

# HOYER

MOTORS

## Data sheet

**Item no. / Configuration** 01 / 4102160-11.0-010201-S-026790  
**Description** HMA4 160M1-2 400/690 V 50 Hz 11 kW

General data	
Standard series	IEC 60034
Type	HMA4 160M1-2
Design	400 VD / 690 VY 50 Hz + 480 VD / 830 VY 60 Hz
Direction of rotation	CW
Installation max. altitude (m)	1.000
Poles	2

Motor protection	
Winding temp. detector	No
Temp. detector type	None
Bearing detector	No
Winding PTC main	PTC 3 x 155°C
Winding PTC spare	None
Space heater	None
Terminal board thread	M6
Electrical insulation	Standard (1350 V @ 0.8 µs)
Tropical insulation	No
SPM	N/A
External grounding	Yes
Drain hole	Yes
Rain cap	No

Classification	
Class society	
Shaft requirement acc. to	None
Ex. code	No

Mechanical data	
Frame / Shaft height	IEC 160
Type of construction	B3
Cooling method	IC411
Protection class	IP55
Temp. insulation class	F
Frame material	Aluminum
Keyway	Closed
Balancing	Half key
IEC vibration class	A
Weight (kg)	99
Bearing (DE)	6309 2Z / C3 / DGBB
Bearing (NDE)	6309 2Z / C3 / DGBB
Fixed bearing	DE
Moment of inertia (kg×m <sup>2</sup> )	0.0555
Painting (color)	RAL 9005
Corrosion protection	C3L
Main terminal box pos.	DE top
Main cable entries	Blind cap 2xM40x1.5
Main cable direction	Right from DE
Main cable material	Plastic
Aux. cable entries	Blind cap 2xM20x1.5
Aux. cable direction	NDE
Aux. cable material	Plastic

Winding operation variants			
Rated power (kW)	11	11	
Frequency (Hz)	50	60	
Connection	D/Y	D/Y	
Voltage (V)	400 / 690	480 / 830	
Full load current (A)	19.3 / 11.2	16.1 / 9.3	
No load current (A)	6.54	6.19	
Speed (rpm)	2950	3550	
Power factor 100/75/50 (%)	0.89 / 0.84 / 0.76	0.89 / 0.81 / 0.71	
Efficiency 100/75/50 (%)	92.6 / 92.99 / 92.15	92.4 / 92.83 / 91.53	
Efficiency class	IE4	IE4	
Full load torque (Nm)	35.4	29.5	
Tst/Tn	2.73	3.25	
Tmax/Tn	3.96	4.71	
Ist/In	9.52	10.4	
Temp. rise class	B	B	
Duty	S1	S1	
Sound pressure level (dBA)	65	70	
Min. ambient temp. (°C)	-20°C	-20°C	
Max. ambient temp. (°C)	40°C	40°C	

Data are not binding. Hoyer reserves the right to implement changes without notice. The extent of data are not equivalent to nameplate on the motors.