400A KD-K Molded Case Switch
Class J, R or T Fuse	600A	—	100,000A	600V	400A KD-K Molded Case Switch
Magnetic Only[1] Type CB[2]	250A	Marked HMCP	100,000A	480V	HMCP
			50,000A	600V	
	400A	Marked HMCP	100,000A	480V	
			50,000A	600V	
Thermal/Mag. Type CB[3]	400A	35,000A	25,000A	600V	HKD
		50,000A	100,000A	600V	KDC
		65,000A	65,000A	480V	HKD

TABLE IX – SIZE 6 SHORT-CIRCUIT RATINGS

Short-Circuit Protective Device (SCPD)	Max. Rating SCPD	Circuit Breaker Interrupting Rating	Short-Circuit Rating		Typical Disconnect Device Cat. No.
			Current	Voltage	
Class J, R or T Fuse	600A	—	100,000A	480V	600A LD-K Molded Case Sw.
			65,000A	600V	
Class L Fuse	800A	—	100,000A	480V	600A LD-K Molded Case Sw.
			65,000A	600V	
Magnetic Only[1] Type CB[2]	600A	Marked HMCP	100,000A	480V	HMCP
			50,000A	600V	
	800A	Marked HMC	65,000A	480V	Magnetic Only HMC
			25,000A	600V	
Thermal/Mag. Type CB[3]	600A	65,000A	65,000A	480V	HLD
		25,000A	35,000A	600V	
	800A	50,000A	65,000A	480V	T/Magnetic HMC
		25,000A	25,000A	600V	
Thermal/Mag. with CL[4]	800A	200,000A	100,000A	600V	NB Tri-Pac

ACCESSORIES

Description	Catalog Number
Internal Trip Indicator for W200	WLED
External (remote) Reset for W200, 24 in. Leads*	WRSK24
External (remote) Reset for W200, 72 in. Leads*	WRSK72
External (remote) Reset/Trip Indicator for W200, 24 in. Leads	WRSKL24
External (remote) Reset/Trip Indicator for W200, 72 in. Leads	WRSKL72
Control Circuit Terminal Block with 5A fuse and 2 Tie Points to accept solid, stranded or lugged conductors for W200 and W201	WTBF16
Communications Module – Data, Status and Control	WPONI
Communications Module – Status and Control	WCTLPONI
Central Monitoring Unit to Receive WPONI output	WCMU
Alarm Module with one NO Contact	WBNOC

* There is no trip indication available when this accessory is used, other than via a communications network.

SHORT-CIRCUIT RATINGS

These motor controllers are suitable for use on circuits capable of delivering not more than the current (rms symmetrical amperes) shown, in circuits rated not more than the voltage shown in Tables VIII and IX, when protected by the SCPD shown.

TABLE NOTES:

1. Instantaneous-Adjustable-Trip
2. Circuit Breaker
3. Inverse-Time Circuit Breaker
4. Inverse-Time Circuit Breaker with Current-Limiting Attachment

AC COIL DATA (TYPICAL VALUES) SIZES 5 AND 6

Inrush VA	Sealed VA	Sealed Watts
2600	50	10

Use a 300VA or larger machine-tool control transformer. Protect the coil and printed wiring board with a 5 ampere time-delay fuse. See Table X.

TROUBLESHOOTING HINTS

If the controller does not operate as expected, check the following:

(a) All control power to terminals 3-P-E-C must be supplied from the same phase.

(b) Terminal P must be energized to permit the contactor to pickup.

(c) Terminals E and C must be energized to obtain a tripped indication.

(d) A starter in a tripped condition caused by a phase-loss or a ground-fault must be reset with control power ON.

(e) Each DIP switch handle must be in the full ON or full OFF position.

A Type WCMU central monitoring unit can be of great assistance in troubleshooting.

WITH MOTOR CIRCUIT PROTECTOR SZ "0"

MAXIMUM HORSEPOWER RATINGS

Motor Circuit Protector	Volts	Single Phase	Three Phase
15 Amp HMCP	115	1	2
	*200/230	2	3
	460	-	5
	575	-	5
7 HMCP HMCP	115	1/6	1/2
	*200/230	1/3	1
	460	-	2
	575	-	3
3 Amp HMCP	115	-	-
	*200/230	-	-
	460	-	3/4
	575	-	1

Cam Setting	HMCP Trip Setting 3A	7A	15A
A	9	21	45
B	12	28	60
C	15	35	75
D	18	42	90
E	21	49	105
F	24	56	120
G	27	63	135
H	30	70	150

See HMCP adjustment instructions

* 200V rating applies to 3 phase only

SUITABLE FOR USE ON A CIRCUIT CAPABLE OF DELIVERING NOT MORE THAN 100,000 rms SYMMETRICAL AMPERES, 480 VOLTS MAXIMUM, OR 25,000 rms SYMMETRICAL AMPERES AT 600 VOLTS
EXCEPTION: CATALOG NUMBERS STARTING WITH "ECA" OR "CCA" ARE RATED 10,000 rms SYMMETRICAL AMPERES AT 600 VOLTS

Adjustable Instantaneous Trip Motor Circuit Protector (HMCP) Instructions

The HMCP is factory set at minimum trip. The adjustment dial of the HMCP must be properly set to provide protection from 700% to a maximum of 1300% of motor full load amperes. the 3 amp through 150 amp HMCP is provided with one adjustment dial. The trip level is adjusted by pressing in on the dial and turning until the desired trip setting is next to the arrow on the dial.

WARNING - To maintain overcurrent, short circuit, and ground fault protection, the manufacturer's instructions for selection of the heater pack and setting of the instantaneous trip circuit breaker (current interrupter) must be followed.
AVERTISSEMENT: D'assurer une protection continue contre les surcharges, les courts-circuit el les courants de tuite, les instructions due fabricant en co qui a trait aux choix des rechauffeurs de relais de circuit doivent etre suives.
WARNING - Tripping of the instantaneous trip circuit breaker (current interrupter) when properly set is an indication that a fault current has been interrupted. Current-carrying component parts of the magnetic motor controller should be examined and replaced if damaged to provide continued protection against fire and/or shock hazard. If burnout of the heater pack occurs, the complete overload relay must be replaced.
AVERTISSEMENT: Le declenchement de l'interrupter de circuit indique qu'un courant de tuite a ete interrompu. Les composants porteurs de courant du controleur magnetique devraient etre examines et remplaces s'ils sont endommages afin de assurer une protection continue contre les risques d'incendies ou de chocs, ou les deux. Si des rechauffeurs des relais de surcharge grilent, le relais de surcharge doi etre remplace au complet.

POWER TERMINATIONS

Line Side: Use 75°C Aluminum or Copper Conductors Only		Load Side: Use 75°C Copper Conductors Only
Wire Range (AWG)	Terminal Torque (lb-in)	Max. Wire Size - 8 AWG Terminal Torque - 20 lb-in
14 - 10	35	
8	40	

WITH MOTOR CIRCUIT PROTECTOR SZ "1"

MAXIMUM HORSEPOWER RATINGS

Motor Circuit Protector	Volts	Single Phase	Three Phase
30 Amp HMCP	115	2	3
	*200/230	3	7-1/2
	460	-	10
	575	-	10
15 Amp HMCP	115	1/3	1
	*200/230	2	2
	460	-	5
	575	-	7-1/2
7 HMCP HMCP	115	1/6	1/2
	*200/230	1/3	1
	460	-	2
	575	-	3
3 Amp HMCP	115	-	-
	*200/230	-	-
	460	-	3/4
	575	-	1

Cam Setting	HMCP Trip Setting 3A	7A	15A	30A
A	9	21	45	90
B	12	28	60	120
C	15	35	75	150
D	18	42	90	180
E	21	49	105	210
F	24	56	120	240
G	27	63	135	270
H	30	70	150	300

See HMCP adjustment instructions

* 200V rating applies to 3 phase only

SUITABLE FOR USE ON A CIRCUIT CAPABLE OF DELIVERING NOT MORE THAN 100,000 rms SYMMETRICAL AMPERES, 480 VOLTS MAXIMUM, OR 25,000 rms SYMMETRICAL AMPERES AT 600 VOLTS
EXCEPTION: CATALOG NUMBERS STARTING WITH "ECA" OR "CCA" ARE RATED 10,000 rms SYMMETRICAL AMPERES AT 600 VOLTS

Adjustable Instantaneous Trip Motor Circuit Protector (HMCP) Instructions

The HMCP is factory set at minimum trip. The adjustment dial of the HMCP must be properly set to provide protection from 700% to a maximum of 1300% of motor full load amperes. the 3 amp through 150 amp HMCP is provided with one adjustment dial. The trip level is adjusted by pressing in on the dial and turning until the desired trip setting is next to the arrow on the dial.

WARNING - To maintain overcurrent, short circuit, and ground fault protection, the manufacturer's instructions for selection of the heater pack and setting of the instantaneous trip circuit breaker (current interrupter) must be followed.
AVERTISSEMENT: D'assurer une protection continue contre les surcharges, les courts-circuit el les courants de tuite, les instructions due fabricant en co qui a trait aux choix des rechauffeurs de relais de circuit doivent etre suives.
WARNING - Tripping of the instantaneous trip circuit breaker (current interrupter) when properly set is an indication that a fault current has been interrupted. Current-carrying component parts of the magnetic motor controller should be examined and replaced if damaged to provide continued protection against fire and/or shock hazard. If burnout of the heater pack occurs, the complete overload relay must be replaced.
AVERTISSEMENT: Le declenchement de l'interrupter de circuit indique qu'un courant de tuite a ete interrompu. Les composants porteurs de courant du controleur magnetique devraient etre examines et remplaces s'ils sont endommages afin de assurer une protection continue contre les risques d'incendies ou de chocs, ou les deux. Si des rechauffeurs des relais de surcharge grilent, le relais de surcharge doi etre remplace au complet.

POWER TERMINATIONS

Line Side: Use 60/75°C Aluminum or Copper Conductors Only		Load Side: Use 75°C Copper Conductors Only	
Wire Range (AWG)	Terminal Torque (lb-in)	Wire Range (AWG)	Terminal Torque (lb-in)
14 - 10	35	14 - 10	35
8	40	8	40
6 - 4	45	6 - 4	45

WITH MOTOR CIRCUIT PROTECTOR SZ "2"

MAXIMUM HORSEPOWER RATINGS

Motor Circuit Protector	Volts	Three Phase
50 Amp HMCP	200	10
	230	15
	460	25
	575	25
30 Amp HMCP	460/575	10

Cam Setting	HMCP Trip Setting 30A	50A
A	90	150
B	120	200
C	150	250
D	180	300
E	210	350
F	240	400
G	270	450
H	300	500

See HMCP adjustment instructions

SUITABLE FOR USE ON A CIRCUIT CAPABLE OF DELIVERING NOT MORE THAN 100,000 rms SYMMETRICAL AMPERES, 480 VOLTS MAXIMUM, OR 25,000 rms SYMMETRICAL AMPERES AT 600 VOLTS
EXCEPTION: CATALOG NUMBERS STARTING WITH "ECA" OR "CCA" ARE RATED 10,000 rms SYMMETRICAL AMPERES AT 600 VOLTS

Adjustable Instantaneous Trip Motor Circuit Protector (HMCP) Instructions

The HMCP is factory set at minimum trip. The adjustment dial of the HMCP must be properly set to provide protection from 700% to a maximum of 1300% of motor full load amperes. the 3 amp through 150 amp HMCP is provided with one adjustment dial. The trip level is adjusted by pressing in on the dial and turning until the desired trip setting is next to the arrow on the dial.

WARNING - To maintain overcurrent, short circuit, and ground fault protection, the manufacturer's instructions for selection of the heater pack and setting of the instantaneous trip circuit breaker (current interrupter) must be followed.
AVERTISSEMENT: D'assurer une protection continue contre les surcharges, les courts-circuit el les courants de tuite, les instructions due fabricant en co qui a trait aux choix des rechauffeurs de relais de circuit doivent etre suives.
WARNING - Tripping of the instantaneous trip circuit breaker (current interrupter) when properly set is an indication that a fault current has been interrupted. Current-carrying component parts of the magnetic motor controller should be examined and replaced if damaged to provide continued protection against fire and/or shock hazard. If burnout of the heater pack occurs, the complete overload relay must be replaced.
AVERTISSEMENT: Le declenchement de l'interrupter de circuit indique qu'un courant de tuite a ete interrompu. Les composants porteurs de courant du controleur magnetique devraient etre examines et remplaces s'ils sont endommages afin de assurer une protection continue contre les risques d'incendies ou de chocs, ou les deux. Si des rechauffeurs des relais de surcharge grilent, le relais de surcharge doi etre remplace au complet.

POWER TERMINATIONS

Line Side: Use 75°C Copper Conductors Only		Load Side: Use 75°C Copper Conductors Only	
Wire Range (AWG)	Terminal Torque (lb-in)	Wire Range (AWG)	Terminal Torque (lb-in)
14 - 10	35	14 - 10	35
8	40	8	40
6 - 4	45	6 - 4	45
3	50	3 - 2	50

WITH MOTOR CIRCUIT PROTECTOR S2. "3"

MAXIMUM HORSEPOWER RATINGS

Motor Circuit Protector	Volts	Three Phase	Cam Setting	HMCP Trip Setting 100A
100 Amp HMCP	200	25	A	300
	230	30	B	400
	460	50	C	500
	575	50	D	600
SUITABLE FOR USE ON A CIRCUIT CAPABLE OF DELIVERING NOT MORE THAN 100,000 rms SYMMETRICAL AMPERES, 480 VOLTS MAXIMUM, OR 25,000 rms SYMMETRICAL AMPERES AT 600 VOLTS			E	700
			F	800
			G	900
			H	1000
			See HMCP adjustment instructions	

Adjustable Instantaneous Trip Motor Circuit Protector (HMCP) Instructions

The HMCP is factory set at minimum trip. The adjustment dial of the HMCP must be properly set to provide protection from 700% to a maximum of 1300% of motor full load amperes. the 3 amp through 150 amp HMCP is provided with one adjustment dial. The trip level is adjusted by pressing in on the dial and turning until the desired trip setting is next to the arrow on the dial.

WARNING - To maintain overcurrent, short circuit, and ground fault protection, the manufacturer's instructions for selection of the heater pack and setting of the instantaneous trip circuit breaker (current interrupter) must be followed.

AVERTISSEMENT: D'assurer une protection continue contre les surcharges, les courts-circuit el les courants de tuite, les instructions due fabricant en co qui a trait aux choix des rechauffeurs de relais de circuit doivent etre suives.

WARNING - Tripping of the instantaneous trip circuit breaker (current interrupter) when properly set is an indication that a fault current has been interrupted. Current-carrying component parts of the magnetic motor controller should be examined and replaced if damaged to provide continue protection against fire and/or shock hazard. If burnout of the heaterpack occurs, the complete overload relay must be replaced.

AVERTISSEMENT: Le declenchement de l'interrupter de circuit indique qu'un courant de tuite a ete interrompu. Les composants porteurs de courant du controleur magnetique devraient etre examines et remplaces s'ils sont endommages afin de assurer une protection continue contre les risques de'incendies ou de chocs, ou les deux. Si des rechauffeurs des relais de surcharge grilent, le relais de surcharge doi etre remplace au complet.

POWER TERMINATIONS

Use 75°C Aluminum or Copper Conductors Only

Wire Range (AWG)	Terminal Torque (lb-in)
14 - 10	35
8	40
6 - 4	45
3 - 1/0	50

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WITH MOTOR CIRCUIT PROTECTOR S2 "4"

MAXIMUM HORSEPOWER RATINGS

Motor Circuit Protector	Volts	Three Phase	Cam Setting	HMCP Trip Setting 150A T4	HMCP Trip Setting 150A U4
150 Amp HMCP	200	40	A	450	750
	230	50	B	600	1000
	460	100	C	750	1250
	575	100	D	900	1500
			E	1050	1750
			F	1200	2000
			G	1350	2250
			H	1500	2500
			See HMCP adjustment instructions		

SUITABLE FOR USE ON A CIRCUIT CAPABLE OF DELIVERING NOT MORE THAN 100,000 rms SYMMETRICAL AMPERES, 480 VOLTS MAXIMUM, OR 25,000 rms SYMMETRICAL AMPERES AT 600 VOLTS

Adjustable Instantaneous Trip Motor Circuit Protector (HMCP) Instructions

The HMCP is factory set at minimum trip. The adjustment dial of the HMCP must be properly set to provide protection from 700% to a maximum of 1300% of motor full load amperes. the 3 amp through 150 amp HMCP is provided with one adjustment dial. The trip level is adjusted by pressing in on the dial and turning until the desired trip setting is next to the arrow on the dial.

WARNING - To maintain over current, short circuit, and ground fault protection, the manufacturer's instructions for selection of the heater pack and setting of the instantaneous trip circuit breaker (current interrupter) must be followed.

AVERTISSEMENT: D'assurer une protection continue contre les surcharges, les courts-circuit el les courants de tuite, les instructions due fabricant en co qui a trait aux choix des rechauffeurs de relais de circuit doivent etre suives.

WARNING - Tripping of the instantaneous trip circuit breaker (current interrupter) when properly set is an indication that a fault current has been interrupted. Current-carrying component parts of the magnetic motor controller should be examined and replaced if damaged to provide continue protection against fire and/or shock hazard. If burnout of the heaterpack occurs, the complete overload relay must be replaced.

AVERTISSEMENT: Le declenchement de l'interrupter de circuit indique qu'un courant de tuite a ete interrompu. Les composants porteurs de courant du controleur magnetique devraient etre examines et remplaces s'ils sont endommages afin de assurer une protection continue contre les risques de'incendies ou de chocs, ou les deux. Si des rechauffeurs des relais de surcharge grilent, le relais de surcharge doi etre remplace au complet.

POWER TERMINATIONS

Line Side

Terminal Torque Values lb-in

Socket Head		Slotted Head	
5/32 in.	100	14 - 10	35
		8	40
3/16 in.	120	6 - 4	45
		3 - 1/0	50

Load Side

Use 75°C Aluminum or Copper Conductors Only

Torque Terminals to 250 lb-in.

Minimum Wire Size No. 6 AWG

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WITH MOTOR CIRCUIT PROTECTOR SZ "5"

MAXIMUM HORSEPOWER RATINGS

Motor Circuit Protector	Volts	Three Phase
250 Amp HMCP	200 230 460 575	60 75 150 200
400 Amp HMCP	200 230 460	75 100 200

SUITABLE FOR USE ON A CIRCUIT CAPABLE OF DELIVERING NOT MORE THAN 100,000 rms SYMMETRICAL AMPERES, 480 VOLTS MAXIMUM, 25,000 rms SYMMETRICAL AMPERES AT 600 VOLTS WITH 250 AMP HMCP OR 35,000 rms SYMMETRICAL AMPERES AT 600 VOLTS WITH 400 AMP HMCP.

Adjustable Instantaneous Trip Motor Circuit Protector (HMCP) Instructions

The HMCP is factory set at minimum trip. The adjustment dial of the HMCP must be properly set to provide protection from 700% to a maximum of 1300% of motor full load amperes. the 250 amp and 400 amp HMCP is provided with three adjustment dials. The trip level is adjusted by pressing in on the dial and turning until the desired trip setting is next to the arrow on the dial.

WARNING - To maintain over current, short circuit, and ground fault protection, the manufacturer's instructions for selection of the heater pack and setting of the instantaneous trip circuit breaker (current interrupter) must be followed.
AVERTISSEMENT: D'assurer une protection continue contre les surcharges, les courts-circuit el les courants de tuite, les instructions due fabricant en co qui a trait aux choix des rechauffeurs de relais de circuit doivent etre suives.
WARNING - Tripping of the instantaneous trip circuit breaker (current interrupter) when properly set is an indication that a fault current has been interrupted. Current-carrying component parts of the magnetic motor controller should be examined and replaced if damaged to provide continued protection against fire and/or shock hazard. If burnout of the heater pack occurs, the complete overload relay must be replaced.
AVERTISSEMENT: Le declenchement de l'interrupter de circuit indique qu'un courant de tuite a ete interrompu. Les composants porteurs de courant du controleur magnetique devraient etre examines et remplaces s'ils sont endommages afin de assurer une protection continue contre les risques de'incendies ou de chocs, ou les deux. Si des rechauffeurs des relais de surcharge grilent, le relais de surcharge doi etre remplace au complet.

Max Coil VA = 143 Volt-Amperes

POWER TERMINATIONS

Line Side	Load Side
Use 75°C copper or aluminum conductors only. Torque terminals to values given on HMCP nameplate	Use 75°C copper or aluminum conductors only. Torque terminals to 550 lb-in

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USING OLD MCP's

Interrupting Capacity of A206, A207, A216 and A217 Combination Starters Symmetrical, Amperes

NEMA Size	Starter and Breaker Type	240 Volts	480 Volts	600 Volts
0	A206, A216 (EB)	10,000	.....	.....
	A206, A216 (MCP)	50,000	50,000①	50,000①
	A207, A217 (MCP + CL)	100,000	100,000	100,000
1, 2	A206, A216 (EB)	10,000	.....	.....
	A206, A216 (MCP)	50,000	18,000	14,000
	A207, A217 (MCP + CL)	100,000	100,000	100,000
3, 4	A206, A216 (MCP)	50,000	18,000	14,000
	A207, A217 (MCP + CL)	100,000	100,000	100,000

SHORT-CIRCUIT RATINGS — SIZE 5

Short-Circuit Protective Device (SCPD)	Max. Size SCPD	Circuit Breaker Interrupting Rating	Short-Circuit Withstand Rating		Westinghouse Cat. No. Prefix
			Current	Voltage	
Class H Fuse	600A	—	10,000A	600V	MCS (High Mag. Trip)
Class J, K, R or T Fuse	600A	—	65,000A	600V	MCS (High Mag. Trip)
			100,000A	480V	
Magnetic Only[1] Type CB[2]	400A	—	18,000A	600V	LB
			25,000A	480V	
Thermal/Mag[3] Type Circuit Breaker	400A	22,000A	18,000A	600V	LA, LB, LC
		25,000A	25,000A	600V	HLA, HLB, HLC
		30,000A	30,000A	480V	LA, LB, LC
		35,000A	42,000A	480V	HLA, HLB, HLC
Thermal/Mag. CB+CL[4]	400A	200,000A	100,000A	600V	LA+TRI-PAC
Thermal/Mag. CLB[5]	400A	150,000A	15,000A	480V	LCL

SHORT-CIRCUIT RATINGS — SIZE 6

Short-Circuit Protective Device (SCPD)	Max. Size SCPD	Circuit Breaker Interrupting Rating	Short-Circuit Withstand Rating		Westinghouse Cat. No. Prefix
			Current	Voltage	
Class J, K or R Fuse	600A	—	65,000A	600V	MCS (High Mag. Trip)
			100,000A	480V	
Class L Fuse	800A	—	65,000A	600V	MCS (High Mag. Trip)
			100,000A	480V	
Magnetic Only[1] Type CB[2]	600A	22,000A	18,000A	600V	LA
		30,000A	42,000A	480V	
Thermal Magnetic[3] Circuit Breaker	600A	25,000A	25,000A	600V	HLB, HLC
		30,000A	30,000A	480V	LA, LC
		35,000A	42,000A	480V	HLB, HLC
Thermal/Mag. Type CB + CL[4]	600A	200,000A	150,000A	480V	NB+TRI-PAC

[1]Instantaneous Adjustable Trip
[2]Circuit Breaker
[3]Inverse Time
[4]Inverse-Time with Built-In Current Limiting Fuses
[5]Inverse-Time Current Limiting Circuit Breaker.