



Date

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EMS - Energy Management Starter

1Ø, 120 ~ 230V, 1/10-25HP

3Ø, 200 ~ 600V, 1/2-300HP

Power metering, optional BACnet or Modbus communications, and an intuitive interface allow the EMS to integrate seamlessly with building automation systems. By combining starter operation with controls, you extend equipment life and save energy. Installation is cost-effective thanks to integrated sensing and control points.

Special Instructions:

FEATURES

Power metering

- 1% ANSI grade metering
- Pulse/analog output for accurate measurements (optional)
- kW and kWh data available on LCD display

Superior motor protection

-  **SMARTSTART™** Protection
 - 1-95A Electronic Overload
 - Locked rotor
 - Cycle fault
 - Max time to start
 - Out of calibration (detects incorrect FLA setting)
- Selectable trip class 5-30
- Current and voltage phase unbalance
- Over/under power (new standard feature!)
 - Prevents free-wheeling motor damage (belt loss)
- Over/under voltage
- Reverse phase

Proof of flow verification

- True power measure detects belt loss and alerts automation system
- Eliminates costly current sensors

Voltage & dry contact inputs for auto run command

- Wire directly from the automation system to the starter, no interposing relays necessary
- Save on installation costs and increase reliability.

Fireman's override

- Initiates smoke purge sequence during emergency situations for safety and code compliance

Damper control

- Provides a 24VAC (or optional 120VAC) output for powering a damper motor
- Interlocks damper with starter ensuring proper sequence of operation
- Prevents damage to duct work, saves energy from heat loss
- Saves on automation panel points, reduces wiring, saves on installation costs



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FEATURES (CONT.)

HOA keypad with LCD display

- Plain English operation – easy to set up and simple to operate
- LEDs indicate Hand/Off/Auto modes, run and fault conditions

Flexible control transformer (CPT)

- Multi-tap CPT input accepts all common motor voltages
- Integrated secondary protection – no fuses required

Combination versions include disconnect

- Motor circuit protection disconnect provides short circuit protection
- High interrupting ratings for maximum electrical system compatibility
- No fuses required – save time and money
- Lockable handle for safety

Ground Fault Protection

- Protects motors from damage due to ground current conditions
- UL 1053 Certified

OPTIONS

BACnet or Modbus Communications with power metering for energy savings

- Ideal for LEED projects (Measurement & Verification credit), tenant sub-metering cost allocation, load shedding and performance contracting
- Native RS-485 76800 BPS for high performance

Comprehensive point list including HOA status, overload faults, and all metering attributes (kW, kWh, kVar, V, A, etc. aggregate and per phase).

- Additional programmable digital input. Additional analog input, selectable between 0-10V, 4-20 mA, or 10K thermistor
- Includes power metering display with programmable parameters
- Tested to BTL standards

120V Damper Control

- Option in lieu of 24VAC standard

Ethernet Fault Logging (*Time & Date Stamped*)

- Records up to 100 faults and alarms (e.g. underpower, overload, etc.)
- Data easily is easily displayed & saved on any web browser using an Ethernet connection. Starter incorporates internal web server. No programming required.

Ground Fault Protection

- Protects motors from damage due to ground current conditions
- UL 1053 Certified



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EMS Specification

Starter Type

EMS - Energy Management Starter

120-600VAC, 1 & 3-Phase, 50/60Hz input, Across the line, full-voltage non-reversing

NEMA Type 1 or 3R Enclosed

User Interface

Hand-Off-Auto	Door mounted Hand-Off-Auto keypad (water-tight-membrane)
Programming	Door mounted display with programming keys (LCD, back-lit, 16 character)
Mode Indication	Integrated LEDs, Hand-Off-Auto-Run-Fault indication

Standard Control Operations

Inputs	Voltage Auto-Run	Accepts 12-130VAC/DC. Applying voltage will send a run command to the starter when in Auto mode.
	Dry Contact Auto-Run	Normally Open dry contact. When closed, the starter will be commanded to run when in Auto mode.
	Fireman's Override	Accepts 12-130VAC/DC. Applying voltage will command the motor to run in all modes and will supersede a Shutdown command. Hand/Off/Auto/Run/Fault LEDs will flash.
	Shutdown	Normally Closed dry contact. When open, the contactor will open and the starter will disengage the contactor and will not accept a run command with the exception of Fireman's Override. Hand/Off/Auto LEDs will flash.
	Permissive Auto	Normally Open dry contact. When closed, the starter will not accept a run command when in Auto mode.
Outputs	Actuator Position Switch	Normally Open dry contact. To be used in series with customer provided actuator contacts which disable the motor starter until the actuator is in position. (ie. The contactor will not close unless this contact is closed)
	Status Relay	Normally Open relay contacts. Status Relay will close when the motor draws a user defined percentage of the FLA setting.
	Fault Relay	Fault Relay will close in the event of a fault trip. <u>Contact Ratings:</u> 0.3A @ 125VAC, 1A @ 24VAC
Operational	Actuator Power	24VAC, 1A max. (Optional 120VAC, 0.25A max.)
	Overload Type	Electronic, I ² t trip curve
	Power Fail Modes	Restart in last mode (Hand/Off/Auto) with no delay (default)
		Restart in Off mode
	On/Off Time Delay	Restart in Off mode if power failure lasts longer than 2 seconds. Restart in last mode if power failure is less than 2 seconds.
	Fault Reset	Adjustable: Manual or Automatic

Environmental

Ambient Operating Temp	-5° to 140° F (-20° to 60° C)
Ambient Storage Temp	-5° to 185° F (-20° to 85° C)
Relative Humidity	5% to 95% non-condensing

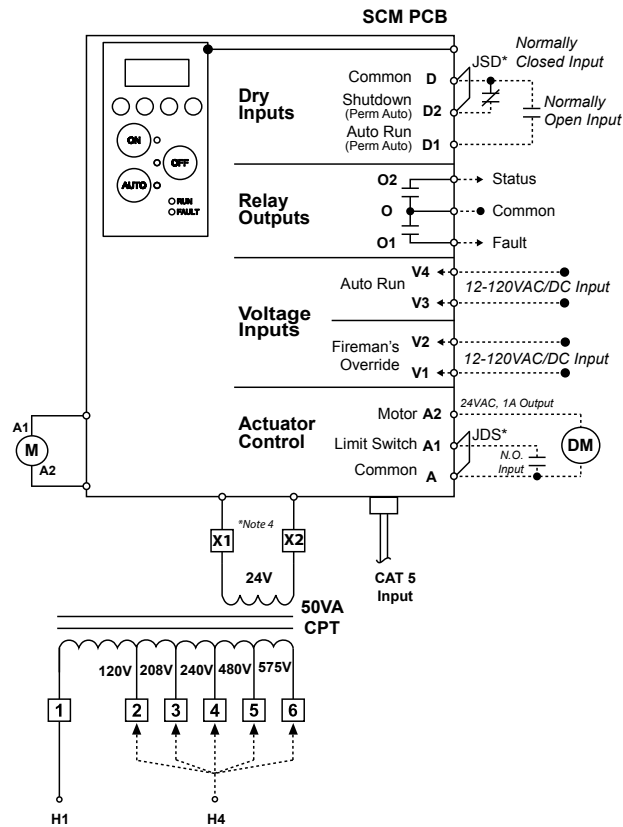
Motor Protection	Adjustment / Description	Default Setting
Overload Current Setting Range	Differs per model	Per FLA
Overload Trip Class	Adjustable: 5-30	10
Overload Service Factor	Adjustable: 0.00-2.00	1.15
Under Power	On/Off, Adjustable: 0-99% of measured electrical input	Off / 80%
Over Power	On/Off, Adjustable: 101-200% of measured electrical input	Off / 120%
Over / Under Voltage	On/Off, Adjustable: ± 5 -25% over/under the nominal voltage setting	On / 10%
Voltage Phase Unbalance	On/Off, Adjustable: 1-20% voltage phase deviation	On / 3%
Voltage Phase Loss	Always On, Adjustable: 1-50% voltage phase deviation	5%
Voltage Phase Sequence Reversal	On/Off, Trips within 0.1 seconds upon voltage phase reversal detection	On
Ground Fault (Optional)	On/Off, Adjustable: 1.0-9.9A	Off / 1A
Cycle Fault	On/Off, Trips if contactor cycle rate exceeds 20 starts/minute	On
Warm Start Provision	On/Off, Delays motor restart after a fault trip, based on calculated motor temperature	On
Protection	Adjustment / Description	Default Setting
Current Phase Unbalance	On/Off, Adjustable: 1-50% current phase unbalance	On / 20%
Locked Rotor / Stall	On/Off, Trips within 0.5 seconds	On
Out of Calibration	On/Off, Trips after 10 seconds if the FLA setting is incorrect (set above calculated FLA range), ie. Start current is outside of an acceptable range. (fla setting * 5 < inrush < fla setting * 14).	On
Max Time to Start	On/Off, Regardless of FLA or I ² t curve, always trip at start if starting current is outside of an acceptable range (inrush / 5) and still decreasing after 10 seconds.	On



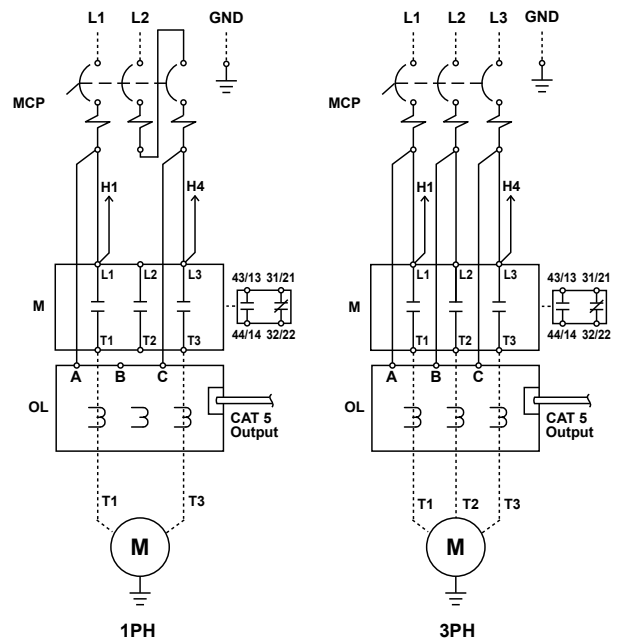
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EMS WIRING DIAGRAM

Control wiring



Power wiring





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Ordering and Sizing Information (120~575 VAC)

Energy Management Starter - 1 & 3-Phase, 50/60 Hz, 120~575 VAC

UL Type 1 Enclosed - Combination Starter, **scm** Electronic Overload

Includes MCP Disconnect

	Part Number	UL HP Ratings						SCIC KAIC ®		Contactor NEMA Size	Contactor Type	Disconnect Part Number
		10		30								
		120V	230V	208V	230V	460V	575V	240V	460V			
Combination	EMS1-9/J-G1.6-9	-	1/10	-	-	3/4	3/4	100	65	00	MRC-9B	CMS-32HI-1.6
	EMS1-9/J-G2.5-9	-	1/6	1/2	1/2	1	1.5	100	65			CMS-32HI-2.5
	EMS1-9/J-G4-9	1/8	1/3	3/4	3/4	2	3	100	65			CMS-32HI-4
	EMS1-9/J-G6-9	1/4	1/2	1	1.5	3	5	100	65			CMS-32HI-6
	EMS1-9/J-G8-9	1/3	1	2	2	5	5	100	65			CMS-32HI-8
	EMS1-18/J-G10-18	1/2	1.5	2	3	5	7.5	100	65	0	MRC-18B	CMS-32HI-10
	EMS1-18/J-G13-18	1/2	2	3	3	7.5	10	100	65			CMS-32HI-13
	EMS1-18/J-G17-18	1	3	3	5	10	15	100	30			CMS-32HI-17
	EMS1-32/J-G22-32	1.5	3	5	7.5	15	20	100	30	1	MRC-32A	CMS-32HI-22
	EMS1-32/J-G26-32	2	3	7.5	7.5	15	20	100	30			CMS-32HI-26
	EMS1-32/J-G32-32	2	5	7.5	10	20	30	100	30			CMS-32HI-32
	EMS1-50/J-G40-50	3	7.5	10	10	30	30	100	50	2	MRC-50LA	CMS-63HI-40
	EMS1-50/J-G50-50	3	10	15	15	30	40	100	50			CMS-63HI-50
	EMS1-85/J-G63-85	5	10	20	20	40	-	100	50	3	MRC-85LA	CMS-63HI-63
	EMS1-85/J-G75-85	5	15	20	25	50	-	100	50			CMS-100HI-75
	EMS1-85/J-G90-85	7.5	20	25	30	60	-	100	50			CMS-100HI-90

*For NEMA Size 3, 575V applications, please consult factory

Energy Management Starter - 1 & 3-Phase, 50/60 Hz, 120~575 VAC

UL Type 1 Enclosed - Standard Starter, **scm** Electronic Overload

Disconnect Not Included

Standard	Part Number	UL HP Ratings						SCIC KAIC @		Contactor NEMA Size	Contactor Type
		10		30							
		120V	230V	208V	230V	460V	575V	240V	460V		
	EMS1-9/J-9	1/3	1	2	2	5	7.5	5	5	00	MRC-9B
	EMS1-18/J-18	1	3	5	5	10	15	5	5	0	MRC-18B
	EMS1-32/J-32	2	5	7.5	10	20	25	5	5	1	MRC-32A
	EMS1-50/J-50	3	10	15	15	30	40	5	5	2	MRC-50LA
	EMS1-85/J-85	7.5	15	25	30	60	-	10	10	3	MRC-85LA

*For NEMA Size 3, 575V applications, please consult factory

NEMA 1 Factory Installable Options

Part Number	Description
EMS-BN-COM*	BACnet communications card with power metering
EMS-MB-COM*	Modbus RTU communications card
EMS-ENET*	Ethernet data and fault logging card
EMS-120	120VAC control circuit and damper/actuator control (in lieu of 24VAC)
EMS-1PH	1-phase wiring for EMS starters

*Items cannot be installed in combination with other items marked with "***"

Consult factory for type 4 & 4X enclosed EMS starters



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Ordering and Sizing Information (120~575 VAC)

Energy Management Starter - 1 & 3-Phase, 50/60 Hz, 120~575 VAC

UL Type 3R Enclosed - Combination Starter, **scm** Electronic Overload

Includes MCP Disconnect

Part Number	UL HP Ratings						SCIC KAIC ®		Contactor NEMA Size	Contactor Type	Disconnect Part Number	
	10		30									
	120V	230V	208V	230V	460V	575V	240V	460V				
Combination	EMS3R-9/J-G1.6-9	-	1/10	-	-	3/4	3/4	100	65	00	MRC-9B	CMS-32HI-1.6
	EMS3R-9/J-G2.5-9	-	1/6	1/2	1/2	1	1.5	100	65			CMS-32HI-2.5
	EMS3R-9/J-G4-9	1/8	1/3	3/4	3/4	2	3	100	65			CMS-32HI-4
	EMS3R-9/J-G6-9	1/4	1/2	1	1.5	3	5	100	65			CMS-32HI-6
	EMS3R-9/J-G8-9	1/3	1	2	2	5	5	100	65			CMS-32HI-8
	EMS3R-18/J-G10-18	1/2	1.5	2	3	5	7.5	100	65	0	MRC-18B	CMS-32HI-10
	EMS3R-18/J-G13-18	1/2	2	3	3	7.5	10	100	65			CMS-32HI-13
	EMS3R-18/J-G17-18	1	3	3	5	10	15	100	30			CMS-32HI-17
	EMS3R-32/J-G22-32	1.5	3	5	7.5	15	20	100	30	1	MRC-32A	CMS-32HI-22
	EMS3R-32/J-G26-32	2	3	7.5	7.5	15	20	100	30			CMS-32HI-26
	EMS3R-32/J-G32-32	2	5	7.5	10	20	30	100	30			CMS-32HI-32
	EMS3R-50/J-G40-50	3	7.5	10	10	30	30	100	50	2	MRC-50LA	CMS-63HI-40
	EMS3R-50/J-G50-50	3	10	15	15	30	40	100	50			CMS-63HI-50
	EMS3R-85/J-G63-85	5	10	20	20	40	-	100	50	3	MRC-85LA	CMS-63HI-63
	EMS3R-85/J-G75-85	5	15	20	25	50	-	100	50			CMS-100HI-75
	EMS3R-85/J-G90-85	7.5	20	25	30	60	-	100	50			CMS-100HI-90

*For NEMA Size 3, 575V applications, please consult factory

Energy Management Starter - 1 & 3-Phase, 50/60 Hz, 120~575 VAC

UL Type 3R Enclosed - Standard Starter, **scm** Electronic Overload

Disconnect Not Included

Standard	Part Number	UL HP Ratings						SCIC KAIC @		Contactor NEMA Size	Contactor Type
		10		30							
		120V	230V	208V	230V	460V	575V	240V	460V		
	EMS3R-9/J-9	1/3	1	2	2	5	7.5	5	5	00	MRC-9B
	EMS3R-18/J-18	1	3	5	5	10	15	5	5	0	MRC-18B
	EMS3R-32/J-32	2	5	7.5	10	20	25	5	5	1	MRC-32A
	EMS3R-50/J-50	3	10	15	15	30	40	5	5	2	MRC-50LA
	EMS3R-85/J-85	7.5	15	25	30	60	-	10	10	3	MRC-85LA

*For NEMA Size 3, 575V applications, please consult factory

NEMA 3R Factory Installable Options

Part Number	Description
EMS-BN-COM/3R*	BACnet communications card with power metering
EMS-MB-COM/3R*	Modbus RTU communications card
EMS-ENET/3R*	Ethernet data and fault logging card
EMS-120	120VAC control circuit and damper/actuator control (in lieu of 24VAC)
EMS-1PH	1-phase wiring for EMS starters

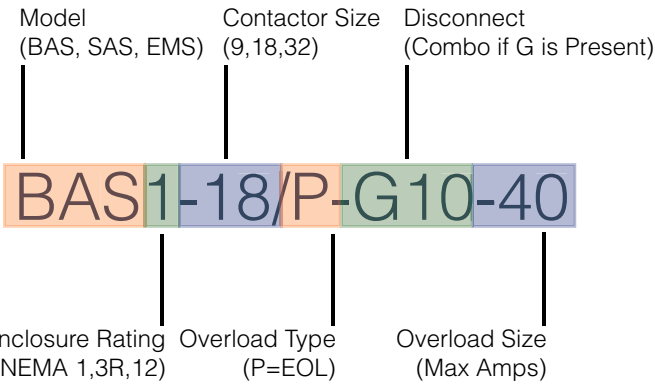
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Consult factory for type 4 & 4X enclosed EMS starters



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SUBMITTED EQUIPMENT SCHEDULE



QTY TAG EMS PART # VOLTAGE/ PHASE NEMA SIZE HP ENCLOSURE

BACnet Communication w/ Power Metering
MODbus RTU Communication Card
Ethernet Data and Fault Logging Card
120VAC Control Circuit and Damper Control



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3-POLE CONTACTOR SPECIFICATIONS



Frame size				MRC-9B	MRC-18B	MRC-32A	MRC-50LA	MRC-85LA	
Type				22AF		40AF		100AF	
Terminal Type				Screw		Screw		Lug	
Number of poles				3 pole		3 pole		3 pole	
Rated operation voltage, Ue				690V		690V		690V	
Rated insulation voltage, Ui				690V		1000V		1000V	
Rated frequency				50/60Hz		50/60Hz		50/60Hz	
Rated impulse withstand voltage, Uimp				6kV		8kV		6kV	
Max. operating rate in operating cycles per hour (AC3)				1800 operations per hour		1800 operations per hour		1800 operations per hour	
Durability	Mechanical			15 mil. operations		12 mil. operations		12 mil. operations	
	Electrical			2.5 mil. operations		2 mil. operations		2 mil. operations	
Current and power	AC-1, Thermal current			A	25	40	50	70	135
	AC-3	200/240V	kW	2.5	4.5	7.5	15	25	
			A	11	18	32	55	85	
		380/440V	kW	4	7.5	15	22	45	
			A	9	18a	32	50	85	
		500/550V	kW	4	7.5	18.5	30	45	
			A	7	13	28	43	75	
		690V	kW	4	7.5	18.5	30	45	
A			6	9	20	28	45		
UL rating (50/60Hz)	Continuous current			A	25	40	50	70	135
	Single Phase	110~120V	HP	0.5	1	2	3	7.5	
		220~240V	HP	1.5	3	5	10	15	
	Three Phase	200~208V	HP	2	5	7.5	20	30	
		220~240V	HP	3	7.5	10	25	40	
		440~480V	HP	5	10	20	40	60	
		550~600V	HP	7.5	15	25	50	75	
	NEMA size			00	0	1	2	3	
Size and weight	MRC	Weight	lbs	0.73 lbs	0.88 lbs	1.98 lbs	3.53 lbs		
		Size (WxHxD)	in	1.77 x 2.89 x 3.39 in	1.77 x 3.27 x 3.54 in	2.17 x 4.17 x 4.69 in	2.76 x 5.51 x 5.35 in		
	MRD	Weight	lbs	1.12 lbs	1.32 lbs	2.65 lbs	5.73 lbs		
		Size (WxHxD)	in	1.77 x 2.89 x 4.63 in	1.77 x 3.27 x 4.61 in	2.17 x 4.17 x 5.76 in	2.76 x 5.51 x 6.78 in		
Auxiliary (standard)				1NO & 1NC		1NO & 1NC		1NO & 1NC	
Auxiliary	Side mount			MA-1		MA-1		MA-1	
	Front mount			CA-2, CA-4		CA-2, CA-4		CA-2, CA-4	

*Minimum conduct current of auxiliary contactor is DC 17V 5mA

**10A max, Not motor duty rated.



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3-POLE CONTACTOR SPECIFICATIONS (CONT.)



MRC-100LA	MRC-150LA
100AF	150AF
Lug	
3 pole	
690V	
1000V	
50/60Hz	
6kV	8kV
1800 operations per hour	
12 mil. operations	5 mil. operations
2 mil. operations	1 mil. operations
135	210
25	45
85	150
45	75
85	150
45	70
75	100
45	50
45	60
135	210
7.5	15
15	25
30	40
40	50
60	100
75	75
3	4
3.53 lbs	5.29 lbs
2.76 x 5.51 x 5.35 in	
5.73 lbs	
2.76 x 5.51 x 6.78 in	0.15 x 0.24 x 0.20 in
1NO & 1NC	
MA-1	
CA-2, CA-4	

MRC-330A	MRC-400A
	400AF
	Screw
	3 pole
	690V
	1000V
	50/60Hz
	8kV
1200 operations per hour	
5 mil. operations	2.5 mil. operations
1 mil. operations	0.5 mil. operations
350	450
90	125
330	400
160	225
330	350
160	225
280	350
200	250
225	300
350	450
-	-
-	-
100	125
125	150
250	300
250	300
5	-
20.28 lbs	
6.42 x 9.57 x 8.05 in	
2NO & 2NC	
CA-100	



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MOLDED CASE CIRCUIT BREAKER SPECIFICATIONS



TD/TS Series

Frame size	
Rated current In	A
Number of poles	
Rated operational voltage, Ue AC	V
UL interrupting rating	kA

	120V
	240V
AC 50/60Hz	480V
	600V

Reference standard

Available breaker types

Accessories

Mechanical life	Operations
Electrical life @600V AC	Operations
Weight 3-pole lbs (kg)	
Basic dimension, WxHxD 3-Pole	

TS250

250AF	
150, 175, 200, 250	
3	
600	
NU	HU
-	-
50	100
35	65
10	18
UL489	
Fixed thermal, fixed magnetic, FTU	
Adjustable-thermal, fixed-magnetic, FMU	
Adjustable-thermal, Adjustable-magnetic (3 pole), ATU	
AX - Auxiliary switch	
AL - Alarm switch	
SHT - Shunt trip	
UVT - Undervoltage trip	
EHU - Extended rotary handle	
FH - Flange handle	
PL, PHL - Locking devices (removable, fixed)	
MIT - Mechanical interlock device	
5,000	
1,000	
4.19lbs (1.9kg)	
4.13 x 7.01 x 3.39in (105 x 178 x 86mm)	



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MANUAL MOTOR STARTER SPECIFICATIONS

Frame Size	Part #	Rated operational current le (A)	Magnetic release operating current (A)	Branch Motor Protection (UL508)								
				1-phase [HP] (50/60Hz)		3-phase [HP] (60Hz)				KAIC Ratings [kA]		
				115V	230V	200V	230V	460V	575V	240V	480V	600V
32AF	CMS-32HI-0.16	0.16	2.1	-	-	-	-	-	-	100	50	10
	CMS-32HI-0.25	0.25	3.3	-	-	-	-	-	-	100	50	10
	CMS-32HI-0.4	0.4	5.2	-	-	-	-	-	-	100	50	10
	CMS-32HI-0.63	0.63	8.2	-	-	-	-	-	-	100	50	10
	CMS-32HI-1	1	13	-	-	-	-	-	1/2	100	50	10
	CMS-32HI-1.6	1.6	20.8	-	1/10	-	-	3/4	3/4	100	50	10
	CMS-32HI-2.5	2.5	32.5	-	1/6	1/2	1/2	1	1.5	100	50	10
	CMS-32HI-4	4	52	1/8	1/3	3/4	3/4	2	3	100	50	10
	CMS-32HI-6	6	78	1/4	1/2	1	1.5	3	5	100	50	10
	CMS-32HI-8	8	104	1/3	1	2	2	5	5	100	50	10
	CMS-32HI-10	10	130	1/2	1.5	2	3	5	7.5	100	50	10
	CMS-32HI-13	13	169	1/2	2	3	3	7.5	10	100	50	10
	CMS-32HI-17	17	221	1	3	3	5	10	15	100	50	10
	CMS-32HI-22	22	286	1.5	3	5	7.5	15	20	100	30	10
	CMS-32HI-26	26	338	2	3	7.5	7.5	15	20	100	30	10
	CMS-32HI-32	32	416	2	5	7.5	10	20	30	100	30	10
63AF	CMS-32HI-40	40	520	3	7.5	10	10	30	30	100	30	10
	CMS-63HI-10	10	130	1/2	1.5	2	3	5	7.5	100	50	10
	CMS-63HI-13	13	169	1/2	2	3	3	7.5	10	100	50	10
	CMS-63HI-17	17	221	1	3	3	5	10	15	100	50	10
	CMS-63HI-22	22	286	1.5	3	5	7.5	15	20	100	50	10
	CMS-63HI-26	26	338	2	3	7.5	7.5	15	20	100	50	10
	CMS-63HI-32	32	416	2	5	7.5	10	20	30	100	50	10
	CMS-63HI-40	40	520	3	7.5	10	10	30	30	100	50	10
	CMS-63HI-50	50	650	3	10	15	15	30	40	100	50	10
100AF	CMS-63HI-63	63	819	5	10	20	20	40	60	100	50	10
	CMS-63HI-65	65	845	5	10	20	20	40	60	100	50	10
	CMS-100H-17	17	221	1	3	3	5	10	15	100	50	10
	CMS-100H-22	22	286	1.5	3	5	7.5	15	20	100	50	10
	CMS-100H-26	26	338	2	3	7.5	7.5	15	20	100	50	10
	CMS-100H-32	32	416	2	5	7.5	10	20	30	100	50	10
	CMS-100H-40	40	520	3	7.5	10	10	30	30	100	50	10
	CMS-100H-50	50	650	3	10	15	15	30	40	100	50	10
	CMS-100H-63	63	819	5	10	20	20	40	60	100	50	10
	CMS-100H-75	75	975	5	15	20	25	50	60	100	50	10
	CMS-100H-90	90	1170	7.5	20	25	30	60	75	100	50	10



CMS-32HI



CMS-63HI



CMS-100HI



Date

Project

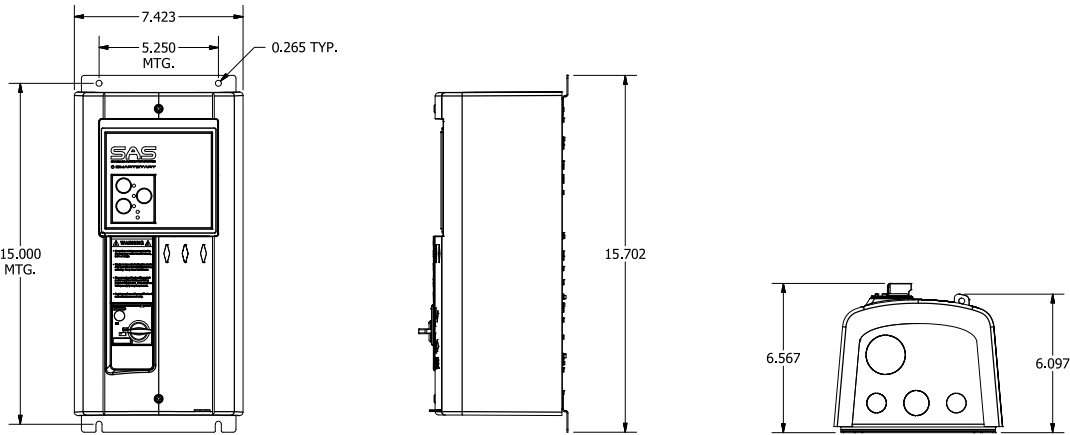
Rep Firm

Contractor

Engineering Firm

UL TYPE 1 DIMENSIONS

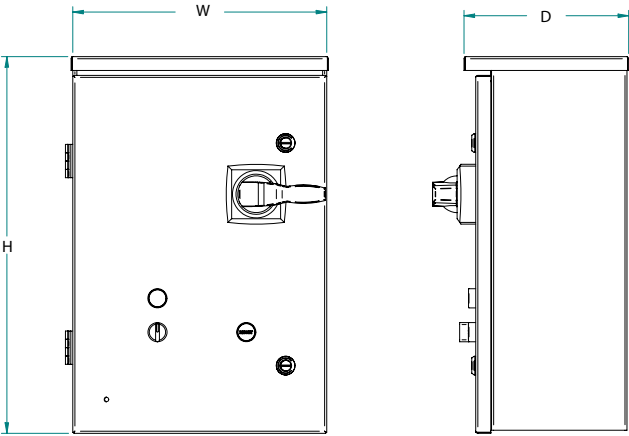
All dimensions are in inches



NEMA 3R DIMENSIONS

*All measurements in inches

Starter Size	H	W	D
NEMA Size 00 -> 1, Standard	16	12	8
NEMA Size 2 -> 3, Standard	22	15	8
NEMA Size 00 -> 2, Combo			
NEMA Size 3, Combo	32	15	8





Date

Project

Rep Firm

Contractor

Engineering Firm

NEMA 4 DIMENSIONS

**All measurements in inches*

Starter Size	H	W	D
NEMA Size 00 -> 2, Standard NEMA Size 00 -> 1, Combo	16	14	8
NEMA Size 3, Standard NEMA Size 2, Combo	20	16	10
NEMA Size 3, Combo	20	20	10

