

# All The Options – No Costly Extras



**NOW AVAILABLE  
WITH  
QUICK DISCONNECT!**



## NEMA 4X (IP65) SMVvector OFFERS SIMPLICITY AND PROTECTION FOR VECTOR BASED MOTOR CONTROL

The SMV NEMA 4X (IP65) inverter drive offers sophisticated auto-tuning, fast dynamic torque response and impressive low-speed operation in a compact and simple to use package. The NEMA 4X rated enclosure allows the SMVvector to be used in indoor and indoor/outdoor applications where atmospheric moisture is present or low pressure water jets are used.

### SMVvector Features

- Highly compact, easy-to-use and low cost
- Integrated keypad and display
- Optional built in EMC filter, dynamic braking and remote keypad/display
- EPM memory chip
- UL, cUL, CE, GOST, C-Tick compliant

### Enclosure Options

- Indoor Only - ABS plastic
- Indoor/Outdoor - Poly-carbonate

### EPM Memory Chip - OEM Magic

All SMV Series products offer the benefits of the EPM, a rugged memory chip that plugs directly into the drive, cutting programming time to seconds. An EPM programming module allows drive parameters to be instantly copied onto the chip, and once plugged in, the EPM ensures the drive is ready to run without being powered up. OEM manufacturers can speed-up production and suppliers can provide effective low-cost product support.

### Fieldbus Support

**ETHERNET**

**DeviceNet™**

**PROFIBUS**

**CANopen**

**Modbus**

**LECOM**



c **UL** us **CE** **ROHS**  
COMPLIANT

**Lenze**  
www.lenzeamericas.com

# SMVector

## Modes of Operation

Open Loop Flux Vector (speed or torque control)  
V/Hz (constant or variable)  
Enhanced V/Hz with auto-tuning

## Frequency

Output: 500 Hz standard  
High Carrier: 4, 6, 8, 10, 12 (kHz)

## Universal Logic Assertion (Selectable)

Positive logic input, PNP, active high  
Negative logic input, NPN, active low

## Inputs/Outputs

3 Programmable +1 dedicated digital input  
2 Analog inputs (4 - 20mA and 0 - 10V)  
1 Digital output (24VDC/50mA)  
1 Analog output (0 - 10V or 2 - 10V)  
1 Relay output (24VDC/250VAC, 3A)

## Speed Commands

Keypad, Potentiometer  
Jog, 8 Preset speeds  
Floating Point Control  
Sequencer: 16 Programmable Segments  
Voltage: Scalable 0 - 10 VDC  
Current: Scalable 4 - 20 mA

## Braking Functions

DC injection braking  
Optional dynamic braking  
Flux braking, adjust flux level & decel time

## Process Control

PID Modes: direct and reverse acting  
PID Sleep Mode w/ Recovery Threshold  
Analog Output (Speed, Load, Torque, kW)  
Elapsed Run or Power-On Time (Hours)

## Acceleration/Deceleration Profile

Two independent decel ramps  
Two independent accel ramps  
Auxiliary ramp (or Coast)-to-stop  
S-Type  
Linear

## Logic Modules

Form "C" relay  
Form "C" relay with 2 additional I/O

## Communication Protocols

CANopen  
DeviceNet  
EtherNet/IP  
LECOM  
Modbus RTU  
PROFIBUS DP

### 120/140V - 1Ø Input (3Ø Output)

Model Number	Output Current	Power		Size	Size with Disconnect
	I <sub>N</sub> [A]	HP	kW		
ESV371N01S__	2.4	0.5	0.37	R1	AA1
ESV751N01S__	4.2	1	0.75	R1	AA1
ESV112N01S__	6.0	1.5	1.1	R2	AA2

### 200/240V - 1Ø Input (3Ø Output) With Integrated EMC Filter included.

Model Number	Output Current	Power		Size	Size with Disconnect
	I <sub>N</sub> [A]	HP	kW		
ESV371N02S__	2.4	0.5	0.37	R1	AA1
ESV751N02S__	4.2	1	0.75	R1	AA1
ESV112N02S__	6.0	1.5	1.1	R2	AA2
ESV152N02S__	7.0	2	1.5	R2	AA2
ESV222N02S__	9.6	3	2.2	S1	

### 200/240V - 1 or 3Ø Input (3Ø Output)

Model Number	Output Current	Power		Size	Size with Disconnect
	I <sub>N</sub> [A]	HP	kW		
ESV371N02Y__	2.4	0.5	0.37	R1	AA1
ESV751N02Y__	4.2	1	0.75	R1	AA1
ESV112N02Y__	6.0	1.5	1.1	R2	AA2
ESV152N02Y__	7.0	2	1.5	R2	AA2
ESV222N02Y__	9.6	3	2.2	S1	

### 200/240V - 3Ø Input (3Ø Output)

Model Number	Output Current	Power		Size	Size with Disconnect
	I <sub>N</sub> [A]	HP	kW		
ESV402N02T__	16.5	5	4.0	V1	AC1
ESV552N02T__	23	7.5	5.5	T1	AB1
ESV752N02T__	29	10	7.5	T1	AB1
ESV113N02T__	42	15	11	W1	AF1
ESV153N02T__	54	20	15	W1	AF1

### 400/480V - 3Ø Input (3Ø Output)

Model Number	Output Current	Power		Size	Size with Disconnect
	I <sub>N</sub> [A]	HP	kW		
ESV371N04T__	1.3/1.1	0.5	0.37	R1	AA1
ESV751N04T__	2.4/2.1	1	0.75	R1	AA1
ESV112N04T__	3.5/3.0	1.5	1.1	R2	AA2
ESV152N04T__	4.0/3.5	2	1.5	R2	AA2
ESV222N04T__	5.5/4.8	3	2.2	R2	AA2
ESV302N04TF__	7.6/6.3	4	3.0	R2	AA2
ESV402N04T__	8.7/7.6	5	4.0	V1	AC1
ESV552N04T__	12.7/11.0	7.5	5.5	V1	AC1
ESV752N04T__	16.1/14.0	10	7.5	T1	AB1
ESV113N04T__	24/21	15	11	W1	AE1
ESV153N04T__	31/27	20	15	W1	AE1
ESV183N04T__	39/34	25	18.5	W1	AF1
ESV223N04T__	46/40	30	22	X1	AF1

### 600V - 3Ø Input (3Ø Output)

Model Number	Output Current	Power		Size	Size with Disconnect
	I <sub>N</sub> [A]	HP	kW		
ESV751N06T__	1.7	1	0.75	R1	AA1
ESV152N06T__	2.7	2	1.5	R2	AA2
ESV222N06T__	3.9	3	2.2	R2	AA2
ESV402N06T__	6.1	5	4.0	V1	AC1
ESV552N06T__	9.0	7.5	5.5	V1	AC1
ESV752N06T__	11	10	7.5	T1	AB1
ESV113N06T__	17	15	11	W1	AE1
ESV153N06T__	22	20	15	W1	AE1
ESV183N06T__	27	25	18.5	W1	AF1
ESV223N06T__	32	30	22	X1	AF1

### Model Number Designation (last two digits)

C = NEMA 4X (IP65) Indoor Only ABS plastic enclosure, convection cooled  
D = NEMA 4X (IP65) Indoor Only ABS plastic enclosure, fan cooled  
E = NEMA 4X (IP65) Indoor/Outdoor Polycarbonate plastic enclosure, convection cooled  
F = NEMA 4X (IP65) Indoor/Outdoor Polycarbonate plastic enclosure, fan cooled

F = Integral EMC filter  
L = Integral EMC filter and integrated line disconnect  
M = Integrated line disconnect  
X = No EMC filter/No line disconnect



	Dimensions					
	H		W		D	
	in	mm	in	mm	in	mm
R1	8.00	203	6.30	160	4.50	114
R2	8.00	203	6.30	160	6.30	160
S1	8.00	203	7.10	181	6.80	172
T1	10.00	254	8.10	204	8.00	203
V1	10.00	254	9.00	228	8.00	203
W1	14.40	366	9.40	240	9.50	241
X1	18.50	470	9.40	240	9.50	241
AA1	11.00	279	6.30	160	5.40	136
AA2	11.00	279	6.30	160	7.20	182
AB1	13.00	330	8.10	204	8.90	225
AC1	13.00	330	9.00	228	9.00	226
AD1	11.00	279	7.10	181	7.70	194
AE1	14.40	366	9.40	240	10.30	261
AF1	18.50	470	9.40	240	11.20	285

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