

**1-800-GRAINGER (472-4643)**



Enclosure NEMA Rating	NEMA Size M-0			NEMA Size M-1			NEMA Size M-1P		
	1 hp HP @ 120VAC, Thermal Unit Code	2 hp HP @ 230VAC, Mr. Model	Item No.	2 hp HP @ 120VAC, Thermal Unit Code	3 hp HP @ 230VAC, Mr. Model	Item No.	3 hp HP @ 120VAC, Thermal Unit Code	5 hp HP @ 230VAC, Mr. Model	Item No.
<b>1-Phase, 2 Pole</b>									
No Enclosure	J1	2510MBO1	2BW14	—	—	—	L1	2510MCO2	2PYE2
1	J2	2510MBG1	1H411	K2	2510MCG1	1H415	L2	2510MCG2	1H416
12	J2	2510MBA1	2BW07	K2	2510MCA1	2BW22	L2	2510MCA2	2BW23
4, 4X	J2	2510MBW1	2PYD9	—	—	—	L2	2510MCW2	2PYE8
<b>1-Phase, 2 Pole, Stainless Steel Enclosure</b>									
4, 4X	J2	2510MBW11	2BW20	K2	2510MCW11	2PYE6	—	—	—
Enclosure NEMA Rating	NEMA Size M-0			NEMA Size M-1					
	3 hp HP @ 240VAC, Thermal Unit Code	5 hp HP @ 480VAC, Mr. Model	Item No.	7 1/2 hp HP @ 240VAC, Thermal Unit Code	10 hp HP @ 480VAC, Mr. Model	Item No.			
<b>3-Phase, 3 Pole</b>									
No Enclosure	M1	2510MBO2	1H413	N1	2510MCO3	2BW31			
1	M2	2510MBG2	1H412	N2	2510MCG3	1H417			
12	M2	2510MBA2	1H410	N2	2510MCA3	2BW25			
4, 4X	M2	2510MBW2	1H414 *	N2	2510MCW3	2BW36 *			
7, 9	M2	2510MBR2	2BW18	N2	2510MCR3	2PYE5			
<b>3-Phase, 3 Pole, Stainless Steel Enclosure</b>									
4, 4X	M2	2510MBW12	2BW21	N2	2510MCW13	2BW35			
		<b>Description</b>			<b>Mfr. Model</b>	<b>Item No.</b>			
		Internal Lever for use with Type M Integral HP in NEMA 4, 4X, 7, 9, and 12 Enclosures			9998L1	1H418			
		Replacement Contacts For 2- or 3-Pole M-0			9998ML1	1H559			
		Replacement Contacts For 2- or 3-Pole M-1 and M-1P			9998ML2	1H560			

\* Toggle switch operator.

## NEMA Manual Motor Starters

- 600VAC max.; 250VDC max.
- Required thermal units sold separately, see page 166
- Auxiliary contacts 1H589 and 1H590 available on page 163

Push-button motor starters provide On/Off operation and overload protection for small 1-phase, 3-phase, or DC motors. For use on small machine tools, pumps, fans, and conveyors. UL Listed.

Note: NEMA Type 12 enclosures can be converted for 3R outdoor use by drilling two 1/8" holes in the bottom.

## FAT-N Manual Motor Starters

NEMA manual starters provide control and overload protection to single- and 3-phase motors. Feature straight-through wiring and field-mounted auxiliary contacts. Come standard with a lockout device to lock motor in Off position. NEMA rated 1, 4, 7, 9, and 12.



NEMA Size	HP @		No Enclosure		NEMA 1		NEMA 4		NEMA 7D, 9E, 9F, 9G		NEMA 12	
	3-Phase 240V	HP @ 3-Phase 480V	Mfr. Model	Item No.	Mfr. Model	Item No.	Mfr. Model	Item No.	Mfr. Model	Item No.	Mfr. Model	Item No.
<b>Toggle Operator</b>												
M-0	2 hp	5 hp	B100MOC	11Z488	B100SOC	11Z490	B100WOC	11Z492	B100UOC	11Z494	B100JOC	11Z496
M-1	3 hp	10 hp	B100M1C	11Z489	B100S1C	11Z491	B100W1C	11Z493	B100U1C	11Z495	B100J1C	11Z497
<b>Push Button Operator</b>												
M-0	2 hp	5 hp	B100MCA	12M044	B100SCA	12M046	—	—	—	—	—	—
M-1	3 hp	10 hp	B100M1CA	12M045	B100S1CA	12M047	—	—	—	—	—	—
Description	Mfr. Model	Item No.	Full Load		Full Load		Full Load		Full Load		Full Load	
			Amps	Mfr. Model	Amps	Mfr. Model	Amps	Mfr. Model	Amps	Mfr. Model	Amps	Mfr. Model
<b>Accessories</b>												
Auxiliary Contact, 1NO	B1A	12M048	<b>Thermal Units</b>		1.05 to 1.14 FH16		12M066		4.04 to 4.40 FH30		12M080	
Auxiliary Contact, 1NC	B1B	12M049	0.28 to 0.29 FH03		1.15 to 1.25 FH17		12M067		4.41 to 4.81 FH31		12M081	
Red Pilot Light, 120VAC	LK-21	12M050	0.30 to 0.33 FH04		1.26 to 1.39 FH18		12M068		4.82 to 5.26 FH32		12M082	
Red Pilot Light, 208-240VAC	LK-22	12M051	0.34 to 0.36 FH05		1.40 to 1.54 FH19		12M069		5.27 to 5.74 FH33		12M083	
Red Pilot Light, 480-600VAC	LK-26	12M052	0.37 to 0.40 FH06		1.55 to 1.71 FH20		12M070		5.75 to 6.26 FH34		12M084	
			0.41 to 0.45 FH07		1.72 to 1.89 FH21		12M071		6.27 to 6.83 FH35		12M085	
			0.46 to 0.50 FH08		1.90 to 2.10 FH22		12M072		6.84 to 7.45 FH36		12M086	
			0.51 to 0.56 FH09		2.11 to 2.32 FH23		12M073		7.46 to 8.11 FH37		12M087	
			0.57 to 0.63 FH10		2.33 to 2.54 FH24		12M074		8.12 to 8.81 FH38		12M088	
			0.64 to 0.70 FH11		2.55 to 2.79 FH25		12M075		8.82 to 9.58 FH39		12M089	
			0.71 to 0.78 FH12		3.00 to 3.07 FH26		12M076		9.59 to 10.40 FH40		12M090	
			0.79 to 0.86 FH13		3.08 to 3.36 FH27		12M077		10.41 to 11.30 FH41		12M091	
			0.87 to 0.95 FH14		3.37 to 3.68 FH28		12M078		11.40 to 12.20 FH42		12M092	
			0.96 to 1.04 FH15		3.69 to 4.03 FH29		12M079		12.30 to 13.50 FH43		12M093	

## NEMA Fractional Horsepower Manual Starters

- 1-pole 277VAC max.; 2-pole 277VAC/230VDC max.
- Required thermal units sold separately

Provide overload protection and manual On/Off control for small motors. Toggle-operated fractional HP starter for single-phase motors up to 1 HP. 2-pole starters can also be used with DC motors to 3/4 HP. Manual reset.

Binder head screw terminals are suitable for #10 or smaller copper wire and are accessible from the front. For use in fans, conveyors, pumps, and small machine tools.



Amps AC	Enclosure NEMA Rating	Operator	Pilot Light	Description/Special Features	H	W	D	1-POLE		2-POLE		
								Mfr. Model	Item No.	Mfr. Model	Item No.	
<b>Manual Motor Starter</b>												
16 A	1	Toggle	No	—	2.75 in	4.25 in	2.44 in	2510FG1	1H385	2510FG2	1H387	
16 A	1	Toggle	Red: On	—	2.75 in	4.25 in	2.44 in	2510FG1P	1H386	2510FG2P	1H388	
16 A	No Enclosure	Toggle	No	Stainless Steel Flush Plate	2.34 in	4.12 in	1.06 in	2510FS1	1H396	2510FS2	1H397	
16 A	No Enclosure	Toggle	No	—	4.12 in	1.69 in	1.59 in	2510F01	1H392	2510F02	1H393	
16 A	1	Toggle	No	Handle Guard Lock-Off	2.88 in	4.25 in	2.44 in	2510FG5	1H389	2510FG6	1H390	
16 A	4	Rocker	No	Handle Guard Lock-Off	4.56 in	4.25 in	2.75 in	2510FW1	1H398	2510FW2	1H399	
16 A	7, 9	Rocker	No	Handle Guard Lock-Off	4.38 in	6.38 in	3.94 in	2510FR1	1H394	2510FR2	1H395	
Full Load Amps	Mfr. Model	Item No.	Full Load		Full Load		Full Load		Full Load		Item No.	
			Amps	Mfr. Model	Amps	Mfr. Model	Amps	Mfr. Model	Amps	Mfr. Model		
<b>Thermal Units, 1 Required</b>												
0.41 to 0.44	A.49	5B619	1.30 to 1.37		A1.54		3.07 to 3.45		A4.32		8.16 to 8.98	A11.9
0.50 to 0.53	A.59	5B621	1.38 to 1.47		A1.63		3.46 to 3.70		A4.79		8.99 to 9.67	A13.2
0.59 to 0.65	A.71	5B623	1.48 to 1.56		A1.75		3.71 to 4.07		A5.30		9.68 to 9.95	A14.1
0.66 to 0.71	A.78	5B624	1.57 to 1.65		A1.86		4.08 to 4.32		A5.78		9.96 to 10.80	A14.8
0.72 to 0.78	A.86	5B625	1.66 to 1.79		A1.99		4.33 to 4.90		A6.20		10.90 to 12.10	A16.2
0.79 to 0.85	A.95	5B626	1.80 to 1.95		A2.15		4.91 to 5.35		A6.99		12.20 to 13.10	A17.9
0.86 to 0.96	A1.02	5B627	1.96 to 2.15		A2.31		5.36 to 5.85		A7.65		13.20 to 13.90	A19.8
0.97 to 1.04	A1.16	5B628	2.16 to 2.38		A2.57		5.86 to 6.41		A8.38		14.00 to 15.00	A21.3
1.05 to 1.16	A1.25	5B629	2.39 to 2.75		A2.81		6.42 to 6.79		A9.25		15.10 to 16.00	A25.2
1.17 to 1.29	A1.39	5B630	2.76 to 2.84		A3.61		6.80 to 7.57		A9.85			
			2.85 to 3.06		A3.95		7.58 to 8.15		A11.0			

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