MVW3000

Medium Voltage
Variable Speed Drive

WEG **MVW3000**
Variable Speed Drive (VSD)

Efficient, Reliable and Safe Motor Control for a Wide Range of Industrial Applications

WEG introduces the new generation of Medium Voltage Variable Speed Drives ***MVW3000***.

Friendly operator interface, identical to that of Low Voltage VSD product line, presents familiarity and ease of use.

MVW3000 is perfectly suitable for a variety of variable speed industrial applications such as compressors, pumps, fans, conveyors and grinding mills.

For new installations or revamps, MVW3000 offers robust solutions to optimize your process and save significantly on operating costs.

The MVW3000 is based on multi-level voltage source converter, using cascaded H-bridge (CHB) topology. The almost perfect sinusoidal output waveforms produced by the drive allows the use on applications with new or existing induction and sincronous motors.

Features

- Motor voltage: 2.3 kV, 3.3 kV, 4.16 kV, 5.5 kV, 6 kV, 6.3 kV, 6.6 kV, 6.9 kV, 7.2 kV and 8 kV[1)]
- Motor current: up to 200 Amps[1)]
- Input voltage: 2.3 kV...13.8 kV[2)]
- Reliable air-cooled design
- Total harmonics compliance with IEEE 519

- Complete panel integration provides quick and reliable commissioning and startup
- High power factor (>0.95) throughout entire speed range without capacitors or filters
- Outstanding input harmonic levels without harmonic filters (meets IEEE 519, IEC 61800-3, G5/4-1)
- Reduced motor losses, vibrations, torque pulses and overheating due to near sinusoidal output voltage and current

Power cells designed with the well proven WEG technology with more than 30 years of experience in motor drives. Two options of power cells available: Electrolytic and Dry-type Capacitors to the best-fit application

Notes: 1) Higher voltage/current under request.
2) Contact factory for voltages above 7.2 kV.

MVW3000 Integral VSD

Includes all components that are required for a MV VSD standard system design on a small footprint.

Standard Arrangement and Features

Approx. Dimensions 3,900 (W) x 2,210 (H) x 1,100 (D) (mm)
- Switchgear & transformer section: 1,800mm
- Power cells section: 1,500 mm
- Control & filter section: 600 mm

Input Switchgear
- Load break switch fuse with vacuum contactor - for up to 6.9 kV, 3 Ph, 60 Hz input
- Mechanical interlocking to prevent access to HV section untill switch is in OFF position
- Bottom cable entry or top cable entry

Phase Shifting Transformer 18-Pulse as Standard
- With surge arresters on primary HV side
- Impedance matched secondary windings to minimize line side harmonics & reduce losses
- Winding temperature monitoring (Pt-100 in windings) available via 8 channel temperature monitor

Assembly Features
- Cable connection arrangement top entry/top exit or bottom entry/bottom exit
- Kirk-key locked enclosure sections for switchgear, transformer and VFD

Notes: 1) Dimensions for the standard product at voltages up to 6.9 kV and currents up to 140 A. Dimensions for higher ratings under request
2) Existing or separate input switchgear can also be used.

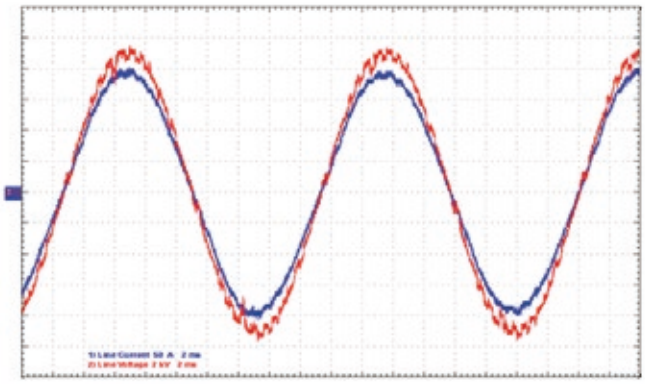
Specification Table

Product model	Rated voltage (V)	Output current (A)[1)]	Motor power reference	
			HP	kW
MVW3000 0040 T2300	2,300 V	40	150	132
MVW3000 0070 T2300		70	300	250
MVW3000 0100 T2300		100	450	355
MVW3000 0140 T2300		140	600	500
MVW3000 0200 T2300		200	900	710
MVW3000 0040 T3300	3,300 V	40	250	160
MVW3000 0070 T3300		70	450	355
MVW3000 0100 T3300		100	600	500
MVW3000 0140 T3300		140	900	710
MVW3000 0200 T3300		200	1,250	1,000
MVW3000 0040 T4160	4,160 V	40	300	200
MVW3000 0070 T4160		70	500	425
MVW3000 0100 T4160		100	800	600
MVW3000 0140 T4160		140	1,000	850
MVW3000 0200 T4160		200	1,500	1,120
MVW3000 0040 T5500	5,500 V	40	400	315
MVW3000 0070 T5500		70	700	560
MVW3000 0100 T5500		100	1,000	800
MVW3000 0140 T5500		140	1,500	1,120
MVW3000 0200 T5500		200	2,000	1,600
MVW3000 0040 T6300	6,000~6,300 V	40	450	355
MVW3000 0070 T6300		70	800	630
MVW3000 0100 T6300		100	1,000	900
MVW3000 0140 T6300		140	1,750	1,250
MVW3000 0200 T6300		200	2,250	1,800
MVW3000 0040 T6900	6,600~6,900 V	40	500	400
MVW3000 0070 T6900		70	900	710
MVW3000 0100 T6900		100	1,250	1,000
MVW3000 0140 T6900		140	1,750	1,400
MVW3000 0200 T6900		200	2,500	2,000
MVW3000 0040 T7200	7,200 V	40	500	400
MVW3000 0070 T7200		70	900	710
MVW3000 0100 T7200		100	1,250	1,000
MVW3000 0140 T7200		140	2,000	1,400
MVW3000 0200 T7200		200	2,500	2,000
MVW3000 0040 T8000	8,000 V	40	600	450
MVW3000 0070 T8000		70	1,000	800
MVW3000 0100 T8000		100	1,500	1,120
MVW3000 0140 T8000		140	2,000	1,600
MVW3000 0200 T8000		200	3,000	2,250

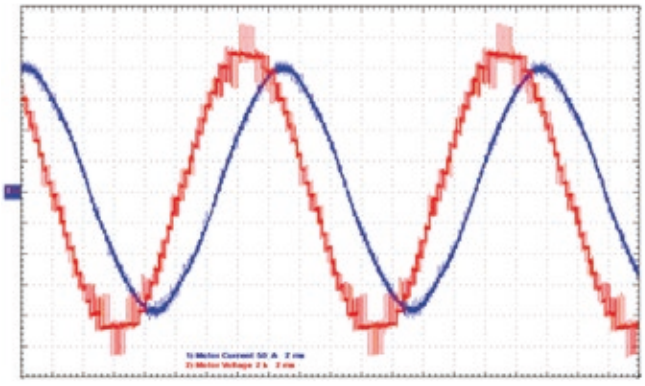
Notes: 1) Overload capacity: ND = Normal duty: 115% during 60 seconds.

Waveforms

Input Current and Input Voltage



Motor Current and Motor Voltage



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Cod: 50070340 | Rev: 00 | Date (m/y): 12/2016