## **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 5.5 2P Tag no. MD13S2B5 BBL type Ref. MJ132 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) 650 CUSTOMER TO FURNISH Starting torque (%FLT) 230 Load speed (rpm) Motor $GD^2$ (kgm<sup>2</sup>) 0.063 Pull out torque (%FLT) 300 Load $GD^2$ (kgm<sup>2</sup>) **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) 10.1 Full load current (FLC) amps. Rotor type (Squirrel Cage/ Slip ring ) Squirrel Cage Rotor voltage/rotor current (RV/RA) (Volts/Amps) Not applicable Full load speed (rpm) 2920 Full load torque (FLT) kg-m 1.84 Stator/rotor time constant (min) 72/97 Efficiency in % at FL/0.75FL/0.5FL 85.7 Power factor at FL/0.75FL/0.5FL 0.880.85 0.77 85.0 80.0 Mechanical parameters Mounting **B5** 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 Acid Alkali Proof Method of cooling (TEFC/forced cooled/TESC) TEFC (IC 411) Paint type Net weight of motor (kg) 82 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) Dimenssions of pulley (OD x width) mm Direction of cable entry As per GA drawing 1R X 3C X 16 SQ MM Bearings (roller/ball/angular contact) Ball/Ball Cable size and type(Aluminium) Bearing size DE/NDE Earthing provision (one terminal in TB) 6208 2Z C3/6208 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"

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