
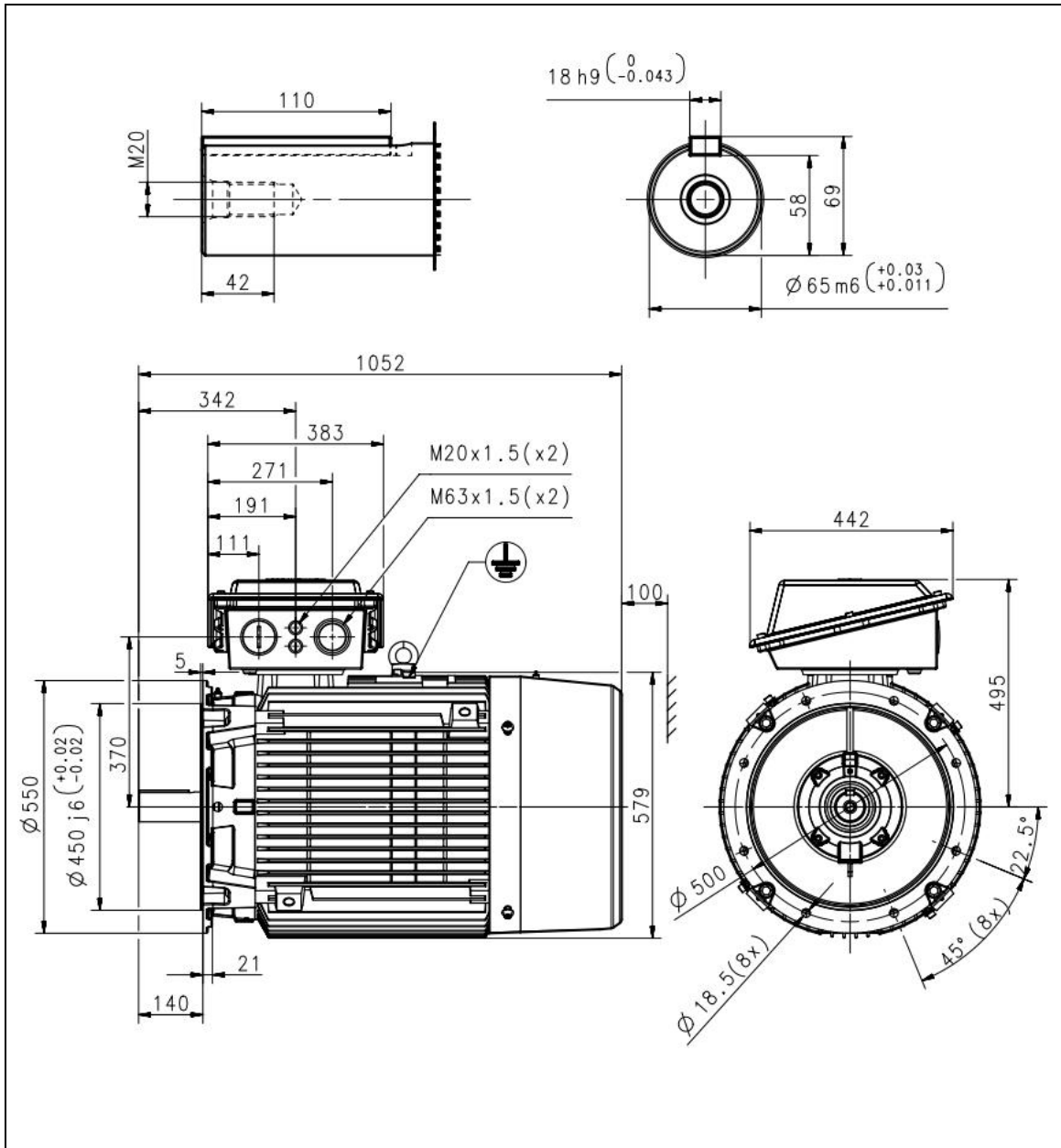


IEC LV Motors		Technical Data Sheet			
		Project	Location		
Department/Author Gugan E		Customer name	Customer ref		Item name 1.0001
Our ref. Trielectric International FZE		Rev/Changed by A	Date of issue 9/25/2023	Saving ident untitled.xlsm	Pages 1(3)
No.	Definition	Data	Unit	Remarks	
1	Product	TEFC, 3-phase, squirrel cage induction motor			
2	Product code	3GBA 281 230-BDMIN		Calc. ref.	3GZH021028-9
3	Type/Frame	M2BAX 280SMC 2			
4	Mounting	IM3001, B5(flange)			
5	Rated output P _N	90	kW		
6	Service factor	1			
7	Type of duty	S1 100%			
8	Rated voltage U _N	400	VD	± 5 %	
9	Rated frequency f _N	50	Hz	± 2 %	
10	Rated speed n _N	2975	r/min		
11	Rated current I _N	155	A		
12					
13	Starting current I _s /I _N	7.7			
14	Nominal torque T _N	289	Nm		
15	Locked rotor torque T _s /T _N	1.9			
16	Maximum torque T _{max} /T _N	2.7			
17					
18					
Load characteristics		Load %	Current A	Efficiency %	Power factor
19	PLL determined from residual loss	100	155	95.0 / IE3	0.88
20		75	119	95	0.86
21		50	85.3	94	0.81
22					
23	Thermal withstand time hot	20	s		
24	Thermal withstand time cold	46	s		
25	Insulation class / Temperature class	F / B			
26	Ambient temperature	50	°C		
27	Altitude	1000	m.a.s.l.		
28	Degree of protection	IP55			
29	Cooling system	IC411			
30	Bearing DE/NDE	6316/C3 - 6316/C3			
31	Sound pressure level (LP dB(A) 1m)	90	dB(A)	at no-load	
32	Moment of inertia J = ¼ GD2	0.99	kg-m2		
33	Position of terminal box	Top			
34	Direction of rotation	Bi-directional			
35	Weight of rotor	124	kg		
36	Total weight of motor	649	kg		
37	Paint shade	Munsell Blue			
38	Cable size				
39	Vibration	As Per IS 12075			
40					
41					
42					
43					
44					
45					
Ex-motors					
46					
47					
48					
Option Variant Codes / Definition					
49					
50					
51					
52					
Remarks:					
Applicable standards: IS 12615:2018, IEC 60034-30-1:2014					

All performance values are subject to IS/IEC tolerances



Additional information:

Dimension Print	Motor Type: M2BA/BAX 280SM_2 B5 V1 V3.	Document No: 3GZC500028-75 C 13 BA 280 A
	Description: STANDARD SQUIRREL CAGE MOTOR	
Unit: ABB Ltd., Motors and Generators	Issued by: Bin Zou	Replaces:
Date: 2015-08-12	Approved by: Anna Feng	Replaced by:
ABB Ltd.	Customer Reference:	ABB

Motors in brief

General performance IE3 premium efficiency cast iron motors in brief

Size		280 2-8 Pole	315 2 Pole	315 4-8 Pole	355 2 Pole	355 4-8 Pole
Stator	Material	Cast iron grade 150, IS:210				
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G				
	Surface Treatment	C3 medium according to ISO / EN 12944-5				
Feet		Integrated with stator				
	Material	Cast iron grade 150, IS:210				
Bearing end shields	Material	Cast iron grade 150, IS:210				
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G				
	Surface Treatment	C3 medium according to ISO / EN 12944-5				
Bearings	D-end	6316/C3	6316/C3	6319/C3	6319/C3	6322/C3
	N-end	6315/C3	6316/C3	6316/C3	6319/C3	6319/C3
Axially-locked	Inner Bearing Cover	As standard, locked at D-end				
Lubrication		Regreasable bearing, Regreasing nipple M10x1				
Measuring nipple		-				
Rating plate	Material	Steel				
Terminal Box	Frame material	Cast iron grade 150, ISO: 210				
	Cover Material	Cast iron grade 150, ISO:210				
	Screws	Steel				
Connections	Cable Entries	2 x 2" BSC	2 x 2-1/2" BSC*			
	Cable Sizes	280 : 2Rx3Cx185Sqmm Cu/Al Cable 315 : 2Rx3Cx240Sqmm Cu/Al Cable 355 : 2Rx3Cx240Sqmm Cu/Al Cable*				
	Terminal Stud Size	M12	M16			
	Terminals	6 terminals for connection, cable lugs (not included)				
	Fan	Material	PP** Aluminium			
Fan Cover	Material	Sheet of steel, Cold Rolled				
	Paint colour shade	Munsell blue 8B 4.5/3.25 / NCS 4822 B05G				
	Surface Treatment	C3 medium according to ISO / EN 12944-5				
Stator winding	Material	Copper				
	Insulation	Insulation class F, Temperature rise class B unless otherwise stated				
	Winding protection	-				
Rotor winding	Material	Pressure diecast aluminum				
Balancing method		Half Key Balancing as Standard				
Key ways		Open Key Way				
Enclosure		IP 55				
Cooling method		IC 411				
Drain holes		Drain holes with closable plastic plugs, open on delivery				
Lifting lugs		Bolted with the stator				

*Cable sizes for 355MLC2,355MLD2,355MLB4, 355MLB6H & 355MLB4H will be 2Rx3Cx300 Sqmm Cu/Al , Threaded opening 2x3" BSC

**Polypropylene, Reinforced with 20% glass fibre.