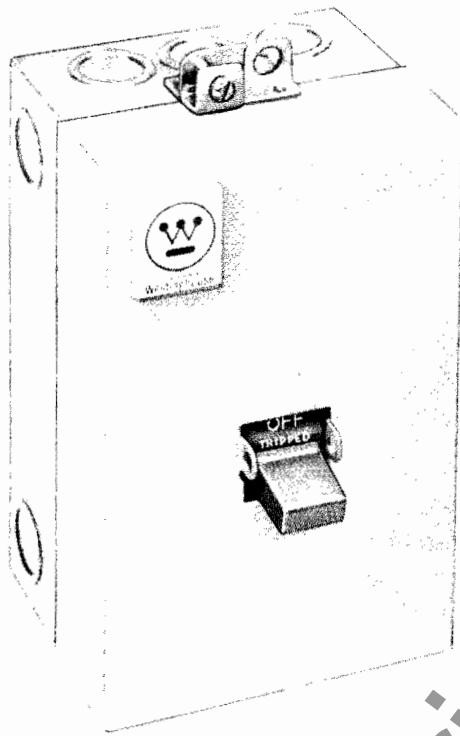




## Ac Manual Motor Starters



Type B101



Type B100



Type MS

www.ElectricalPartMan.com

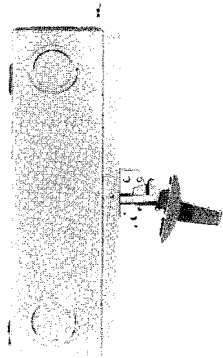
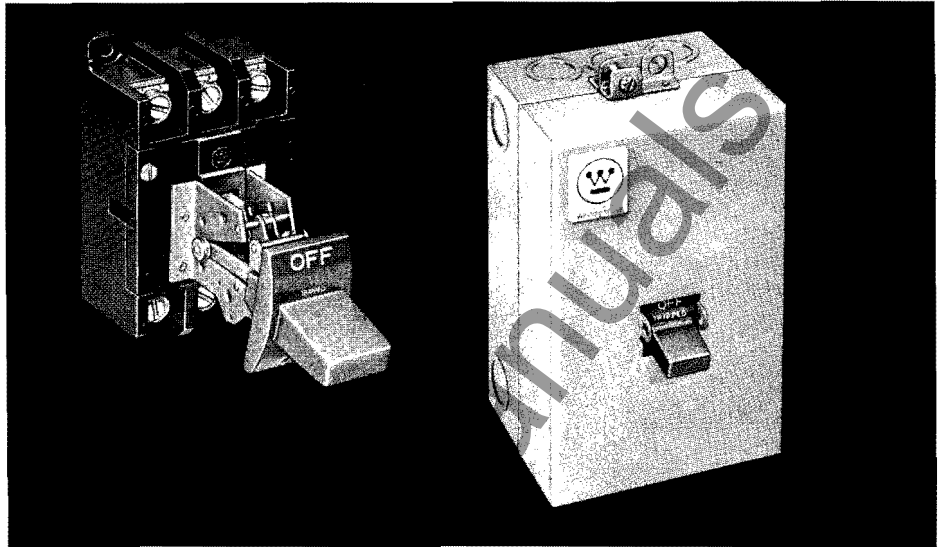
com

### Type B101 Starter

#### Application

This motor starting switch is for controlling Ac or Dc motors that are equipped with their own overload protective devices. It can also be used for applications where overload protection is not required. Over-center toggle mechanism provides quick make-quick break operation, preventing excessive arcing and insuring long life and low maintenance.

The NEMA 1 enclosure is of split-case construction, with the toggle mechanism extending beyond the sides of the enclosure base. With the cover removed, line and load leads can be connected without reaching inside the enclosure base.



#### List Prices

##### Discount C10-S1

##### Non-Reversing Motor Starting Switches,

NEMA Size	No. of Poles	Open Switches		NEMA 1 Enclosure	
		Catalog Number	List Price	Catalog Number	List Price
0	2	B101M0B	\$ 8	B101S0B	\$12
	3	B101M0C	19	B101S0C	23
1	2	B101M1B	16	B101S1B	20
	3	B101M1C	38	B101S1C	42

#### Replacement Contact Kits

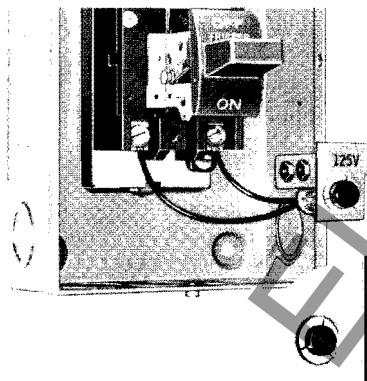
##### (E-1 Discount)

Kits contain a complete set of moving contacts, stationary contacts, and springs.

Starter Size	No. of Poles	Kit Style No.	List Price Per Kit
M-0	2	673B965G06	\$ 8
	3	673B965G07	12
M-1	2	673B965G09	12
	3	673B965G10	16

### Field Mountable Pilot Light Kit

Pilot light kits are available for field mounting in NEMA 1 enclosures as illustrated below.



#### Factory Modifications

##### Discount C10-S1

Catalog Number Symbol	Description	List Price Addition
A	Pushbutton Operation	N/C
E2	1 Elect. Interlock (1NO)	22
E2	2 Elect. Interlocks (1NO, 1NC)	44
E3	1 Elect. Interlocks (1NC)	22
E4	2 Elect. Interlocks (2NO)	44
E5	2 Elect. Interlocks (2NC)	44
J	Jog Operation	4
L	Red Pilot Light (120 volts)	30
L2	Red Pilot Light (240 volts)	30
L6	Red Pilot Light (480/600 volts)	30

#### Field Modifications – Pilot Light Kits

##### Discount C10-S1

Catalog Number	Description	List Price
LK21	Red lens, 120 volts	\$22
LK22	Red lens, 240 volts	22
LK26	Red lens, 480/600 volts	22

#### Ordering Information

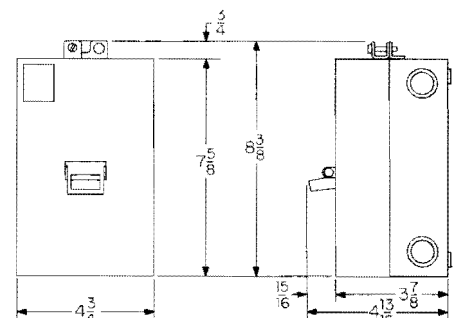
Order by catalog number. For Factory Modifications, add, in alphabetical order, proper code letter or letters shown in table, to standard catalog number. Example: B101SOC plus 120 volt pilot light = B101SOCL.

- ② On reversing applications, only one electrical interlock per starter. Maximum of two on other applications.
- ③ Ratings up to 3Hp, 3 Phase suitable for group fusing.

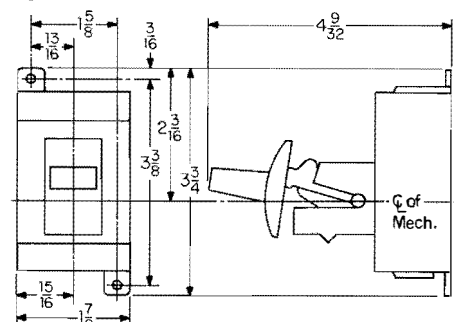
#### Outline Dimensions, Inches

For complete dimensions, see Dimension sheet 8140

##### NEMA 1 Enclosure



##### Open

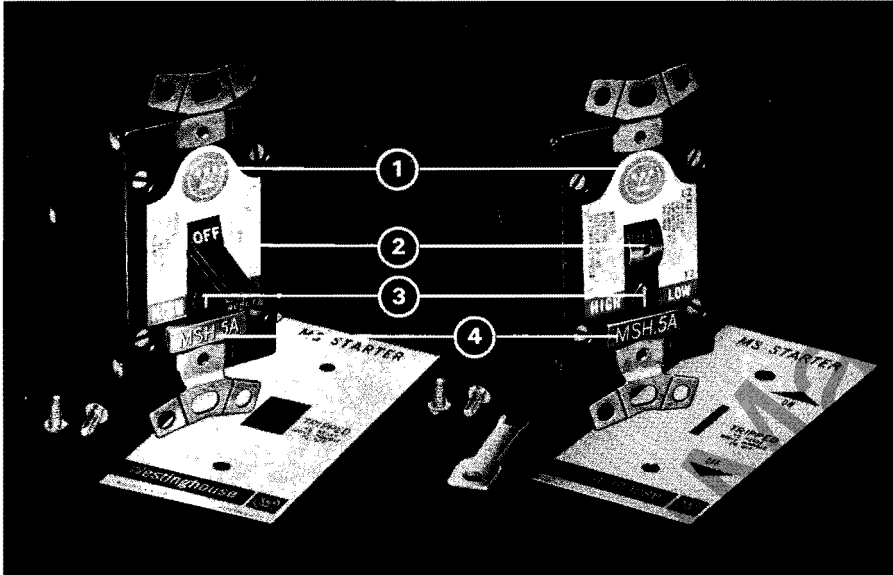


#### Ratings

NEMA Size	Maximum Horsepower <sup>③</sup>		
	115 Volts Ac	230 Volts Ac	460/575 Volts Ac
<b>2-Pole, Single Phase</b>			
M-0	1	2	...
M-1	2	3	...
<b>3-Pole, Three Phase</b>			
M-0	2	3	5
M-1	3	7½	10



**MS Motor Starter**



By utilizing the concept of modular arrangement, the Westinghouse type MS motor starter permits the use of one basic unit (either toggle or key operated) for a wide range of motor starter applications. The basic unit is given a high degree of flexibility because of the many individual components and adapter kits which are available.

A compact and versatile unit, the MS motor starter has heavy sliding contacts and uses a "quick-make" and "quick-break" mechanism. The new "plug-in" heater is easily inserted or removed by hand; an adjustment knob allows approximately ten percent plus or minus adjustment of the nominal heater rating.

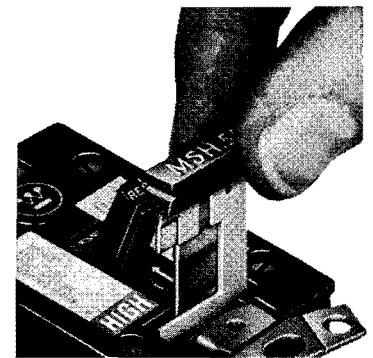
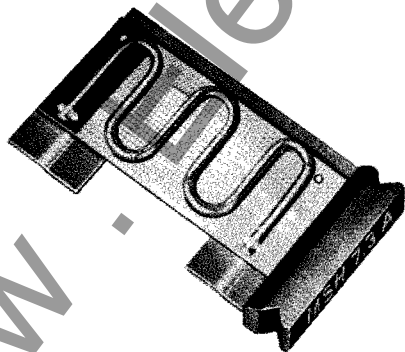
**① Modifications are Easy**  
By removing this tab, you are ready to easily

install the MS pilot light kit, consisting of a prewired neon light bulb and a lens cap. Where the flexibility of manual operation or remote pilot control is desired, the MS selector switch kit is also available.

**② Toggle or Key Handle**  
The basic MS unit is available either toggle or key operated. With the trip-free toggle-operated unit, the "on", "off" or "reset" position is clearly indicated.

**③ Adjustment Knob**  
An adjustment knob, located directly below the toggle or key handle and mounted on the front of the starter, permits approximately ten percent plus or minus adjustment of the nominal heating rating.

**④ Plug-in Heater**  
Added protection and safety are assured by the MS motor starter heater. Standard equipment on the MS, the heater increases the starter's flexibility. It offers approximately 115% to 125% protection. Easily removed by hand, this plug-in heater is keyed for proper positioning. Heater ratings are clearly marked.



**Other Features**

Other Westinghouse quality features include the large pressure type terminals, straight-through wiring and a trip-free handle mechanism.

**List Prices, Open Units**  
Discount C10-S1

Catalog Number	Volts	Hp	Poles	List Price <sup>②</sup>
<b>Toggle Operated</b>				
MST01	120/240 Ac	1	1	11
	240 Dc	1/2		
	32 Dc	1/2		
MST02	120/240 Ac	1	2	13
	240 Dc	1		
	32 Dc	1/2		
<b>Key Operated</b>				
MSK01	120/240 Ac	1	1	15
	240 Dc	1/2		
	32 Dc	1/2		
MSK02	120/240 Ac	1	2	17
	240 Dc	1		
	32 Dc	1/2		

<sup>②</sup> Does not include heater; order as separate item from table on page 11. Add \$2 list each.

**Dimensions:** Page 8.

**Ordering Information**

Order open units from this page and assembled units pages 5, 6, 7 by catalog number. Order boxes, covers and flush plates, page 4, by catalog number.

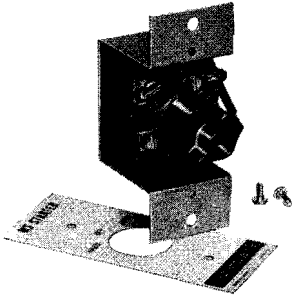
**Accessories**

Order accessories, page 4, by catalog number.

**Heaters**

Select heaters from table, page 11 and list catalog number.

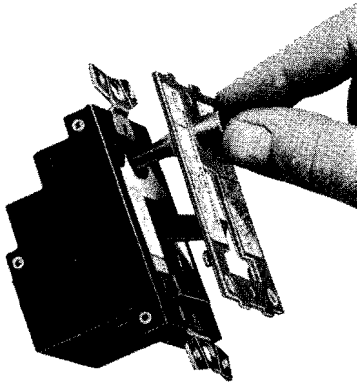
**MS Motor Starter Accessories**  
**Selector Switch Kit**



The selector switch kit is ideal for those situations where you want to control a motor either manually or remotely. This need often occurs in the heating and ventilating industry. It gives you increased versatility.

Cat. No. MSS List Price: \$11<sup>Ⓜ</sup>

**Pilot Light Kit**



You need only a screw driver to install the pilot light kit which consists of a prewired neon light bulb and a colored plastic lens cap. Especially useful with key operated MS motor starter, as an indicator. The nameplate included in the kit will match your MS motor starter and enclosure.

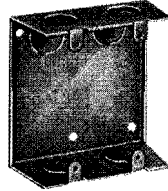
Description	Catalog Number	List Price <sup>Ⓜ</sup>
For toggle operated MS with lockoff	MSPL	\$6
For toggle operated MS	MSPT	6
For key operated MS	MSPK	6

<sup>Ⓜ</sup> Includes nameplate.

**NEMA 1 Boxes (without covers)**  
Available as either single or double units. Finish is grey baked enamel. Each single unit has three conduit openings. See page 8 for dimensions.

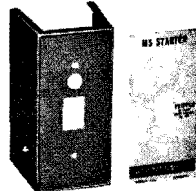


1 Unit  
Cat. No. MS1BN  
List Price: \$1



2 Unit  
Cat. No. MS2BN  
List Price: \$2

**Covers for NEMA 1 Boxes**



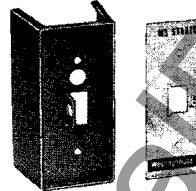
Cat. No. MS1CN  
List Price: \$1

1 Unit



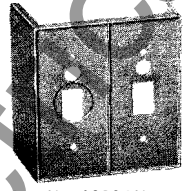
Cat. No. MS1CS  
List Price: \$1

1 Unit (for Selector Switch)



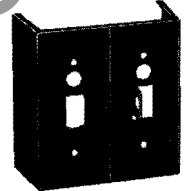
Cat. No. MS1CL List Price: \$3<sup>Ⓜ</sup>

1 Unit With Lockoff



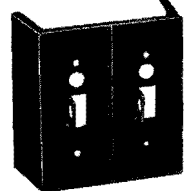
Cat. No. MS2CN List Price: \$8

2 Unit



Cat. No. MS2CL List Price: \$10<sup>Ⓜ</sup>

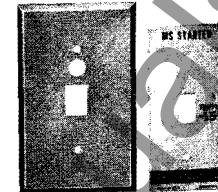
2 Unit With 1 Lockoff



Cat. No. MS2CL List Price: \$12<sup>Ⓜ</sup>

2 Unit With 2 Lockoffs

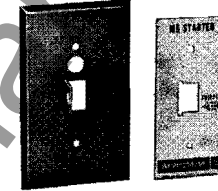
**Flush Plates**  
**Painted and Stainless Steel**  
Flush Plates duplicate function of NEMA 1 covers. See page 8 for dimensions.



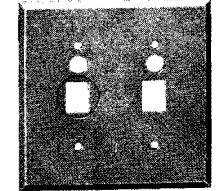
A-1 Unit



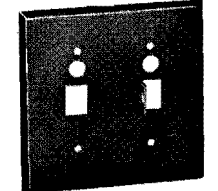
B-1 Unit For Selector Switch



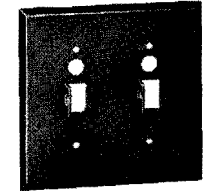
C-1 Unit With Lockoff<sup>Ⓜ</sup>



D-2 Unit



E-2 Unit With 1 Lockoff<sup>Ⓜ</sup>



F-2 Unit With 2 Lockoffs<sup>Ⓜ</sup>

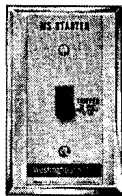
For completely assembled units, see pages 5, 6 and 7.

Units	Painted		Stainless Steel	
	Catalog Number	List Price	Catalog Number	List Price
A	MS1FN	\$ 1	MS1DN	\$ 2
B	MS1FS	1	MS1DS	2
C	MS1FL	3 <sup>Ⓜ</sup>	MS1DL	4 <sup>Ⓜ</sup>
D	MS2FN	8	MS2DN	10
E	MSSF1	10 <sup>Ⓜ</sup>	MSSDL	12 <sup>Ⓜ</sup>
F	MS2FL	12 <sup>Ⓜ</sup>	MS2DL	14 <sup>Ⓜ</sup>

<sup>Ⓜ</sup> Includes nameplate.

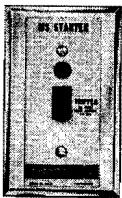


**MS Motor Starter  
Single Units, Assembled**



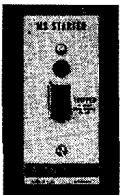
One-pole toggle operated switch. Mounted on general purpose stainless steel flush plate (does not include switch box).

Catalog Number: MST01DN  
List Price: \$13<sup>③</sup>



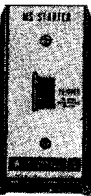
One-pole toggle operated switch with pilot light. Mounted on general purpose stainless steel flush plate (does not include switch box).

Catalog Number: MST01DN1P  
List Price: \$19<sup>③</sup>



One-pole toggle operated switch with pilot light. Lockoff on cover. Mounted on general purpose gray flush plate (does not include switch box).

Catalog Number: MST01FL1P  
List Price: \$20<sup>③</sup>



One-pole toggle operated switch. Lockoff on cover. In a NEMA 1 general purpose enclosure.

Catalog Number: MST01SL  
List Price: \$15<sup>③</sup>



One-pole toggle operated switch with pilot light. Lockoff on cover. In a NEMA 1 general purpose enclosure.

Catalog Number: MST01SL1P  
List Price: \$21<sup>③</sup>



One-pole key operated switch. In a NEMA 1 general purpose enclosure.

Catalog Number: MSK01SN  
List Price: \$17<sup>③</sup>



One-pole key operated switch with pilot light. In a NEMA 1 general purpose enclosure.

Catalog Number: MSK01SN1P  
List Price: \$23<sup>③</sup>

**General Purpose Surface Mounting Units in a NEMA 1 Enclosure**

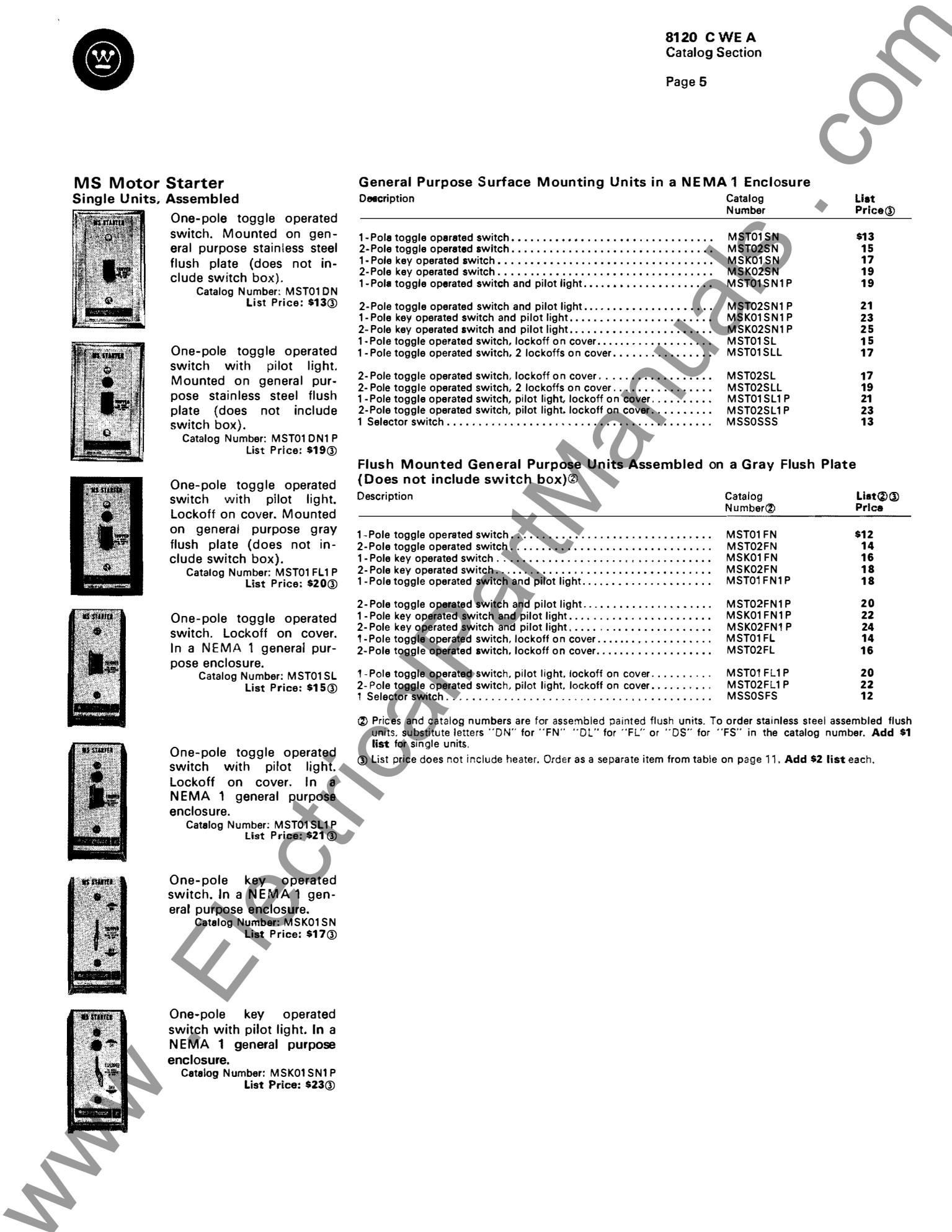
Description	Catalog Number	List Price <sup>③</sup>
1-Pole toggle operated switch	MST01SN	\$13
2-Pole toggle operated switch	MST02SN	15
1-Pole key operated switch	MSK01SN	17
2-Pole key operated switch	MSK02SN	19
1-Pole toggle operated switch and pilot light	MST01SN1P	19
2-Pole toggle operated switch and pilot light	MST02SN1P	21
1-Pole key operated switch and pilot light	MSK01SN1P	23
2-Pole key operated switch and pilot light	MSK02SN1P	25
1-Pole toggle operated switch, lockoff on cover	MST01SL	15
1-Pole toggle operated switch, 2 lockoffs on cover	MST01SLL	17
2-Pole toggle operated switch, lockoff on cover	MST02SL	17
2-Pole toggle operated switch, 2 lockoffs on cover	MST02SLL	19
1-Pole toggle operated switch, pilot light, lockoff on cover	MST01SL1P	21
2-Pole toggle operated switch, pilot light, lockoff on cover	MST02SL1P	23
1 Selector switch	MSS0SSS	13

**Flush Mounted General Purpose Units Assembled on a Gray Flush Plate  
(Does not include switch box)<sup>②</sup>**

Description	Catalog Number <sup>②</sup>	List <sup>②③</sup> Price
1-Pole toggle operated switch	MST01FN	\$12
2-Pole toggle operated switch	MST02FN	14
1-Pole key operated switch	MSK01FN	16
2-Pole key operated switch	MSK02FN	18
1-Pole toggle operated switch and pilot light	MST01FN1P	18
2-Pole toggle operated switch and pilot light	MST02FN1P	20
1-Pole key operated switch and pilot light	MSK01FN1P	22
2-Pole key operated switch and pilot light	MSK02FN1P	24
1-Pole toggle operated switch, lockoff on cover	MST01FL	14
2-Pole toggle operated switch, lockoff on cover	MST02FL	16
1-Pole toggle operated switch, pilot light, lockoff on cover	MST01FL1P	20
2-Pole toggle operated switch, pilot light, lockoff on cover	MST02FL1P	22
1 Selector switch	MSS0SFS	12

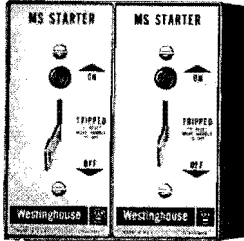
<sup>②</sup> Prices and catalog numbers are for assembled painted flush units. To order stainless steel assembled flush units, substitute letters "DN" for "FN" "DL" for "FL" or "DS" for "FS" in the catalog number. Add \$1 list for single units.

<sup>③</sup> List price does not include heater. Order as a separate item from table on page 11. Add \$2 list each.



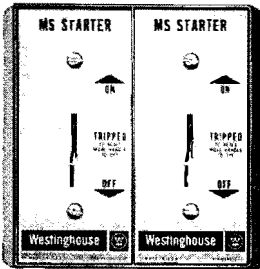
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**MS Motor Starter  
Double Units, Assembled**



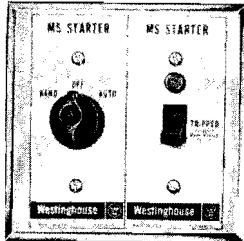
Two one-pole key operated switches and two pilot lights in a NEMA 1 general purpose enclosure.

Cat. No. MSK11SN2P List Price: \$64<sup>③</sup>



Two one-pole key operated switches in a NEMA 1 general purpose enclosure.

Cat. No. MSK11SN List Price: \$40<sup>③</sup>



One one-pole toggle operated switch, one selector switch and one pilot light mounted on a general purpose stainless steel flush plate (does not include box).

Cat. No. MST11SN1P List Price: \$44<sup>③</sup>



One one-pole toggle operated switch, one selector switch and one pilot light in a NEMA 1 general purpose enclosure.

Cat. No. MST11SN1P List Price: \$44<sup>③</sup>

**General Purpose Surface Mounting NEMA 1 Enclosure**

Description	Catalog Number	List <sup>③</sup> Price
2-1-Pole toggle operated switches.....	MST11SN	\$32
2-2-Pole toggle operated switches.....	MST22SN	36
2-1-Pole key operated switches.....	MSK11SN	40
2-2-Pole key operated switches.....	MSK22SN	44
2-1-Pole toggle operated switches and 2 pilot lights.....	MST11SN2P	56
2-2-Pole toggle operated switches and 2 pilot lights.....	MST22SN2P	58
2-1-Pole key operated switches and 2 pilot lights.....	MSK11SN2P	64
2-2-Pole key operated switches and 2 pilot lights.....	MSK22SN2P	66
2-1-Pole toggle operated switches, 2 lockoffs on cover.....	MST11SL	36
2-2-Pole toggle operated switches, 2 lockoffs on cover.....	MST22SL	40
2-1-Pole toggle operated switches, 2 pilot lights, 2 lockoffs on cover.....	MST11SL2P	60
2-2-Pole toggle operated switches, 2 pilot lights, 2 lockoffs on cover.....	MST22SL2P	62
1-1-Pole toggle operated switch and 1 selector switch.....	MSTS1SN	32
1-2-Pole toggle operated switch and 1 selector switch.....	MSTS2SN	34
1-1-Pole toggle operated switch, 1 selector switch, 1 lockoff on cover.....	MSTS1SL	34
1-2-Pole toggle operated switch, 1 selector switch, 1 lockoff on cover.....	MSTS2SL	36
1-1-Pole toggle operated switch, 1 selector switch, 1 pilot light, 1 lockoff.....	MSTS1SL1P	46
1-2-Pole toggle operated switch, 1 selector switch, 1 pilot light, 1 lockoff.....	MSTS2SL1P	48
1-1-Pole toggle operated switch, 1 selector switch, 1 pilot light.....	MSTS1SN1P	44
1-2-Pole toggle operated switch, 1 selector switch, 1 pilot light.....	MSTS2SN1P	46

**Flush Mounting General Purpose Units Assembled on Gray Flush Plate  
(Does not include box)<sup>②</sup>**

Description	Catalog Number <sup>②</sup>	List <sup>③</sup> Price
2-1-Pole toggle operated switches.....	MST11FN	\$30
2-2-Pole toggle operated switches.....	MST22FN	34
2-1-Pole key operated switches.....	MSK11FN	38
2-2-Pole key operated switches.....	MSK22FN	42
2-1-Pole toggle operated switches and 2 pilot lights.....	MST11FN2P	54
2-2-Pole toggle operated switches and 2 pilot lights.....	MST22FN2P	56
2-1-Pole key operated switches and 2 pilot lights.....	MSK11FN2P	62
2-2-Pole key operated switches and 2 pilot lights.....	MSK22FN2P	64
2-1-Pole toggle operated switches, 2 lockoffs on cover.....	MST11FL	34
2-2-Pole toggle operated switches, 2 lockoffs on cover.....	MST22FL	38
2-1-Pole toggle operated switches, 2 pilot lights, 2 lockoffs on cover.....	MST11FL2P	56
2-2-Pole toggle operated switches, 2 pilot lights, 2 lockoffs on cover.....	MST22FL2P	60
1-1-Pole toggle operated switch and 1 selector switch.....	MSTS1FN	30
1-2-Pole toggle operated switch and 1 selector switch.....	MSTS2FN	32
1-1-Pole toggle operated switch, 1 selector switch, 1 lockoff on cover.....	MSTS1FL	32
1-2-Pole toggle operated switch, 1 selector switch, 1 lockoff on cover.....	MSTS2FL	34
1-1-Pole toggle operated switch, 1 selector switch, 1 pilot light, 1 lockoff.....	MSTS1FL1P	43
1-2-Pole toggle operated switch, 1 selector switch, 1 pilot light, 1 lockoff.....	MSTS2FL1P	45
1-1-Pole toggle operated switch, 1 selector switch, 1 pilot light.....	MSTS1FN1P	42
1-2-Pole toggle operated switch, 1 selector switch, 1 pilot light.....	MSTS2FN1P	44

<sup>②</sup> Prices and catalog numbers are for assembled painted flush units. To order stainless steel assembled flush units, substitute letters "DN" for "FN" and "DL" for "FL" in the catalog number. **Add \$2 list each.**

<sup>③</sup> Price does not include heater. Order as a separate item from table on page 11. **Add \$2 list** for each heater.

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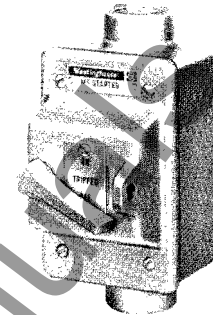


### MS Motor Starter

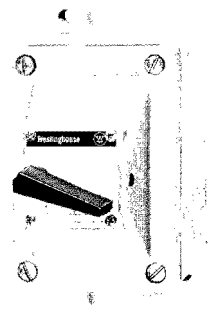
Cast Aluminum Enclosures ④ for NEMA 3, 4, 5 Watertight,  
NEMA 7D, 9E, F, G Hazardous Locations ③

These cast aluminum enclosures are available with either one or two threaded conduit entrances. Provision is made for locking operating handle in the "OFF" position. NEMA 7 enclosures meet specifications for Class 1, Group D (vapors); NEMA 9 enclosures meet Class 11, Groups E, F and G specifications (dust.).

Volts	Hp	Poles	Hubs	Catalog Number		List Price <sup>②</sup>
				NEMA 3, 4, 5	NEMA 7D, 9E, F, G	
120/240Ac 240Dc 32Dc	1 ¼ ¼	1	1	MSTO1AN	MSTO1EN	\$46
120/240Ac 240Dc 32Dc	1 ¼ ¼	1	Thru	MSTO1AH	MSTO1EH	50
120/240Ac 120/240Dc 32Dc	1 1 ¼	2	1	MSTO2AN	MSTO2EN	48
120/240Ac 120/240Dc 32Dc	1 1 ¼	2	Thru	MSTO2AH	MSTO2EH	52



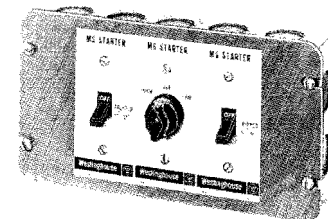
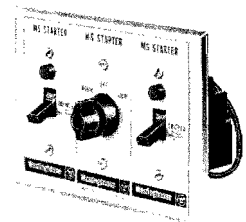
NEMA 3, 4, 5



NEMA 7D, 9E, F, G

- ② List price does not include heater which must be ordered separately from page 11. Add \$2 List each.
- ③ NEMA 7D equals NEMA 7, Class 1, Group D; NEMA 9E, F, G equals NEMA 9, Class 11, Groups E, F, G.
- ④ Cast iron available; refer to Westinghouse.

Flush-plate



NEMA 1 Enclosure

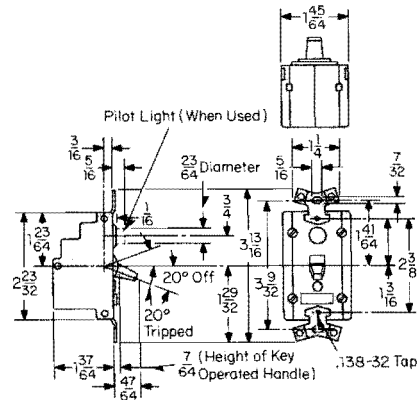
### Two Speed, Flush Plate or NEMA 1 Enclosure

Two starters (toggle or key operated) and three position selector switch wired and mounted on painted or stainless steel flush plates, or in NEMA 1 enclosure. Flush units can be installed in a standard three-gang outlet box.

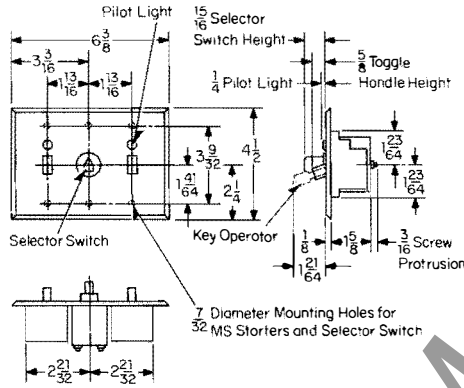
Volts	Starters (2 Included)		Operation	Selector Switches	Pilot Lights	Flush Plates		NEMA 1 Gen. Purpose			
	Hp	Poles				Painted		Stainless Steel		Catalog Number	List Price <sup>②</sup>
						Catalog Number	List Price <sup>②</sup>	Catalog Number	List Price <sup>②</sup>		
120/240 Ac 240 Dc 32 Dc	1	1	Toggle	1	.	MSTS11FN	\$44	MSTS11DN	\$46	MSTS11SN	\$46
	1	1	Toggle	1	2	MSTS11FN2P	66	MSTS11DN2P	68	MSTS11SN2P	68
	1	1	Key	1	.	MSKS11FN	56	MSKS11DN	58	MSKS11SN	54
	1	1	Key	1	2	MSKS11FN2P	78	MSKS11DN2P	80	MSKS11SN2P	76
120/240 Ac 120/240 Dc 32 Dc	1	2	Toggle	1	.	MSTS22FN	22	MSTS22DN	50	MSTS22SN	50
	1	2	Toggle	1	2	MSTS22FN2P	70	MSTS22DN2P	72	MSTS22SN2P	72
	1	2	Key	1	.	MSKS22FN	60	MSKS22DN	62	MSKS22SN	58
	1	2	Key	1	2	MSKS22FN2P	82	MSKS22DN2P	85	MSKS22SN2P	80

**MS Motor Starter, Dimensions in Inches (Not to be Used for Construction Purposes Unless Approved)**

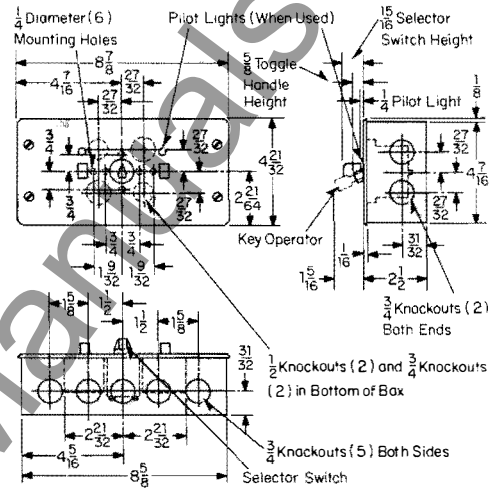
**MS Motor Starter  
Toggle and Key Operated Open Units**



**Two Speed MS Manual Motor Starters  
Flush Plate Mounting**

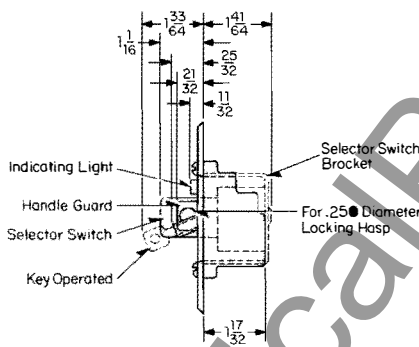
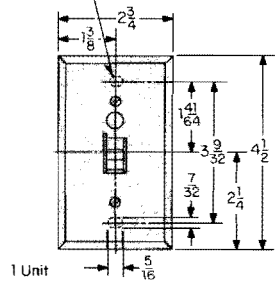


**Two Speed MS Manual Motor Starters  
NEMA 1 General Purpose**



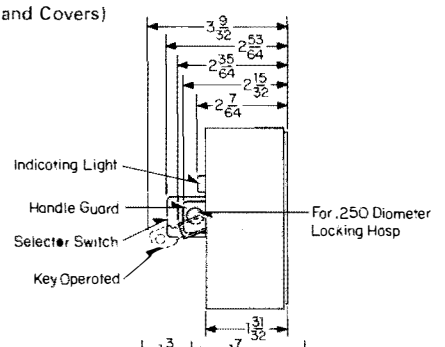
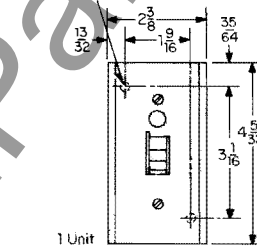
**Flush Plates**

Mounting Purposes (2) Holes

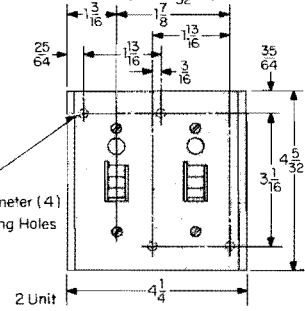
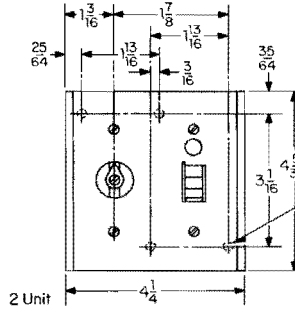
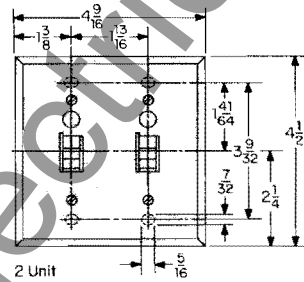
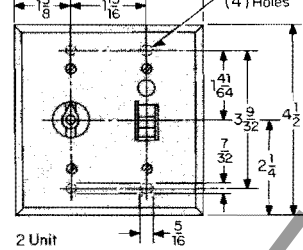


**NEMA 1 Enclosures (Boxes and Covers)**

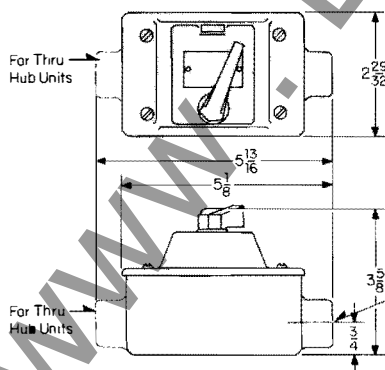
13/64 Diameter (2) Mounting Holes



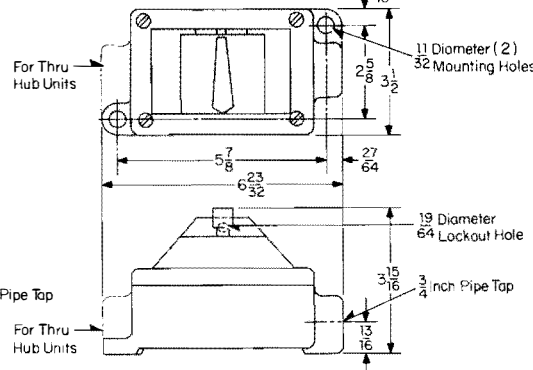
Mounting Purposes (4) Holes



**Watertight (Cast Aluminum)**

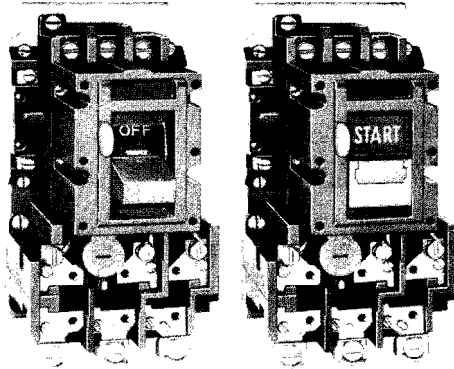


**Hazardous Location (Cast Aluminum)**



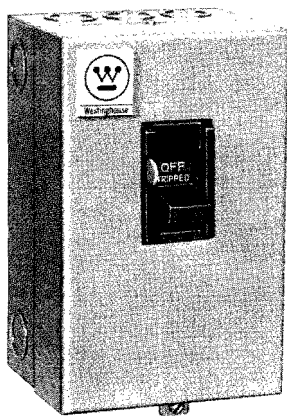


Type B100 Starter



Toggle Operated

Pushbutton Operated



NEMA 1 Enclosed

Description

The Westinghouse B-100 manual starter can be used on non-reversing, reversing and multi-speed applications up to 10 hp, 600 volts Ac. It features a three-pole block overload relay which utilizes A/200 starter heaters, straight-thru wiring, and will accept electrical and mechanical interlocks.

B-100 starters are available for toggle or pushbutton operation, as open devices, or in enclosures to meet most environmental conditions.

Ordering Information

Order by catalog number. Complete catalog number consists of base (B100, B110, B130) plus suffix letters, as: B100+MOB=B100-MOB; B110+MOC=B110MOC; B130+SOC=B130SOC.

Heaters (Select from Page 11.)

Enter as separate item by listing heater code number from appropriate heater table. Three phase starters require three heaters, single phase starters require two heaters. **Heater List Price: \$3 each. Discount C10-S1**

List Prices – Prices Do Not Include Heaters Discount C10-S1

Starter Size	Open Type, Toggle Handle ②	Enclosed		NEMA 1B Flush Mounted	NEMA 4 Watertight Stainless Steel ③④	NEMA 7D, 9E, F, G Haz. Loc. ③④⑦	NEMA 12 Dusttight					
		NEMA 1 General Purpose	NEMA 12 Dusttight									
		Cat. No.	List Price	Cat. No.	List Price	Cat. No.	List Price	Cat. No.	List Price	Cat. No.	List Price	
<b>Type B100 Non-Reversing, 2 Poles (For Single Phase Motors)</b>												
M-O	MOB	\$ 33	SOB	\$ 37	FOB	\$ 37	WOB	\$101	UOB	\$129	JOB	\$ 51
M-1	M1B	43	S1B	47	F1B	47	W1B	125	U1B	153	J1B	61
M-1P	MDB	65	SDB	69	FDB	69	...	...	...	...	...	...
<b>Type B100, Non-Reversing, 3 Poles (For Polyphase Motors)④</b>												
M-O	MOC	40	SOC	44	FOC	44	WOC	108	UOC	136	JOC	58
M-1	M1C	50	S1C	54	F1C	54	W1C	132	U1C	160	J1C	68
<b>Type B110, Reversing, 3 Poles (For Polyphase Motors)</b>												
M-O	MOC	126	SOC	138	...	...	...	...	...	...	...	...
M-1	M1C	156	S1C	168	...	...	...	...	...	...	...	...
<b>Type B130, 2 Speed, 2 Winding, 3 Poles (For Polyphase Motors)</b>												
M-O	MOC	132	SOC	144	...	...	...	...	...	...	...	...
M-1	M1C	162	S1C	174	...	...	...	...	...	...	...	...

Factory Modifications

To order, add, in alphabetical order, proper symbol (s) shown in table to standard catalog number, as B100S1C with pushbutton operator and 120 volt pilot light=B100S1C-AL.

Field Mounting Kits

Discount C10-S1

Catalog Number	Description	List Price
B1A	1-NO Elect. Interlock	\$12
B1B	1-NC Elect. Interlock	12
LK21	Red Pilot Light 120/60	22
LK22	Red Pilot Light 208-240/60	22
LK26	Red Pilot Light 480-600/60	22
M-13	Mechanical Interlock	12
<b>For NEMA 4, NEMA 12 Enclosures</b>		
LK41	Red Pilot Light 120 Volts	54
LK42	Red Pilot Light 240 Volts	54
LK46	Red Pilot Light 600 Volts	54

Factory Modifications

Discount C10-S1

Cat. No. Suffix	Description	List Price
A	Pushbutton Operator (Open and NEMA 1 only)	N/C
E	1-NO Elect. Interlock	\$22
E2	1-NO and 1-NC Elect. Interlocks	44
E3	1-NC Elect. Interlock	22
E4	2-NO Elect. Interlocks	44
E5	2-NC Elect. Interlocks	44
J	Jog Operation	4
L	Red Pilot Light 120/60	30
L2	Red Pilot Light 208-240/60	30
L6	Red Pilot Light 480-600/60	30
X	Without Lockoff	N/C
Z	Line Terminals at Bottom	N/C
<b>For NEMA 7D, 9E, F, G Encl. Only⑧</b>		
H	One 1/4" Tap Top and Bottom	N/C
H2	Two 3/4" Taps in Bottom	N/C
H3	Two 1" Taps in Bottom	N/C
<b>For NEMA 4, NEMA 12 Enclosures</b>		
L	Red Pilot Light 120 Volts	\$54
L2	Red Pilot Light 240 Volts	54
L4	Red Pilot Light 480 Volts	54
L6	Red Pilot Light 600 Volts	54

Ratings

NEMA Size	Maximum Horsepower⑧		
	120 Volts Ac	208-240 Volts Ac	480-600 Volts Ac
<b>2 Pole, Single Phase Ac</b>			
M-O	1	2	—
M-1	2	3	—
M-1P (1 1/2)	3	5	—
<b>3 Pole, 3 Phase Ac</b>			
M-O	2	3	5
M-1	3	7 1/2	10

Replacement Contact Kits

(E-1 Discount)

Kits contain a complete set of moving contacts, stationary contacts, and springs.

Starter Size	No. of Poles	Kit Style No.	List Price per Kit
M-O	2	673B965G06	\$ 8
	3	673B965G07	12
M-1	2	673B965G09	12
	3	673B965G10	16
M-1P	2	673B965G12	16

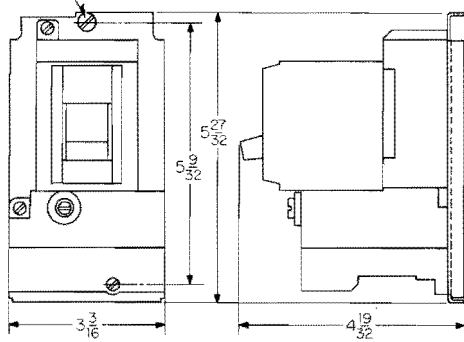
- ② Includes Mounting Clip for Panel Mounting
- ③ Toggle Handle Only
- ④ May be used on two-phase four-wire circuits by running one wire direct to motor.
- ⑤ One 1" Chrome hub supplied on each end
- ⑥ NEMA 7D = NEMA 7 Class 1 Group D, NEMA 9 E, F, G = NEMA 9 Class 11, Groups E, F, G
- ⑦ Tapped for 1" Conduit each end.
- ⑧ Ratings up to 3 Hp, 3 Ph suitable for group fusing.
- ⑨ Do not mix conduit sizes.

**Type B 100 Starter**

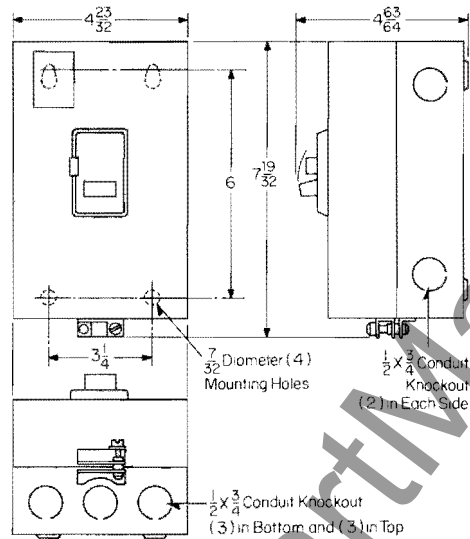
Dimensions, Inches *Not to be used for construction purposes unless approved.*

**Open, Non-Reversing Starter**

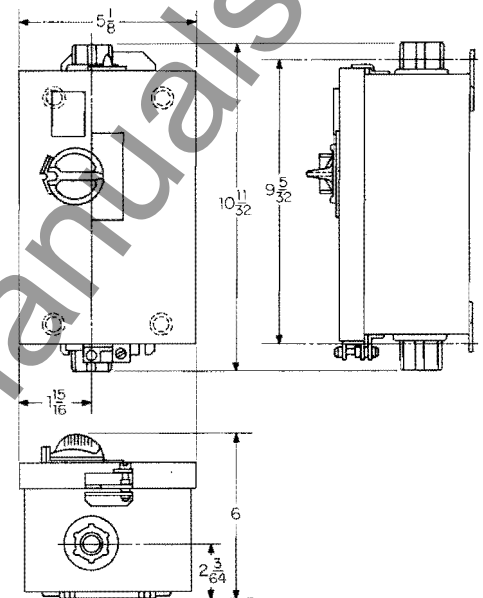
.190-32 Mounting Screw



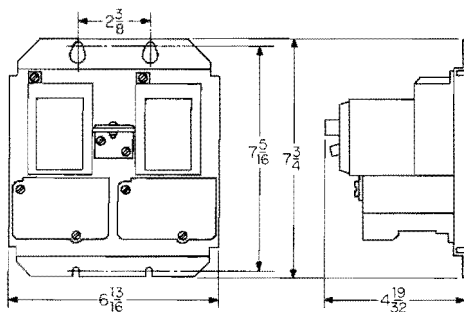
**NEMA 1 Enclosure, Non-Reversing Starter**



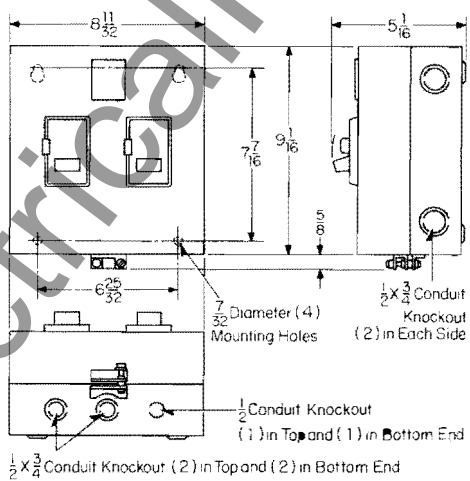
**NEMA 4 Enclosure, Non-Reversing Starter**



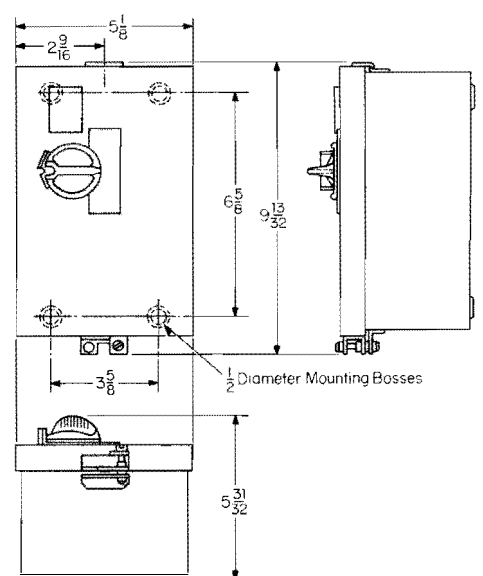
**Open Reversing and Multi-speed Starters**



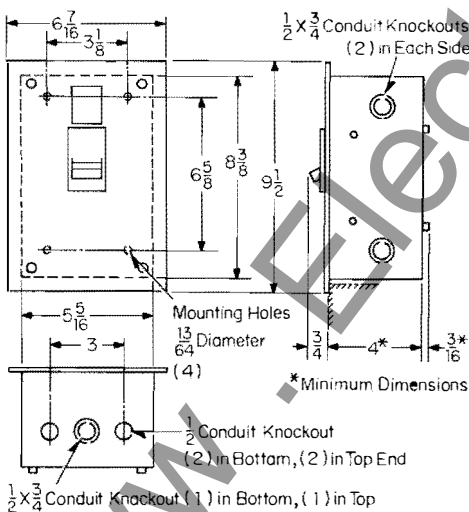
**NEMA 1 Enclosure, Reversing and Multi-speed Starters**



**NEMA 12 Enclosure, Non-Reversing Starter**



**NEMA 1 Flush Enclosure**





### F Series Heaters for Type B100 Manual Starters

Select Heater element based on motor nameplate listed Full Load Amps. Trip rating of element is 125% of motor minimum F.L.A. listed for the element.

#### Open Starters

Single Phase			Three Phase		
Code Mark	Motor Full Load Amps @ 40°C	Max Fuse	Code Mark	Motor Full Load Amps @ 40°C	Max Fuse
FH03	.29— .31	1 A	FH03	.26— .27	1 A
FH04	.32— .34	1 A	FH04	.28— .30	1 A
FH05	.35— .38	1 A	FH05	.31— .33	1 A
FH06	.39— .41	1 A	FH06	.34— .36	1 A
FH07	.42— .46	1 A	FH07	.37— .40	1 A
FH08	.47— .51	1 A	FH08	.41— .45	1 A
FH09	.52— .57	1 A	FH09	.46— .50	1 A
FH10	.58— .64	2 A	FH10	.51— .56	1 A
FH11	.65— .71	2 A	FH11	.57— .62	2 A
FH12	.72— .79	2 A	FH12	.63— .69	2 A
FH13	.80— .87	2 A	FH13	.70— .76	2 A
FH14	.88— .96	3 A	FH14	.77— .84	2 A
FH15	.97— 1.05	3 A	FH15	.85— .92	3 A
FH16	1.06— 1.16	3 A	FH16	.93— 1.02	3 A
FH17	1.17— 1.28	4 A	FH17	1.03— 1.12	3 A
FH18	1.29— 1.42	4 A	FH18	1.13— 1.24	4 A
FH19	1.43— 1.57	5 A	FH19	1.25— 1.38	4 A
FH20	1.58— 1.75	5 A	FH20	1.39— 1.53	5 A
FH21	1.76— 1.94	6 A	FH21	1.54— 1.70	5 A
FH22	1.95— 2.16	7 A	FH22	1.71— 1.89	6 A
FH23	2.17— 2.39	7 A	FH23	1.90— 2.10	7 A
FH24	2.40— 2.66	8 A	FH24	2.11— 2.33	8 A
FH25	2.67— 2.94	9 A	FH25	2.34— 2.58	8 A
FH26	2.95— 3.25	10 A	FH26	2.59— 2.85	9 A
FH27	3.26— 3.58	10 A	FH27	2.86— 3.14	10 A
FH28	3.59— 3.93	10 A	FH28	3.15— 3.45	10 A
FH29	3.94— 4.31	10 A	FH29	3.46— 3.78	10 A
FH30	4.32— 4.71	15 A	FH30	3.79— 4.13	10 A
FH31	4.72— 5.18	15 A	FH31	4.14— 4.54	15 A
FH32	5.19— 5.64	15 A	FH32	4.55— 4.95	15 A
FH33	5.65— 6.15	20 A	FH33	4.96— 5.39	15 A
FH34	6.16— 6.72	20 A	FH34	5.40— 5.89	20 A
FH35	6.73— 7.33	25 A	FH35	5.90— 6.43	20 A
FH36	7.34— 8.00	25 A	FH36	6.44— 7.02	20 A
FH37	8.01— 8.68	30 A	FH37	7.03— 7.61	25 A
FH38	8.69— 9.41	30 A	FH38	7.62— 8.25	25 A
FH39	9.42— 10.1	35 A	FH39	8.26— 8.94	30 A
FH40	10.2— 10.9	35 A	FH40	8.95— 9.74	30 A
FH41	11.0— 11.8	40 A	FH41	9.75— 10.44	35 A
FH42	11.9— 12.8	40 A	FH42	10.45— 11.29	35 A
FH43	12.9— 14.0	45 A	FH43	11.3— 12.3	40 A
FH44	14.1— 15.4	50 A	FH44	12.4— 13.5	45 A
FH45	15.5— 16.5	50 A	FH45	13.6— 14.5	50 A
<b>Above Max. for Size 0</b>			<b>Above Max. for Size 0</b>		
FH46	16.6— 17.7	60 A	FH46	14.6— 15.5	50 A
FH47	17.8— 18.9	60 A	FH47	15.6— 16.6	60 A
FH48	19.0— 20.3	70 A	FH48	16.7— 17.8	60 A
FH49	20.4— 21.9	70 A	FH49	17.9— 19.2	60 A
FH50	22.0— 23.6	80 A	FH50	19.3— 20.7	70 A
FH51	23.7— 25.4	80 A	FH51	20.8— 22.3	70 A
<b>Above Max. for Size 1</b>			<b>Above Max. for Size 1</b>		
FH52	25.5— 27.5	90 A	FH52	22.4— 24.1	80 A
FH53	27.6— 29.8	100 A	FH53	24.2— 26.1	90 A
FH54	29.9— 32.3	100 A			
FH55	32.4— 35.0	110 A			

Above Max. for Size 1 1/2

Heater List Price: \$3 Each.  
Discount C10-S1

#### Enclosed Starters

Single Phase			Three Phase		
Code Mark	Motor Full Load Amps @ 40°C	Max Fuse	Code Mark	Motor Full Load Amps @ 40°C	Max Fuse
FH03	.28— .29	1 A	FH03	.25— .26	1 A
FH04	.30— .33	1 A	FH04	.27— .29	1 A
FH05	.34— .36	1 A	FH05	.30— .32	1 A
FH06	.37— .40	1 A	FH06	.33— .35	1 A
FH07	.41— .45	1 A	FH07	.36— .39	1 A
FH08	.46— .50	1 A	FH08	.40— .44	1 A
FH09	.51— .56	1 A	FH09	.45— .49	1 A
FH10	.57— .63	2 A	FH10	.50— .55	1 A
FH11	.64— .70	2 A	FH11	.56— .61	2 A
FH12	.71— .78	2 A	FH12	.62— .68	2 A
FH13	.79— .86	2 A	FH13	.69— .75	2 A
FH14	.87— .95	3 A	FH14	.76— .83	2 A
FH15	.96— 1.04	3 A	FH15	.84— .91	3 A
FH16	1.05— 1.14	3 A	FH16	.92— 1.00	3 A
FH17	1.15— 1.25	4 A	FH17	1.01— 1.10	3 A
FH18	1.26— 1.39	4 A	FH18	1.11— 1.22	4 A
FH19	1.40— 1.54	5 A	FH19	1.23— 1.35	4 A
FH20	1.55— 1.71	5 A	FH20	1.36— 1.50	5 A
FH21	1.72— 1.89	6 A	FH21	1.51— 1.66	5 A
FH22	1.90— 2.10	7 A	FH22	1.67— 1.84	6 A
FH23	2.11— 2.32	8 A	FH23	1.85— 2.03	7 A
FH24	2.33— 2.54	8 A	FH24	2.04— 2.23	7 A
FH25	2.55— 2.79	9 A	FH25	2.24— 2.45	8 A
FH26	2.80— 3.07	10 A	FH26	2.46— 2.69	9 A
FH27	3.08— 3.36	10 A	FH27	2.70— 2.95	10 A
FH28	3.37— 3.68	10 A	FH28	2.96— 3.23	10 A
FH29	3.69— 4.03	10 A	FH29	3.24— 3.53	10 A
FH30	4.04— 4.40	15 A	FH30	3.54— 3.85	10 A
FH31	4.41— 4.81	15 A	FH31	3.87— 4.22	10 A
FH32	4.82— 5.26	15 A	FH32	4.23— 4.61	15 A
FH33	5.27— 5.74	15 A	FH33	4.62— 5.03	15 A
FH34	5.75— 6.26	20 A	FH34	5.04— 5.49	15 A
FH35	6.27— 6.83	20 A	FH35	5.50— 5.99	20 A
FH36	6.84— 7.45	25 A	FH36	6.00— 6.53	20 A
FH37	7.46— 8.11	25 A	FH37	6.54— 7.11	25 A
FH38	8.12— 8.81	30 A	FH38	7.12— 7.73	25 A
FH39	8.82— 9.58	30 A	FH39	7.74— 8.40	25 A
FH40	9.59— 10.40	35 A	FH40	8.41— 9.12	30 A
FH41	10.41— 11.3	35 A	FH41	9.13— 9.89	35 A
FH42	11.4— 12.2	40 A	FH42	9.9— 10.7	35 A
FH43	12.3— 13.5	45 A	FH43	10.8— 11.8	40 A
FH44	13.6— 14.9	50 A	FH44	11.9— 13.0	45 A
FH45	15.0— 16.0	50 A	FH45	13.1— 14.0	50 A
FH46	16.1— 17.1	60 A	FH46	14.1— 15.0	50 A
FH47	17.2— 18.3	60 A	FH47	15.1— 16.1	50 A
FH48	18.4— 19.7	70 A	FH48	16.2— 17.3	60 A
FH49	19.8— 21.2	70 A	FH49	17.4— 18.6	60
FH50	21.3— 22.8	80 A	FH50	18.7— 20.0	70 A
FH51	22.9— 24.5	88 A	FH51	20.1— 21.5	70 A
FH52	24.6— 26.4	90 A	FH52	21.6— 23.2	80 A
FH53	26.5— 28.5	90 A	FH53	23.3— 25.0	80 A
FH54	28.6— 30.8	100 A	FH54	25.1— 26.8	90 A
FH55	30.9— 33.3	110 A			
FH56	33.4— 36.0	125 A			
FH57	36.1— 38.9	125 A			

#### MS Starters (See Pages 3, 5, 6, 7)

Motor Full Load Current	Catalog Number	Motor Full Load Current	Catalog Number
.4 - .43	MSH .5A	2.72- 2.95	MSH 3.4A
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