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|  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 | 90 | / 2P | | | | |
| BBL type tef. | | 2J28M255 | Frame size | MJ280 | | | | | |
| 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 | | T4 | 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) | 650 | | | | | |
| Load speed (rpm) | | CUSTOMER TO FURNISH | Starting torque (%FLT) | 200 | | | | | |
| Motor GD ² (kgm ²) | | 3.42 | Pull out torque (%FLT) | 280 | | | | | |
| Load GD ² (kgm ²) | | CUSTOMER TO FURNISH | Locked rotor withstand time (hot/cold) (sec) | 15 | / 30 | | | | |
| 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. | | 146 | Rotor type (Squirrel Cage/ Slip ring) | Squirrel Cage | | | | | |
| Full load speed (rpm) | | 2970 | Rotor voltage/rotor current (RV/RA) (Volts/Amps) | Not applicable | | | | | |
| Full load torque (FLT) kg-m | | 29.5 | Stator/rotor time constant (min) | 144/194 | | | | | |
| Efficiency in % at FL/0.75FL/0.5FL | 94.1 | 93.9 90.9 | Power factor at FL/0.75FL/0.5FL | 0.91 | 0.89 0.86 | | | | |
| Mechanical parameters | | | | | | | | | |
| Mounting | | B5 | 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.) | | 765 | 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 120 SQ MM | | | | | |
| Bearing size DE/NDE | 6316 C3 | / 6316 C3 | Earthing provision (one terminal in TB) | Yes | | | | | |
| Type of lubrication | | SKF LGMT3- 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" | | | | | | | | | |
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| | | | | | | Prepared by | | | |
| | | | | | | Approved by | | | |
| | | | | | | Revision | | | |
| Project: | | Contractor/Client | | Date: | | | | | |
| Consultant | | Package | | | | | | | |

