

STANDARD FEATURES



INTERFACE

Plain Language display	8 Languages	LED Status Indication	Graphing
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START / STOP FUNCTION

Voltage Ramp Start (TVR)	Current Ramp Start	Voltage Ramp Stop (TVR)
Constant Current Start	XLR-8 Adaptive Start/Stop	



MOTOR AND SYSTEM PROTECTIONS

Motor Overload	Too many starts	External Trip Inputs	Line Frequency
Motor Connection Fault	Current imbalance	Motor Thermistor	
Instant Over Current (Jam)	Overcurrent	Phase Loss	
Excess Start Time (Stall)	Undercurrent	Phase Sequence	



MONITORING

Phase currents	Current phase imbalance	Power Factor	<i>With PUMP SMART CARD</i>
Average current	Thermal Capacity: starter	High current flag	▪ Pump Pressure
Hours Run	Thermal Capacity: motor	Low current flag	▪ Pump Flow
Start Counter	Analogue Output Value	Motor temperature flag	▪ Well depth
Line frequency	Last Start Details		▪ Pump Temperature



ANCILLARY FUNCTIONS

Restart Delay: Antibackspin	Second Motor Set	Run Timers	Simulation Tools
Auto-Start/Stop	Auto Reset	Weekly Scheduling	



ACTIVITY LOGS – 384 EVENTS

Date and Time	Average Current	Motor Thermistor State	Rating Capacity
Event type	Phase 1 Current	Ambient Temp	Power Factor
Event Source	Phase 2 Current	Start Heatsink Temp	START HERE Support App
Event Action Detail 1	Phase 3 Current	Motor Thermal Models	
Event Action Detail 2	Frequency	SCR Temp	
Started in (s)	Starter State At Event	Bypass Contactor Temp	

SPECIFICATIONS

SUPPLY

Main Voltage L1,L2,L3	EMX4e-xxxxB-V5	200~525 VAC (+/- 10%)
	EMX4e-xxxxB-V7	380~600 VAC (+/- 10%)
Control Voltage A1,A2,A3	EMX4e-xxxxB-xx-C1 (A1, A2)	110~120 VAC (+10%/-15%), 600mA
	EMX4e-xxxxB-xx-C1 (A2, A3)	220~240 VAC (+10%/-15%), 600mA
	EMX4e-xxxxB-xx-C2 (A1, A2)	24 VAC/VDC (+/- 20%), 2.8A
Mains Frequency	50 Hz~60 Hz (+/- 5%)	
Rated insulation	600 VAC to earth	
Rated impulse withstand	6 kV	
Form designation	Bypassed semiconductor motor starter form 1	

SHORT CIRCUIT CAPABILITY

Coordination with semiconductor fuses	Type 1
Coordination with HRC fuses	Type 2

ELECTROMAGNETIC CAPABILITY (COMPLIANT WITH EU DIRECTIVE 2014/35/EU)

EMC Immunity	IEC 60947-4-2
EMC Emissions	IEC 60947-4-2 Class B

INPUTS

Input rating	Active 24 VDC, 8mA approx..
Motor thermistor (B4, B5)	Trip >3.6 kΩ, reset <1.6 kΩ

OUTPUTS

Relay Outputs	10 A @ 250 VAC resistive, 5A @ 250 VAC AC15 pf 0.3	
	Main Contactor (33,34)	Normally open
	Relay output A (41, 42, 44)	Changeover
	Relay output B (53, 54)	Normally open
Analog Output (21, 22)	Maximum load	600Ω (12VDC @ 20 mA)
	Accuracy	+/- 5%

ENVIRONMENT

Operating Temperature	-10°C~60°C above 40°C with derating	
Storage Temperature	-25°C~+60°C	
Operating Altitude	0-1000m, above 1000m with derating	
Humidity	5%~95% Relative Humidity	
Pollution Degree	Pollution Degree 3	
Vibration	IEC 60068-2-6	
Protection	0024B~0135B	IP20
	0184B~0580B	IP00

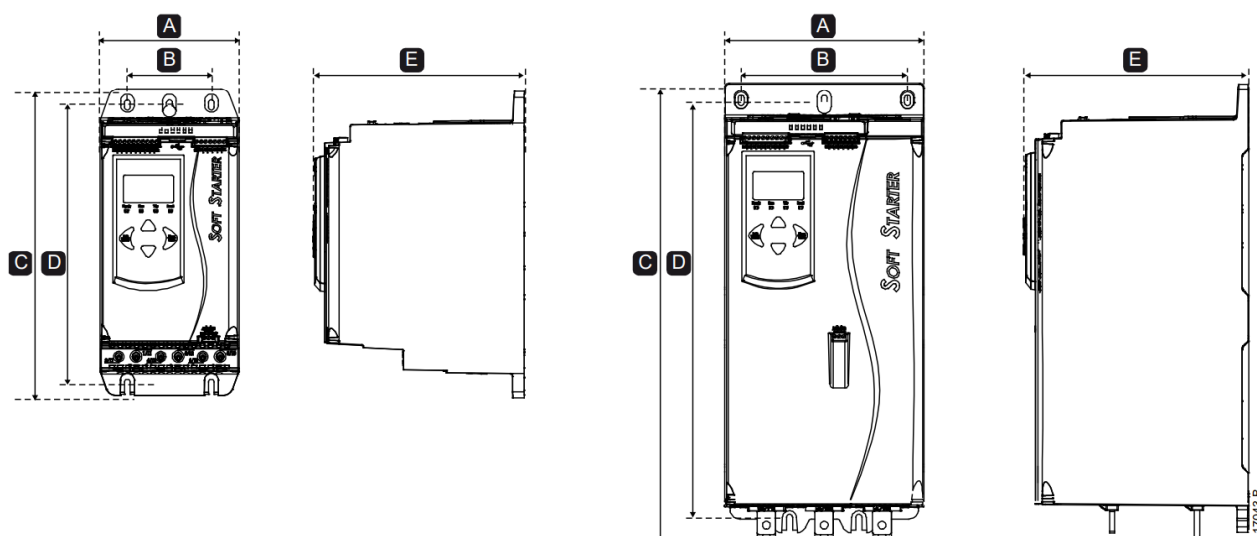
HEAT DISSIPATION

During Start	4.5 watts per ampere	
During Run	0024B~0052B	≤ 35 watts approx.
	0064B~0135B	≤ 50 watts approx.
	0184B~0250B	≤ 120 watts approx.
	0352B~0580B	≤ 140 watts approx.

APPROVALS

CCC	GB 14048.6	CE	EN 60947-4-2
C-UL	C22.2 No 60497-4-2	UL	UL 60947-4-2
RCM	IEC 60947-4-2		

DIMENSIONS & WEIGHTS



	Width		Height		Depth	Weight
Model	A	B	C	D	E	
EMX4e-0024B~0042B	152 (6.0)	92 (3.6)	336 (13.2)	307 (12.1)	231 (9.1)	4.7 (10.4)
EMX4e-0052B~0069B						4.8 (10.6)
EMX4e-0105B~0135B						5.0 (11.0)
EMX4e-0184B~0250B	216 (8.5)	180 (7.1)	495 (19.5)	450 (17.7)	243 (9.6)	11.7 (25.8)
EMX4e-0352B~0401B			523 (20.6)			12.5 (27.6)
EMX4e-0550B~0580B						15 (33.1)
mm (inches)						kg (lbs)