



EMX4 SOFT STARTER

Redefining soft starters

AuCom
MOTOR CONTROL SPECIALISTS

RIGHT FROM
THE START

Our innovation is driven by your ongoing challenges. The relentless demand for productivity in every aspect of your operation has impelled us to develop a soft starter that delivers unsurpassed efficiency, right from the start.

The new EMX4 soft starter helps ensure enhanced productivity of your operation. The EMX4 doesn't just start and stop your machinery with precision and efficiency, it also helps you minimize energy costs and improve operational effectiveness through the delivery of meaningful data to both operators and plant automation systems.

AuCom develops motor control solutions for a range of industrial applications across the world. Our specialized focus on the research, development and engineering of innovative customized solutions ensures that when you choose to work with AuCom, you're working with a global leader.



Like its predecessor, the EMX4 soft starter sets new standards for soft start technology.

EMX4 is not only smaller, more powerful and packed with new control and protection features, it also introduces the game-changing smart card capability. Fitting a smart card to the EMX4 transforms it from super smart motor controller to complete system controller.

This is truly a starter for the future.



Why not make life easier?

Smart does not have to mean complex. While the EMX4 offers more functionality than ever before, it has been designed to make your life easier. By enhancing the display and connectivity functions, and making them intuitive, it is easier to access the right information when you need it, enhancing your overall efficiency.

We have designed the user experience to include a comprehensive graphical display, quick setup menus and multiple languages.

It is also easier to connect with other devices and support services. Connectivity has been enhanced with a suite of communication cards to enable network connections and increase accessibility.

The new USB port allows straightforward upload, download and storage of starter performance information, increasing your ability to manage the system effectively.

Scheduling and automation features enable you to tailor operations to meet your site requirements, minimizing manual intervention and ensuring continued operation.

The EMX4 includes starter, motor and system protection functions, complete with alarms to alert you to any potential issues. In the event that the worst does happen, Power Through and Emergency Run functions give you the power to choose to keep running.



Useful operational and event logs



Rely on EMX4

Whether you are responsible for installation, maintenance or operation the EMX4 has you covered.

Feature	Benefit
Quick Application Setup	Easy commissioning
Simulation Mode	Easy and fast testing during installation and commissioning No need for line power or motor
Automatic Timers and Schedulers	Fast and easy automation No need for external logic or timers
Power Through	Minimal downtime on-site Retain most control and protection capabilities
Emergency Mode	Continued operation in emergency situations
USB Port	Easy data retrieval without the need for PC or network No need for adaptor or cable Easy firmware updates Easy and fast commissioning
Pluggable Terminals	Fast installation and unit exchange

Now you can start smart

The EMX4 smart card redefines the role of a soft starter. With the appropriate smart card installed the EMX4 is able to operate as an entire system controller.

Smart cards deliver industry or application specific functionality and are easily inserted into the EMX4, simplifying system design, installation and set-up.

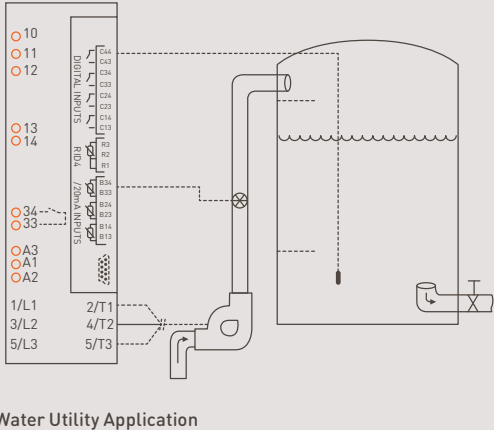
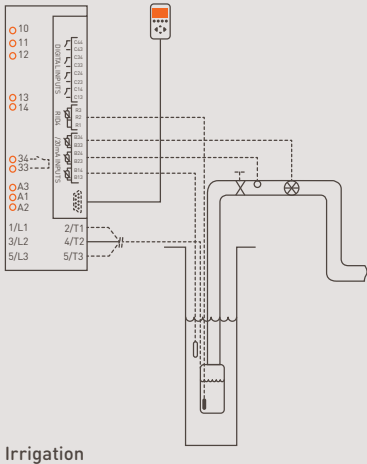
By transforming your EMX4 with an industry specific smart card, your system can be purpose-built around one central point of intelligent control and communications.

Using this technology will improve overall efficiency of your system, and put you firmly in control.



START PUMPING SMART

Installing the Pumping Smart Card allows applicable sensors to be directly connected to the EMX4. This removes the need for extra components normally required to provide this level of specific information and control for your system.



The EMX4 Smart Card release program is ongoing. Go to www.aucom.com for available Smart Cards and the opportunity to suggest a development for application or industry.

Spray irrigation

EMX4 starters fitted with Pumping Smart Cards are providing farmers with improved control of their spray irrigation.

- Built in timers and scheduling functions enable operation to be tailored to match water restrictions and optimal electrical rates.
- Travel to the pump site is reduced by the Sleep Mode and Automatic Restart functions. These automatically restart operation after irrigators are relocated or temporary electrical disturbances interrupt irrigation.
- All this and more without the cost and complexity of separate control logic and wiring.

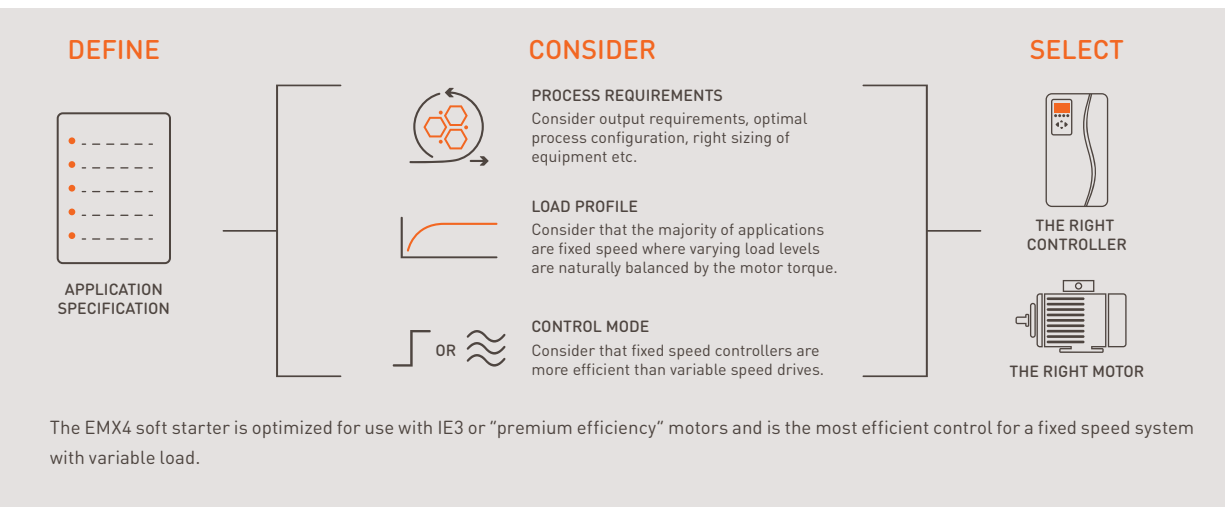


Efficiency starts with us



GET IT RIGHT FROM THE START

Design of energy efficient systems requires consideration of the system as a whole. Using energy efficient components is important but selection of the correct motor control mode (fixed or variable speed) is also critical. Approximately 80% of motor applications are most efficiently operated at a fixed speed. Using a variable speed drive (VSD) with such a system can be highly inefficient, regardless of the efficiency of the motor you are running.



EMX4 – THE MOST ENERGY EFFICIENT OUTCOME FOR FIXED SPEED APPLICATIONS

- 99.5% Efficiency**
 Internal bypass makes EMX4 soft starters 99.5% efficient when running.
- 80% Reduction in wasted energy**
 Compared to a misapplied drive the 99.5% efficiency of EMX4 equates to around an 80% reduction in waste energy.
- 0% Harmonics**
 EMX4 produces no harmonics during run, improving overall power quality and eliminating system losses resulting from harmonics.

PREMIUM EFFICIENCY CAPABLE

The use of premium efficiency/IE3 motors can maximize efficiency and save on operating costs, however there can be issues associated with starting these type of motors, including:

- Higher inrush and starting currents that stress electrical supply circuits.
- 'Spiky' pullout torque curves can make smooth control more difficult.

We have developed the EMX4 soft starter to be an ideal partner for running premium efficiency motors.

Our innovative XLR-8 adaptive acceleration technology auto-tunes for the connected motor and gives you precise control over the acceleration and deceleration of your motor without any of the downsides.

Conveyor control

An energy audit of a quarry identified a VSD controlled 132 kW conveyor that always operated at full speed. An EMX4 soft starter offered this fixed speed application savings as well as a reduction in site harmonics.

Correctly identifying this conveyor as a fixed speed application at installation would have substantially reduced the capital costs. Using an EMX4 with a fixed speed application delivers superior acceleration and deceleration performance, advanced motor protection and communications functions.



Features and options

Feature Sets	EMX4e	EMX4i
MOTOR CONTROL		
Motor sets	1	2
Constant current and current ramp start	•	•
Adaptive control starting/stopping	•	•
Kickstart		•
Coast to stop and TVR stop	•	•
DC brake		•
Soft brake		•
Jog (forward and reverse)		•
Inside delta (6 wire) control		•
Soft trip	•	•
MOTOR PROTECTION		
Motor thermistor	•	•
Current imbalance	•	•
Under/Overcurrent	•	•
Phase sequence	•	•
Phase loss	•	•
Power loss	•	•
INTEGRATION AND MANAGEMENT		
Multi-language graphical display	•	•
I/O and network expansion options	•	•
USB port and data logging	•	•
Analog output	•	•
Emergency run	•	•
SCR fail PowerThrough operation		•
Daily on/off scheduling		•
COMMUNICATIONS OPTIONS		
Modbus RTU	•	•
Profibus	•	•
DeviceNet	•	•
Modbus TCP	•	•
ProfiNET	•	•
Ethernet/IP	•	•
SMART CARD OPTIONS		
Pumping Smart Card	•	•
ACCESSORIES		
Remote Keypad	•	•



XLR-8 ACCELERATION CONTROL



Torque or Current Control start modes influence acceleration but only XLR-8 puts you in direct control of ramp profiles and start times.

Pumping engineers around the world are relying on AuCom's unique XLR-8 technology to help tune pump starting and stopping for optimal results.

Select a ramp profile and time then let the EMX4 do the rest. XLR-8 technology auto-tunes for the connected motor and load conditions to deliver the specified performance.

Whether you are trying to prevent rapid changes in flow rate, flow direction, or water column separation and closure, XLR-8 puts the right start and stop profile at your fingertips.



Engineered packages

As well as chassis starters, EMX4 is available in enclosures as standard packages, or we will custom engineer a solution to your specifications.

With a choice of NEMA 12, NEMA 3R and other enclosures, standard or heavy duty rating and optional line-rated bypass contactor and circuit breaker, there's a package to suit your requirements. Options include:

- NEMA 12, NEMA 3R and other enclosures
- Line-rated bypass contactor and circuit breaker
- SS/Off/ATL switch
- Control power transformer
- Pushbuttons and indicator lights
- Door-mounted keypad
- Space heater with thermostat
- and more



The future starts with AuCom

We develop motor control products for industrial applications across the world. Our focus on research and development, as well as manufacturing, supply and support, ensures that when you choose to work with AuCom, you're working with a global leader. Almost 40 years of experience added to our expertise and ability means you can rely on us to get it right from the start.

OUR APPROACH

We start with a challenge or application, working with you to define and develop a solution that's not only fit for purpose today, but fully supported into tomorrow.

OUR PEOPLE

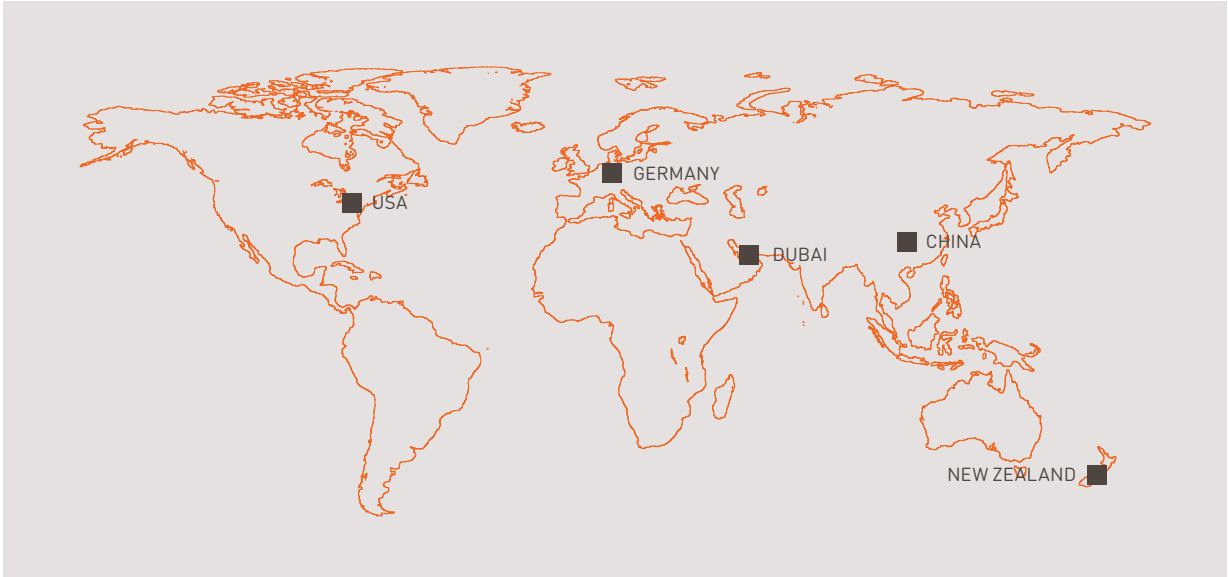
The power behind our success doesn't rely on our innovative products alone. Our people play a pivotal role. That's why, with AuCom, it's always personal. Combining dedication and experience with ability and passion, we don't just listen more closely, we draw on the breadth of our expertise to better understand your unique requirements and offer real solutions and ongoing support.

OUR PARTNERS

We choose partners that are experts, not only in soft start and motor control, but in understanding the needs of their industry. We work closely with our partners to ensure customers receive only the best support and advice.



AuCom manufacturing plant in Freedom, PA



We have high standards

AuCom is accredited to ISO9001:2000, with all products designed and tested to international standards such as IEC 60947-4-2, UL 508, CCC and CISPR-11. All of our products are thoroughly tested in certified facilities and in the field before release, and every soft starter is tested before leaving the factory.

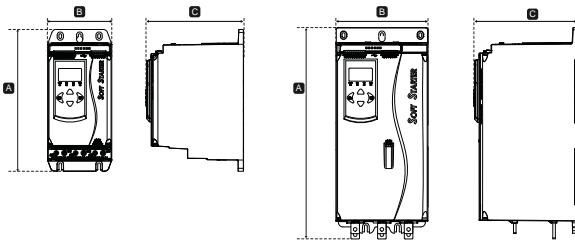


EMX4 specifications

RATINGS

	Light 300%, 10 s, 6 starts per hour				Normal 350%, 30 s, 4 starts per hour				Heavy 450%, 30 s, 4 starts per hour			
	A	HP @230 VAC	HP @460 VAC	HP @575 VAC	A	HP @230 VAC	HP @460 VAC	HP @575 VAC	A	HP @230 VAC	HP @460 VAC	HP @575 VAC
EMX4-0024B	24	7.5	15	20	17	5	10	15	13	3	10	10
EMX4-0042B	42	15	30	40	28	10	20	25	22	7.5	15	20
EMX4-0052B	49	15	30	50	35	10	25	30	27	10	20	25
EMX4-0064B	64	20	50	60	47	15	30	40	36	10	25	30
EMX4-0069B	69	25	50	60	59	20	40	50	46	15	30	40
EMX4-0105B	100	30	75	100	65	25	50	60	52	15	40	50
EMX4-0115B	115	40	75	100	81	30	60	75	63	20	50	60
EMX4-0135B	135	50	100	125	97	30	75	100	76	25	60	75
EMX4-0184B	164	60	125	150	106	40	75	100	82	30	60	75
EMX4-0200B	200	75	150	200	131	50	100	125	102	40	75	100
EMX4-0229B	229	75	150	200	156	60	125	150	125	40	100	100
EMX4-0250B	250	100	200	250	195	75	150	200	156	60	125	150
EMX4-0352B	341	125	250	350	227	75	150	200	180	60	150	150
EMX4-0397B	389	150	300	400	261	100	200	250	203	75	150	200
EMX4-0410B	410	150	300	450	377	150	300	350	302	100	250	300
EMX4-0550B	550	200	450	500	412	150	350	450	321	125	250	300
EMX4-0580B	580	200	500	500	477	200	400	500	360	150	300	350

DIMENSIONS AND WEIGHTS



	Height [A] inch (mm)	Width [B] inch (mm)	Depth [C] inch (mm)	Weight lb (kg)
EMX4-0024B				10.7 (4.8)
EMX4-0042B				
EMX4-0052B				10.9 (4.9)
EMX4-0064B	13.2 (336)	6.0 (152)	9.1 (231)	
EMX4-0069B				
EMX4-0105B				12.1 (5.5)
EMX4-0115B				
EMX4-0135B				
EMX4-0184B				
EMX4-0200B	19.5 (495)			28.0 (12.7)
EMX4-0229B				
EMX4-0250B				
EMX4-0352B		8.5 (216)	9.6 (243)	34.2 (15.5)
EMX4-0397B				
EMX4-0410B	20.6 (523)			41.9 (19.0)
EMX4-0550B				
EMX4-0580B				

Other solutions

AuCom offers a complete range of soft starters. Whether you need a simple product for starting only, or a comprehensive motor control panel you can trust AuCom to offer a product to match.

	Soft Start	Motor Protection	Advanced Interface	Internal Bypass	Current Range	Voltage Range
CSXi	•	•		•	≤ 200 A	≤ 575 VAC
EMX3	•	•	•	•	≤ 2400 A	≤ 690 VAC
MVE	•	•	•	•	≤ 800 A *	≤ 15 kV

*Up to 10 kA available on request.



We've got you covered

AuCom's expertise and knowledge extends well beyond the products we make. We're about helping you achieve efficient and effective control of your machines and processes no matter what the industry or application.



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