

 Bharat Bijlee		<i>Data sheet for motors</i>							
Manufacturer		Bharat Bijlee Ltd.		Customer					
Type of motor		3 Phase Induction Motor		BBL Enquiry reference No					
Quantity				Customer P.O.Number					
Application		CUSTOMER TO FURNISH		W.O. No. / SAP No.					
Tag no.				Output kW / pole		3.7 / 8P			
BBL type tef.		2J16M813		Frame size		MJ160			
Installation details				Applicable standards (latest edition)					
Area classification (Safe / Hazardous)		Hazardous		Performance: IS/IEC 60034-1 Maintenance IS:900		FLP Motors: IS/IEC 60079-1			
Location: indoor/outdoor/deck		Indoor		Dimensions: IS 1231/IS 2223/IS:8223					
Altitude (meters)		1000 or less		Vibrations: IS 12075					
				Noise level: IS 12065					
Hazardous area details				Supply conditions and permissible variations (grid supply)					
Area classification GAS (Zone 1/Zone 2)		ZONE I		Number of phases		Three			
Gas group		IIA, IIB		Voltage (Volts) and permissible variation		415 ±10%			
Temp.class		T5		Frequency (Hz) and permissible variation		50 ±5%			
Type of Explosion protection (FLP/Type 'e'/Type 'n')		Ex d		Combined variation (absolute sum)		±10%			
Approving authority for hazardous area		If Coal Mine application then DGMS else PESO							
Electrical parameters									
Starting performance									
Method of starting		DOL		Starting current (%FLC)		440			
Load speed (rpm)		CUSTOMER TO FURNISH		Starting torque (%FLT)		170			
Motor GD ² (kgm ²)		0.202		Pull out torque (%FLT)		220			
Load GD ² (kgm ²)		CUSTOMER TO FURNISH		Locked rotor withstand time (hot/cold) (sec)		30 / 60			
Load torque-speed curve		Parabolic TS curve		Number of consecutive starts (hot/cold) (nos.) provided Load GD2 = Motor GD2		2 / 3			
Starting time at rated voltage (sec)		PLEASE FURNISH ALL ABOVE DETAILS							
Running Performance									
Efficiency class		IE2		Duty and designation		Continuous (S1)			
Ambient temp./temp.rise by resistance (deg.C)		45 / 75		CDF/Equivalent starts per hour/FI		-			
Enclosure		TEFC (TOTALLY ENCLOSED FAN COOLED)		Insulation class / utilisation class on DOL		F/B			
Full load current (FLC) amps.		8.55		Rotor type (Squirrel Cage/ Slip ring)		Squirrel Cage			
Full load speed (rpm)		715		Rotor voltage/rotor current (RV/RA) (Volts/Amps)		Not applicable			
Full load torque (FLT) kg-m		5.05		Stator/rotor time constant (min)		90/122			
Efficiency in % at FL/0.75FL/0.5FL		81.4 81.4 80.0		Power factor at FL/0.75FL/0.5FL		0.74 0.68 0.55			
Mechanical parameters									
Mounting		B3		Mounting dimensions		Refer GA drawing			
Shaft extention		Single cylindrical		Direction of rotation viewed from DE		Clockwise			
Degree of protection		IP 55		Suitable for bidirectional rotation		Yes			
Method of cooling (TEFC/forced cooled/TESC)		TEFC (IC 411)		Paint type		Acid Alkali Proof			
Net weight of motor (kgs.)		133		Paint shade		632 as per IS 5			
				Earthing provision (two terminals on stator body)		Yes			
Bearings						Terminal box			
Coupling (Direct/flexible/Belt & Pulley/Gearbox)		Direct		Terminal box location when viewed from DE		As per GA drawing			
Dimenssions of pulley (OD x width) mm		-		Direction of cable entry		As per GA drawing			
Bearings (roller/ball/angular contact)		Ball /Ball		Cable size and type(Aluminium)		2R X 3C X 35 SQ MM			
Bearing size DE/NDE		6209 2Z C3 / 6209 2Z C3		Earthing provision (one terminal in TB)		Yes			
Type of lubrication		LITHIUM SOAP BASE GREASE		No of phases/Winding connection/number of terminals		3 / DELTA / 6			
Accessories									
RTDs - 3 numbers simplex (w/o controller)				Arrow plate for direction of rotation					
BTDs - 1 number per bearing (w/o controller)				Double compression glands (main cable)					
Space heaters - single phase 50z, 230V				Double compression glands (Space heater/thermistors/RTDs)					
Thermistors - PTC , 1 number per phase				Brake (Type/voltage/torque)					
Additional T-Box for Accessories									
Additional nameplate									
Notes:									
1)All performance values are subject to IS/IEC 60034-1 tolerances, unless otherwise specified.									
2)Performance values are at rated voltage and rated frequency condition and for DOL starting condition.									
3)Motor GD ² = Load GD ² assumed wherever not mentioned.									
4)Where starting time is more than 10 seconds, provision of heavy duty relays is mandatory.									
5)Kilowatt rating is mandatory and HP is approximate.									
6) Accessories provided are marked as "YES"									
						Prepared by			
						Approved by			
						Revision			
						Date:			
Project:				Contractor/Client					
Consultant				Package					

