B Bharat Bijlee Data sheet for motors **Customer** Bharat Bijlee Ltd. Manufacturer 3 phase Induction Motor **BBL** Enquiry reference No Type of motor Quantity **Customer P.O.Number CUSTOMER TO FURNISH** W.O. No. / SAP No. **Application** Output kW / Pole 9.3 8P Tag no. MD18L813 BBL type Ref. MJ180 Frame size Installation details Applicable standards (latest edition) Performance: IS/IEC 60034-1 Maintenance IS:900 | FLP Motors: IS/IEC 60079-1 Area classification (Safe / Hazardous) Hazardous area Location: indoor/outdoor/deck Dimensions: IS 1231/IS 2223/IS:8223 Indoor Vibrations: IS 12075 Altitude (meters) 1000 or less 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 Voltage (Volts) and permisible variation ±10% IIA, IIB 415 Gas group Temp.class Frequency (Hz) and permissible variation 50 ±5% Ex 'd' Combined variation (absolute sum) ±10% (EI D/Tyma 'a'/Tyma 'n') If Mine application then DGMS Approving authority for hazardous area else PESO Electrical parameters Starting performance Method of starting DOL Starting current (%FLC) 450 CUSTOMER TO FURNISH Starting torque (%FLT) 210 Load speed (rpm) Motor GD^2 (kgm²) Pull out torque (%FLT) 0.62 220 Load GD² (kgm²) **CUSTOMER TO FURNISH** Locked rotor withstand time (hot/cold) (sec) 30 15 Number of consecutive starts (hot/cold) (nos.) 2/3 Load torque-speed curve Parabolic TS curve provided Load GD2 = Motor GD2 PLEASE FURNISH ALL ABOVE Starting time at rated voltage (sec) **DETAILS** Running Performance Duty and designation Continuous (S1) Efficiency class CDF/Equivalent starts per hour/FI Ambient temp./temp.rise by resistance (deg.C) 45 TEFC (TOTALLY ENCLOSED Insulation class / utilisation class on DOL F/B Enclosure FAN COOLED) Full load current (FLC) amps. 18.9 Rotor type (Squirrel Cage/ Slip ring) Squirrel Cage Rotor voltage/rotor current (RV/RA) (Volts/Amps) Not applicable Full load speed (rpm) 715 Full load torque (FLT) kg-m Stator/rotor time constant (min) 108/146 12.7 Efficiency in % at FL/0.75FL/0.5FL Power factor at FL/0.75FL/0.5FL 0.79 0.74 0.64 86.5 86.5 85.0 Mechanical parameters Mounting **B**3 Mounting dimensions Refer GA drawing Single cylindrical Direction of rotation viewed from DE Clockwise Shaft extention IP 55 Suitable for bidirectional rotation Yes Degree of protection Method of cooling (TEFC/forced cooled/TESC) Acid Alkali Proof **TEFC** (IC 411) Paint type Net weight of motor (kg) 205 Paint shade 632 as per IS 5 Earthing provision (two terminals on stator body) Yes Terminal box Bearings Coupling (Direct/flexible/Belt & Direct Terminal box location when viewed from DE As per GA drawing Pulley/Gearbox) As per GA drawing Dimenssions of pulley (OD x width) mm Direction of cable entry 2R X 3C X 50 SQ MM Bearings (roller/ball/angular contact) Ball/Ball Cable size and type(Aluminium) Bearing size DE/NDE Earthing provision (one terminal in TB) 6310 2Z C3/6310 2Z C3 Yes LITHIUM SOAP BASE GREASE 3 / DELTA / 6 Type of lubrication 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) Double compression glands (Space Space heaters - single phase 50z, 230V heater/Thermisters/RTDs) Thermisters - PTC 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	

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Project:	Contractor/Client	Dotos
Consultant	Package	Date: