

NEMA Starters and Switches, Class 11

Class 11

Furnas Brand Class 11 across the line manual starters and switches provide control for machinery where start stop remote control is not required (optional remote stop available).

Class 11 manual starters are used for single and poly-phase motors up to 10HP. Starters have melting alloy overload relays which help protect against damage due to excessive current caused by a sustained overload.

Class 11 switches provide control for inherently protected motors. Typical applications include metal and wood-working machinery, grinders, power saws, conveyors, fans, pumps, blowers, textile and packaging machinery, slitters and paper cutters.

Class 11 manual controllers have front accessible pressure type wire connectors. Ample wiring space is provided for easy wiring.

A complete line of general purpose and industrial duty enclosures is available as well as open type mounting for custom built enclosures. These manual controllers are available with low voltage protection which will automatically open the power poles when the voltage drops or the power is interrupted. A remote stop function may be incorporated with the low voltage protection coil as a factory option to provide remote or semi-automatic stopping.

Class 11 controllers with the LVP option provide the OSHA requirements for protecting personnel from potential injury caused by the automatic start-up of machinery following a voltage drop or power interruption when low voltage protection is specified.

Open styles and devices in NEMA 1, 4, 7 & 9, 12 enclosures can be padlocked in the Off position.

Furnas Brand Class 11 Manual Starters and Switches Standard Features include:

- Pressure Type Wire Connectors
- Complete Line of Enclosures
- Low Voltage Protection (LVP) Option
- Remote Stop Control
- Pilot Light Indication
- Padlock Option
- LVP Option Meets OSHA Requirements
- UL Approved File #E10590
- CSA Certified File #LR6535

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NEMA and HP Rated Control



OPEN TYPE Starter



OPEN TYPE with LVP



NEMA 1 General Purpose



NEMA 4 Watertight 304 Stainless Steel



NEMA 4X Watertight Corrosion Resistant




NEMA 7 & 9 Class I Group C & D Class II Group E, F & G



NEMA 12 Industrial Use



NEMA Starters and Switches, Field Modification Kits and Replacement Parts, Class 11

 <p>Class 11 Manual Motor Starter</p>	Ordering Information <ul style="list-style-type: none"> ▶ Heater elements see page 884. ▶ Accessories see below. ▶ Dimensions see page 40. ▶ Wiring Diagrams see page 40. ▶ Application Data see page 40. ▶ Hubs for NEMA 4X enclosure see page 125. ▶ Add suffix "SF" for remote Stop function to units with low voltage protection (LVP) option. No price addition. Not available in NEMA 1 enclosures. ▶ For applications requiring a low voltage protection coil see table at right. 	Low Voltage Protection Coil Table <table border="1"> <tr> <td>60 Hz Voltage</td> <td>Letter</td> </tr> <tr> <td>120V</td> <td>*F</td> </tr> <tr> <td>240V</td> <td>*G</td> </tr> <tr> <td>460V</td> <td>*H</td> </tr> </table> <p>*Add corresponding letter to end of base catalog number for low voltage protection coil. \$85. list adder. Note: The low voltage protection coils are wired directly across lines 1 and 2 (see wiring diagrams). The coil voltage should correspond with the line voltage.</p>	60 Hz Voltage	Letter	120V	*F	240V	*G	460V	*H
	60 Hz Voltage	Letter								
120V	*F									
240V	*G									
460V	*H									

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NEMA and HP
Rated Control

Manual Starter—Class 11, Single Phase

Max HP				Enclosure												
115 Volts	200 Volts	230 Volts	Size		Open Type		NEMA 1 General Purpose		NEMA 12 Dust-tight		NEMA 4 Watertight 304 Stainless Steel		NEMA 4X Watertight Corrosion Resistant		NEMA 7 & 9 Class I Groups C & D Class II Groups E, F & G	
					Catalog No	Price \$	Catalog No	Price \$	Catalog No	Price \$	Catalog No	Price \$	Catalog No	Price \$	Catalog No	Price \$
1	2	2	M0	11CB2A	127.00	11CB2B	143.00	11CB20	196.00	11CB2W	389.00	11CB2F	389.00	11CB2H	497.00	
2	3	3	M1	11DB2A	166.00	11DB2B	181.00	11DB20	235.00	11DB2W	482.00	11DB2F	482.00	11DB2H	589.00	
3	5	5	M1P	11DB5A	250.00	11DB5B	266.00	11DB50	320.00	11DB5W	589.00	11DB5F	589.00	11DB5H	682.00	

Manual Starters—Class 11, Three Phase

Max HP					Enclosure												
200 Volts	230 Volts	460 Volts	575 Volts	Size		Open Type		NEMA 1 General Purpose		NEMA 12 Dust-tight		NEMA 4 Watertight 304 Stainless Steel		NEMA 4X Watertight Corrosion Resistant		NEMA 7 & 9 Class I Groups C & D Class II Groups E, F & G	
						Catalog No	Price \$	Catalog No	Price \$	Catalog No	Price \$	Catalog No	Price \$	Catalog No	Price \$	Catalog No	Price \$
3	3	5	5	M0	11CB3A	154.00	11CB3B	169.00	11CB30	223.00	11CB3W	416.00	11CB3F	416.00	11CB3H	524.00	
7½	7½	10	10	M1	11DB3A	193.00	11DB3B	208.00	11DB30	262.00	11DB3W	508.00	11DB3F	508.00	11DB3H	616.00	


Manual Switch—Class 11, Single Phase

Max HP					Enclosure												
115 Volts	200 Volts	230 Volts	Cont Amp Rating	Size		Open Type		NEMA 1 General Purpose		NEMA 12 Dust-tight		NEMA 4 Watertight 304 Stainless Steel		NEMA 4X Watertight Corrosion Resistant		NEMA 7 & 9 Class I Groups C & D Class II Groups E, F & G	
						Catalog No	Price \$	Catalog No	Price \$	Catalog No	Price \$	Catalog No	Price \$	Catalog No	Price \$	Catalog No	Price \$
1	2	2	20	M0	11RB2A	116.00	11RB2B	131.00	11RB20	208.00	11RB2W	401.00	11RB2F	401.00	11RB2H	508.00	
2	3	3	30	M1	11SB2A	154.00	11SB2B	169.00	11SB20	247.00	11SB2W	493.00	11SB2F	493.00	11SB2H	601.00	
3	5	5	35	M1P	11SB5A	241.00	11SB5B	254.00	11SB50	331.00	11SB5W	601.00	11SB5F	601.00	11SB5H	601.00	

Manual Switch—Class 11, Three Phase

Max HP						Enclosure												
200 Volts	230 Volts	460 Volts	575 Volts	Cont Amp Rating	Size		Open Type		NEMA 1 General Purpose		NEMA 12 Dust-tight		NEMA 4 Watertight 304 Stainless Steel		NEMA 4X Watertight Corrosion Resistant		NEMA 7 & 9 Class I Groups C & D Class II Groups E, F & G	
							Catalog No	Price \$	Catalog No	Price \$	Catalog No	Price \$	Catalog No	Price \$	Catalog No	Price \$	Catalog No	Price \$
3	3	5	5	20	M0	11RB3A	123.00	11RB3B	139.00	11RB30	254.00	11RB3W	447.00	11RB3F	447.00	11RB3H	555.00	
7.5	7.5	10	10	30	M1	11SB3A	162.00	11SB3B	177.00	11SB30	254.00	11SB3W	539.00	11SB3F	539.00	11SB3H	647.00	

Field Modification Kits, NEMA 1 & Open—Class 11

Description	Volts	Catalog No	Price \$
 Pilot Light	120	12ZAL1	38.50
	208-240	12ZAL2	38.50
	480	12ZAL4	38.50

Replacement AC Coils—Class 11

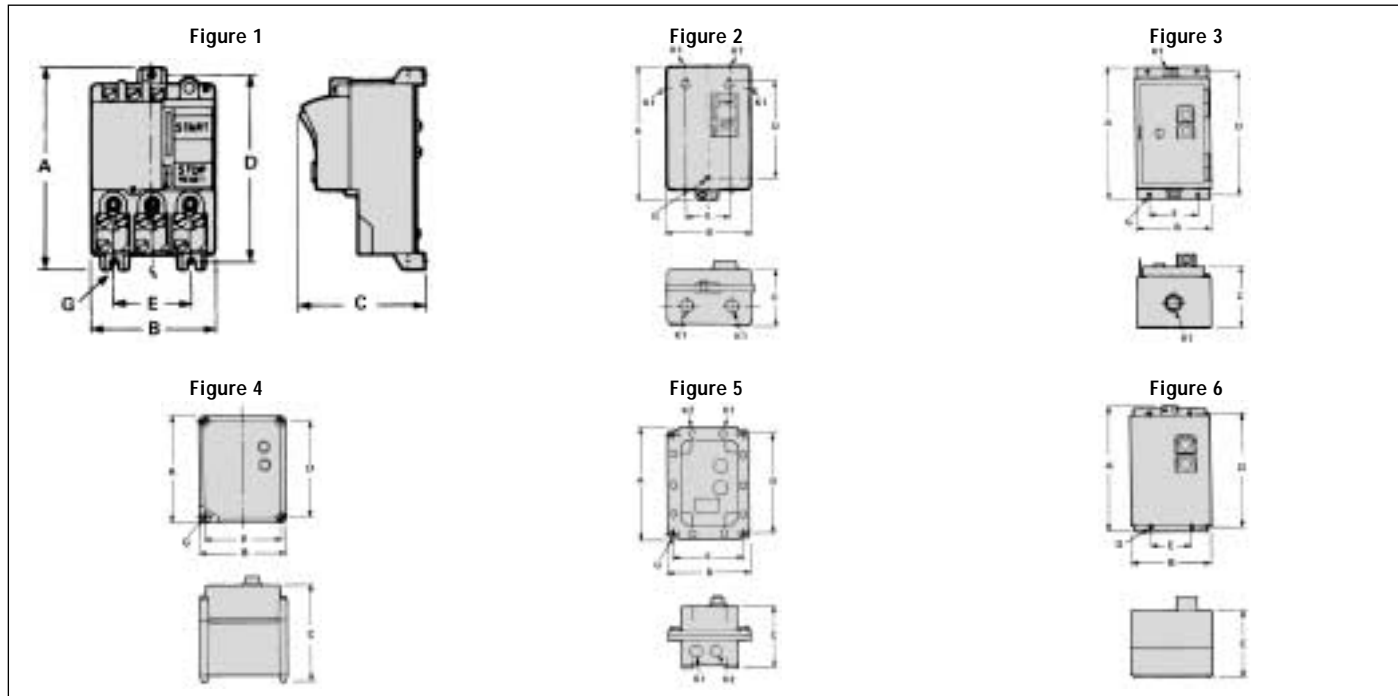
Description	Size	Model	Volts, 60HZ	Catalog No	Price \$
For Replacement Only on Starters w/ Low Voltage Protection	All	B	120	75D22979F	49.50 [Ⓣ]
			208	75D22979D	49.50 [Ⓣ]
			240	75D22979G	49.50 [Ⓣ]
			480	75D22979H	49.50 [Ⓣ]

Contact Kits—Class 11 (1) Kit Required Per Pole

Description	Size	Model	Catalog No	Price \$
Kit includes one stationary, one movable contact and spring	M0	CB, RB	75CB11	26.00 [Ⓣ]
	M1	DB, SB	75DB11	38.00 [Ⓣ]
	M1P	DB5, SB5	75DB11P	45.50 [Ⓣ]

ⓉDiscount Code: Replacement Parts

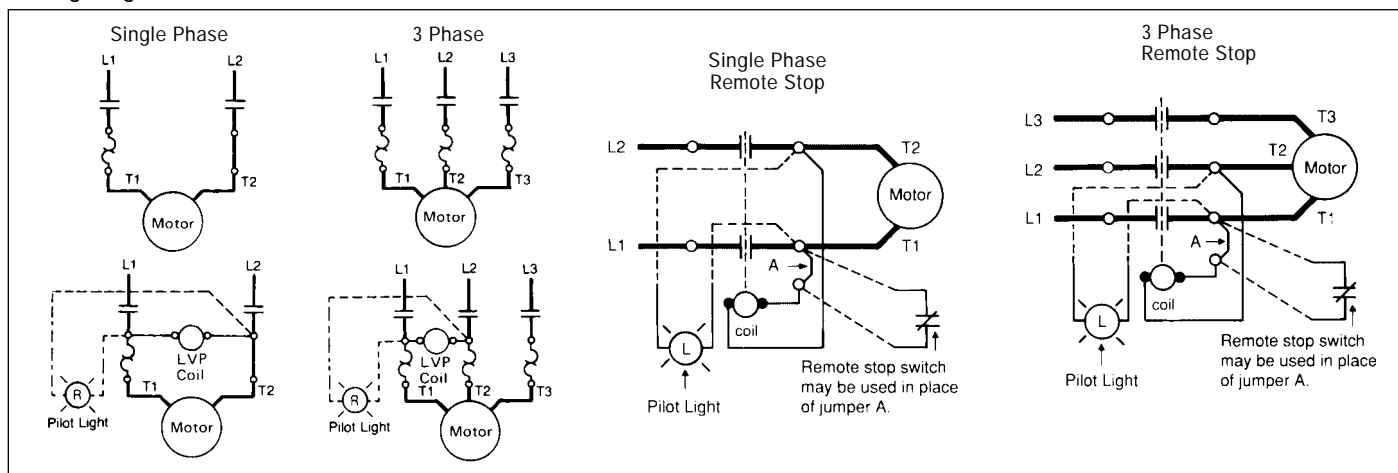
Dimensions



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Enclosure Type	Figure	Outline Dimensions			Mtg Dimensions		Mtg Screw	Conduit Size		Max Wire Size	Approx Ship Wt Lbs (Kg)
		A	B	C	D	E		K1	K2		
Open	1	5 7/16 (135)	3 1/2 (89)	3 3/8 (92)	5 1/2 (140)	2 1/4 (57)	10	—	—	8	3 (1.36)
NEMA 1	2	8 (203)	5 1/16 (144)	3 3/16 (81)	5 7/8 (149)	2 1/2 (64)	10	1/2 - 3/4	—	8	8 (3.63)
NEMA 4	3	11 1/8 (302)	6 1/8 (159)	5 1/8 (130)	10 3/8 (264)	4 1/8 (105)	1/2	—	—	8	10 (4.54)
NEMA 4X	4	11 1/8 (302)	7 15/16 (202)	7 7/16 (186)	11 1/8 (283)	6 1/8 (175)	10	1	—	8	12 (5.44)
NEMA 7 & 9	5	11 (279)	7 1/8 (181)	5 7/8 (149)	9 3/16 (233)	6 1/16 (154)	3/8	1/2	3/4	8	27 (12.25)
NEMA 12	6	9 3/16 (233)	5 7/8 (149)	5 1/16 (129)	8 7/8 (219)	3 (76)	1/2	—	—	8	11 (4.99)

Wiring Diagrams



Coil Data (for units with LVP option)

Class	Watts	Volts 60HZ	Inrush (Open Magnet)		Normal (Sealed Magnet)	
			Amps	VA	Amps	VA
11	4	120	.15	18	.108	13
		240	.075		.054	
		480	.037		.027	

Note: Dimensions for reference, not for construction. Dimensions are in inches (mm).