

MVW3000 - MEDIUM VOLTAGE VARIABLE SPEED DRIVE

The efficient and safe choice to protect
medium voltage motors



Motors | Automation | Energy | Transmission & Distribution | Coatings



MW3000 - Medium Voltage Variable Speed Drive

Summary

Introduction	04
Features	06
WEG Programming Suite (WPS)	08
Fieldbus Communication	08
User-friendly HMI	09
Testing Facilities	10
System Customised Solutions	11
Selection Guide	12
Waveforms	12
Models	13
Technical Data	18



THE EFFICIENT AND SAFE CHOICE TO PROTECT MEDIUM VOLTAGE MOTORS

WEG introduces the new MVW3000 Medium Voltage Variable Speed Drive. With an easy-to-use HMI, which follows the same programming concept used by the LV line, the MVW3000 is perfect for a wide range of industrial applications that require speed variation, such as compressors, pumps, fans, conveyor belts and mills.

For new installations or retrofits, the MVW3000 is an efficient and robust solution to control the speed and streamline the process, reducing energy consumption and maintenance costs.



MVW3000 is a Voltage Source Inverter (VSI) based on the multi-level Cascaded H-Bridge (CHB) topology. The almost sinusoidal output waveforms produced by the drive allow the use of this VSD with new or existing synchronous and induction motors without demanding especial insulation.



EFFICIENCY



RELIABILITY



SAFETY

Features

- Motor voltage: 1.15 kV to 13.8 kV
- Motor current: up to 1,140 A¹⁾
- Input voltage: 1.15 kV...13.8 kV
- High-efficiency air cooling
- User-friendly interface
- Arc detector system on transformer and cells cabinet as standard
- Low harmonic content, according to IEEE 519, IEC 61800-3 and G5/4-1
- Fully integrated solution
- High input power factor (> 0.95)
- Easy maintenance
- Power cells with long life plastic film capacitors
- Output waveform close to a sine wave

Note: 1) Up to 600 A for motor voltage above 6.9 kV.



It includes all the parts of a medium voltage speed variation system in a single and compact cabinet.

Incoming Protection

- Three-phase switch disconnecter with fuses and vacuum contactor - for input voltage up to 6.9 kV
- Mechanical interlock to prevent access to the MV compartment with the switch in the ON position
- Cable input through the bottom or top

Phase-Shifting Transformer

- With lightning arrester on the high-voltage side
- Impedance matching of the windings on the secondary winding to optimize the harmonics and reduce losses on the line side
- Winding temperature monitor (Pt-100 on the windings) with up to eight channels

Note: 1) You can use the existing cubicle or one separate from the inverter. The incoming protection is an optional item. Depending on the rated power, the switchgear can be positioned in the transformer enclosure.

Features

Power cells developed with WEG proven technology, over thirty years of experience with AC drives.



Power cells

Control

Withdrawable power cells. Clamp connection makes installation and maintenance fast and easy.

Optionally, cells can be provided with bypass function. In case of problems, the faulty cell will be removed from the circuit enabling the operation to continue. This is performed automatically by the drive.



High availability with N+1 redundancy, rated motor voltage even with a faulty power cell per phase.

Mechanical Characteristics

- Small footprint
- IP21, IP41 and IP42 cabinet
- Mechanical interlocking system for all compartments
- Top/bottom line cable entry
- Bottom motor cable entry
- Efficient air-cooling system with optional redundant fans

Control Column

- 10" touch screen HMI
- Indoor cabinet lights
- Fibre optic for noise immunity and galvanic isolation
- Conformal coating on PCBs as standard

WEG Programming Suite (WPS)

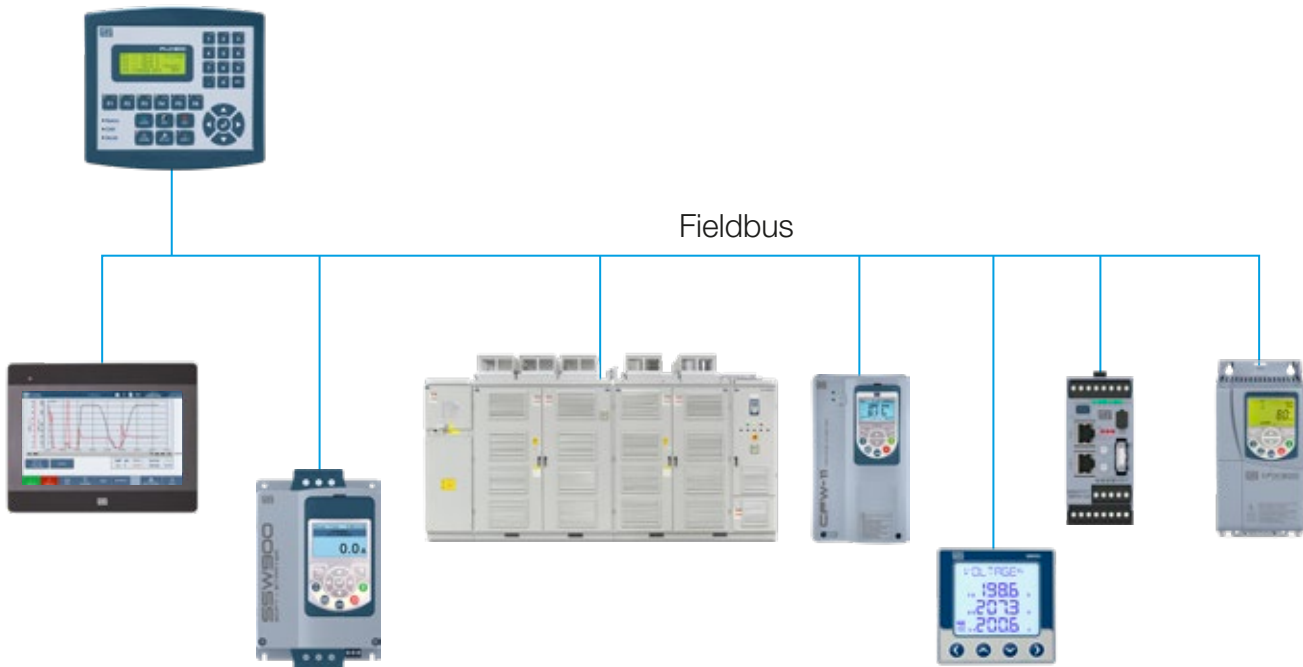
Freeware software (available at WEG website) for configuration, monitoring and diagnostic of MVW3000.

- Runs on MS Windows environment
- RS232 or RS485 serial communication
- Online and offline programming
- Graphical monitoring of drive parameters



Fieldbus Communication

MVW3000 supports several industrial network protocols, such as Modbus-RTU, DeviceNet, Profibus, CANopen and EtherNet/IP. Others fieldbusses are available under request.



User-friendly HMI

A door mounted 10-inch touch screen HMI offers great flexibility to the operator allowing easy access to user process data in real-time. Intuitive operation makes equipment parameterization, status reading and alarm/fault logging simple tasks.

It also supports several languages, multiple protection levels against unauthorized access, graphic and plotting functions.



Great flexibility to the operator



Intuitive operation



Support to several languages



Graphic and plotting functions



Multiple levels for protection against unauthorized access



Testing Facilities

Every equipment manufactured is tested in our labs. This guarantees the performance and saves time during commissioning and start-up.

The tests of WEG MV VSD will be conducted in accordance with the following standards: IEC 60146-1, 61800-3, 61800-4 and 61800-5.

- Routine tests: Visual Inspection, insulation, dielectric voltage-withstand, light load, checking of auxiliary devices, checking the control equipment properties and checking the protective devices.
- Type tests: paint plan, rated load, temperature rise and efficiency / power losses.
- Especial tests: power factor, overload / overcurrent capability, harmonic distortion and ground fault test.

Routine tests, type tests and combined/string tests (VSD + Motor) can be performed in the same manufacturing plant. Please consult WEG for further information.



WEG Laboratories – Load tests in our facilities

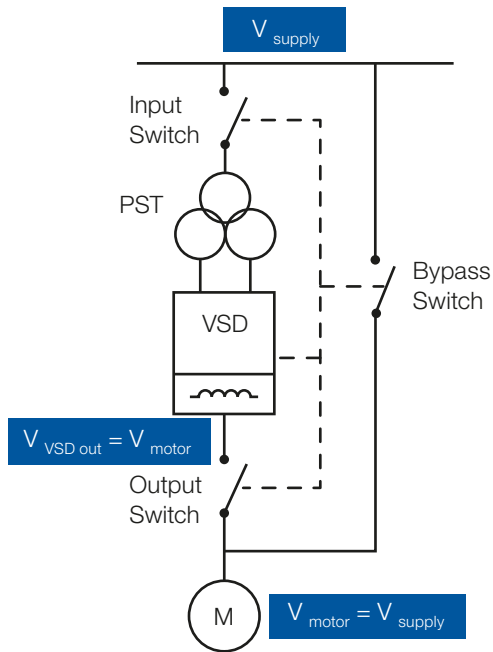


Combined test (MV Incoming Switchgear + Phase-shifting Transformer + MV VSD + MV Motor).

System Customised Solutions

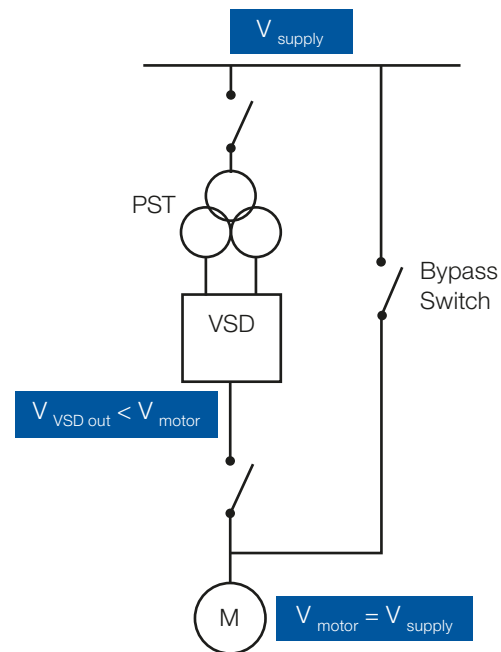
Full Voltage Starting and Synchronous Bypass

If speed variation is not required all the time, this arrangement can be used. With this topology it is possible to start and bypass several motors to the grid.



Reduced Voltage Starting and Standard Bypass

For those applications where only motor start-up is required, a VSD with lower rated voltage can be used.



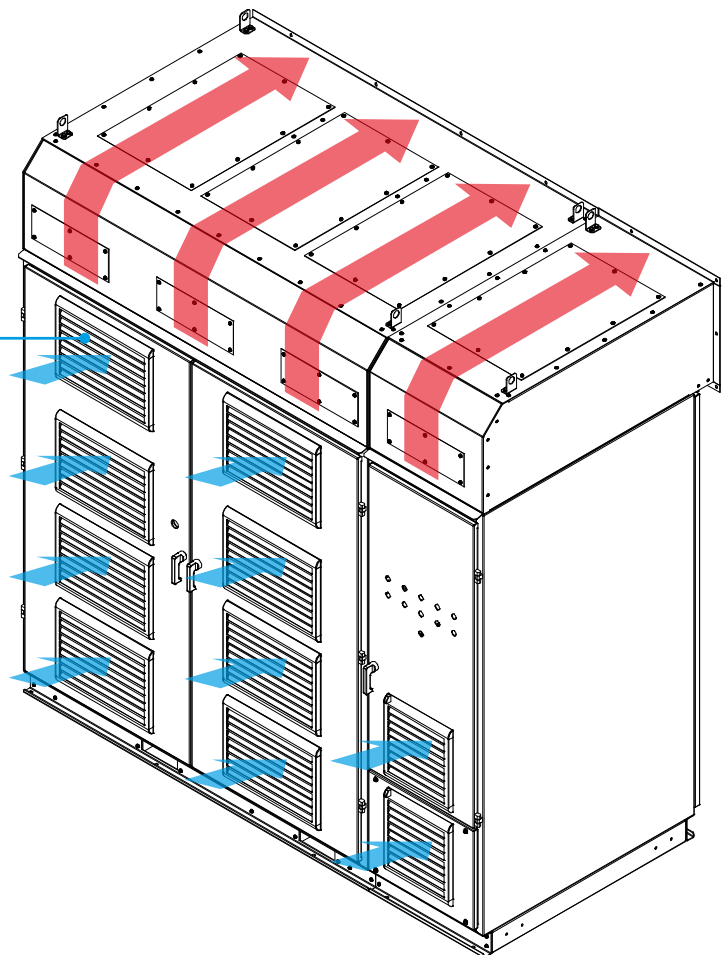
Air-duct channel to exhaust hot air to the outside of electrical room (no air-conditioning required)



Output earth switch



Standalone Input Switchgear



Selection Guide

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12

1 - Product line

2 - Rated current

40 A	A0040
50 A	A0050
60 A	A0060
70 A	A0070
80 A	A0080
90 A	A0090
100 A	A0100
110 A	A0110
125 A	A0125
140 A	A0140
160 A	A0160
180 A	A0180
200 A	A0200
225 A	A0225
265 A	A0265
310 A	A0310
340 A	A0340
400 A	A0400
450 A	A0450
500 A	A0500
550 A	A0550
600 A	A0600
760 A	A0760
855 A	A0855
950 A	A0950
1,045 A	A1045
1,140 A	A1140

3 - Motor voltage

2,300 V	V023
3,300 V	V033
4,160 V	V041
5,500 V	V055
6,300 V	V063
6,900 V	V069
10,000 V	V100
11,000 V	V110
13,200 V	V132
13,800 V	V138

4 - Phase-shifting transformer

Aluminum - 50 Hz	T5A
Aluminum - 60 Hz	T6A
Copper - 50 Hz	T5C
Copper - 60 Hz	T6C

5 - Input voltage

2,300 V	023
3,300 V	033
4,160 V	041
5,500 V	055
6,000 V	060
6,300 V	063
6,600 V	066
6,900 V	069
10,000 V	100
11,000 V	110
13,200 V	132
13,800 V	138

6 - Language

English	E
Spanish	S
Portuguese	P
French	F
Russian	R

7 - Cooling

Air	A
-----	---

8 - Incoming protection

Not applicable	N
Included	S

9 - Capacitor

Plastic film	F
--------------	---

10 - Cell type

Standard	S
With bypass	B
Redundant cell	R

11 - Rectifier

Diode	D
-------	---

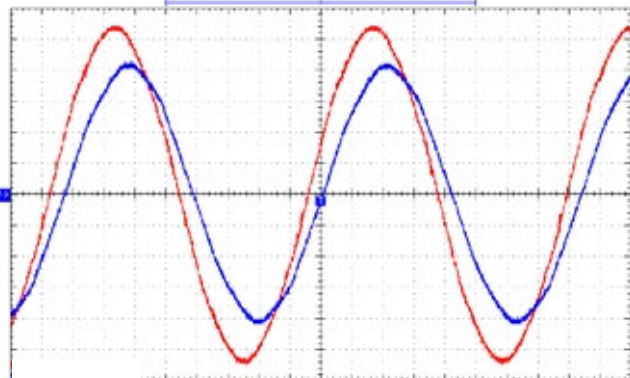
12 - Output filter

Not applicable	N
Type 1	F1
Type 2	F2

Note: 1) Overload capacity: ND = Normal Duty: 115% for 60 seconds every 10 minutes.

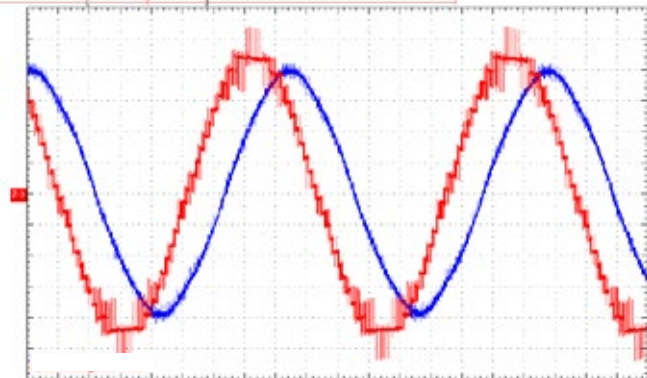
Waveforms

Input Voltage and Current



- Voltage
- Current
- High input power factor
- Negligible harmonic current content

Motor Voltage and Current



- Voltage
- Current
- Almost sinusoidal motor voltage
- No pulse torque

Models

MVW3000 model	Normal Duty (ND ¹)			Qty	Standard rectifier	Dimensions
	A	hp	kW			
2,3 kV motor voltage				Cells/phase	#-pulse	W x H x D (mm)
MVW3000 A0040 V023 TxA 072	40	170	130	2	18	2400 x 2405 x 1220
MVW3000 A0050 V023 TxA 072	50	220	165	2	18	2400 x 2405 x 1220
MVW3000 A0060 V023 TxA 072	60	265	200	2	18	2400 x 2405 x 1220
MVW3000 A0070 V023 TxA 072	70	315	235	2	18	2400 x 2405 x 1220
MVW3000 A0080 V023 TxA 072	80	355	265	2	18	2400 x 2405 x 1220
MVW3000 A0090 V023 TxA 072	90	400	300	2	18	2400 x 2405 x 1220
MVW3000 A0100 V023 TxA 072	100	445	335	2	18	2400 x 2405 x 1220
MVW3000 A0110 V023 TxA 072	110	485	365	2	18	2400 x 2405 x 1220
MVW3000 A0125 V023 TxA 072	125	560	420	2	18	2400 x 2405 x 1220
MVW3000 A0140 V023 TxA 072	140	630	470	2	18	2400 x 2405 x 1220
MVW3000 A0160 V023 TxA 072	160	715	535	2	18	2400 x 2405 x 1220
MVW3000 A0180 V023 TxA 072	180	810	605	2	18	2400 x 2405 x 1220
MVW3000 A0200 V023 TxA 072	200	895	670	2	18	2400 x 2405 x 1220
MVW3000 A0225 V023 TxA 072	225	1,010	755	2	18	2600 x 2405 x 1220
MVW3000 A0265 V023 TxA 072	265	1,190	890	2	18	2600 x 2405 x 1220
MVW3000 A0310 V023 TxA 072	310	1,390	1,040	2	18	2600 x 2405 x 1220
MVW3000 A0340 V023 TxA 072	340	1,525	1,140	2	18	2600 x 2405 x 1220
MVW3000 A0400 V023 TxA 072	400	1,795	1,340	2	18	3900 x 2640 x 1620
MVW3000 A0450 V023 TxA 072	450	2,020	1,510	2	18	3900 x 2640 x 1620
MVW3000 A0500 V023 TxA 072	500	2,250	1,680	2	18	4100 x 2640 x 1620
MVW3000 A0550 V023 TxA 072	550	2,470	1,845	2	18	4100 x 2640 x 1620
MVW3000 A0600 V023 TxA 072	600	2,700	2,015	2	18	4100 x 2640 x 1620
MVW3000 A0760 V023 TxA 072	760	3,425	2,555	4	18	6350 x 2640 x 1620
MVW3000 A0855 V023 TxA 072	855	3,850	2,875	4	18	6350 x 2640 x 1620
MVW3000 A0950 V023 TxA 072	950	4,280	3,195	4	18	6350 x 2640 x 1620
MVW3000 A1045 V023 TxA 072	1,045	4,710	3,515	4	18	6350 x 2640 x 1620
MVW3000 A1140 V023 TxA 072	1,140	5,135	3,835	4	18	6350 x 2640 x 1620

MVW3000 model	Normal Duty (ND ¹)			Qty	Standard rectifier	Dimensions
	A	hp	kW			
3,3 kV motor voltage				Cells/phase	#-pulse	W x H x D (mm)
MVW3000 A0040 V033 TxA 072	40	250	190	3	18	3900 x 2405 x 1220
MVW3000 A0050 V033 TxA 072	50	320	240	3	18	3900 x 2405 x 1220
MVW3000 A0060 V033 TxA 072	60	380	285	3	18	3900 x 2405 x 1220
MVW3000 A0070 V033 TxA 072	70	445	335	3	18	3900 x 2405 x 1220
MVW3000 A0080 V033 TxA 072	80	515	385	3	18	3900 x 2405 x 1220
MVW3000 A0090 V033 TxA 072	90	575	430	3	18	3900 x 2405 x 1220
MVW3000 A0100 V033 TxA 072	100	640	480	3	18	3900 x 2405 x 1220
MVW3000 A0110 V033 TxA 072	110	710	530	3	18	3900 x 2405 x 1220
MVW3000 A0125 V033 TxA 072	125	800	600	3	18	3900 x 2405 x 1220
MVW3000 A0140 V033 TxA 072	140	900	675	3	18	3900 x 2405 x 1220
MVW3000 A0160 V033 TxA 072	160	1,030	770	3	18	3900 x 2405 x 1220
MVW3000 A0180 V033 TxA 072	180	1,155	865	3	18	3900 x 2405 x 1220
MVW3000 A0200 V033 TxA 072	200	1,285	960	3	18	3900 x 2405 x 1220
MVW3000 A0225 V033 TxA 072	225	1,450	1,085	3	18	4400 x 2405 x 1320
MVW3000 A0265 V033 TxA 072	265	1,705	1,275	3	18	4400 x 2405 x 1320
MVW3000 A0310 V033 TxA 072	310	2,000	1,495	3	18	4400 x 2405 x 1320
MVW3000 A0340 V033 TxA 072	340	2,195	1,640	3	18	4400 x 2405 x 1320
MVW3000 A0400 V033 TxA 072	400	2,580	1,925	3	18	4650 x 2640 x 1620
MVW3000 A0450 V033 TxA 072	450	2,905	2,170	3	18	4650 x 2640 x 1620
MVW3000 A0500 V033 TxA 072	500	3,230	2,410	3	18	4950 x 2640 x 1620
MVW3000 A0550 V033 TxA 072	550	3,550	2,650	3	18	4950 x 2640 x 1620
MVW3000 A0600 V033 TxA 072	600	3,870	2,890	3	18	4950 x 2640 x 1620
MVW3000 A0760 V033 TxA 072	760	4,910	3,666	6	18	7400 x 2640 x 1620
MVW3000 A0855 V033 TxA 072	855	5,525	4,125	6	18	7400 x 2640 x 1620
MVW3000 A0950 V033 TxA 072	950	6,140	4,580	6	18	7900 x 2640 x 1620
MVW3000 A1045 V033 TxA 072	1,045	6,755	5,040	6	18	7900 x 2640 x 1620
MVW3000 A1140 V033 TxA 072	1,140	7,370	5,500	6	18	7900 x 2640 x 1620

Note: 1) Normal Duty (ND) overload capacity: 115% for 60 seconds every 10 minutes.

Motor power is for reference only and it is based on 4-pole motor with 0.87 power factor and 97% efficiency at full load.

The ratings are valid for 40 °C ambient temperature and up to 1000 masl.

Specifications subject to change without notice.

Models

MVW3000 model	Normal Duty (ND ¹)			Qty	Standard rectifier	Dimensions
	A	hp	kW			
4,16 kV motor voltage				Cells/phase	#-pulse	W x H x D (mm)
MVW3000 A0040 V041 TxA 072	40	320	240	4	24	3900 x 2405 x 1220
MVW3000 A0050 V041 TxA 072	50	400	300	4	24	3900 x 2405 x 1220
MVW3000 A0060 V041 TxA 072	60	480	360	4	24	3900 x 2405 x 1220
MVW3000 A0070 V041 TxA 072	70	565	425	4	24	3900 x 2405 x 1220
MVW3000 A0080 V041 TxA 072	80	650	485	4	24	3900 x 2405 x 1220
MVW3000 A0090 V041 TxA 072	90	730	545	4	24	3900 x 2405 x 1220
MVW3000 A0100 V041 TxA 072	100	810	605	4	24	3900 x 2405 x 1220
MVW3000 A0110 V041 TxA 072	110	890	665	4	24	3900 x 2405 x 1220
MVW3000 A0125 V041 TxA 072	125	1,015	760	4	24	3900 x 2405 x 1220
MVW3000 A0140 V041 TxA 072	140	1,135	850	4	24	3900 x 2405 x 1220
MVW3000 A0160 V041 TxA 072	160	1,300	970	4	24	3900 x 2405 x 1220
MVW3000 A0180 V041 TxA 072	180	1,460	1,090	4	24	3900 x 2405 x 1220
MVW3000 A0200 V041 TxA 072	200	1,625	1,215	4	24	3900 x 2405 x 1220
MVW3000 A0225 V041 TxA 072	225	1,825	1,365	4	24	4200 x 2405 x 1320
MVW3000 A0265 V041 TxA 072	265	2,155	1,610	4	24	4200 x 2405 x 1320
MVW3000 A0310 V041 TxA 072	310	2,520	1,880	4	24	4200 x 2405 x 1320
MVW3000 A0340 V041 TxA 072	340	2,765	2,065	4	24	4200 x 2405 x 1320
MVW3000 A0400 V041 TxA 072	400	3,255	2,430	4	24	5250 x 2640 x 1620
MVW3000 A0450 V041 TxA 072	450	3,665	2,735	4	24	5250 x 2640 x 1620
MVW3000 A0500 V041 TxA 072	500	4,075	3,040	4	24	5550 x 2640 x 1620
MVW3000 A0550 V041 TxA 072	550	4,475	3,340	4	24	5550 x 2640 x 1620
MVW3000 A0600 V041 TxA 072	600	4,885	3,645	4	24	5550 x 2640 x 1620
MVW3000 A0760 V041 TxA 072	760	6,190	4,620	8	24	10500 x 2640 x 1620
MVW3000 A0855 V041 TxA 072	855	6,970	5,200	8	24	10500 x 2640 x 1620
MVW3000 A0950 V041 TxA 072	950	7,740	5,780	8	24	11100 x 2640 x 1620
MVW3000 A1045 V041 TxA 072	1,045	8,515	6,355	8	24	11100 x 2640 x 1620
MVW3000 A1140 V041 TxA 072	1,140	9,290	6,930	8	24	11100 x 2640 x 1620

MVW3000 model	Normal Duty (ND ¹)			Qty	Standard rectifier	Dimensions
	A	hp	kW			
5,5 kV motor voltage				Cells/phase	#-pulse	W x H x D (mm)
MVW3000 A0040 V055 TxA 072	40	425	320	5	30	3900 x 2405 x 1220
MVW3000 A0050 V055 TxA 072	50	535	400	5	30	3900 x 2405 x 1220
MVW3000 A0060 V055 TxA 072	60	640	480	5	30	3900 x 2405 x 1220
MVW3000 A0070 V055 TxA 072	70	750	560	5	30	3900 x 2405 x 1220
MVW3000 A0080 V055 TxA 072	80	855	640	5	30	3900 x 2405 x 1220
MVW3000 A0090 V055 TxA 072	90	965	720	5	30	3900 x 2405 x 1220
MVW3000 A0100 V055 TxA 072	100	1,070	800	5	30	3900 x 2405 x 1220
MVW3000 A0110 V055 TxA 072	110	1,175	880	5	30	3900 x 2405 x 1220
MVW3000 A0125 V055 TxA 072	125	1,340	1,000	5	30	3900 x 2405 x 1220
MVW3000 A0140 V055 TxA 072	140	1,505	1,125	5	30	3900 x 2405 x 1220
MVW3000 A0160 V055 TxA 072	160	1,720	1,285	5	30	3900 x 2405 x 1220
MVW3000 A0180 V055 TxA 072	180	1,935	1,445	5	30	3900 x 2405 x 1220
MVW3000 A0200 V055 TxA 072	200	2,150	1,605	5	30	3900 x 2405 x 1220
MVW3000 A0225 V055 TxA 072	225	2,415	1,805	5	30	4600 x 2405 x 1320
MVW3000 A0265 V055 TxA 072	265	2,855	2,130	5	30	4600 x 2405 x 1320
MVW3000 A0310 V055 TxA 072	310	3,335	2,490	5	30	4600 x 2405 x 1320
MVW3000 A0340 V055 TxA 072	340	3,655	2,730	5	30	4600 x 2405 x 1320
MVW3000 A0400 V055 TxA 072	400	4,305	3,215	5	30	5900 x 2640 x 1620
MVW3000 A0450 V055 TxA 072	450	4,845	3,615	5	30	5900 x 2640 x 1620
MVW3000 A0500 V055 TxA 072	500	5,380	4,015	5	30	5900 x 2640 x 1620
MVW3000 A0550 V055 TxA 072	550	5,920	4,420	5	30	5900 x 2640 x 1620
MVW3000 A0600 V055 TxA 072	600	6,460	4,820	5	30	5900 x 2640 x 1620
MVW3000 A0760 V055 TxA 072	760	8,190	6,110	10	30	12500 x 2640 x 1620
MVW3000 A0855 V055 TxA 072	855	9,210	6,875	10	30	12500 x 2640 x 1620
MVW3000 A0950 V055 TxA 072	950	10,235	7,635	10	30	12500 x 2640 x 1620
MVW3000 A1045 V055 TxA 072	1,045	11,255	8,400	10	30	12500 x 2640 x 1620
MVW3000 A1140 V055 TxA 072	1,140	12,280	9,165	10	30	12500 x 2640 x 1620

Note: 1) Normal Duty (ND) overload capacity: 115% for 60 seconds every 10 minutes.

Motor power is for reference only and it is based on 4-pole motor with 0.87 power factor and 97% efficiency at full load.

The ratings are valid for 40 °C ambient temperature and up to 1000 masl.

Specifications subject to change without notice.

Models

MVW3000 model	Normal Duty (ND ¹)			Qty	Standard rectifier	Dimensions
	A	hp	kW			
6,3 kV motor voltage				Cells/phase	#-pulse	W x H x D (mm)
MVW3000 A0040 V063 TxA 072	40	485	365	6	36	3900 x 2405 x 1220
MVW3000 A0050 V063 TxA 072	50	615	460	6	36	3900 x 2405 x 1220
MVW3000 A0060 V063 TxA 072	60	735	550	6	36	3900 x 2405 x 1220
MVW3000 A0070 V063 TxA 072	70	855	640	6	36	3900 x 2405 x 1220
MVW3000 A0080 V063 TxA 072	80	985	735	6	36	3900 x 2405 x 1220
MVW3000 A0090 V063 TxA 072	90	1,105	825	6	36	3900 x 2405 x 1220
MVW3000 A0100 V063 TxA 072	100	1,230	920	6	36	3900 x 2405 x 1220
MVW3000 A0110 V063 TxA 072	110	1,350	1,010	6	36	3900 x 2405 x 1220
MVW3000 A0125 V063 TxA 072	125	1,540	1,150	6	36	3900 x 2405 x 1220
MVW3000 A0140 V063 TxA 072	140	1,720	1,285	6	36	3900 x 2405 x 1220
MVW3000 A0160 V063 TxA 072	160	1,970	1,470	6	36	3900 x 2405 x 1220
MVW3000 A0180 V063 TxA 072	180	2,215	1,655	6	36	3900 x 2405 x 1220
MVW3000 A0200 V063 TxA 072	200	2,465	1,840	6	36	3900 x 2405 x 1220
MVW3000 A0225 V063 TxA 072	225	2,770	2,070	6	36	4600 x 2405 x 1320
MVW3000 A0265 V063 TxA 072	265	3,270	2,440	6	36	4600 x 2405 x 1320
MVW3000 A0310 V063 TxA 072	310	3,820	2,850	6	36	4800 x 2405 x 1320
MVW3000 A0340 V063 TxA 072	340	4,195	3,130	6	36	4800 x 2405 x 1320
MVW3000 A0400 V063 TxA 072	400	4,930	3,680	6	36	6250 x 2640 x 1620
MVW3000 A0450 V063 TxA 072	450	5,545	4,140	6	36	6250 x 2640 x 1620
MVW3000 A0500 V063 TxA 072	500	6,165	4,600	6	36	6750 x 2640 x 1620
MVW3000 A0550 V063 TxA 072	550	6,780	5,060	6	36	6750 x 2640 x 1620
MVW3000 A0600 V063 TxA 072	600	7,405	5,525	6	36	6750 x 2640 x 1620
MVW3000 A0760 V063 TxA 072	760	9,380	7,000	12	36	12500 x 2640 x 1620
MVW3000 A0855 V063 TxA 072	855	10,550	7,875	12	36	12500 x 2640 x 1620
MVW3000 A0950 V063 TxA 072	950	11,720	8,750	12	36	12500 x 2640 x 1620
MVW3000 A1045 V063 TxA 072	1,045	12,895	9,625	12	36	12500 x 2640 x 1620
MVW3000 A1140 V063 TxA 072	1,140	14,065	10,500	12	36	12500 x 2640 x 1620

MVW3000 model	Normal Duty (ND ¹)			Qty	Standard rectifier	Dimensions
	A	hp	kW			
6,9 kV motor voltage				Cells/phase	#-pulse	W x H x D (mm)
MVW3000 A0040 V069 TxA 072	40	535	400	6	36	3900 x 2405 x 1220
MVW3000 A0050 V069 TxA 072	50	670	500	6	36	3900 x 2405 x 1220
MVW3000 A0060 V069 TxA 072	60	810	605	6	36	3900 x 2405 x 1220
MVW3000 A0070 V069 TxA 072	70	945	705	6	36	3900 x 2405 x 1220
MVW3000 A0080 V069 TxA 072	80	1,075	805	6	36	3900 x 2405 x 1220
MVW3000 A0090 V069 TxA 072	90	1,210	905	6	36	3900 x 2405 x 1220
MVW3000 A0100 V069 TxA 072	100	1,345	1,005	6	36	3900 x 2405 x 1220
MVW3000 A0110 V069 TxA 072	110	1,480	1,105	6	36	3900 x 2405 x 1220
MVW3000 A0125 V069 TxA 072	125	1,685	1,260	6	36	3900 x 2405 x 1220
MVW3000 A0140 V069 TxA 072	140	1,890	1,410	6	36	3900 x 2405 x 1220
MVW3000 A0160 V069 TxA 072	160	2,155	1,610	6	36	3900 x 2405 x 1220
MVW3000 A0180 V069 TxA 072	180	2,430	1,815	6	36	3900 x 2405 x 1220
MVW3000 A0200 V069 TxA 072	200	2,700	2,015	6	36	3900 x 2405 x 1220
MVW3000 A0225 V069 TxA 072	225	3,035	2,265	6	36	4600 x 2405 x 1320
MVW3000 A0265 V069 TxA 072	265	3,575	2,670	6	36	4600 x 2405 x 1320
MVW3000 A0310 V069 TxA 072	310	4,185	3,125	6	36	4800 x 2405 x 1320
MVW3000 A0340 V069 TxA 072	340	4,590	3,425	6	36	4800 x 2405 x 1320
MVW3000 A0400 V069 TxA 072	400	5,400	4,030	6	36	6250 x 2640 x 1620
MVW3000 A0450 V069 TxA 072	450	6,075	4,535	6	36	6250 x 2640 x 1620
MVW3000 A0500 V069 TxA 072	500	6,755	5,040	6	36	6750 x 2640 x 1620
MVW3000 A0550 V069 TxA 072	550	7,430	5,545	6	36	6750 x 2640 x 1620
MVW3000 A0600 V069 TxA 072	600	8,105	6,050	6	36	6750 x 2640 x 1620
MVW3000 A0760 V069 TxA 072	760	10,270	7,665	12	36	12500 x 2640 x 1620
MVW3000 A0855 V069 TxA 072	855	11,555	8,625	12	36	12500 x 2640 x 1620
MVW3000 A0950 V069 TxA 072	950	12,840	9,580	12	36	12500 x 2640 x 1620
MVW3000 A1045 V069 TxA 072	1,045	14,120	10,540	12	36	12500 x 2640 x 1620
MVW3000 A1140 V069 TxA 072	1,140	15,400	11,500	12	36	12500 x 2640 x 1620

Note: 1) Normal Duty (ND) overload capacity: 115% for 60 seconds every 10 minutes.
 Motor power is for reference only and it is based on 4-pole motor with 0.87 power factor and 97% efficiency at full load.
 The ratings are valid for 40 °C ambient temperature and up to 1000 masl.
 Specifications subject to change without notice.

Models

MVW3000 model	Normal Duty (ND ¹)			Qty	Standard rectifier	Dimensions
	10 kV motor voltage	A	hp			
MVW3000 A0040 V100 TxA 150	40	775	580	9	54	5600 x 2405 x 1320
MVW3000 A0050 V100 TxA 150	50	975	730	9	54	5600 x 2405 x 1320
MVW3000 A0060 V100 TxA 150	60	1,170	875	9	54	5600 x 2405 x 1320
MVW3000 A0070 V100 TxA 150	70	1,365	1,020	9	54	5600 x 2405 x 1320
MVW3000 A0080 V100 TxA 150	80	1,560	1,165	9	54	5800 x 2405 x 1320
MVW3000 A0090 V100 TxA 150	90	1,760	1,315	9	54	5800 x 2405 x 1320
MVW3000 A0100 V100 TxA 150	100	1,955	1,460	9	54	5800 x 2405 x 1320
MVW3000 A0110 V100 TxA 150	110	2,150	1,605	9	54	5800 x 2405 x 1320
MVW3000 A0125 V100 TxA 150	125	2,445	1,825	9	54	5800 x 2405 x 1320
MVW3000 A0140 V100 TxA 150	140	2,740	2,045	9	54	5800 x 2405 x 1320
MVW3000 A0160 V100 TxA 150	160	3,130	2,335	9	54	6000 x 2405 x 1320
MVW3000 A0180 V100 TxA 150	180	3,525	2,630	9	54	6000 x 2405 x 1320
MVW3000 A0200 V100 TxA 150	200	3,910	2,920	9	54	6000 x 2405 x 1320
MVW3000 A0225 V100 TxA 150	225	4,400	3,285	9	54	8000 x 2405 x 1320
MVW3000 A0265 V100 TxA 150	265	5,185	3,870	9	54	8000 x 2405 x 1320
MVW3000 A0310 V100 TxA 150	310	6,070	4,530	9	54	8400 x 2405 x 1320
MVW3000 A0340 V100 TxA 150	340	6,655	4,965	9	54	8400 x 2405 x 1320
MVW3000 A0400 V100 TxA 150	400	7,835	5,845	9	54	11200 x 2640 x 1620
MVW3000 A0450 V100 TxA 150	450	8,810	6,575	9	54	11200 x 2640 x 1620
MVW3000 A0500 V100 TxA 150	500	9,790	7,305	9	54	11200 x 2640 x 1620
MVW3000 A0550 V100 TxA 150	550	10,770	8,035	9	54	11200 x 2640 x 1620
MVW3000 A0600 V100 TxA 150	600	11,755	8,770	9	54	11200 x 2640 x 1620

MVW3000 model	Normal Duty (ND ¹)			Qty	Standard rectifier	Dimensions
	11 kV motor voltage	A	hp			
MVW3000 A0040 V110 TxA 150	40	855	640	10	60	5600 x 2405 x 1320
MVW3000 A0050 V110 TxA 150	50	1,070	800	10	60	5600 x 2405 x 1320
MVW3000 A0060 V110 TxA 150	60	1,285	960	10	60	5600 x 2405 x 1320
MVW3000 A0070 V110 TxA 150	70	1,505	1,125	10	60	5600 x 2405 x 1320
MVW3000 A0080 V110 TxA 150	80	1,720	1,285	10	60	5800 x 2405 x 1320
MVW3000 A0090 V110 TxA 150	90	1,935	1,445	10	60	5800 x 2405 x 1320
MVW3000 A0100 V110 TxA 150	100	2,150	1,605	10	60	5800 x 2405 x 1320
MVW3000 A0110 V110 TxA 150	110	2,365	1,765	10	60	5800 x 2405 x 1320
MVW3000 A0125 V110 TxA 150	125	2,685	2,005	10	60	5800 x 2405 x 1320
MVW3000 A0140 V110 TxA 150	140	3,015	2,250	10	60	5800 x 2405 x 1320
MVW3000 A0160 V110 TxA 150	160	3,445	2,570	10	60	6000 x 2405 x 1320
MVW3000 A0180 V110 TxA 150	180	3,870	2,890	10	60	6000 x 2405 x 1320
MVW3000 A0200 V110 TxA 150	200	4,305	3,215	10	60	6000 x 2405 x 1320
MVW3000 A0225 V110 TxA 150	225	4,845	3,615	10	60	8400 x 2405 x 1320
MVW3000 A0265 V110 TxA 150	265	5,710	4,260	10	60	8400 x 2405 x 1320
MVW3000 A0310 V110 TxA 150	310	6,675	4,980	10	60	8800 x 2405 x 1320
MVW3000 A0340 V110 TxA 150	340	7,325	5,465	10	60	8800 x 2405 x 1320
MVW3000 A0400 V110 TxA 150	400	8,615	6,430	10	60	11800 x 2640 x 1620
MVW3000 A0450 V110 TxA 150	450	9,695	7,235	10	60	11800 x 2640 x 1620
MVW3000 A0500 V110 TxA 150	500	10,770	8,035	10	60	11800 x 2640 x 1620
MVW3000 A0550 V110 TxA 150	550	11,845	8,840	10	60	11800 x 2640 x 1620
MVW3000 A0600 V110 TxA 150	600	12,925	9,645	10	60	11800 x 2640 x 1620

Note: 1) Normal Duty (ND) overload capacity: 115% for 60 seconds every 10 minutes.
 Motor power is for reference only and it is based on 4-pole motor with 0.87 power factor and 97% efficiency at full load.
 The ratings are valid for 40 °C ambient temperature and up to 1000 masl.
 Specifications subject to change without notice.

Models

MVW3000 model	Normal Duty (ND ¹)			Qty	Standard rectifier	Dimensions
	A	hp	kW			
13,2 kV motor voltage				Cells/phase	#-pulse	W x H x D (mm)
MVW3000 A0040 V132 TxA 150	40	1,030	770	12	72	6400 x 2405 x 1320
MVW3000 A0050 V132 TxA 150	50	1,285	960	12	72	6400 x 2405 x 1320
MVW3000 A0060 V132 TxA 150	60	1,545	1,155	12	72	6400 x 2405 x 1320
MVW3000 A0070 V132 TxA 150	70	1,805	1,350	12	72	6400 x 2405 x 1320
MVW3000 A0080 V132 TxA 150	80	2,060	1,540	12	72	6600 x 2405 x 1320
MVW3000 A0090 V132 TxA 150	90	2,325	1,735	12	72	6600 x 2405 x 1320
MVW3000 A0100 V132 TxA 150	100	2,580	1,925	12	72	6600 x 2405 x 1320
MVW3000 A0110 V132 TxA 150	110	2,840	2,120	12	72	6600 x 2405 x 1320
MVW3000 A0125 V132 TxA 150	125	3,230	2,410	12	72	6600 x 2405 x 1320
MVW3000 A0140 V132 TxA 150	140	3,615	2,700	12	72	6600 x 2405 x 1320
MVW3000 A0160 V132 TxA 150	160	4,135	3,085	12	72	6900 x 2405 x 1320
MVW3000 A0180 V132 TxA 150	180	4,650	3,470	12	72	6900 x 2405 x 1320
MVW3000 A0200 V132 TxA 150	200	5,165	3,855	12	72	6900 x 2405 x 1320
MVW3000 A0225 V132 TxA 150	225	5,815	4,340	12	72	9200 x 2405 x 1320
MVW3000 A0265 V132 TxA 150	265	6,845	5,110	12	72	9200 x 2405 x 1320
MVW3000 A0310 V132 TxA 150	310	8,015	5,980	12	72	9200 x 2405 x 1320
MVW3000 A0340 V132 TxA 150	340	8,790	6,560	12	72	9200 x 2405 x 1320
MVW3000 A0400 V132 TxA 150	400	10,340	7,715	12	72	13500 x 2750 x 1620
MVW3000 A0450 V132 TxA 150	450	11,635	8,680	12	72	13500 x 2750 x 1620
MVW3000 A0500 V132 TxA 150	500	12,925	9,645	12	72	14500 x 2750 x 1620
MVW3000 A0550 V132 TxA 150	550	14,220	10,610	12	72	14500 x 2750 x 1620
MVW3000 A0600 V132 TxA 150	600	15,515	11,575	12	72	14500 x 2750 x 1620

MVW3000 model	Normal Duty (ND ¹)			Qty	Standard rectifier	Dimensions
	A	hp	kW			
13,8 kV motor voltage				Cells/phase	#-pulse	W x H x D (mm)
MVW3000 A0040 V138 TxA 150	40	1,075	805	12	72	6400 x 2500 x 1320
MVW3000 A0050 V138 TxA 150	50	1,345	1,005	12	72	6400 x 2500 x 1320
MVW3000 A0060 V138 TxA 150	60	1,620	1,210	12	72	6400 x 2500 x 1320
MVW3000 A0070 V138 TxA 150	70	1,890	1,410	12	72	6400 x 2500 x 1320
MVW3000 A0080 V138 TxA 150	80	2,155	1,610	12	72	6600 x 2500 x 1320
MVW3000 A0090 V138 TxA 150	90	2,430	1,815	12	72	6600 x 2500 x 1320
MVW3000 A0100 V138 TxA 150	100	2,700	2,015	12	72	6600 x 2500 x 1320
MVW3000 A0110 V138 TxA 150	110	2,965	2,215	12	72	6600 x 2500 x 1320
MVW3000 A0125 V138 TxA 150	125	3,375	2,520	12	72	6600 x 2500 x 1320
MVW3000 A0140 V138 TxA 150	140	3,780	2,820	12	72	6600 x 2500 x 1320
MVW3000 A0160 V138 TxA 150	160	4,320	3,225	12	72	6900 x 2500 x 1320
MVW3000 A0180 V138 TxA 150	180	4,865	3,630	12	72	6900 x 2500 x 1320
MVW3000 A0200 V138 TxA 150	200	5,400	4,030	12	72	6900 x 2500 x 1320
MVW3000 A0225 V138 TxA 150	225	6,075	4,535	12	72	9200 x 2500 x 1320
MVW3000 A0265 V138 TxA 150	265	7,160	5,345	12	72	9200 x 2500 x 1320
MVW3000 A0310 V138 TxA 150	310	8,375	6,250	12	72	9200 x 2750 x 1320
MVW3000 A0340 V138 TxA 150	340	9,185	6,855	12	72	9200 x 2750 x 1320
MVW3000 A0400 V138 TxA 150	400	10,810	8,065	12	72	13500 x 2750 x 1620
MVW3000 A0450 V138 TxA 150	450	12,160	9,075	12	72	13500 x 2750 x 1620
MVW3000 A0500 V138 TxA 150	500	13,515	10,085	12	72	14500 x 2750 x 1620
MVW3000 A0550 V138 TxA 150	550	14,865	11,090	12	72	14500 x 2750 x 1620
MVW3000 A0600 V138 TxA 150	600	16,215	12,100	12	72	14500 x 2750 x 1620

Note: 1) Normal Duty (ND) overload capacity: 115% for 60 seconds every 10 minutes.
 Motor power is for reference only and it is based on 4-pole motor with 0.87 power factor and 97% efficiency at full load.
 The ratings are valid for 40 °C ambient temperature and up to 1000 masl.
 Specifications subject to change without notice.

Technical Data

Power supply	Input and output voltages	1,150 to 13,800 V (±10%, -20% with output power derating)	
	Frequency	50 or 60 Hz (specify according to requirement) ±3%	
	Voltage unbalance between phases	<3%	
	Cos Φ	>0.95	
	Overvoltage category	Category III	
Auxiliary power supply	Voltages	Three-phase: 220, 380, 400, 415, 440, 460 or 480 V	
	Frequency	50 or 60 Hz (±3%)	
	Voltage unbalance between phases	<3%	
Degree of protection	Standard	IP21 (IP41 and IP42 optional)	
Environment conditions	Temperature	0 to 40 °C (up to 50 °C with output current derating of 2.5% / °C)	
	Humidity	5 to 90% non-condensing	
	Altitude	0 to 1,000 m (up to 4,000 m with derating of 10% / 1,000 m)	
	Pollution grade	2	
Finishing	Color	RAL 7035	
Control	Microprocessor	32 bits	
	Control method	PWM sinusoidal	
	Control type	Scalar (V/f), Vector	
	Switching frequency	500 Hz	
	Frequency variation	0 to 120 Hz	
	Accepted overload	115% for 60 seconds every 10 minutes	
Performance	Efficiency (typical values)	>96.5% (aluminum windings transformer) >97.0% (copper windings transformer)	
	Speed control	V/f	Regulation: 1% of the rated speed with slip compensation Resolution: 1 rpm (reference via keypad)
		With sensor (use EBA, EBB or EBC board)	Regulation: ±0.01% of the rated speed with analog 14-bit input (EBA) ±0.01% of the rated speed with digital reference (keyboard, serial, Fieldbus, electronic potentiometer, multispeed) ±0.1% of the rated speed with analog 10-bit input
Inputs Outputs	Analog	2 programmable differential inputs (10 bits): 0 to 10 V, 0 to 20 mA or 4 to 20 mA 1 programmable two-pole input (14 bits): -10 V to +10 V, 0 to 20 mA or 4 to 20 mA 1 programmable isolated input (10 bits): 0 to 10 V, 0 to 20 mA or 4 to 20 mA 2 programmable outputs (11 bits): 0 to 10 V 2 programmable two-pole outputs (14 bits): (-10 to +10) V 2 programmable isolated outputs (11 bits): 0 to 20 mA or 4 to 20 mA	
	Digital analog relay transistor	8 programmable isolated inputs: 24 V dc 1 programmable isolated input: 24 V dc 1 programmable isolated input: 24 V dc (for thermistor-PTC of the motor) 5 programmable outputs, NO/NC contacts: 240 V ac, 1 A 2 programmable isolated outputs NO: 24 V dc, 50 mA	
Communication	Serial interface Fieldbus networks	RS232 (point-to-point)	
		RS485, isolated, via EBA or EBB board (multipoint up to 30 inverters)	
		Modbus-RTU (incorporated software) via RS485 serial interface	
		Profibus-DP ou DeviceNet via kits adicionais	
		EtherNet and PROFINET	
Compliance / Standards	Electromagnetic compatibility	EMC directive 89 / 336 / EEC - industrial environment	
		EN 61800-3 Standard (EMC - emission and immunity)	
	CEI - IEC 61800	Adjustable Speed Electrical Power Drive System	
		Part 4 - General Requirements	
		Part 5 - Safety Requirements	

Global presence is essential,
as much as understanding your needs.

Global Presence

With more than 30.000 employees worldwide, WEG is one of the largest electric motors, electronic equipments and systems manufacturers. We are constantly expanding our portfolio of products and services with expertise and market knowledge. We create integrated and customized solutions ranging from innovative products to complete after-sales service.

WEG's know-how guarantees our **Medium Voltage Variable Speed Drive** is the right choice for your application and business, assuring safety, efficiency and reliability.



Availability is to have a global support network



Partnership is to create solutions that suit your needs



Competitive edge is to unite technology and innovation

Know More

High performance and reliable products to improve your production process.

Excellence is to provide a whole solution in industrial automation that improves our customers productivity.

MV Cubicles

Soft-Starters



Transformers

Visit:

www.weg.net



youtube.com/wegvideos

For WEG's worldwide
operations visit our website



www.weg.net



AUTOMATION

 +55 47 3276.4000

 automacao@weg.net

 Jaraguá do Sul - SC - Brazil

Cod: 50070340 | Rev: 05 | Date (m/a): 12/2019.

The values shown are subject to change without prior notice.

The information contained is reference values.