

# Data Sheet

Itemnumber..... 3221120259



AC = 219	DB = M10	EG = 28	GD = 7	LA = 14	N = 180	T = 4
AD = 168	E = 60	F = 8	HB = 145	LB = 345	P = 250	TB = 120
D = 28	EB = 50	G = 24	L = 405	M = 215	S = 4-Ø15	TL = 120

## Version

Type..... HMA2 112M1-2  
Design..... Induction motor  
Standard series..... IEC 60034  
Phase / Voltage range..... 3~ / Low

## Electrical design

Efficiency..... IE2  
Pole..... 2  
Power at 50 Hz (kW)..... 4,00  
Hz..... 60 (60 Hz output)  
Voltage..... 440VY  
Winding voltage..... 230VD/400VY 50 Hz  
Power output (kW)..... 4,65  
Duty..... S1  
Insulation class..... F  
Temperature rise..... B

## Mechanical design

Frame size..... 112  
Mounting..... B5  
Rain cap..... No  
Protection class..... IP55  
Cooling method..... IC411/TEFC  
External grounding..... Yes  
Drain hole..... Yes  
Frame material..... Aluminium  
Material approval..... None  
Shaft..... IEC Standard  
Key..... Closed key  
Balancing..... Half key balancing  
Vibration class..... Grade-A  
Weight (kg)..... 32,0

## Environment condition

Ambient temp. min. (°C)..... -20  
Ambient temp. max. (°C)..... 45  
Altitude (mtr up to)..... 1000

## Bearing

DE Bearing..... 6306-ZZ/C3  
NDE Bearing..... 6306-ZZ/C3  
Fixed bearing..... DE

## Terminal box

Tbox position..... Top  
Cable entry direction..... Right (from DE)  
Cable entry  
Main..... 1 x M20x1,5  
Ø8-13mm metal  
Accessory..... 1 x M20x1,5  
Metal blindcap  
Terminal board thread..... 6-M5

## Motor protection

Thermal protection main..... PTC 3x 155 dgr  
Thermal protection second..: None  
Space heater..... None  
Temperature detector..... No  
SPM..... No  
IR wire..... No  
Tropical insulation..... Yes

## Explosion protection

According to..... None  
Type of protection..... None

## General

Direction of rotation..... CW  
Painting..... RAL 9005  
Nameplate..... Multivoltage + VFD  
Special packing..... No  
Special requirements..... No

## Test values

Rotor inertia (kgm²)..... 0,0068  
Noise level (dB(A))..... 72  
No load current (A)..... 2,50  
Winding resist. (ohm)..... 1,07  
Starting time (sec.)..... 10,00  
Temp. rise winding (K)..... 60  
Temp. rise surface (K)..... 42

Rated power (kW)	4,00	3,90	4,80	4,65
Frequency (Hz)	50	50	60	60
Voltage (V)	230 400	220 380	280 480	440
Connection	D Y	D Y	D Y	Y
Full load current (A)	13,0 7,50	13,4 7,75	13,0 7,50	7,75
Speed (rpm)	2910	2910	3500	3500
Power factor cos(phi)	0,90	0,90	0,90	0,86
Efficiency, 100/75/50 (%)	85,8/ 86,0 /84,3	85,8/ 86,0 /84,3	85,8/ 86,0 /84,3	85,1/ 85,3 /83,6
Ist/In	8,65	7,60	8,65	7,95
Full load torque (Nm)	13,2	12,8	13,2	12,8
Tst/Tn	2,75	2,55	2,75	2,40
Tmax/Tn	3,00	2,80	3,00	2,60
Duty	S1	S1	S1	S1
Ambient temp. (°C)	40	45	40	45