



موتور ویبره  
میکرو M3



**ماهان موتور آریا**

MAHAN MOTOR ARIA

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Designed for industrial continuous duty, the M3 series features a compact shape, reduced overall dimensions, terminal box underneath which means also a high electric protection in dusty environments. Multi-holes mounting feet enable M3 series to match several existing mounting plates. M3 series motors comply with the most recent international standards for use in explosive dust atmospheres. Particularly M3 series can be used in zones 21 and 22.

## Technical features

### Power supply

Three-phase voltage from 24V to 690V, 50Hz or 60Hz or single-phase 100-130V, 60Hz and 200-240V, 50Hz; suitable for use with an inverter from 20Hz to the base frequency with constant torque load profile.

### Polarity

2 and 4 poles.

### Conformity with European Directives

ATEX 94/9/EC.  
Low Voltage 2006/95/EC.

### Reference Regulations

IEC/EN 61241-0, IEC/EN 61241-1,  
EN 60034-1.

### Functioning

Continual service (S1) at maximum declared centrifugal force and electric power. Intermittent services are also possible depending on the type of vibrator and the operating conditions. For detailed information contact our technical assistance office.

### Centrifugal force

Range up to 311 kgf (3.05 kN). Centrifugal force can be changed by adjusting the eccentric weights

### Mechanical protection

IP 66 according to IEC 529, EN 60529.

### Protection against mechanical impacts

IK 08 according to IEC 68, EN 50102.

### Insulation class

Class F (155°C).

### Tropicalization

Standard with vacuum encapsulation.

### Ambient temperature

From -20°C to +40°C. Versions for higher or lower temperatures are available on request.

### Vibrator thermal protection

On request with PTC thermistor rated heat detectors 130°C (DIN 44081-44082).

### Fixing of the vibrator

In all positions and therefore without restriction. The terminal box is positioned underneath the vibrator, on the same side as the fixing base.

### Lubrication

Sealed ball bearings, lubricated "for life".



ماهان موتور آریا

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**Category:** II 2 D  
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**Level of protection:** tD A21 IP66  
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**Temperature class:** 120°C  
.....

.....  
**EC certificate:** LCIE 05 ATEX 6163 X  
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**Areas of use:** 21, 22  
.....

### Certifications

#### Terminal box

The terminal box is positioned underneath the vibrator, on the same side as the fixing base. Special shaped terminals allow to fix the power supply cable, protecting it from loosening.

#### Electric motor

Three-phase or single-phase asynchronous type. Insulated windings using vacuum encapsulating.  
The rotor is die cast aluminium.

#### Casing

In high-tensile aluminium alloy, with sand blasted surface.

#### Bearing flange

In ductile cast iron.  
The geometry of the flange transmits the load to the casing uniformly.

#### Motor shaft

In treated steel alloy (Isothermic hardening) resistant to stress.

#### Eccentric weights

Easily adjustable from 100% down to 0.

#### Weight covers

Made in die cast, high strength alluminium alloy with accurate surface sand blasting.

Regulation CAN/CSA - C22.2 N. 100-95,  
file n° LR100948 Class 4211 01  
– Motors and generators.



Mechanical protection IP66 (EN 60529),  
protection against impacts IK 08  
(EN 50102)



II 2 D, tD A21 IP66  
IEC/EN 61241-0, IEC/EN 61241-1  
Certificate n. LCIE 05 ATEX 6163X



Certificate GOST-R n° POCC IT.ГБ04.В01154,  
standards GOST R 51330.0-99,  
GOST R 51330.1-99, GOST R 51330.8-99,  
GOST R IEC 61241-1-1-99



Certificate of Conformity  
n° IECEx CES 09.0001X standards IEC 61241-0,  
IEC 61241-1.



Comply with the applicable  
European Union directives





## 2 poles - 3000/3600 rpm

	Description					Mechanical specifications						Electrical specifications							
	Code	Type	SIZE	II2D Temp. class	IP	Static moment* kgmm		Centrifugal force				Weight kg		Max input power W		Max. current A		I <sub>a</sub> /I <sub>N</sub>	
						50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	400 V 50 Hz	460 V 60 Hz
three-phase	600467	M3/65-S02	00	• 120°C	IP	6.43	6.43	<b>64.7</b>	<b>93.1</b>	<b>0.635</b>	<b>0.913</b>	4.3	4.3	120	120	0.27	0.23	3.43	3.90
	600465	M3/105-S02	00	• 120°C	IP	9.64	9.64	<b>97.0</b>	<b>140</b>	<b>0.950</b>	<b>1.37</b>	5.2	5.2	180	180	0.35	0.30	2.68	3.00
	600462	M3/205-S02	00	• 120°C	IP	21.0	21.0	<b>211</b>	<b>304</b>	<b>2.07</b>	<b>2.98</b>	6.0	6.0	180	180	0.35	0.30	2.68	3.00
	600461	M3/305-S02	00	• 120°C	IP	31.0	21.0	<b>311</b>	<b>304</b>	<b>3.05</b>	<b>2.98</b>	6.3	6.0	180	180	0.35	0.30	2.68	3.00
single-phase	600467	M3/65-S02	00	• 120°C	IP	6.43	6.43	<b>64.7</b>	<b>93.1</b>	<b>0.635</b>	<b>0.913</b>	4.3	4.3	110	110	0.56	1.52	2.24	2.24
	600465	M3/105-S02	00	• 120°C	IP	9.64	9.64	<b>97.0</b>	<b>140</b>	<b>0.950</b>	<b>1.37</b>	5.2	5.2	165	165	0.75	1.52	1.67	2.24
	600462	M3/205-S02	00	• 120°C	IP	21.0	21.0	<b>211</b>	<b>304</b>	<b>2.07</b>	<b>2.98</b>	6.0	6.0	165	165	0.75	1.52	1.67	2.24
	600461	M3/305-S02	00	• 120°C	IP	31.0	21.0	<b>311</b>	<b>304</b>	<b>3.05</b>	<b>2.98</b>	6.3	6.0	165	165	0.75	1.52	1.67	2.24

## 4 poles - 1500/1800 rpm

	Description					Mechanical specifications						Electrical specifications							
	Code	Type	SIZE	II2D Temp. class	IP	Static moment* kgmm		Centrifugal force				Weight kg		Max input power W		Max. current A		I <sub>a</sub> /I <sub>N</sub>	
						50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	50 Hz	60 Hz	400 V 50 Hz	460 V 60 Hz
three-phase	601514	M15/36-S02	00	• 120°C	IP	12.0	12.0	<b>30.2</b>	<b>43.5</b>	<b>0.30</b>	<b>0.43</b>	5.4	5.4	85	95	0.21	0.20	1.78	1.95
	601515	M15/81-S02	00	• 120°C	IP	31.0	21.0	<b>77.9</b>	<b>76.1</b>	<b>0.76</b>	<b>0.75</b>	6.3	6.0	85	95	0.21	0.20	1.78	1.95
single-phase	601514	M15/36-S02	00	• 120°C	IP	12.0	12.0	<b>30.2</b>	<b>43.5</b>	<b>0.30</b>	<b>0.43</b>	5.4	5.4	90	100	0.43	1.00	1.20	1.30
	601515	M15/81-S02	00	• 120°C	IP	31.0	21.0	<b>77.9</b>	<b>76.1</b>	<b>0.76</b>	<b>0.75</b>	6.3	6.0	90	100	0.43	1.00	1.20	1.30

\* Working moment = 2 x static moment. I<sub>a</sub>/I<sub>N</sub> = ratio between start-up current and maximum current.

