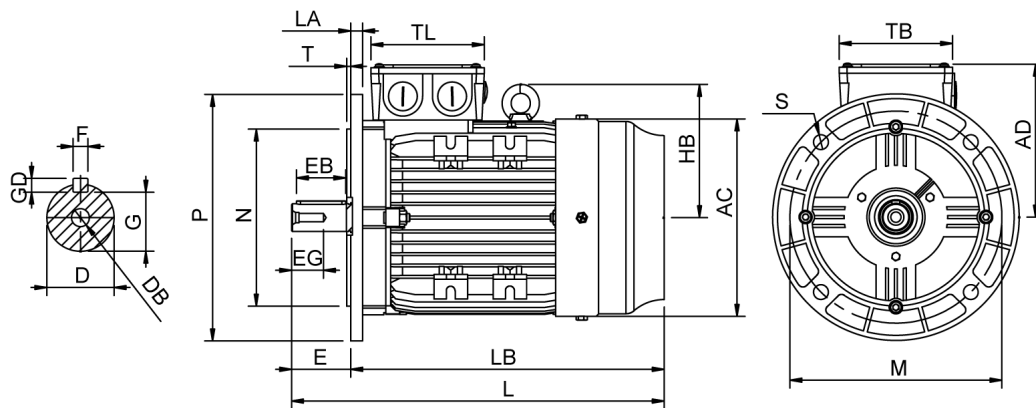


# Data Sheet

Itemnumber.....: 6041600200



AC = 314	DB = M16	EG = 38	GD = 8	LA = 15	N = 250	T = 5
AD = 238	E = 110	F = 12	HB = 207	LB = 502	P = 350	TB = 181
D = 42	EB = 90	G = 37	L = 612	M = 300	S = 4-Ø18,5	TL = 181

## Version

Type.....: HMA4 160M-4  
Design.....: Induction motor  
Standard series.....: IEC 60034  
Phase / Voltage range.....: 3~ / Low

## Electrical design

Efficiency.....: IE4  
Pole.....: 4  
Power at 50 Hz (kW).....: 11,0  
Hz.....: 50  
Voltage.....: 400VD/690VY  
Winding voltage.....: 400VD/690VY 50 Hz  
Power output (kW).....: 11,0  
Duty.....: S1  
Insulation class.....: F  
Temperature rise.....: B

## Mechanical design

Frame size.....: 160  
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).....: 106

## Environment condition

Ambient temp. min. (°C).....: -20  
Ambient temp. max. (°C).....: 40  
Altitude (mtr up to).....: 1000

## Bearing

DE Bearing.....: 6209-ZZ/C3  
NDE Bearing.....: 6209-ZZ/C3  
Fixed bearing.....: DE

## Terminal box

Tbox position.....: Top  
Cable entry direction.....: Right (from DE)  
Cable entry  
Main.....: 2 x M40x1,5  
Plastic blindcaps  
Accessory.....: 2 x M20x1,5  
Plastic blindcaps  
Terminal board thread.....: M6

## Test values

Rotor inertia (kgm²).....: 0,13  
Noise level (dB(A)).....: 64  
Starting time (sec.).....: 0,10

## Motor protection

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

## Explosion protection

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

## General

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

Rated power (kW)	11,0	10,6	13,2	12,8
Frequency (Hz)	50	50	60	60
Voltage (V)	400 690	380 660	480 830	440
Connection	D Y	D Y	D Y	D
Full load current (A)	20,6 11,8	21,2 12,2	20,6 11,8	21,2
Speed (rpm)	1480	1480	1770	1770
Power factor cos(phi)	0,83	0,84	0,83	0,85
Efficiency, 100/75/50 (%)	93,3/93,1/92,2	93,3/93,1/92,2	93,3/93,1/92,2	92,8/92,6/91,7
Ist/In	8,80	7,75	8,80	8,10
Full load torque (Nm)	71,0	69,0	71,0	69,0
Tst/Tn	3,30	3,05	3,30	2,85
Tmax/Tn	3,40	3,15	3,40	2,95
Duty	S1	S1	S1	S1
Ambient temp. (°C)	40	45	40	45