

Data Sheet

Itemnumber..... 3221602109



A = 254	AC = 313	BB = 304	DB = M16	EG = 36	GD = 8	HB = 222	L = 652	TL = 162
AA = 65	AD = 277	C = 108	E = 110	F = 12	H = 160	HD = 437	LB = 542	
AB = 314	B = 254	D = 42	EB = 90	G = 37	HA = 20	K = 14,50	TB = 218	

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

Mechanical design

Frame size..... 160
Mounting..... B3
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)..... 138

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

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

Test values

Rotor inertia (kgm²)..... 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