IEC style starters

Full-voltage - across the line - non reversing - three-phase type


M0 R


M0 P


M1 R


M1 P


M2 R


M2 P

Maximum horsepower ratings						Catalog number ❶ ❷ ❸ ❹	Price
Single Phase ❶		Three Phase					
120V	240V	200V	240V	480V	600V		$ each
M0 ENCLOSURE Reset button only							
1/2	1 1/2	2	3	5	5	**M0 R009 12 ❶ ❷ ❸**	163.00
1/2	1 1/2	3	3	7 1/2	10	**M0 R012 12 ❶ ❷ ❸**	179.00
Start - Stop/Reset Pushbuttons							
1/2	1	2	3	5	5	**M0 P009 12 ❶ ❷ ❸**	177.00
1/2	1 1/2	3	3	7 1/2	10	**M0 P012 12 ❶ ❷ ❸**	193.00
M1 ENCLOSURE Reset button only							
3/4	2	3	3	5	7 1/2	**M1 R009 12 ❶ ❷ ❸**	194.00
1	3	5	5	10	15	**M1 R018 12 ❶ ❷ ❸**	221.00
Start - Stop/Reset Pushbuttons							
3/4	2	3	3	5	7 1/2	**M1 P009 12 ❶ ❷ ❸**	208.00
1	3	5	5	10	15	**M1 P018 12 ❶ ❷ ❸**	235.00
M2 ENCLOSURE Reset button only							
2	3	7 1/2	7 1/2	15	15	**M2 R025 12 ❶ ❷ ❸**	270.00
3	7 1/2	10	10	20	25	**M2 R032 12 ❶ ❷ ❸**	344.00
Start - Stop/Reset Pushbuttons							
2	3	7 1/2	7 1/2	15	15	**M2 P025 12 ❶ ❷ ❸**	284.00
3	7 1/2	10	10	20	25	**M2 P032 12 ❶ ❷ ❸**	358.00
M3 ENCLOSURE Reset button only							
5	10	10	15	30	40	**11 M3 BRF R50 ❶ ❷ ❸**	481.00
—	—	20	25	50	60	**11 M3 BRF R65 ❶ ❷ ❸**	570.00
—	—	25	30	60	75	**11 M3 BRF R80 ❶ ❷ ❸**	672.00
—	—	30	30	60	75	**11 M3 BRF R95 ❶ ❷ ❸**	696.00
Start - Stop/Reset Pushbuttons							
5	10	10	15	30	40	**11 M3 BRF P50 ❶ ❷ ❸**	496.00
—	—	20	25	50	60	**11 M3 BRF P65 ❶ ❷ ❸**	585.00
—	—	25	30	60	75	**11 M3 BRF P65 ❶ ❷ ❸**	585.00
—	—	30	30	60	75	**11 M3 BRF P95 ❶ ❷ ❸**	711.00

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Dimensions pages D-16 and 17

Wiring diagrams page W-6

11 M3 BRF R

11 M3 BRF P

	Contactor included	Enclosure	
	Size	Size	Degree of protection
	BG09 10A	M0 RA	IP65
	BG12 10A	M0 RA	IP65
	BG09 10A	M0 PA	IP65
	BG12 10A	M0 PA	IP65
	BF09 10A	M1 RA	IP65
	BF18 10A	M1 RA	IP65
	BF09 10A	M1 PA	IP65
	BF18 10A	M1 PA	IP65
	BF25 10A	M2 RA	IP65
	BF32 00A	M2 RA	IP65
	BF25 10A	M2 RA	IP65
	BF32 00A	M2 RA	IP65
	BF50 00	M3	IP54
	BF65 00	M3	IP54
	BF80 00	M3	IP54
	BF95 00	M3	IP54
	BF50 00	M3	IP54
	BF65 00	M3	IP54
	BF80 00	M3	IP54
	BF95 00	M3	IP54

General characteristics
Full-voltage starters in non-metallic enclosure are supplied complete with three-pole single-phase sensitive thermal overload relay.
The enclosure has knockout entries. The M0 and M1 versions have all entries with diameter 0.8in / 21mm while the M2, diameter 0.8/1in - 21/26mm and M3, diameter 1.5in / 37mm. Entries are located on upper and lower surfaces and must be completed with adequate wire conduits to maintain the enclosure degree of protection. Protection fuses are to be mounted externally by the user.

Electrical life
500,000 cycles at the maximum rate of 600 cycles/hour.

Certifications and compliance
UL listings for USA and Canada pending for M0 - M1 - M2 types only.
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-4-1, UL508.

Coil codes ❶❷

Voltage range 60Hz	Coil Code
24V	02460
120V	12060
220-240V	23060
440-480V	46060
575V	57560

Overload relay codes ❶❸

For M0 types		For M1-M2 types	
Amp Range	Relay code	Amp Range	Relay code
0.14 - 0.23	023	0.1-0.16	A0
0.2 - 0.33	033	0.16-0.25	A1
0.3 - 0.5	05	0.25-0.4	A2
0.45 - 0.75	075	0.4-0.63	A3
0.6 - 1	1	0.63-1	A4
0.9 - 1.5	1V5	1-1.6	A5
1.4 - 2.3	2V3	1.6-2.5	A6
2 - 3.3	33	2.5-4	A7
3 - 5	5	4-6.5	A8
4.5 - 7.5	75	6.3-10	A9
6 - 10	10	9-14	B0
9 - 15	15	13-18	B1
For M3 types		17-23	B2
14 - 23	23	20-25	B3
20 - 33	33	24-32	B4
28 - 42	42	32-38	B5
35 - 50	50		
46 - 65	65		
60 - 82	82		
70 - 95	95		

❶ For a starter without overload relay, replace "12" of the catalog number with "10" and complete with a coil code only. Consult Sales & Technical Support for pricing. Example: M1 P009 10 02460.
For single phase starter, replace "12" of the catalog number with "13" and complete with coil and relay codes as mentioned below.
For a M0 starter with automatic reset relay, replace "12" of the catalog number with "15 and complete with coil and relay codes as mentioned below.

❷ Select the coil voltage required from the coil codes table and add the coil code to the catalog number.

❸ After adding the coil code, select the Amp range required from the Overload relay codes tables, depending on the enclosure type, and add the relay code to the catalog number.
For single phase starters, refer to note ❶ above.
Three-phase starters can be used on single phase provided they are wired properly, refer to wiring diagrams on page W-6 or see the instructions leaflet with the starter.
Examples of complete catalog numbers:
M1 P009 12 12060 A9 M1 enclosure, Start-Stop/Reset buttons, BF09A contactor, 6.3-10A overload, 3 phase, and 120VAC coil
M2 R032 13 23060 B4 M2 enclosure, Reset only, BF32A contactor, 24-32A overload, single phase, and 230VAC coil.

❹ See page 6-5 for main starter components. Contact Sales & Technical Support for catalog numbers and pricing not listed.

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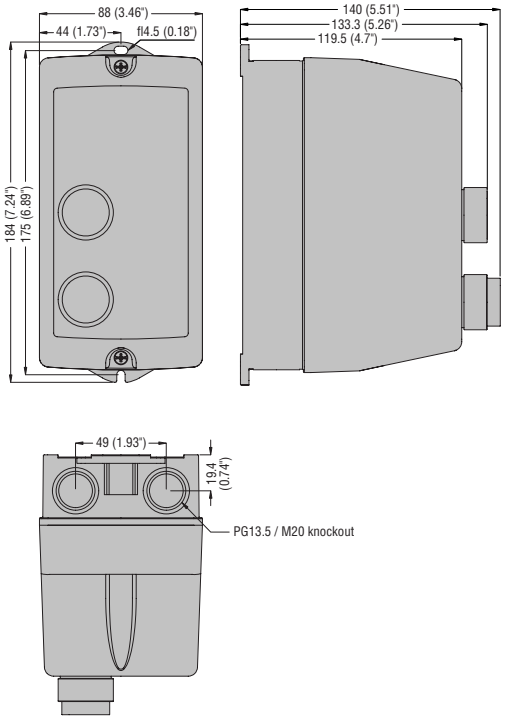
Wiring diagrams page W-6

Dimensions [mm (in)]

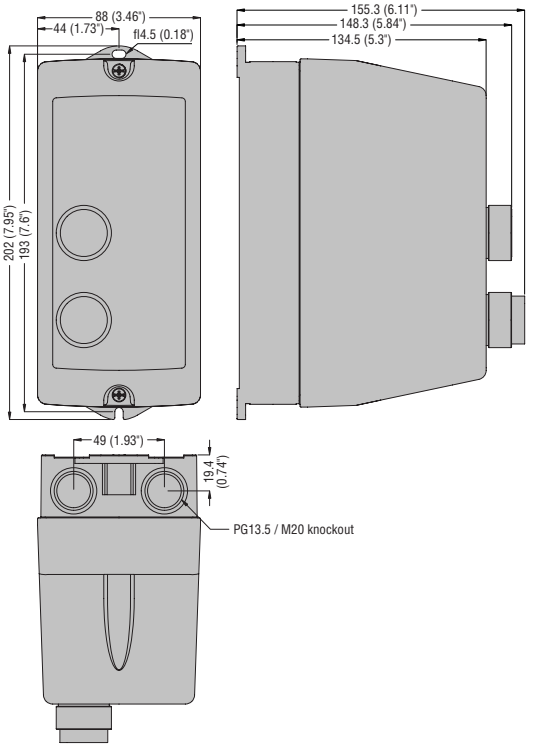
IEC style starters

FULL VOLTAGE STARTERS - EMPTY ENCLOSURES

M0



M1



M2