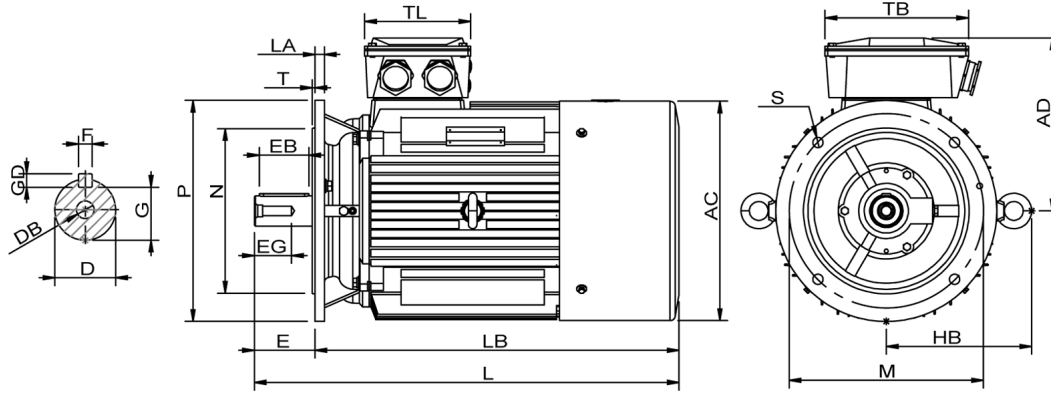


# Data Sheet

Itemnumber....: 3221600209



AC = 313	DB = M16	EG = 36	GD = 8	LA = 15	N = 250	T = 5
AD = 277	E = 110	F = 12	HB = 222	LB = 498	P = 350	TB = 218
D = 42	EB = 90	G = 37	L = 608	M = 300	S = 4-Ø18,5	TL = 162

### Version

Type.....: HMC2 160M1-2  
 Design.....: Induction motor  
 Standard series.....: IEC 60034  
 Phase / Voltage range.....: 3~ / Low

### Electrical design

Efficiency.....: IE2  
 Pole.....: 2  
 Power at 50 Hz (kW).....: 11,0  
 Hz.....: 60 (60 Hz output)  
 Voltage.....: 440VD  
 Winding voltage.....: 400VD/690VY 50 Hz  
 Power output (kW).....: 12,8  
 Duty.....: S1  
 Insulation class.....: F  
 Temperature rise.....: B

### Motor protection

Thermal protection main....: PTC 3x 155 dgr  
 Thermal protection second..: None  
 Space heater.....: 1x 230V 50W  
 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

### 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.....: Cast Iron  
 Material approval.....: None  
 Shaft.....: IEC Standard  
 Key.....: Closed key  
 Balancing.....: Half key balancing  
 Vibration class.....: Grade-A  
 Weight (kg).....: 100

### Environment condition

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

### Bearing

DE Bearing.....: 6309-ZZ/C3  
 NDE Bearing.....: 6309-ZZ/C3  
 Fixed bearing.....: DE

### Terminal box

Tbox position.....: Top  
 Cable entry direction.....: Right (from DE)  
 Cable entry  
 Main.....: 2 x M40x1,5  
 Ø22-30mm metal  
 Accessory.....: 2 x M20x1,5  
 Metal blindcaps  
 Terminal board thread.....: 6-M6

### Test values

Rotor inertia (kgm<sup>2</sup>).....: 0,043  
 Noise level (dB(A)).....: 74  
 No load current (A).....: 5,35  
 Winding resist. (ohm).....: 0,68  
 Starting time (sec.).....: 0,17  
 Temp. rise winding (K).....: 63  
 Temp. rise surface (K).....: 39

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)	19,4 11,2	20,0 11,6	19,4 11,2	20,6
Speed (rpm)	2930	2930	3520	3520
Power factor cos(phi)	0,92	0,92	0,92	0,92
Efficiency, 100/75/50 (%)	89,4/ 88,2 /87,1	89,4/ 88,2 /87,1	89,4/ 88,2 /87,1	88,9/ 87,7 /86,4
Ist/In	6,55	5,75	6,55	6,05
Full load torque (Nm)	36,0	34,5	36,0	34,5
Tst/Tn	2,16	2,00	2,16	1,86
Tmax/Tn	3,15	2,90	3,15	2,70
Duty	S1	S1	S1	S1
Ambient temp. (°C)	40	45	40	45