

# ABB BALDOR RELIANCE III

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## Customer information packet

### VSPNM3538

.5HP, 1725RPM, 3PH, 60HZ, 56C, 3420M, TENV, F1

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                       |
|---------------------------------------|---------------------------------------|
| <b>Enclosure</b>                      | TENV                                  |
| <b>Frame</b>                          | 56C                                   |
| <b>Frame Material</b>                 | Steel                                 |
| <b>Frequency</b>                      | 60.00 Hz                              |
| <b>Haz Area Class and Group</b>       | None                                  |
| <b>Haz Area Division</b>              | Not Applicable                        |
| <b>Motor Letter Type</b>              | Three Phase                           |
| <b>Output @ Frequency</b>             | .500 HP @ 60 HZ                       |
| <b>Phase</b>                          | 3                                     |
| <b>Synchronous Speed @ Frequency</b>  | 1800 RPM @ 60 HZ                      |
| <b>Voltage @ Frequency</b>            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ    |
| <b>Agency Approvals</b>               | C UR US<br>WEEE                       |
| <b>Ambient Temperature</b>            | 40 °C                                 |
| <b>Auxiliary Box</b>                  | NO AUXILLARY BOX                      |
| <b>Auxiliary Box Lead Termination</b> | None                                  |
| <b>Base Indicator</b>                 | No Mounting                           |
| <b>Bearing Grease Type</b>            | Polyrex EM (-20F +300F)               |
| <b>Blower</b>                         | None                                  |
| <b>Current @ Voltage</b>              | 1.500 A @ 230.0 V<br>.750 A @ 460.0 V |
| <b>Design Code</b>                    | B                                     |
| <b>Drip Cover</b>                     | No Drip Cover                         |
| <b>Duty Rating</b>                    | CONT                                  |
| <b>Efficiency @ 100% Load</b>         | 81.5 %                                |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated             |
| <b>Feedback Device</b>                | NO FEEDBACK                           |
| <b>Front Shaft Indicator</b>          | None                                  |
| <b>Heater Indicator</b>               | No Heater                             |
| <b>High Voltage Full Load Amps</b>    | 0.8 a                                 |
| <b>Insulation Class</b>               | F                                     |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | C          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 34N591     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 34WGR771   |
| <b>Layout</b>       | 34LYN591   |
| <b>Eff. date</b>    | 03-03-2025 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 9#18       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 03-07-2024 |

|                                      |                     |
|--------------------------------------|---------------------|
| <b>Inverter Code</b>                 | Not Inverter        |
| <b>KVA Code</b>                      | K                   |
| <b>Lifting Lugs</b>                  | No Lifting Lugs     |
| <b>Locked Bearing Indicator</b>      | Locked Bearing      |
| <b>Motor Lead Quantity/Wire Size</b> | 9 @ 18 AWG          |
| <b>Motor Lead Termination</b>        | Flying Leads        |
| <b>Motor Standards</b>               | NEMA                |
| <b>Motor Type</b>                    | 3420M               |
| <b>Mounting Arrangement</b>          | F1                  |
| <b>Number of Poles</b>               | 4                   |
| <b>Overall Length</b>                | 10.88 IN            |
| <b>Power Factor</b>                  | 76                  |
| <b>Product Family</b>                | General Purpose     |
| <b>Pulley End Bearing Type</b>       | Ball                |
| <b>Pulley Face Code</b>              | C-Face              |
| <b>Pulley Shaft Indicator</b>        | Standard            |
| <b>Rodent Screen</b>                 | None                |
| <b>Service Factor</b>                | 1.25                |
| <b>Shaft Diameter</b>                | 0.625 IN            |
| <b>Shaft Ground Indicator</b>        | No Shaft Grounding  |
| <b>Shaft Rotation</b>                | Reversible          |
| <b>Shaft Slinger Indicator</b>       | No Slinger          |
| <b>Speed</b>                         | 1725 rpm            |
| <b>Speed Code</b>                    | Single Speed        |
| <b>Starting Method</b>               | Direct on line      |
| <b>Thermal Device - Bearing</b>      | None                |
| <b>Thermal Device - Winding</b>      | None                |
| <b>Vibration Sensor Indicator</b>    | No Vibration Sensor |
| <b>Winding Thermal 1</b>             | None                |
| <b>Winding Thermal 2</b>             | None                |

**NP4558A02LL**

**YR**

**AC Induction Motor Performance Data**

Record # 100720

Preliminary Data Sheet

| Winding: 34WGR771-R002 |    |          | Type: 3420M                              |                         | Enclosure: TENV |           |
|------------------------|----|----------|------------------------------------------|-------------------------|-----------------|-----------|
| Nameplate Data         |    |          | 460 V, 60 Hz:<br>High Voltage Connection |                         |                 |           |
| Rated Output (HP)      |    | .5       | Full Load Torque                         |                         | 1.51 LB-FT      |           |
| Volts                  |    | 230/460  | Start Configuration                      |                         | direct on line  |           |
| Full Load Amps         |    | 1.5/.75  | Breakdown Torque                         |                         | 5.3 LB-FT       |           |
| R.P.M.                 |    | 1725     | Pull-up Torque                           |                         | 3.5 LB-FT       |           |
| Hz                     | 60 | Phase    | 3                                        | Locked-rotor Torque     |                 | 4.1 LB-FT |
| NEMA Design Code       |    | B        | KVA Code                                 | Starting Current        |                 | 5.4 A     |
| Service Factor (S.F.)  |    | 1.25     | No-load Current                          |                         | 0.46 A          |           |
| NEMA Nom. Eff.         |    | 81.5     | Power Factor                             | Line-line Res. @ 25°C   |                 | 30.4 Ω    |
| Rating - Duty          |    | 40C      | AMB-CONT                                 | Temp. Rise @ Rated Load |                 | 53°C      |
| S.F. Amps              |    | 1.76/.88 | Temp. Rise @ S.F. Load                   |                         | 67°C            |           |
|                        |    |          | Locked-rotor Power Factor                |                         | 54.5            |           |
|                        |    |          | Rotor inertia                            |                         | 0.0476 oz-in²   |           |

**Load Characteristics 460 V, 60 Hz, 0.5 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 37   | 56   | 69   | 76   | 80   | 82   | 80   |
| Efficiency      | 66.3 | 77.5 | 81.1 | 81.9 | 81.7 | 80.6 | 81.7 |
| Speed           | 1779 | 1762 | 1744 | 1725 | 1704 | 1681 | 1704 |
| Line amperes    | 0.48 | 0.55 | 0.63 | 0.75 | 0.88 | 1.03 | 0.88 |

ABB Motors and Mechanical Inc.

WINDING # 34WGR771

Typical performance - not guaranteed values.

0.5 HP 3 PH 60 HZ 1725 RPM 460 V 3420M

TORQUES (LB-FT): PO=5.3 PU=3.5 LR=4.1 LRA=5.4





