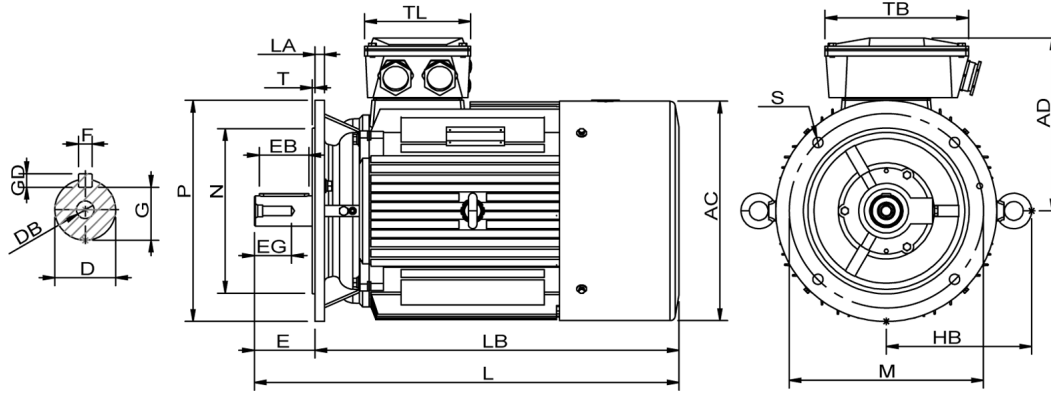


# Data Sheet

Itemnumber....: 3221602209



AC = 313	DB = M16	EG = 36	GD = 8	LA = 15	N = 250	T = 5
AD = 277	E = 110	F = 12	HB = 222	LB = 542	P = 350	TB = 218
D = 42	EB = 90	G = 37	L = 652	M = 300	S = 4-Ø18,5	TL = 162

### Version

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

### Electrical design

Efficiency.....: IE2  
 Pole.....: 2  
 Power at 50 Hz (kW).....: 18,5  
 Hz.....: 60 (60 Hz output)  
 Voltage.....: 440VD  
 Winding voltage.....: 400VD/690VY 50 Hz  
 Power output (kW).....: 21,6  
 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).....: 136

### 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>).....: 0,066  
 Noise level (dB(A)).....: 74  
 No load current (A).....: 7,95  
 Winding resist. (ohm).....: 0,33  
 Starting time (sec.).....: 0,13  
 Temp. rise winding (K).....: 68  
 Temp. rise surface (K).....: 54

Rated power (kW)	18,5	18,0	22,2	21,6
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)	31,5 18,2	32,5 18,8	31,5 18,2	33,5
Speed (rpm)	2950	2950	3520	3520
Power factor cos(phi)	0,93	0,93	0,93	0,93
Efficiency, 100/75/50 (%)	90,9/ 90,2 /89,3	90,9/ 90,2 /89,3	90,9/ 90,2 /89,3	90,4/ 89,7 /88,8
Ist/In	7,50	6,60	7,50	6,90
Full load torque (Nm)	60,0	58,0	60,0	58,0
Tst/Tn	2,65	2,46	2,65	2,30
Tmax/Tn	3,50	3,25	3,50	3,00
Duty	S1	S1	S1	S1
Ambient temp. (°C)	40	45	40	45