


IEC LV Motors		Technical Data Sheet - DOL			
Department/Author SARAVANAN		Customer name	Customer ref	Item name 1.00005	
Our ref. Trielectric International FZE		Rev/Changed by A	Date of issue 10/2/2023	Saving ident untitled.xlsm	Pages 1(3)
No.	Definition	Data	Unit	Remarks	
1	Product	TEFC, 3-phase, squirrel cage induction motor			
2	Product code	3GAA 112 320-ADK		Calc. ref.	3GZF021011-739
3	Type/Frame	M3AA 112MB 4			
4	Mounting	IM1001, B3(foot)			
5	Rated output P _N	4	kW		
6	Service factor	1			
7	Type of duty	S1(IEC) 100%			
8	Rated voltage U _N	400	VD	± 5 % (IEC 60034-1)	
9	Rated frequency f _N	50	Hz	± 2 % (IEC 60034-1)	
10	Rated speed n _N	1451	r/min		
11	Rated current I _N	8.6	A		
12	No-load current	4.6	A		
13	Starting current I _s /I _N	7.6		Meet IEC 60034-12, N ₁ (H at 60 Hz)	
14	Nominal torque T _N	26.3	Nm		
15	Locked rotor torque T _s /T _N	3.1			
16	Maximum torque T _{max} /T _N	4.1			
17	Minimum torque T _{min} /T _N	3			
18	Speed at minimum torque	210	r/min		
19	Load characteristics (IEC 60034-2-1:2014)	Load %	Current A	Efficiency %	Power factor
20	PLL determined from residual loss	100	8.6	88.6 / IE3	0.77
21		75	6.9	89.5	0.7
22		50	5.7	89	0.57
22		Start	65		0.47
23	Maximum starting time from hot	11	s		
24	Maximum starting time from cold	19	s		
25	Insulation class / Temperature class	F / B			
26	Ambient temperature	40	°C		
27	Altitude	1000	m.a.s.l.		
28	Enclosure	IP55			
29	Cooling system	IC411 self ventilated			
30	Bearing DE/NDE	6306-2Z/C3 - 6205-2Z/C3			
31	Type of Grease				
32	Sound pressure level (LP dB(A) 1m)	64	dB(A)	at load	
33	Moment of inertia J = ¼ GD ²	0.018	kg-m ²		
34	Balancing				
35	Vibration class				
36	Position of terminal box	Top			
37	Terminal box entries; no, dimens.				
38	Number of power terminals				
39	Direction of rotation	CW or CCW			
40	Weight of rotor	13	kg		
41	Total weight of motor	44	kg		
42	Dimension drawing no.				
43					
44					
45					
Ex-motors					
46					
47					
48					
Option Variant Codes / Definition					
49					
50					
51					
52					
Remarks:					
Data based on situation 10/20/2022					
All data subject to tolerances in accordance with IEC					
Guaranteed values on request					

Motors in brief

Motor sizes 56–132

Motor size	M3AA	56–63	71	80	90	100	112	132	
Stator and end shields	Material	Die-cast aluminum alloy							
	Paint colour shade	Munsell blue 8B 4.5/3.25							
	Corrosion class	C3 according to IEO/EN 12944-5							
Feet	Integrated aluminum feet								
Bearings	D-end	6201-2Z/C3	6203-2Z/C3	6204-2Z/C3	6205-2Z/C3	6306-2Z/C3	6306-2Z/C3	6208-2Z/C3	
								6308-2Z/C3 ¹⁾	
								E2.6208-2Z/C3 ²⁾ E2.6308-2Z/C3 ³⁾	
	N-end	6201-2Z/C3	6202-2Z/C3	6203-2Z/C3	6204-2Z/C3	6205-2Z/C3	6205-2Z/C3	6206-2Z/C3 E2.6206-2Z/C3 ⁴⁾	
Axially-locked bearings	Inner bearing cover	ND-end retaining ring	Locked at D-end						
Bearing seal	D-end	V-ring							
	N-end	Labyrinth seal							
Lubrication	Permanent grease lubrication. Grease temperature range -40°C to +160°C								
Measuring nipples for condition monitoring of the bearings	Not included								
Rating plate	Material	Aluminum							
Terminal box	Material	Die-cast aluminum alloy, integrated to stator							
	Cover screws material	Zinc-electroplated steel							
Connections	Openings	2x(M16+M16)	2x(M20 + M20)	2x(M20+M25)			2x(M20+M25) ⁵⁾ 2x(M40+M32+M12) ⁶⁾		
		Terminals	6 terminals for connection with cable lugs (not included)						
		Cable glands	Optional						
Fan	Material	Glass-fiber reinforced polypropylene							
Fan cover	Material	Polypropylene							
	Paint colour shade	Munsell blue 8B 4.5/3.25							
	Corrosion class	C3							
Stator winding	Material	Copper							
	Insulation	Insulation class F							
	Winding protection	Optional							
Rotor winding	Material	Die-cast aluminum							
Balancing	Half key balancing								
Key ways	Closed key way								
Drain holes		Without drain holes	Drain holes with closable plastic plugs, open on delivery						
External earthing bolt	As option								
Enclosure	IP 55								
Cooling method	IC 411								

¹⁾ (SM) except 4p 11&15kW HO

⁴⁾ HO 2p 9,2&15kW

²⁾ 2p 9,2kW HO

⁵⁾ S, SB, M, MA

³⁾ 2p 15kW HO

⁶⁾ SC, MC, SMA-SME