

ENERVEX MSC EDRIVE E3 MOTOR CONTROLLER

009.3210.1018 04.19

Product Information

Use

The EDrive E3 Model MSC is a full-featured, industrial-type motor controller programmed used to control and adjust the speed of ENERVEX fans using EC-Motors and 3-phase Induction Motors. It's identical to the EDrive except the enclosure is now NEMA 4X rated.

Description

The EDrive E3 includes an intuitive keypad, built-in mounting brackets with easy access control terminals. The built-in LED display indicates various parameters including motor frequency, amperage and alarm conditions.

It comes pre-programmed by ENERVEX for each specific motor. If program changes are necessary, the settings can be adjusted using the keypad panel.

Features include:

- Sensorless Vector Control
- 14 basic programmable parameters
- Internal Category C1 EMC filter (on selected drives)
- Integral RFI Filter
- 0.5 HP through 1.5 HP in 120 VAC single-phase input classes
- 0.5 HP through 15 HP in 200 VAC three-phase input classes
- 0.5 HP through 2.5 HP in 200VAC-single-phase input classes
- 1 HP through 30 HP in 400 VAC three-phase input classes
- Modbus and Bluetooth connectivity

The single-phase 120V drive version has a special boost phase that initially ramps the motor voltage while maintaining a fixed starting frequency, before reducing the frequency and voltage to the desired operating point.

Material

The frame and the cover is PC/ABS plastic. Rated NEMA 4X

Listings

UL 508C Standard for Power Conversion

Approvals

- CE compliant
- Full EMC Compliance

Warranty

2-Year Factory Warranty. Complete warranty conditions are available from ENERVEX Inc.



Specifications are subject to change without notice.

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VENTING DESIGN SOLUTIONS

ENERVEX

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Specifications

Programming	OptiTools Suite
Supply Voltage	100-115VAC +/-10%
	200-240VAC +/-10%
	380-480VAC +/-10%
Overload Capacity	150% for 60 seconds
	175% for 2.5 seconds
Typical Efficiency	>98%
Operating Temperature	15°F to 120°F (-10°C to 50°C)
Enclosure Rating w/ Wall Bracket	NEMA 4X (IP66)
Connectivity	Modbus, Bluetooth

Dimensions

Frame Size	Height	Width	Depth
1	6.8 (173)	3.3 (83)	4.8 (123)
2	8.7 (221)	4.3 (110)	5.9 (150)
3	10.3 (261)	5.2 (131)	6.9 (175)
4	16.5 (420)	6.7 (171)	8.3 (212)

EDrive E3 Selection Charts

Fan Model	HP	Max Input Amps	Voltage	EDrive E3 Model	Frame Size	EMI Filter
BEF 200	0.5	2.3	1 x 120VAC	MSC 0051	1	No
		2.3	3 x 230VAC	MSC 0052	1	No
		2.2	3 x 460VAC	MSC 0104	1	Yes
BEF 250	0.5	2.3	1 x 120VAC	MSC 0051	1	No
		2.3	3 x 230VAC	MSC 0052	1	No
		2.2	3 x 460VAC	MSC 0104	1	Yes
BEF 300	1	4.3	1 x 120VAC	MSC 0101	1	No
		4.3	3 x 230VAC	MSC 0102	1	Yes
		2.2	3 x 460VAC	MSC 0104	1	Yes
BEF 350	1.5	5.8	1 x 120VAC	MSC 0151	1	No
	2	7.0	3 x 230VAC	MSC 0202	2	Yes
			4.1	3 x 460VAC	MSC 0204	1
BEF 400	3	10.5	3 x 230VAC	MSC 0302	2	Yes
		5.8	3 x 460VAC	MSC 0304	2	Yes
BEF 500	3	10.5	3 x 230VAC	MSC 0302	2	Yes
		5.8	3 x 460VAC	MSC 0304	2	Yes
BEF 600	5	18.0	3 x 230VAC	MSC 0502	3	Yes
		9.5	3 x 460VAC	MSC 0504	2	Yes
BEF 700	10	18.0	3 x 460VAC	MSC 1004	3	Yes

Fan Model	HP	Max Input Amps	Voltage	EDrive E3 Model	Frame Size	EMI Filter
TDF 160	0.5	2.3	1 x 120VAC	MSC 0051	1	No
TDF 200	0.5	2.3	1 x 120VAC	MSC 0051	1	No
TDF 250	0.5	2.3	1 x 120VAC	MSC 0051	1	No
TDF 560	7.5	24.0	3 x 230VAC	MSC 0752	3	Yes
		14.0	3 x 460VAC	MSC 0754	3	Yes
TDF 620	10	18.0	3 x 460VAC	MSC 1004	3	Yes
TDF 685	20	30.0	3 x 460VAC	MSC 2004	4	Yes

Fan Model	HP	Max Input Amps	Voltage	EDrive E3 Model	Frame Size	EMI Filter
RSV 400 EFV 400 GSV 400	1	4.3	3 x 230VAC	MSC 0102	1	Yes
		2.2	3 x 400VAC	MSC 0104	1	Yes
RSV 450 EFV 450 GSV 450	2	7.0	3 x 230VAC	MSC 0202	2	Yes
		4.1	3 x 400VAC	MSC 0204	1	Yes

Fan Model	HP	Max Input Amps	Voltage	EDrive E3 Model	Frame Size	EMI Filter
IPVB 350	1.5	5.8	1 x 230VAC	MSC 0151	1	Yes
	2	7.0	3 x 230VAC	MSC 0202	2	Yes
		4.1	3 x 460VAC	MSC 0204	1	Yes
IPVB 400	3	20.9	1 x 230VAC	MSC 0502	3	Yes
		10.5	3 x 230VAC	MSC 0302	2	Yes
		5.8	3 x 460VAC	MSC 0304	2	Yes
		4.1	3 x 575VAC	MSC 0306	4	Yes
IPVB 500	5	18.0	3 x 230VAC	MSC 0502	3	Yes
		9.5	3 x 460VAC	MSC 0504	2	Yes
		6.5	3 x 575VAC	MSC 0506	4	Yes

Fan Model	HP	Max Input Amps	Voltage	EDrive E3 Model	Frame Size	EMI Filter
SFTA 16	1	5.6	3 x 230VAC	MSC 0102	1	Yes
		3.5	3 x 460VAC	MSC 0104	1	Yes
SFTA 18	1	5.6	3 x 230VAC	MSC 0102	1	Yes
		3.5	3 x 460VAC	MSC 0104	1	Yes
SFTA 21	1.5	8.9	3 x 230VAC	MSC 0202	2	Yes
		5.6	3 x 460VAC	MSC 0204	2	Yes
SFTA 24	3	12.1	3 x 230VAC	MSC 0302		Yes
		7.5	3 x 460VAC	MSC 0304		Yes
SFTA 30	5	20.9	3 x 230VAC	MSC 0502		Yes
		11.5	3 x 460VAC	MSC 0504		Yes
SFTA 36	10	33.3	3 x 230VAC	MSC 1002		Yes
		21.2	3 x 460VAC	MSC 1004		Yes

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