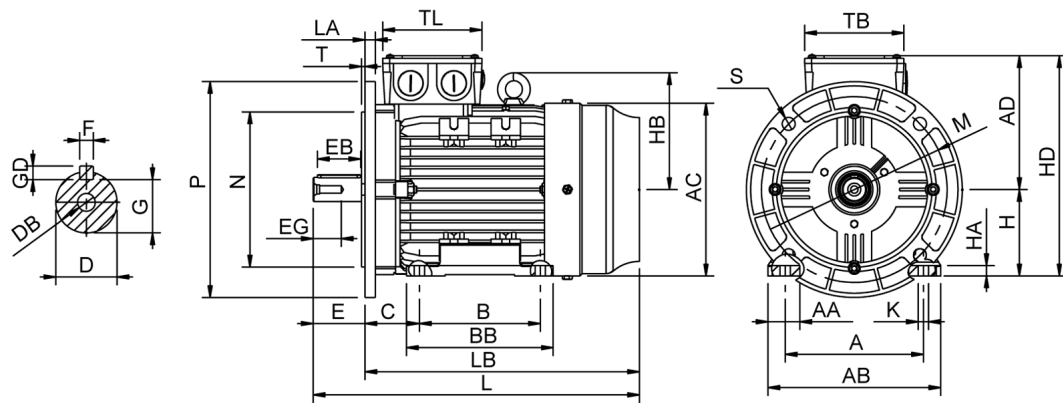


# Data Sheet

Itemnumber..... 6021602400



A = 254	AC = 314	BB = 304	DB = M16	EG = 38	GD = 8	HB = 207	L = 656	M = 300	S = 4-Ø18,5	TL = 181
AA = 62	AD = 238	C = 108	E = 110	F = 12	H = 160	HD = 398	LA = 15	N = 250	T = 5	
AB = 314	B = 254	D = 42	EB = 90	G = 37	HA = 22	K = 14,50	LB = 546	P = 350	TB = 181	

## Version

Type..... HMA4 160L-2  
Design..... Induction motor  
Standard series..... IEC 60034  
Phase / Voltage range..... 3~ / Low

## Electrical design

Efficiency..... IE4  
Pole..... 2  
Power at 50 Hz (kW)..... 18,5  
Hz..... 50  
Voltage..... 400VD/690VY  
Winding voltage..... 400VD/690VY 50 Hz  
Power output (kW)..... 18,5  
Duty..... S1  
Insulation class..... F  
Temperature rise..... B

## Mechanical design

Frame size..... 160  
Mounting..... B35  
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)..... 130

## 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)..... 0,088  
Noise level (dB(A))..... 71  
Starting time (sec.)..... 0,18

## 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)	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)	32,0 18,6	33,0 19,2	32,0 18,6	33,0
Speed (rpm)	2940	2940	3530	3530
Power factor cos(phi)	0,89	0,90	0,89	0,90
Efficiency, 100/75/50 (%)	93,7/93,5/92,0	93,7/93,5/92,0	93,7/93,5/92,0	93,3/93,0/91,4
Ist/In	8,10	7,15	8,10	7,45
Full load torque (Nm)	60,0	58,0	60,0	58,0
Tst/Tn	2,20	2,04	2,20	1,90
Tmax/Tn	3,80	3,55	3,80	3,30
Duty	S1	S1	S1	S1
Ambient temp. (°C)	40	45	40	45