



# EMS—Electronic Motor Starter



Eaton's Electrical Sector is pleased to announce the electronic motor starter (EMS), the latest technology in safe and efficient motor starting. The EMS is a full starter with built-in solid-state contacts and integral overload protection. Its compact size and high-electrical life make it an ideal replacement for the traditional contactor/overload relay starter configuration.

## Multifunctional

The EMS comes with an optional reversing start feature, eliminating the need for an additional contactor. The optional E-stop functionality removes the need for a separate E-stop contactor.

## Extended life

High-electrical life provides up to 30 million operations. Ideal for customer applications requiring multiple motor start/stops per hour.

## Safety rated

Functional safety is growing in importance for the machinery OEM. The EMS is rated at SIL3 per IEC 62061 and PLe per ISO 13849, meeting the most stringent of safety requirements.

## Easy installation

The EMS comes equipped with push-in terminals for quick and easy wiring of power and control circuits. Push-in terminals provide 60% time savings over screw-in terminals and better contact against vibrations.

## Short-circuit rating

The EMS carries IEC and UL® short-circuit ratings, with 100 kAIC UL short-circuit rating when mated with 30 A Class J fuse.

## Applications

A versatile solution, the EMS also supports the following installation applications:

- Logistics
- Conveyor control
- Production machines
- Tooling machines
- Packaging machines
- Small elevators



Panel with four traditional starters installed: FVNR, FVR, FVNR with E-stop and FVR with E-stop.



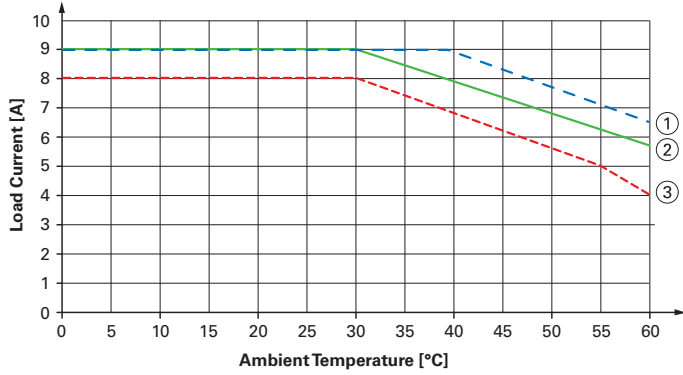
Identical panel with four EMS starters installed, producing the same functionality.

# EATON

Powering Business Worldwide

Function	Current Range AC-51a (A)	Current Range AC-53a (A)	Motor Rating AC-53a 380 V, 400 V, 415 V (kW)	Catalog Number
Non-reversing	0.18–2.4	0.18–2.4	0.06–0.75	EMS-DO-T-2.4-24VDC
Reversing	0.18–2.4	0.18–2.4	0.06–0.75	EMS-RO-T-2.4-24VDC
Non-reversing, with E-stop	0.18–2.4	0.18–2.4	0.06–0.75	EMS-DOS-2.4-24VDC
Reversing, with E-stop	0.18–2.4	0.18–2.4	0.06–0.75	EMS-ROS-T-2.4-24VDC
Non-reversing	1.5–9	1.5–6.5	0.55–3.0	EMS-DO-T-9-24VDC
Reversing	1.5–9	1.5–6.5	0.55–3.0	EMS-RO-T-9-24VDC
Non-reversing, with E-stop	1.5–9	1.5–6.5	0.55–3.0	EMS-DOS-T-9-24VDC
Reversing, with E-stop	1.5–9	1.5–6.5	0.55–3.0	EMS-ROS-T-9-24VDC

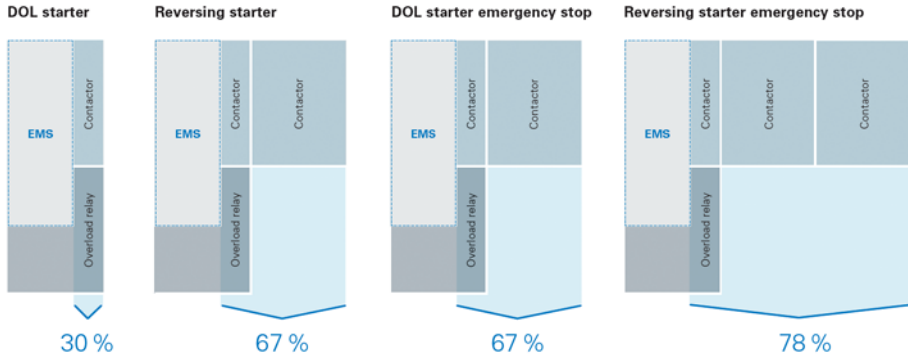
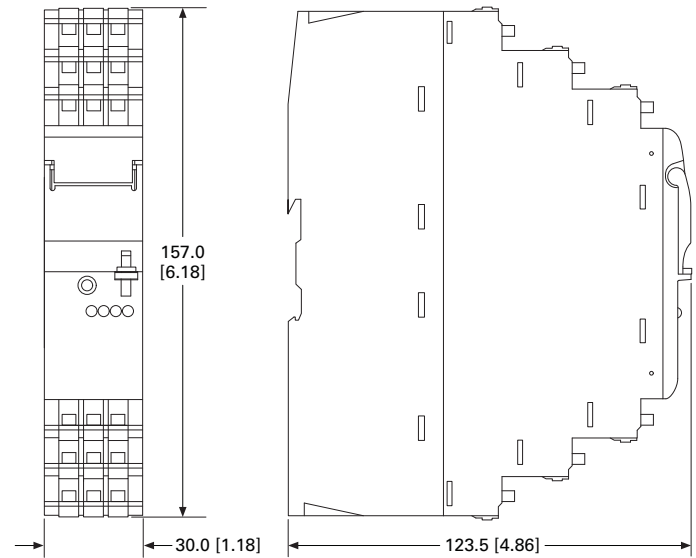
### EMS—De-rating



1. Standalone.
2. In series with 1.8-inch distance.
3. In series, no distance.

### EMS—Dimensions

Approximate dimensions in mm [inches]



**Note:** A frame width reduction of up to 78% in comparison to conventional motor starters.

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 Printed in USA  
 Publication No. PA034001EN / Z15400  
 July 2014

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