



STARTERS TABLE OF CONTENTS



B7 Series
Prism Magnetic Motor Starters.....3

B7 Series
Catalog Logic4

B7AD Prism Combination Starter
Prism Combination Starters5

B7 Series
Overload heaters6

B7 Series
Dimensions7

B7 Series
B7AD0 Combination Starters..... 8-9



B7MSN Series
Compact Manual NEMA Starters.....16-18



XMSW Series
Manual Line Starters..... 19-20



XSD/XSX/FXSD/FXSX Series
Manual Motor Starting Switches.....10-11

XSD/XSX/FXSD/FXSX Series
Heaters, Dimensions.....12



EXB70 IEC Magnetic Starter Series... 21-23



B7MS Series
Compact Manual IEC Starters.....13-15



STARTERS
SECTION S

STARTERS FOR HARSH & HAZARDOUS ENVIRONMENTS





Line Starter



Combination Starter

B70
Motor Starter

NEC / CEC Certifications

Class I, Groups B, C & D

Class I, Zone 1 IIB+H2 Gb

Class II, Groups E, F & G

Class III

Type 3, 4 & 4X

Ta=-25°C to +40°C

Ta=-50°C to +40°C



Files E83969

Certificate LR11716 - 51

FEATURES-SPECIFICATIONS

Features

- TYPE 4, 4X rated – providing protection from hose directed water and corrosion
- Universal mounting pan, pre-drilled to facilitate easy field installation of starters. Provision for grounding supplied as standard.
- More wiring room – meets latest NEC wire bend requirements
- Quick release, captivated cover bolts of 316 grade stainless steel
- Flange sealing gasket located to the inside of cover bolt – preventing water seepage into enclosure through bolt holes
- Hinged cover provided as standard for an extra measure of safety and convenience
- Breaker (MCP) handle can be padlocked in “ON” or “OFF” position
- Provisions provided for drain and breather plus conduit openings for power and control
- Reset button provided as standard
- Two control operator openings provided plugged as standard. Additional openings can be factory or field drilled.
- Copper-free (less than 4/10 of 1% copper) enclosure
- Ductile mounting lugs

Materials

- **ENCLOSURE** – Copper-free aluminum
- **O-RING GASKET** – BUNA-N nitrile
- **COVER BOLTS** – 316 grade stainless steel
- **CB/MCP HANDLE** – Copper-free aluminum
- **RESET OPERATOR** – Thermoplastic polyester button molded onto stainless steel shaft. Aluminum shroud.
- **MOUNTING PAN** – Sheet aluminum
- **HINGE** – Aluminum with stainless steel pin
- **RESET SHROUD** – Black anodized

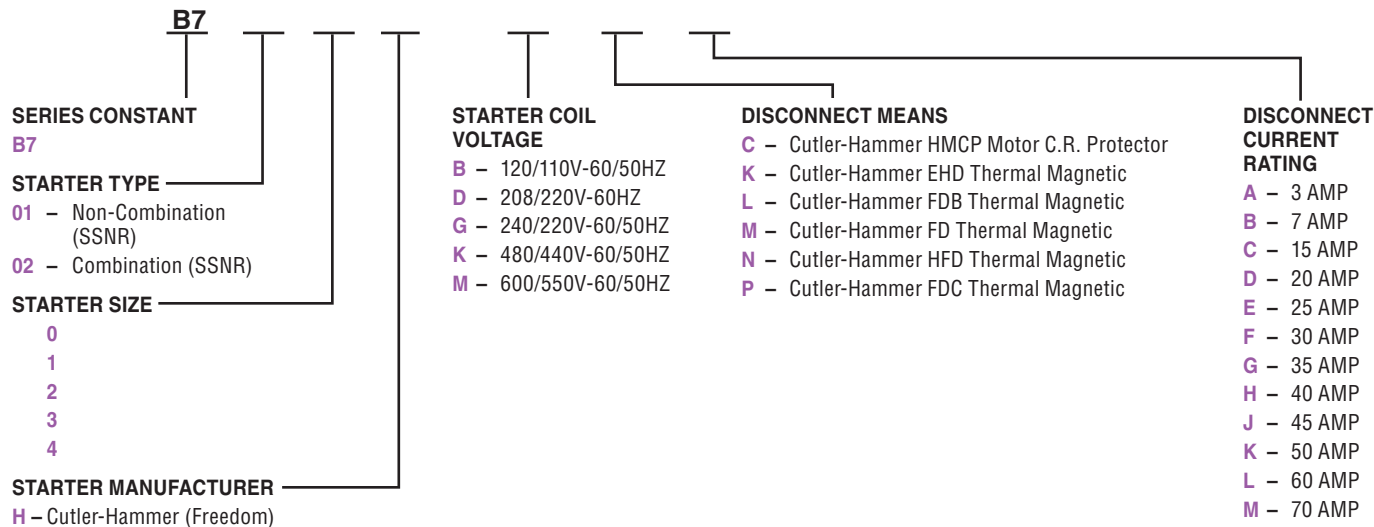
Electrical Rating

- Starters are 3 phase 50/60Hz
- 600VAC Single Speed Non-Reversing



STARTERS B7 SERIES

CATALOG LOGIC – B7 ENCLOSURES WITH CONTROLS



This Catalog Logic Chart is for reference only and is to be used for selection of special voltage and amperage requirements. Consult Factory since not all assemblies are available with complete list of options displayed.

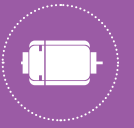
B7 MAGNETIC LINE STARTERS					
NEMA STARTER SIZE	MOTOR VOLTS	COIL VOLTS	MAX. HP	CATALOG NUMBER	ENCLOSURE ONLY NO INTERIORS
				CUTLER-HAMMER SERIES AN16	
0	SEP. CONTROL	120	—	B7010HB	B7011
0	230	240	3	B7010HG	
0	460	480	5	B7010HK	
0	575	600	5	B7010HM	
1	SEP. CONTROL	120	—	B7011HB	B7011
1	230	240	7-1/2	B7011HG	
1	460	480	10	B7011HK	
1	575	600	10	B7011HM	
2	SEP. CONTROL	120	—	B7012HB	B7012
2	230	240	15	B7012HG	
2	460	480	25	B7012HK	
2	575	600	25	B7012HM	
3	SEP. CONTROL	120	—	B7013HB	B7013
3	230	240	30	B7013HG	
3	460	480	50	B7013HK	
3	575	600	50	B7013HM	
4	SEP. CONTROL	120	—	B7014HB	B7014
4	230	240	50	B7014HG	
4	460	480	100	B7014HK	
4	575	600	100	B7014HM	



Line Starter

Magnetic Line Starters - 3 Pole 3Phase, Single Speed Non Reversing 600VAC 60Hz - Overload Heaters Required

- See catalog logic page for additional coil voltages
- Control transformers for use in combination starters only.
- Control transformers will not fit in the starter only below.
- Supplied without overload heaters unless heater value is specified.



Combination Starter

B7 COMBINATION MAGNETIC LINE STARTERS

NEMA STARTER SIZE	MOTOR VOLTS	COIL VOLTS	MAX. HP	DISCONNECT TRIP AMPS	CATALOG NUMBER	ENCLOSURE ONLY NO INTERIORS
					CUTLER-HAMMER SERIES AN16	
0	SEP. CONTROL	120	—	3	B7020HBCA	B7021
0	SEP. CONTROL	120	—	7	B7020HBCB	
0	SEP. CONTROL	120	—	15	B7020HBCC	
0	230	240	1	7	B7020HGCB	
0	230	240	3	15	B7020HGCC	
0	460	480	1	3	B7020HKCA	
0	460	480	2	7	B7020HKCB	
0	460	480	5	15	B7020HKCC	
0	575	600	1	3	B7020HMCA	
0	575	600	2	7	B7020HMCB	
0	575	600	5	15	B7020HMCC	
1	SEP. CONTROL	120	—	15	B7021HBC	
1	SEP. CONTROL	120	—	30	B7021HBCF	
1	230	240	7-1/2	30	B7021HGCF	
1	460	480	10	30	B7021HKCF	
1	575	600	10	30	B7021HMCF	
2	SEP. CONTROL	120	—	50	B7022HBC	B7022
2	SEP. CONTROL	120	—	70	B7022HBCM	
2	230	240	15	50	B7022HGCK	
2	230	240	15	70	B7022HGCM	
2	460	480	25	50	B7022HKCK	
2	575	600	25	50	B7022HMCK	
3	SEP. CONTROL	120	—	100	B7023HBCQ	B7023
3	230	240	30	100	B7023HGQ	
3	460	480	50	100	B7023HKQ	
3	575	600	50	100	B7023HMQ	
4	SEP. CONTROL	120	—	150	B7024HBCT	B7024
4	230	240	50	150	B7024HGCT	
4	460	480	100	150	B7024HKCT	
4	575	600	100	150	B7024HMCT	
5	SEP. CONTROL	120	—	250	B7025CBCMCPJ250	See chart below
5	SEP. CONTROL	120	—	400	B7025CBCMCPK400	
5	230	240	75	250	B7025CGCMCPJ250	
5	230	240	100	400	B7025CGCMCPK400	
5	460	480	150	250	B7025CKCMCPJ250	
5	460	480	200	400	B7025CKCMCPK400	
5	575	600	150	250	B7025CMCMCPJ250	
5	575	600	200	400	B7025CMCMCPK400	

Combination Starters - 3 Pole 3Phase, Single Speed Non Reversing 600VAC 60Hz - Overload Heaters Required

- See catalog logic page for additional coil voltages
- Control transformers for use in combination starters only.
- Supplied without overload heaters unless heater value is specified.
- Combination starter enclosures have sufficient space for factory or field mounting of a control transformer.
- Separate Control=Coil control voltage from a second supply source or from an internal control transformer



STARTERS B7 SERIES

SIZE 5 COMBINATION MOTOR STARTER ENCLOSURE ONLY					
STARTER MANUFACTURER	STARTER TYPE	CIRCUIT BREAKER FRAME			ENCLOSURE CAT. NUMBER
		C-H	GE	SQ-D	
Allen Bradley	Series 509	J	F-225	K	B7025A2
Allen Bradley	Series 509	K	J-600	L	B7025A4
Cutler Hammer	Freedom-AN16	J	F-225	K	B7025C2
Cutler Hammer	Freedom-AN16	K	J-600	L	B7025C4
General Electric	Series 306	J	F-225	K	B7025G2
General Electric	Series 306	K	J-600	L	B7025G4
Square D	Series 8536	J	F-225	K	B7025S2
Square D	Series 8536	K	J-600	L	B7025S4
Eaton	Freedom-AN19	J	F-225	K	B7025W2
Eaton	Freedom-AN19	K	J-600	L	B7025W4

OVERLOAD HEATERS

Overload heaters are not supplied as part of the starter assemblies and are to be ordered as separate items by catalog number and priced accordingly.

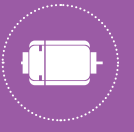
Heaters should be selected on the basis of the actual full-load current and service factor as shown on the motor nameplate or in the manufacturer's published literature.

When motor and overload relay are in the same ambient and the service factor of the motor is 1.15 to 1.25, select heaters from the heater selection chart. If the service factor of the motor is 1.0, or there is no service factor shown, or a maximum of 115% protection is desired, select one size smaller heater than indicated.

When motor and overload relay are in different ambients, select heaters from the chart using adjusted motor currents as follows: decrease rated motor current 1% for each °C motor ambient exceeds controller ambient; increase rated motor current 1% for each °C controller ambient exceeds motor ambient.

FOR SIZES 0-1				
KH2001B-3	.254	.306	.359	.411
KH2002B-3	.375	.452	.530	.607
KH2003B-3	.560	.676	.791	.907
KH2004B-3	.814	.983	1.15	1.32
KH2005B-3	1.20	1.45	1.71	1.96
KH2006B-3	1.79	2.16	2.53	2.90
KH2007B-3	2.15	2.60	3.04	3.49
KH2008B-3	3.23	3.90	4.56	5.23
KH2009B-3	4.55	5.50	6.45	7.40
KH2010B-3	6.75	8.17	9.58	11.0
KH2011B-3	9.14	10.8	12.4	14.0
KH2012B-3	14.0	16.9	19.9	22.8
KH2013B-3	18.7	22.7	26.7	30.7
KH2014B-3	23.5	28.5	33.5	38.5
FOR SIZE 2				
KH2015B-3	29.0	34.0	39.1	44.1
KH2016B-3	39.6	45.5	51.5	57.4
KH2017B-3	53.9	60.9	67.9	74.9
FOR SIZES 3-4				
KH2018-3	18.0	20.2	22.3	24.5
KH2019-3	24.6	27.6	30.5	33.4
KH2020-3	33.5	37.5	41.5	45.6
KH2021-3	45.7	51.2	56.7	62.1
KH2022-3	62.2	69.7	77.1	84.6
KH2023-3	84.7	95.0	105.0	115.0
KH2024-3	106.0	118.0	131.0	144.0
FOR SIZE 5				
KH2004B-3	49	59	69	79
KH2005B-3	72	87	103	118
KH2006B-3	107	130	152	174
KH2007B-3	129	156	182	209
KH2008B-3	194	234	274	—

OVERLOAD HEATERS/NON-REVERSING



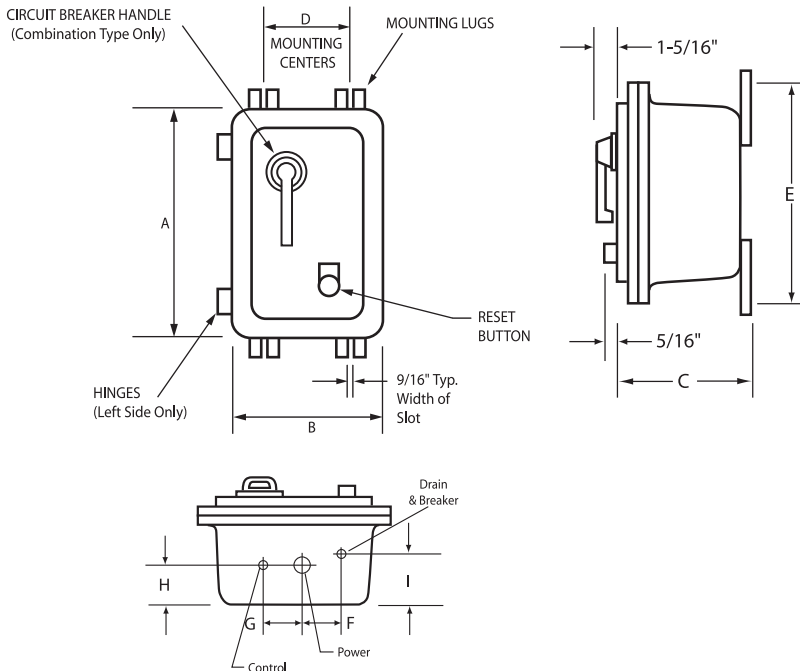
MOTOR STARTERS DIMENSIONS

B7 DIMENSIONS															
CATALOG NUMBER	NEMA SIZE	TYPE	DIMENSIONS IN (MM)									EST. ENCLOSURE WEIGH LBS. (KG)	CONDUIT OPENINGS TOP/BOTTOM (NPT) ①		
			A	B	C	D	E	F	G	H	I		POWER	CONTROL	DRAIN BREATHER
B7011	0,1	Starter Only	18" (457)	11" (280)	9-1/8" (232)	3-5/8" (92)	16-3/8" (416)	2-1/8" (54)	2-3/8" (60)	2-11/16" (68)	3-7/16" (87)	46 (21)	1-1/2"	3/4"	1/2"
B7012	2	Starter Only	20" (508)	12-1/2" (317)	9-1/8" (232)	5" (127)	18-3/8" (467)	2-1/2" (63)	2-1/2" (63)	2-11/16" (68)	3-3/16" (81)	56 (25)	1-1/2"	3/4"	1/2"
B7013	3	Starter Only	26-1/4" (667)	12-1/2" (317)	10-3/4" (276)	5" (127)	24-5/8" (625)	2-1/2" (63)	2-3/4" (70)	4-1/16" (103)	5-1/2" (140)	80 (36)	2"	1"	1/2"
B7014	4	Starter Only	34-1/4" (870)	16-1/2" (419)	11-1/2" (292)	9" (229)	32-5/8" (830)	3-3/4" (95)	4" (102)	4-7/16" (113)	6" (152)	155 (70)	3"	1"	1/2"
B7021	0,1	Combination Starter	23" (584)	14-1/2" (368)	9-1/8" (232)	7" (178)	21-3/8" (543)	2-1/8" (54)	2-1/2" (64)	2-11/16" (68)	3-7/16" (87)	78 (35)	1-1/2"	3/4"	1/2"
B7022	2	Combination Starter	25-1/2" (648)	14-1/2" (368)	9-1/8" (232)	7" (178)	23-7/8" (606)	2-1/8" (54)	2-1/2" (64)	2-11/16" (68)	3-7/16" (87)	88 (40)	1-1/2"	3/4"	1/2"
B7023	3	Combination Starter	27-1/4" (692)	17-7/8" (454)	11" (280)	10-3/8" (263)	25-5/8" (651)	3-1/2" (89)	3-1/2" (89)	4-3/16" (106)	5-1/2" (140)	143 (65)	2"	1"	1/2"
B7024	4	Combination Starter	34-1/4" (870)	21-1/2" (546)	11-7/8" (302)	14" (356)	32-5/8" (829)	4-3/4" (121)	5" (127)	4-9/16" (116)	6-3/16" (157)	235 (107)	3"	1"	1/2"

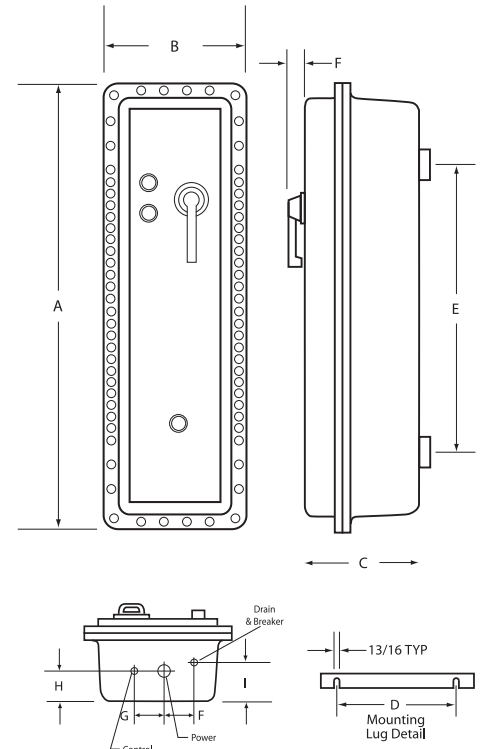
① 1/2" conduit openings may be used for drain and/or breather installation. Smaller conduit openings may be used by utilizing reducing bushings. Custom conduit sizes and locations are available upon request.

DIMENSIONS FOR SIZE 5 COMBINATION STARTER														
DIMENSIONS IN (MM)										CONDUIT TOP & BTM. (NPT)			ENCL. WT. LBS (KG)	
A	B	C	D	E	F	G	H	I	J	K	L	M		
62-1/4" (1581)	20-1/4" (514)	15" (381)	18-1/2" (470)	43-1/2" (1105)	2-5/8" (67)	3-1/8" (79)	5-3/8" (137)	7-3/8" (187)	3-1/2" (89)	4" (102)	1/2" (13)	1" (25)	540 (245)	

Dimensions B7 Size 0 Thru 4



Dimensions B7 Size 5





STARTERS
B7 SERIES



B7AD0 Combination Starter

B70

Motor Starter

NEC / CEC Certifications

Class I, Groups B, C & D

Class I, Zone 1 IIB+H2 Gb

Class II, Groups E, F & G

Class III

Type 3, 4 & 4X

Ta=-25°C to +40°C

Ta=-50°C to +40°C



Files E83969

Certificate LR11716 - 51

FEATURES-SPECIFICATIONS

Eaton Freedom AN19 Starters with C440 Electronic Overload Relays

Features AN19 Starter

- Solid State Overload Relays
- Brownout Protection
- Communications and user interface capabilities
- Overload Heaters not required
- Phase loss and a selectable (On/Off) phase unbalance protection
- Selectable automatic/manual reset
- Selectable Trip Class (10A, 10, 20, 30)
- Class II ground-fault protection – option add “GF” at end of catalog number
- Heaters are not required with the AN19 Starter. The Overload Module has trip current settings via DIP Switch between the amperage range shown.
- All AN19 Starters Coils are wired for separate control and supplied with 110V/50Hz - 120V/60Hz as standard.

Features Enclosure

- TYPE 4, 4X rated – providing protection from hose directed water and corrosion
- Mounting pan, pre-drilled to facilitate easy field installation of starters. Provision for grounding supplied as standard.

- More wiring room – meets latest NEC wire bend requirements
- Quick release, captivated cover bolts of 316 grade stainless steel
- Flange sealing gasket located to the inside of cover bolt – preventing water see page into enclosure through bolt holes
- Hinged cover provided as standard for an extra measure of safety and convenience
- Breaker (MCP) handle can be padlocked in “ON” or “OFF” position
- Provisions provided for drain and breather plus conduit openings for power and control
- Field replaceable reset button provided as standard with gold contact blocks
- Two control operator openings provided plugged as standard. Additional openings can be factory or field drilled
- Copper-free (less than ¼ of 1% copper) enclosure
- Ductile mounting lugs
- Select from B7 Modification Chart
- Transformers are multi-tap
 - » Size 0 50VA
 - » Size 1-2 100VA
 - » Size 3 150VA
 - » Size 4-5 200VA
- AN19 Starters Auxiliary Contacts available, B7HAC

Materials

- **ENCLOSURE** – Copper-free aluminum
- **O-RING GASKET** – BUNA-N nitrile
- **COVER BOLTS** – 316 grade stainless steel
- **MCCB/MCP HANDLE** – Copper-free aluminum
- **RESET OPERATOR** – Thermoplastic polyester polyester button molded onto stainless steel shaft. Aluminum shroud.
- **MOUNTING PAN** – Sheet aluminum
- **HINGE** – Aluminum with stainless steel pin
- **RESET SHROUD** – Black anodized

ELECTRICAL RATING

- Starters are 3 phase 50/60Hz 600VAC Single Speed Non-Reversing



B7AD COMBINATION STARTER								
NEMA STARTER SIZE	MOTOR VOLTS	MAXIMUM HP	COIL VOLTS/ HZ	MCCB OR MCP AMP TRIP	CATALOG NUMBER			
					WITH MOTOR PROTECTOR AND STARTER	*ADD OLR CODE		ENCLOSURE ONLY
						OLR CODE	FLA RANGE	
0	230	3	110/50 120/60	3	B7AD020H6CA* B7AD020H6CB* B7AD020H6CC*	-1P6	0.33-1.62A	B7AD021
	460	5		7		-005	1.0-5.0A	
	575	5		15		-020	4.0-20A	
1	230	7-1/2	110/50 120/60	30	B7AD021H6CF*	-005	1.0-5.0A	B7AD021
	460	10				-020	4.0-20A	
	575	10				-045	0.9-45A	
2	230	15	110/50 120/60	50	B7AD022H6CK*	-20	4.0-20A	B7AD022
	460	25				-045	0.9-45A	
	575	25						
3	230	30	110/50 120/60	100	B7AD023H6CQ*	-100	20-100A	B7AD023
	460	50						
	575	50						
4	230	50	110/50 120/60	150	B7AD024H6CT*	-140	28-140A	B7AD024
	460	100						
	575	100						
5	230	100	110/50 120/60	400	B7AD025H6K400*	-300	60-300A	B7AD025K
	460	200						
	575	200						



STARTERS

XSD/XSX/FXSD/FXSX SERIES



XSD, XSX, Series
Non Factory Sealed



FXSD, FXSX Series
Factory Sealed

XS/FXS

Motor Starter

NEC / CEC Certifications

Class I, Groups C & D

Class I, Zone 1 IIB+H2 Gb

Class II, Groups E, F & G

Class III

Type 3 FXS Series Only

Ta=-25°C to +40°C (UL/FM)

Ta=-50°C to +40°C(CSA)

Files E83969

Certificate LR11714

Files 25219



FEATURES-SPECIFICATIONS

Features

- FXSX-FXSD Series require no external seals (factory sealed) and are TYPE 3 (rain-tight) rated
- Enclosures are cast copper-free aluminum alloy
- Operating shaft is stainless steel
- Multiple gang assemblies available in combination with pilot lights, pushbuttons and switches on request
- Ground flange joint between bolted cover and box provide required flame path
- Provisions for padlocking switch in either "ON" or "OFF" position is standard

Materials

- Impact Resistant Non-Metallic PA6 Glass Reinforced Antistatic Material with f1 UV Protection against the most severe exposure to sunlight with a Flame Retardant rating of V-0.
- Silicone gasketing on all enclosures and operators throughout with Thermal Overload Relay.
- Brass gland plates available for metric size applications of plastic enclosures.

Electrical Rating

- Push button stations, selector switches 600 VAC max. heavy duty.
- Pilot Light Electrical Ratings: 250 VAC max.

STARTERS XSD/XSX/FXSD/FXSX SERIES



XSD/FXSD SERIES WITH OVERLOAD PROTECTION

Non-Factory Sealed:

Square D, Class 2510, Type F
 1-Pole, 1HP, 115-230 VAC
 2-Pole, 1HP, 115-230 VAC
 3/4 HP, 115-230 VDC

Factory Sealed:

Square D, Class 2510, Type F
 1-Pole, 1HP, 115-230 VAC
 2-Pole, 1HP, 115-230 VAC
 3/4 HP, 115-230 VDC

XSD SINGLE GANG			
CATALOG NUMBER		HUB STYLE	HUB SIZE
1-POLE SINGLE PHASE	2-POLE SINGLE PHASE		
XSD-11	XSD-12	Dead end	1/2"
XSD-21	XSD-22		3/4"
XSD-41	XSD-42	Feed thru	1/2"
XSD-51	XSD-52		3/4"
XSD-01	XSD-02	Cover and Switch assembly	

FXSD SINGLE GANG			
CATALOG NUMBER		HUB STYLE	HUB SIZE
1-POLE SINGLE PHASE	2-POLE SINGLE PHASE		
FXSD11	FXSD12	Dead end	1/2"
FXSD21	FXSD22		3/4"
FXSD41	FXSD42	Feed thru	1/2"
FXSD51	FXSD52		3/4"
FXSD01	FXSD02	Cover and Switch assembly	

Overload heaters are not supplied as part of the assembly. Heaters have to be ordered separately.

XSX/FXSX SERIES WITHOUT OVERLOAD PROTECTION

Non-Factory Sealed:

Square D, Class 2510, Type K
 2-Pole, 2 HP, 115 VAC
 2 HP, 200-230 VAC
 3 HP, 460-575 VAC
 3-Pole, 2 HP, 115 VAC
 7-1/2 HP, 200-230 VAC
 10 HP, 460-575 VAC

Factory Sealed:

Square D, Class 2510, Type K
 2-Pole, 2 HP, 115 VAC
 2 HP, 200-230 VAC
 3 HP, 460-575 VAC
 3-Pole, 2 HP, 115 VAC
 3 HP, 200-230 VAC
 5 HP, 460-575 VAC

XSX SINGLE GANG ²			
CATALOG NUMBER		HUB STYLE	HUB SIZE
2-POLE 600V 1-PHASE	3-POLE 600V 3-PHASE		
XSX-12	XSX-13	Dead end	1/2"
XSX-22	XSX-23		3/4"
XSX-42	XSX-43	Feed thru	1/2"
XSX-52	XSX-53		3/4"
XSX-2	XSX-3	Cover and Switch assembly	

FXSX SINGLE GANG			
CATALOG NUMBER		HUB STYLE	HUB SIZE
2-POLE 600V 1-PHASE	3-POLE 600V 3-PHASE		
FXSX12	FXSX13	Dead end	1/2"
FXSX22	FXSX23		3/4"
FXSX42	FXSX43	Feed thru	1/2"
FXSX52	FXSX53		3/4"
FXSX02	FXSX03	Cover and Switch assembly	

² © FM and CSA only



STARTERS

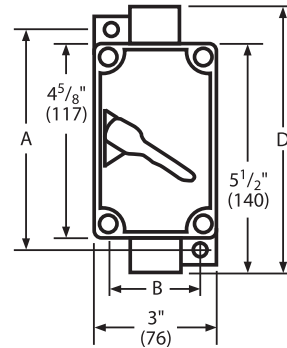
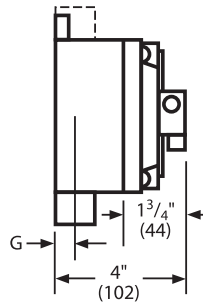
XSD/XSX/FXSD/FXSX SERIES

XSD/XSX/FXSD/FXSX SERIES

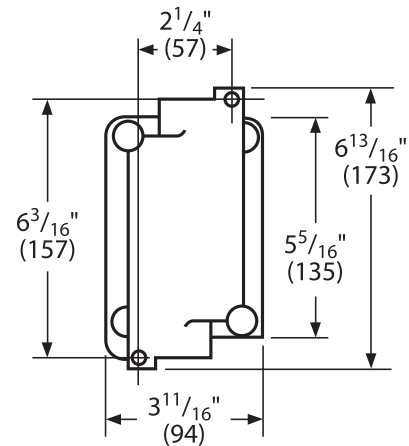
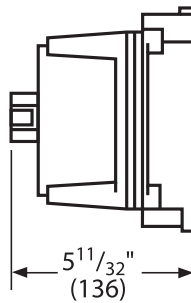
HEATER TABLE		
CATALOG NUMBER	FULL-LOAD MOTOR CURRENT	SQUARE D HEATER CATALOG NUMBER
YOSD-A.49	0.41-0.44	A.49
YOSD-A.54	0.45-0.49	A.54
YOSD-A.59	0.50-0.53	A.59
YOSD-A.65	0.54-0.58	A.65
YOSD-A.71	0.59-0.65	A.71
YOSD-A.78	0.66-0.71	A.78
YOSD-A.86	0.72-0.78	A.86
YOSD-A.95	0.79-0.85	A.95
YOSD-A1.02	0.86-0.96	A1.02
YOSD-A1.16	0.97-1.04	A1.16
YOSD-A1.25	1.05-1.16	A1.25
YOSD-A1.39	1.17-1.29	A1.39
YOSD-A1.54	1.30-1.37	A1.54
YOSD-A1.63	1.38-1.47	A1.63
YOSD-A1.75	1.48-1.56	A1.75
YOSD-A1.86	1.57-1.65	A1.86
YOSD-A1.99	1.66-1.79	A1.99
YOSD-A2.15	1.80-1.95	A2.15
YOSD-A2.31	1.96-2.15	A2.31
YOSD-A2.57	2.16-2.38	A2.57
YOSD-A2.81	2.39-2.75	A2.81
YOSD-A3.61	2.76-2.84	A3.61
YOSD-A3.95	2.85-3.06	A3.95
YOSD-A4.32	3.07-3.45	A4.32
YOSD-A4.79	3.46-3.70	A4.79
YOSD-A5.30	3.71-4.07	A5.30
YOSD-A5.78	4.08-4.32	A5.78
YOSD-A6.20	4.33-4.90	A6.20
YOSD-A6.99	4.91-5.35	A6.99
YOSD-A7.65	5.36-5.85	A7.65
YOSD-A8.38	5.86-6.41	A8.38
YOSD-A9.25	6.42-6.79	A9.25
YOSD-A9.85	6.80-7.57	A9.85
YOSD-A11.0	7.58-8.15	A11.0
YOSD-A11.9	8.16-8.98	A11.9
YOSD-A13.2	8.99-9.67	A13.2
YOSD-A14.1	9.68-9.95	A14.1
YOSD-A14.8	9.96-10.8	A14.8
YOSD-A16.2	10.9-12.1	A16.2
YOSD-A17.9	12.2-13.1	A17.9
YOSD-A19.8	13.2-13.9	A19.8
YOSD-A21.3	14.0-15.0	A21.3
YOSD-A25.2	15.1-16.0	A25.2

Overload heaters are not supplied as part of the assembly. Heaters have to be ordered separately.

XSD/XSX NON-FACTORY SEALED DIMENSIONS					
BOX STYLE	HUB SIZE	A	B	D	G
Single gang dead-end	1/2"	5-1/4"(133)	2-1/4"(57)	—	11/16"(17)
	3/4"	5-1/4"(133)	2-1/4"(57)	—	11/16"(17)
	1"	5-3/8"(136)	2-3/8"(60)	—	7/8"(22)
Single gang feed-thru	1/2"	5-1/4"(133)	2-1/4"(57)	6"(152)	11/16"(17)
	3/4"	5-1/4"(133)	2-1/4"(57)	6"(152)	11/16"(17)
	1"	5-3/8"(136)	2-3/8"(60)	6"(152)	7/8"(22)



Factory Sealed (FXSD/FXSX)





B7MS1P
 Push Button Style



B7MS2R
 Rotary Style

B7MS
 Motor Starter

NEC / CEC Certifications

Class I, Groups B, C & D

Class I, Zone 1 IIB+H2 Gb

Class II, Groups E, F & G

Class III

Type 3, 4, 4X

Ta=-25°C to +40°C (CSAus)

Ta=-50°C to +40°C (cCSA)

 Certificate LR11714

FEATURES-SPECIFICATIONS

Features

- Compact size enclosures provide application flexibility with cost savings over industry standard sizes
- TYPE 4, 4X rated – providing protection from hose directed water and corrosion
- Pre-drilled to facilitate easy field installation of starters
- 2 operating styles, rotary or push button, including lock-out provision.
- Provisions for drain and breather
- Bolt on ductile mounting lugs
- Two NPT conduit openings provided as standard, with custom openings on request
- When ordered with starters, ABB or Square D supplied.

Materials

- Enclosures: Copper-free aluminum (less than 1/10 of 1% copper content)
- Cover Bolts: 316 Stainless Steel
- O-ring Gasket: Silicone
- Finish: Grey Powder Polyester painted exterior, electrostatically applied

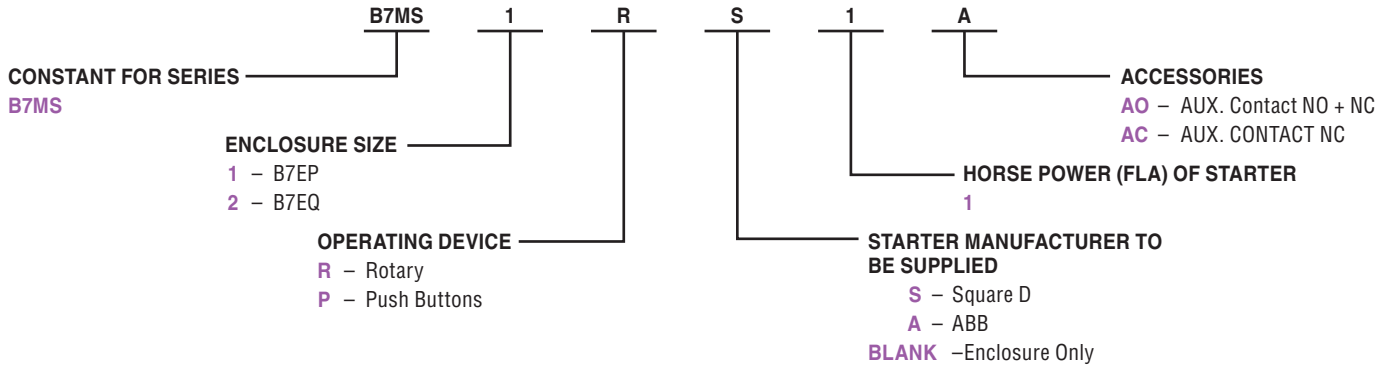
Electrical Rating

- Starters rated 600V, 3 phase up to 50HP

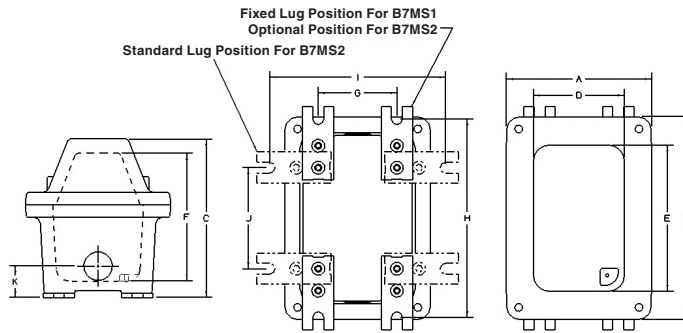


STARTERS B7MS SERIES

CATALOG LOGIC

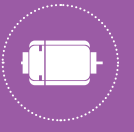


DIMENSIONS



ENCLOSURE	OUTSIDE BOX DIMENSIONS			NOMINAL INSIDE BOX			MOUNTING DIMENSIONS					CONDUIT SIZE	WEIGHT LBS(KG)
	A	B	C	D	E	F	G	H	I	J	K		
B7MS1	5-3/4 (146)	8-1/16 (205)	6-5/16 (160)	3-5/8 (92)	5-13/16 (148)	5-1/16 (129)	3-1/8 (79)	8-1/8 (206)	—	—	1-1/4 (32)	1	11.6 (5.3)
B7MS2	8-1/8 (79)	13-1/16 (345)	7-13/16 (198)	4-1/4 (108)	9-13/16 (249)	6-5/16 (160)	2-1/2 (63)	11-3/8 (289)	6-3/8 (162)	7-1/2 (191)	1-13/16 (46)	1-1/2	23.7 (10.8)

Dimension are shown in inches (mm)



COMPACT MANUAL IEC STARTERS

B7MS – ROTARY STYLE WITH ABB MS132 & MS450 SERIES								
	CATALOG NUMBER	ADJUSTMENT RANGE FLA	SINGLE PHASE HP		THREE PHASE HP			
			120V	230V	200V-208V	230V	480V	600V
ENCLOSURE WITHOUT STARTER	B7MS1RA-1	0.63 - 1.0					0.5	0.5
	B7MS1RA-2	1.0 - 1.6		0.1			0.75	0.75
	B7MS1RA-3	1.6 - 2.5		0.167		0.5	1	1.5
	B7MS1RA-4	2.5 - 4.0	0.125	0.33		1	2	3
	B7MS1RA-5	4.0 - 6.3	0.25	0.5		1.5	3	5
	B7MS1RA-6	6.3 - 9.0	0.33	1		2.5	5	7.5
	B7MS1RA-7	9.0 - 12.5	0.5	2		3	7.5	10
	B7MS1RA-8	12.5 - 16.0	1	2.5		5	10	10
	B7MS1RA-9	16.0 - 20.0	1.5	3		5	10	15
	B7MS1RA-10	20.0 - 25.0	2	3		7.5	15	20
ENCLOSURE WITHOUT STARTER	B7MS2RA-12	11 - 16	1	3	5	5	10	15
	B7MS2RA-13	14 - 20	1.5	3	5	7.5	15	20
	B7MS2RA-14	18 - 25	2	5	7.5	10	20	25
	B7MS2RA-15	22 - 32	3	5	10	10	25	30
	B7MS2RA-16	28 - 40	3	7.5	15	15	30	40
	B7MS2RA-17	36 - 45	5	7.5	15	15	30	40
	B7MS2RA-18	40 - 50	5	10	15	20	40	50
	B7MS2RA FOR USE WITH ABB ONLY							
B7MS – PUSH BUTTON STYLE SQUARE D GV2 SERIES								
ENCLOSURE WITHOUT STARTER	B7MS1PS-1	0.63 - 1.0					0.5	0.5
	B7MS1PS-2	1.0 - 1.6		0.1			0.75	1
	B7MS1PS-3	1.6 - 2.5		0.167		0.5	0.5	1
	B7MS1PS-4	2.5 - 4.0	0.125	0.33		0.75	1	2
	B7MS1PS-5	4.0 - 6.3	0.25	0.5		1.5	1.5	3
	B7MS1PS-6	6.0 - 10.0	0.5	1.5		2	3	5
	B7MS1PS-7	9.0 - 14.0	0.75	2		3	3	10
	B7MS1PS-8	13.0 - 18.0	1	3		5	5	10
	B7MS1PS-9	17.0 - 23.0	1.5	3		5	7.5	15
	B7MS1PS-10	20.0 - 25.0	2	3		5	7.5	15
	B7MS1PS-11	24.0 - 32.0	2	5		10	10	20
B7MS1PS*								
B7MS – ROTARY STYLE WITH SQUARE D GV2 & GV3 SERIES								
ENCLOSURE WITHOUT STARTER	B7MS1RS-1	0.63 - 1.0					0.5	0.5
	B7MS1RS-2	1.0 - 1.6		0.1			0.75	1
	B7MS1RS-3	1.6 - 2.5		0.167		0.5	0.5	1
	B7MS1RS-4	2.5 - 4.0	0.125	0.33		0.75	1	2
	B7MS1RS-5	4.0 - 6.3	0.25	0.5		1.5	1.5	3
	B7MS1RS-6	6.0 - 10.0	0.5	1.5		2	3	5
	B7MS1RS-7	9.0 - 14.0	0.75	2		3	3	10
	B7MS1RS-8	13.0 - 18.0	1	3		5	5	10
	B7MS1RS-9	17.0 - 23.0	1.5	3		5	7.5	15
	B7MS1RS-10	20.0 - 25.0	2	3		5	7.5	15
	B7MS2RS-11	24.0 - 32.0	2	5		10	10	20
B7MS2RS-12	9.0 - 13.0	1	2		3	3	7.5	
B7MS2RS-13	12.0 - 18.0	1	3		5	5	10	
B7MS2RS-14	17.0 - 25.0	2	3		7.5	7.5	15	
B7MS2RS-15	23.0 - 32.0	2	5		10	10	20	
B7MS2RS-16	30.0 - 40.0	3	5		10	10	30	
B7MS2RS-17	37.0 - 50.0	3	7.5		15	15	40	
B7MS2RS-18	48.0 - 65.0	5	10		20	20	50	

B7MS1R – For use with ABB MS116, MS325, MS132 Automation Direct BM3 Cutler-Hammer XTPR Moeller PKZMO Seimens 3RV Sprechler + Schuh KTA7 SQ D Telemecanique GV2P WEG MPW25

B7MS2R – For use with Automation Direct BM3 SQ D Telemecanique GV3P

B7MS2RA – For use with ABB MS450

B7MS1P – For use with Cutler-Hammer XTPB Moeller PKZMO1 SQ D Telemecanique GV2ME WEG MPW25

B7MS2P – For use with Advance Control MMS25

*** B7MS1PRW** – (enclosure without starter) For use with Allen-Bradley 140 Sorecher + Schuh KT4



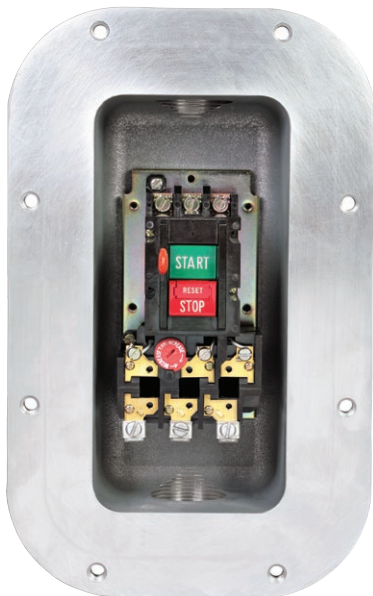
STARTERS

B7MSN SERIES

COMPACT SERIES NEMA STARTERS



B7MSN2P



Internal View

B7MSN

Motor Starter

NEC / CEC Certifications

Class I, Groups B, C & D

Class I, Zone 1 IIB+H2 Gb

Class II, Groups E, F & G

Class III

Type 3, 4, 4X

Ta=-25°C to +40°C (CSAus)

Ta=-50°C to +40°C (cCSA)



Certificate LR11714

FEATURES-SPECIFICATIONS

Features

- Allen-Bradley 609 Series
- Cutler-Hammer B100M Series
- GE CR106 Series
- Square D 2510M Series
- Compact size enclosures provide application flexibility with cost savings over industry standard sizes
- TYPE 4, 4X rated – providing protection from hose directed water and corrosion
- Pre-drilled to facilitate easy field installation of starters
- Large double green/red start-stop push buttons
- Can be pad locked in “OFF” position
- Provisions for drain and breather
- Bolt on ductile mounting lugs
- Two 1-½” NPT conduit openings provided as standard, with custom openings on request

Materials

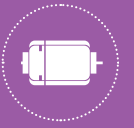
- Enclosures: Copper-free aluminum (less than ¼ of 1% copper content)
- Cover Bolts: 316 Stainless Steel
- O-ring Gasket: Silicone
- Finish: Grey Powder Polyester painted

Electrical Rating

NEMA starter sizes 0, 1, 1-½ FVNR;
 2 pole single phase = 230 VAC
 3 pole three phase = 600 VAC
 2 pole VDC = 230 VDC

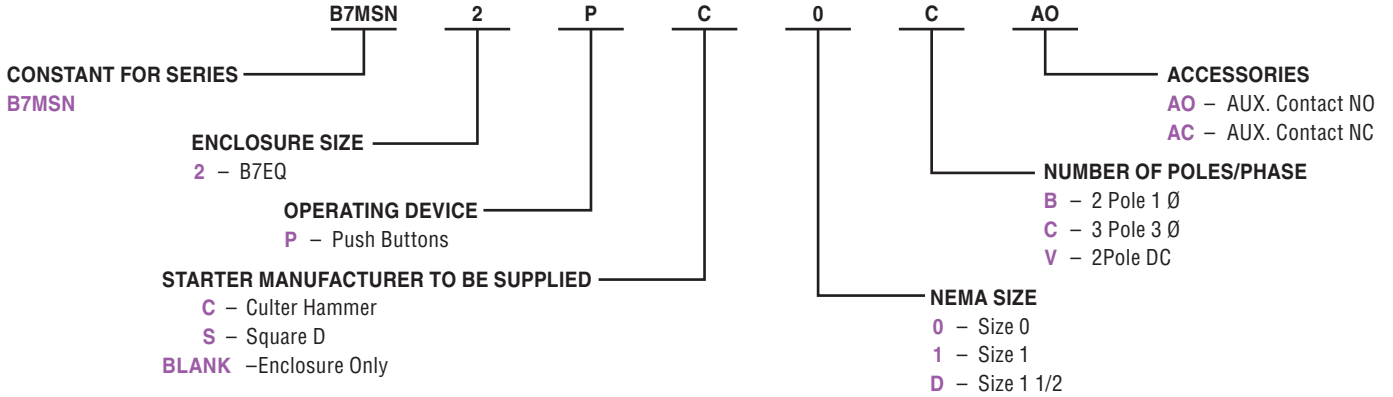
Overload Heaters

Heaters are not included, see next page.



COMPACT SERIES NEMA STARTERS

CATALOG LOGIC



CATALOG NUMBER			SIZE/ PHASE	SINGLE PHASE HP		THREE PHASE				DC HP	
ENCLOSURE	W/CUTLER-HAMMER	W/ SQUARE D		120 VAC	230 VAC	208 VAC	230 VAC	480 VAC	600 VAC	115 DC	230 VDC
B7MSN2P	B7MSN2PC0B	B7MSN2PS0B	M-0 2P	1	2					1 CH	1.5 CH
	B7MSN2PC1B	B7MSN2PS1B	M-1 2P	2	3					1.5 CH	2 CH
		B7MSN2PSDB	M-1P 2P	3	5						
	B7MSN2PC0C	B7MSN2PS0C	M-0 3P			3	3	5	5		
	B7MSN2PC1C	B7MSN2PS1C	M-1 3P			7.5	7.5	10	10		
		B7MSN2PS0V	M-0 2P VDC							1	1.5
		B7MSN2PS1V	M-1 2P VDC							1.5	2

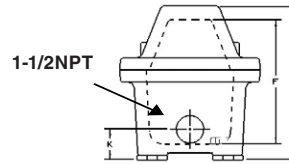
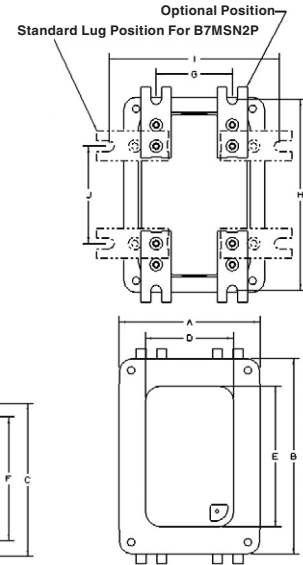


STARTERS B7MSN SERIES

HEATERS, CATALOG LOGIC, DIMENSIONS

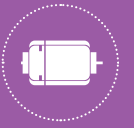
B7MSN HEATER SELECTION SQUARE D 2510M ONLY		
MOTOR FULL LOAD AMPS @ 40° C		
SIZE 0		
CATALOG NUMBER	SINGLE PHASE	THREE PHASE
KB044	0.33 - 0.36	0.29 - 0.32
KB051	0.37 - 0.40	0.33 - 0.36
KB057	0.41 - 0.45	0.37 - 0.39
KB063	0.46 - 0.52	0.40 - 0.47
KB071	0.53 - 0.59	0.48 - 0.56
KB081	0.60 - 0.66	0.57 - 0.63
KB092	0.67 - 0.73	0.64 - 0.69
KB103	0.74 - 0.81	0.70 - 0.77
KB116	0.82 - 0.91	0.78 - 0.86
KB130	0.92 - 1.02	0.87 - 0.96
KB145	1.03 - 1.14	0.97 - 1.11
KB167	1.15 - 1.29	1.12 - 1.23
KB188	1.20 - 1.42	1.24 - 1.37
KB210	1.43 - 1.64	1.38 - 1.55
KB240	1.65 - 1.80	1.56 - 1.75
KB265	1.81 - 2.10	1.76 - 1.92
KB300	2.11 - 2.30	1.93 - 2.16
KB330	2.31 - 2.61	2.17 - 2.50
KB370	2.62 - 2.99	2.51 - 2.81
KB415	3.00 - 3.37	2.82 - 3.16
KB485	3.38 - 3.94	3.17 - 3.40
KB550	3.95 - 4.24	3.41 - 3.76
KB625	4.25 - 4.54	3.77 - 4.00
KB690	4.55 - 5.29	4.01 - 4.68
KB770	5.30 - 5.73	4.69 - 5.18
KB820	5.74 - 6.35	5.19 - 5.51
KB910	6.36 - 7.08	5.52 - 6.19
KB102	7.09 - 7.83	6.20 - 7.12
KB115	7.84 - 8.47	7.13 - 8.15
KB128	8.48 - 9.83	8.16 - 8.60
KB014	9.84 - 10.5	8.61 - 9.21
KB155	10.6 - 11.4	9.22 - 10.1
KB175	11.5 - 12.8	10.2 - 11.2
KB195	12.9 - 13.9	11.3 - 12.0
KB022	14.0 - 16.1	—
KB025	16.2 - 18.0	—
SIZE 1 & 1P	SIZE 1 & 1P	SIZE 1 & 1P
KB195	—	11.3 - 12.1
KB022	—	12.2 - 13.6
KB025	16.2 - 17.6	13.7 - 15.3
KB280	17.7 - 20.6	15.4 - 17.3
KB032	20.7 - 23.1	17.4 - 19.1
KB036	23.2 - 26.0	19.2 - 21.7
KB040	—	21.8 - 24.2
KB045	—	24.3 - 26.0
SIZE 1P	SIZE 1P	SIZE 1P
KB036	23.2 - 27.1	—
KB040	27.2 - 29.2	—
KB045	29.3 - 33.0	—
KB050	33.1 - 36.0	—

MODIFICATIONS	
SUFFIX NUMBER	DESCRIPTION
KIT-251	100 amp ground lug
AO	Aux. contact NO only
AC	Aux. contact NC only
SU-2	Hinge-9 Installed
SU3B-4X	Drain & Breather installed TYPE 4X
SU3B-4XSS	Drain & Breather installed TYPE 4X SS
B7SPNPT	Change Std. conduit size and location
SU9	Special paint finish
SU14	Fungus proofing of enclosures



B7MSN HEATER SELECTIONS CUTLER-HAMMER							
CATALOG NUMBER	MOTOR FULL-LOAD AMPS @ 40°C		CUTLER-HAMMER CODEMARK	CATALOG NUMBER	MOTOR FULL-LOAD AMPS @ 40°C		CUTLER-HAMMER CODEMARK
	SINGLE PHASE	THREE PHASE			SINGLE PHASE	THREE PHASE	
YOWEA200-FH03	.28-.29	.25-.26	FH03	YOWEA200-FH31	4.41-4.81	3.87-4.22	FH31
YOWEA200-FH04	.30-.33	.27-.29	FH04	YOWEA200-FH32	4.82-5.26	4.23-4.61	FH32
YOWEA200-FH05	.34-.36	.30-.32	FH05	YOWEA200-FH33	5.27-5.74	4.62-5.03	FH33
YOWEA200-FH06	.37-.40	.33-.35	FH07	YOWEA200-FH34	5.75-6.25	5.04-5.49	FH34
YOWEA200-FH07	.41-.45	.36-.39	FH07	YOWEA200-FH35	6.27-6.83	5.50-5.99	FH35
YOWEA200-FH08	.46-.50	.40-.44	FH08	YOWEA200-FH36	6.84-7.45	6.00-6.53	FH36
YOWEA200-FH09	.51-.56	.45-.49	FH09	YOWEA200-FH37	7.46-8.11	6.54-7.11	FH37
YOWEA200-FH10	.57-.63	.50-.55	FH10	YOWEA200-FH38	8.12-8.81	7.12-7.73	FH38
YOWEA200-FH11	.64-.70	.56-.61	FH11	YOWEA200-FH39	8.82-9.58	7.74-8.40	FH39
YOWEA200-FH12	.71-.78	.62-.68	FH12	YOWEA200-FH40	9.59-10.40	8.41-9.12	FH40
YOWEA200-FH13	.79-.86	.69-.75	FH13	YOWEA200-FH41	10.41-11.3	9.13-9.89	FH41
YOWEA200-FH14	.87-.95	.76-.83	FH14	YOWEA200-FH42	11.4-12.2	9.9-10.7	FH42
YOWEA200-FH15	.96-1.04	.84-.91	FH15	YOWEA200-FH43	12.3-13.5	10.8-11.8	FH43
YOWEA200-FH16	1.05-1.14	.92-1.00	FH16	YOWEA200-FH44	13.6-14.9	11.9-13.0	FH44
YOWEA200-FH17	1.15-1.25	1.01-1.10	FH17	YOWEA200-FH45	15.0-16.0	13.1-14.0	FH45
YOWEA200-FH18	1.26-1.39	1.11-1.22	FH18	YOWEA200-FH46	16.1-17.1	14.1-15.0	FH46
YOWEA200-FH19	1.40-1.54	1.23-1.35	FH19	YOWEA200-FH47	17.2-18.3	15.1-16.1	FH47
YOWEA200-FH20	1.55-1.71	1.36-1.50	FH20	YOWEA200-FH48	18.4-19.7	16.2-17.3	FH48
YOWEA200-FH21	1.72-1.89	1.51-1.66	FH21	YOWEA200-FH49	19.8-21.2	17.4-18.6	FH49
YOWEA200-FH22	1.90-2.10	1.67-1.84	FH22	YOWEA200-FH50	21.3-22.8	18.7-20.0	FH50
YOWEA200-FH23	2.11-2.32	1.85-2.03	FH23	YOWEA200-FH51	22.9-24.5	20.1-21.5	FH51
YOWEA200-FH24	2.33-2.54	2.04-2.23	FH24	YOWEA200-FH52	24.6-26.4	21.6-23.2	FH52
YOWEA200-FH25	2.55-2.79	2.24-2.45	FH25	YOWEA200-FH53	26.5-28.5	23.2-25.0	FH53
YOWEA200-FH26	2.80-3.07	2.46-2.69	FH26	YOWEA200-FH54	28.6-30.8	25.1-26.8	FH54
YOWEA200-FH27	3.08-3.36	2.70-2.95	FH27	YOWEA200-FH55	30.9-33.3	—	FH55
YOWEA200-FH28	3.37-3.68	2.96-3.23	FH28	YOWEA200-FH56	33.4-36.0	—	FH56
YOWEA200-FH29	3.69-4.03	3.24-3.53	FH29	YOWEA200-FH57	36.1-38.9	—	FH57
YOWEA200-FH30	4.04-4.40	3.54-3.86	FH30				

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



XMSW

Motor Starter

NEC / CEC Certifications

Class I, Groups C & D

Class I, Zone 1 IIB+H2 Gb

Class II, Groups E, F & G

Class III

Type 3R

Ta=-25°C to +40°C

UL File E12379

FEATURES-SPECIFICATIONS

CUTLER HAMMER/EATON B100 STARTERS FULL VOLTAGE, NON-REVERSING SINGLE AND POLYPHASE

Features

- Rectangular bolted cover design provides for attractive, compact, uniform installations
- Enclosure and external handle are diecast copper-free (less than 0.4%) aluminum alloy
- Cast “ON,” “OFF,” “TRIPPED” markings on cover align with external handle and provide clear indication of enclosed starter condition
- External handle is a vault type with standard provisions for locking in the “OFF” position with up to three pad-locks. Provision for locking in “ON” position is available as factory modification (add suffix SU-40 to catalog number).
- Two cast 1” NPT conduit hubs with integral pipe stop, one top and one bottom, are standard on all assemblies

Materials

- Enclosures: Copper-free aluminum (less than ¼ of 1% copper content)
- Cover Bolts: 316 Stainless Steel

Electrical Rating

- Starter sizes 0, 1, 1½
- Two pole, single phase; three pole, polyphase
- Maximum 10 HP, 600 Volts AC



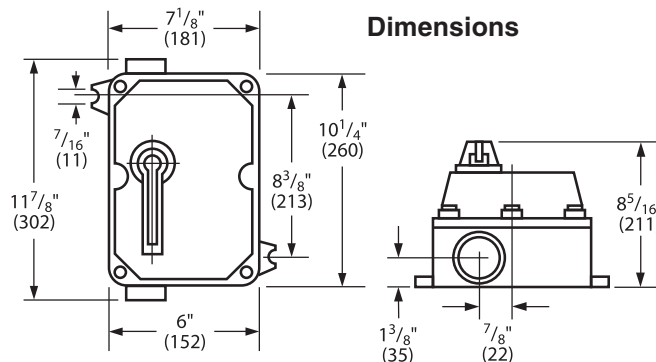
STARTERS

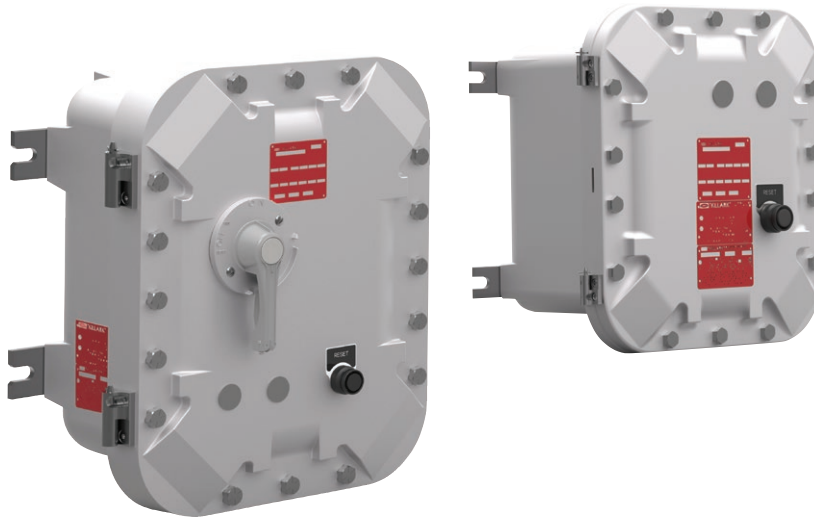
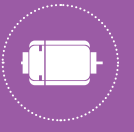
XMSW SERIES

XMSW MANUAL LINE STARTERS						
NEMA SIZE	NUMBER OF POLE SIZE	MAXIMUM HORSEPOWER			CATALOG NUMBER	
		120 VAC	208-240 VAC	480-600 VAC	WITH STARTER	ENCLOSURE ONLY
0	2-POLE; 1Ø, A C	1	2	—	XMSW-0BT	XMSW-00T
0	3-POLE; 3Ø, A C	2	3	5	XMSW-0CT	
1	2-POLE; 1Ø, A C	2	3	—	XMSW-1BT	
1	3-POLE; 3Ø, A C	3	7-1/2	10	XMSW-1CT	
1-1/2	2-POLE; 1Ø, A C	3	5	—	XMSW-DBT	

Heaters not included. If heaters are required order as separate item by catalog number, three phase starters require three heaters. Single phase starters require two heaters. Three pole starters may be used on two-phase four-wire circuits by running one wire direct to motor.

HEATER TABLE FOR XMSW SERIES MANUAL LINE STARTERS							
CATALOG NUMBER	MOTOR FULL-LOAD AMPS @ 40°C		CUTLER-HAMMER	CATALOG NUMBER	MOTOR FULL-LOAD AMPS @ 40°C		CUTLER-HAMMER
	SINGLE PHASE	THREE PHASE			SINGLE PHASE	THREE PHASE	
YOWEA200-FH03	.28-.29	.25-.26	FH03	YOWEA200-FH31	4.41-4.81	3.87-4.22	FH31
YOWEA200-FH04	.30-.33	.27-.29	FH04	YOWEA200-FH32	4.82-5.26	4.23-4.61	FH32
YOWEA200-FH05	.34-.36	.30-.32	FH05	YOWEA200-FH33	5.27-5.74	4.62-5.03	FH33
YOWEA200-FH06	.37-.40	.33-.35	FH07	YOWEA200-FH34	5.75-6.25	5.04-5.49	FH34
YOWEA200-FH07	.41-.45	.36-.39	FH07	YOWEA200-FH35	6.27-6.83	5.50-5.99	FH35
YOWEA200-FH08	.46-.50	.40-.44	FH08	YOWEA200-FH36	6.84-7.45	6.00-6.53	FH36
YOWEA200-FH09	.51-.56	.45-.49	FH09	YOWEA200-FH37	7.46-8.11	6.54-7.11	FH37
YOWEA200-FH10	.57-.63	.50-.55	FH10	YOWEA200-FH38	8.12-8.81	7.12-7.73	FH38
YOWEA200-FH11	.64-.70	.56-.61	FH11	YOWEA200-FH39	8.82-9.58	7.74-8.40	FH39
YOWEA200-FH12	.71-.78	.62-.68	FH12	YOWEA200-FH40	9.59-10.40	8.41-9.12	FH40
YOWEA200-FH13	.79-.86	.69-.75	FH13	YOWEA200-FH41	10.41-11.3	9.13-9.89	FH41
YOWEA200-FH14	.87-.95	.76-.83	FH14	YOWEA200-FH42	11.4-12.2	9.9-10.7	FH42
YOWEA200-FH15	.96-1.04	.84-.91	FH15	YOWEA200-FH43	12.3-13.5	10.8-11.8	FH43
YOWEA200-FH16	1.05-1.14	.92-1.00	FH16	YOWEA200-FH44	13.6-14.9	11.9-13.0	FH44
YOWEA200-FH17	1.15-1.25	1.01-1.10	FH17	YOWEA200-FH45	15.0-16.0	13.1-14.0	FH45
YOWEA200-FH18	1.26-1.39	1.11-1.22	FH18	YOWEA200-FH46	16.1-17.1	14.1-15.0	FH46
YOWEA200-FH19	1.40-1.54	1.23-1.35	FH19	YOWEA200-FH47	17.2-18.3	15.1-16.1	FH47
YOWEA200-FH20	1.55-1.71	1.36-1.50	FH20	YOWEA200-FH48	18.4-19.7	16.2-17.3	FH48
YOWEA200-FH21	1.72-1.89	1.51-1.66	FH21	YOWEA200-FH49	19.8-21.2	17.4-18.6	FH49
YOWEA200-FH22	1.90-2.10	1.67-1.84	FH22	YOWEA200-FH50	21.3-22.8	18.7-20.0	FH50
YOWEA200-FH23	2.11-2.32	1.85-2.03	FH23	YOWEA200-FH51	22.9-24.5	20.1-21.5	FH51
YOWEA200-FH24	2.33-2.54	2.04-2.23	FH24	YOWEA200-FH52	24.6-26.4	21.6-23.2	FH52
YOWEA200-FH25	2.55-2.79	2.24-2.45	FH25	YOWEA200-FH53	26.5-28.5	23.2-25.0	FH53
YOWEA200-FH26	2.80-3.07	2.46-2.69	FH26	YOWEA200-FH54	28.6-30.8	25.1-26.8	FH54
YOWEA200-FH27	3.08-3.36	2.70-2.95	FH27	YOWEA200-FH55	30.9-33.3	—	FH55
YOWEA200-FH28	3.37-3.68	2.96-3.23	FH28	YOWEA200-FH56	33.4-36.0	—	FH56
YOWEA200-FH29	3.69-4.03	3.24-3.53	FH29	YOWEA200-FH57	36.1-38.9	—	FH57
YOWEA200-FH30	4.04-4.40	3.54-3.86	FH30				





EXB70

Empty Enclosure

NEC / CEC Certifications

Class I, Groups B, C & D

Class I, Zone 1 IIB+H2

Class II, Groups E, F & G

Class III

Type 3, 4, 4X

Ta = -0°C to +50°C (UL & CSA)



Files E83969



File LR11716 - 1723354

ATEX Certificate



Ex d II+H2 T6

Ex tD A21 IP66 T80°C

Ta = -0°C to +50°C

PTB 07ATEX 1024

IEC Ex Certificate

Ex db IIB+H2 Gb

Ex tb IIIC Db IP66 T85°C

Ta = -0°C to +50°C

IECEX QPS 17.0014X

FEATURES-SPECIFICATIONS

The EXB70 Series is offered with the ABB brand AF contactor / TF overload relay, XT circuit breakers and motor circuit protectors.

Features

- Copper free cast aluminum construction. High in strength, lighter in weight, corrosion resistant
- Stainless steel metric cover bolts
- Cover o-ring supplied as standard for TYPE 4X and IP66 applications.
- Starters supplied with hinged covers as standard
- Bi-directional bolt on mounting lugs made from a ductile aluminum alloy which will adjust to irregular surfaces without causing damage to the casting.
- Starter only supplied as standard with a manual reset button and two future control operator openings with plugs.
- Combination starter supplied as standard with a manual reset button, through the door circuit breaker handle and two future control operator openings with plugs.
- Each starter comes with three NPT conduit openings in both the top and in the bottom allowing for power, control and drain/breathers.
- The EXB70 can be ordered with custom sizes and quantity of holes both in NPT and metric.
- Additional control operators can be supplied along with addition future operator openings.

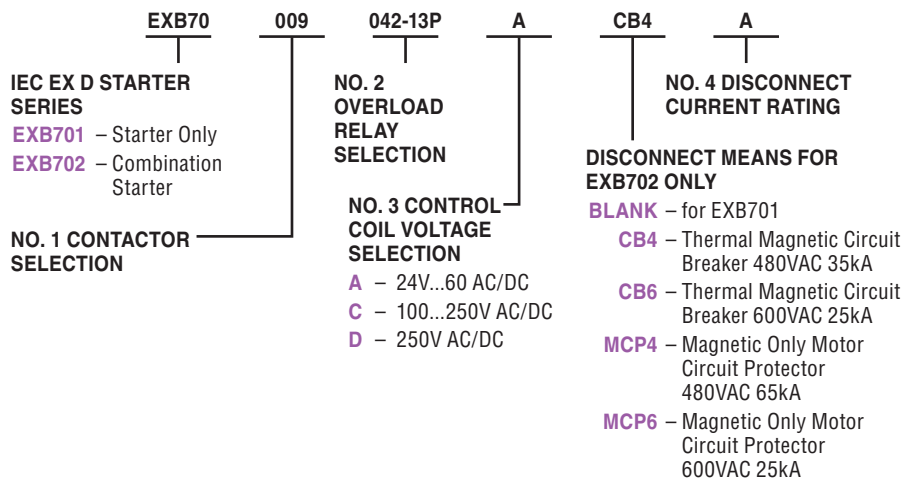
Materials

- **BOX & COVER:** Cooper free aluminum (less than 1/10 of 1%)
- **FINISH:** Aluminum lacquer paint – Grey
- **O-RING GASKET MATERIAL:** Nitrile (BUNA-N) compound
- Stainless steel, A2, cover screw.
- **CB/MCP HANDLE** – Copper free aluminum
- **RESET OPERATOR** – Thermoplastic polyester button molded onto stainless steel shaft. Aluminum shroud, black anodized.

Electrical Rating

- Single Speed Full Voltage Non-Reversing
- 3 Phase 600VAC/690VAC 50/60Hz Coil Voltage
- 24V AC/DC through 500V AC/DC

CATALOG LOGIC





STARTERS EXB70 SERIES

No. 1 – Contactor Selection

UL / CSA RATINGS	009		012		016		026		030		040		052		065		096		116		140	
	HP	AMPS	HP	AMPS	HP	AMPS	HP	AMPS	HP	AMPS	HP	AMPS	HP	AMPS	HP	AMPS	HP	AMPS	HP	AMPS	HP	AMPS
120 VAC - 1Phase	0.75	13.8	1	16	1.5	20	2	24	2	24	3	34										
240 VAC - 1Phase	1.5	10	2	12	3	17	3	17	5	28	7.5	40										
200 - 208 VAC - 3Phase	2	7.8	3	11	5	17.5	7.5	25.3	10	32.2	10	32.2	15	48.3	20	62.1	30	92	30	92	40	120
220 - 240 VAC - 3Phase	2	6.8	3	9.6	5	15.2	7.5	22	10	28	15	42	20	54	25	68	30	80	40	104	50	130
440 - 480 VAC - 3Phase	5	7.6	7.5	11	10	14	15	21	20	27	30	40	40	52	50	65	60	77	75	96	100	124
550 - 600 VAC - 3Phase	7.5	9	10	11	10	17	20	22	25	27	40	41	50	52	60	62	75	77	100	99	125	125
IEC RATINGS	KW	AMPS	KW	AMPS	KW	AMPS	KW	AMPS	KW	AMPS	KW	AMPS	KW	AMPS	KW	AMPS	KW	AMPS	KW	AMPS	KW	AMPS
220 - 240 VAC - 3Phase	2.2	9	3	12	4	18	6.5	26	9	33	11	40	15	53	18.5	65	25	96	30	116	37	140
380 - 400 VAC - 3Phase	4	9	5.5	12	7.5	18	11	26	15	32	18.5	40	22	53	30	65	45	96	55	116	75	140
415 VAC - 3Phase	4	9	5.5	12	9	18	11	26	15	32	22	40	30	53	37	65	55	96	55	116	75	140
440 VAC - 3Phase	4	9	5.5	12	9	18	15	26	18.5	32	22	40	30	53	37	65	55	96	75	116	90	140
500 VAC - 3Phase	5.5	9.5	7.5	12.5	9	15	15	23	18.5	28	22	35	30	45	37	55	55	80	75	110	90	130
690 VAC - 3Phase	5.5	7	7.5	9	9	10.5	15	17	18.5	21	22	25	30	35	37	39	55	57	55	65	75	80
See Overload Relay Selection Chart	042-								065-						096-				140-			

No. 2 – Overload Relay Selection

042-				065-			
SELECTION	AMP SETTING RANGE			SELECTION	AMP SETTING RANGE		
042- .13	0.10	to	0.13	065- 28	22.0	to	28.0
042- .17	0.13	to	0.17	065- 33	25.0	to	33.0
042- .23	0.17	to	0.23	065- 40	30.0	to	40.0
042- .31	0.23	to	0.31	065- 47	36.0	to	47.0
042- .41	0.31	to	0.41	065- 53	44.0	to	53.0
042- .55	0.41	to	0.55	065- 60	50.0	to	60.0
042- .74	0.55	to	0.74	065- 67	57.0	to	67.0
042- 1.0	0.74	to	1.00	096-			
042- 1.3	1.00	to	1.30				
042- 1.7	1.30	to	1.70	SELECTION	AMP SETTING RANGE		
042- 2.3	1.70	to	2.30	096- 51	40.0	to	51.0
042- 3.1	2.30	to	3.10	096- 60	48.0	to	60.0
042- 4.2	3.10	to	4.20	096- 68	57.0	to	68.0
042- 5.7	4.20	to	5.70	096- 78	65.0	to	78.0
042- 7.6	5.70	to	7.60	096- 87	75.0	to	87.0
042- 10	7.60	to	10.0	096- 96	84.0	to	96.0
042- 13.0	10.0	to	13.0	140-			
042- 16.0	13.0	to	16.0				
042- 20.0	16.0	to	20.0	SELECTION	AMP SETTING RANGE		
042- 24.0	20.0	to	24.0	140- 90.0	66.0	to	90.0
042- 29.0	24.0	to	29.0	140- 110.0	80.0	to	110.0
042- 35.0	29.0	to	35.0	140- 135.0	100.0	to	135.0
				140- 142.0	110.0	to	142.0

No. 3 – Coil Voltage Code

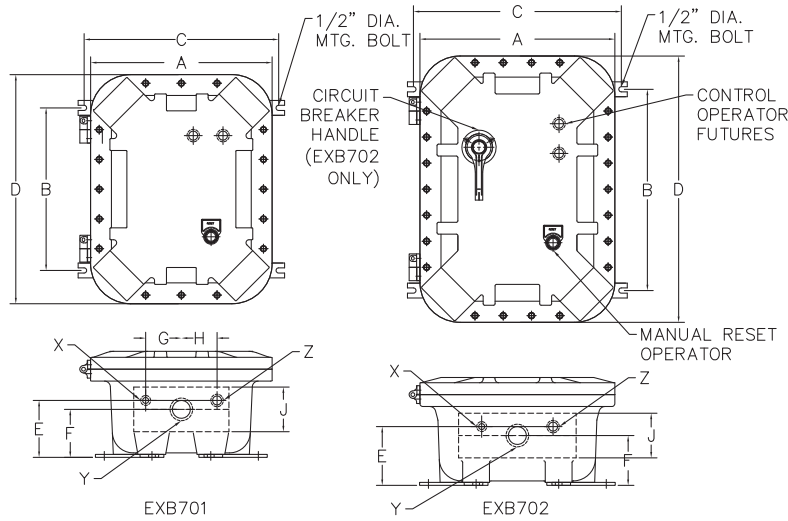
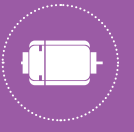
SELECTION	VAC	VDC
A	24 .. 60	24 .. 60
B	48 .. 130	48 .. 130
C	100 .. 250	100 .. 250
D	250 .. 500	250 .. 500

When contactors 009 through 030 are being used with a 24 to 60 VDC control supply voltage add suffix "-DC" to the end of the catalog logic.

No. 4 – BREAKER CODE – EXB702 ONLY

CIRCUIT BREAKER		MOTOR CIRCUIT PROTECTOR	
SELECTION	AMP	SELECTION	AMP
A	15	003	3
B	20	007	7
C	25	015	15
D	30	030	30
E	40	050	50
F	50	070	70
G	60	100	100
H	70	125	125
I	80	150	150
J	90	175	175
K	100	200	200
L	125	225	225
M	150	250	250
N	175		
O	200		
T	250		

STARTERS EXB70 SERIES



EXB70 DIMENSIONS

CATALOG NUMBER	TYPE	DIMENSIONS IN. (MM)										CONDUIT OPENINGS TOP & BOTTOM			WT. LBS (KG)
		A	B	C	D	E	F	G	H	J	X	Y	Z		
EXB701009 TO EXB701030	Starter Only	12.38 (314)	8 (203)	9.88 (251)	14.32 (364)	5.04 (128)	3.64 (92)	2.38 (60)	2.38 (60)	9.82 (249)	1/2 NPT	1-1/2 NPT	3/4 NPT	41 (18)	
EXB701040 TO EXB701096	Starter Only	15.25 (387)	8.94 (227)	12.94 (329)	19.25 (489)	4.92 (125)	4.04 (103)	3 (76)	3 (76)	10.4 (264)	1/2 NPT	2 NPT	3/4 NPT	88 (39)	
EXB701140	Starter Only	16.38 (416)	18.88 (479)	14.94 (379)	28.38 (721)	7.1 (180)	5.19 (132)	3.94 (100)	3.94 (100)	12.82 (325)	1/2 NPT	3 NPT	3/4 NPT	173 (78)	
EXB702009 TO EXB702030	Combination	15.25 (387)	8.94 (227)	12.94 (329)	19.25 (489)	4.92 (125)	4.04 (103)	3 (76)	3 (76)	10.9 (277)	1/2 NPT	1-1/2 NPT	3/4 NPT	88 (40)	
EXB702065	Combination	16.38 (416)	12.88 (327)	14.94 (379)	22.38 (568)	5 (127)	4.13 (105)	3.94 (100)	3.94 (100)	11.06 (280)	1/2 NPT	2 NPT	3/4 NPT	120 (54)	
EXB702096 TO EXB702140	Combination	21.25 (540)	19.38 (492)	19.38 (492)	29.25 (743)	7.34 (186)	5.47 (139)	6 (152)	6 (152)	14 (355)	1/2 NPT	3 NPT	3/4 NPT	273 (123)	

EXB70 MODIFICATION AND ACCESSORIES

OPTIONS	DESCRIPTIONS	OPTIONS	DESCRIPTIONS		
EXB7RPL-120	Pilot light 120V - Red	EXB7DBP	Double pushbutton Start - Stop	EXB7CT100-24	Control transformer 100VA 240/480VAC to 24VAC
EXB7GPL-120	Pilot light 120V - Green	EXB72SS	2 position selector switch On-Off	EXB7CT150-24	Control transformer 150VA 240/480VAC to 24VAC
EXB7APL-120	Pilot light 120V - Amber	EXB7SSHOA	3 position selector switch Hand-Off-Auto	EXB7CT200-24	Control transformer 200VA 240/480VAC to 24VAC
EXB7RPL-24	Pilot light 24V - Red	KB1BCEN	Breather installed	EXB7CT250-24	Control transformer 250VA 240/480VAC to 24VAC
EXB7GPL-24	Pilot light 24V - Green	KB1DCEN	Drain installed	EXB7CT300-24	Control transformer 300VA 240/480VAC to 24VAC
EXB7APL-24	Pilot light 24V - Amber	AUX	Auxiliary contact 1NO & 1NC	EXB72SH251	Space heater 25 watts 120 volts
EXB7LPBR	Illuminated pushbutton 120V - Red	EXB7TB	6 point terminal block	EXB72SH252	Space heater 25 watts 240 volts
EXB7LPBG	Illuminated pushbutton 120V - Green	EXB7SF	Epoxy powder paint	EXB72SH254	Space heater 25 watts 480 volts
EXB7LPBA	Illuminated pushbutton 120V - Amber	EXB7CT50	Control transformer 50 VA 240/480VAC to 120VAC	EXB72SH501	Space heater 50 watts 120 volts
EXB7LPBR-24	Illuminated pushbutton 24V - Red	EXB7CT75	Control transformer 75VA 240/480VAC to 120VAC	EXB72SH502	Space heater 50 watts 240 volts
EXB7LPBG-24	Illuminated pushbutton 24V - Green	EXB7CT100	Control transformer 100VA 240/480VAC to 120VAC	EXB72SH504	Space heater 50 watts 480 volts
EXB7LPBA-24	Illuminated pushbutton 24V - Amber	EXB7CT150	Control transformer 150VA 240/480VAC to 120VAC		
EXB7PLR220	Pilot light resistor 220/120V	EXB7CT200	Control transformer 200VA 240/480VAC to 120VAC		
EXB7PLR440	Pilot light resistor 440/120V	EXB7CT250	Control transformer 250VA 240/480VAC to 120VAC		
EXB7PLR550	Pilot light resistor 550/120V	EXB7CT300	Control transformer 300VA 240/480VAC to 120VAC		
EXB7PLXF220	Pilot transformer 220/120V	EXB7CT50-24	Control transformer 50 VA 240/480VAC to 24VAC		
EXB7PLXF440	Pilot transformer 440/120V	EXB7CT75-24	Control transformer 75VA 240/480VAC to 24VAC		

