

# ABB BALDOR RELIANCE III

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## Customer information packet

### SPM3558T

2HP, 1765RPM, 3PH, 60HZ, 145T, 3542M, TEFC, F1

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                             |
|---------------------------------------|-------------------------------------------------------------|
| <b>Enclosure</b>                      | TEFC                                                        |
| <b>Frame</b>                          | 145T                                                        |
| <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>             | 2.000 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>               | NEMA PREMIUM 4<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>                 | Rigid                                                       |
| <b>Bearing Grease Type</b>            | Polyrex EM (-20F +300F)                                     |
| <b>Blower</b>                         | None                                                        |
| <b>Current @ Voltage</b>              | 2.800 A @ 460.0 V<br>5.600 A @ 230.0 V<br>5.800 A @ 208.0 V |
| <b>Design Code</b>                    | B                                                           |
| <b>Drip Cover</b>                     | No Drip Cover                                               |
| <b>Duty Rating</b>                    | CONT                                                        |
| <b>Efficiency @ 100% Load</b>         | 88.5 %                                                      |
| <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>    | 2.8 a                                                       |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | D          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 35E6248    |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 35WGZ965   |
| <b>Layout</b>       | 35LYE6248  |
| <b>Eff. date</b>    | 06-07-2024 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 9#18       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 09-08-2023 |

|                                      |                            |
|--------------------------------------|----------------------------|
| <b>Insulation Class</b>              | <b>F</b>                   |
| <b>Inverter Code</b>                 | <b>Inverter Duty</b>       |
| <b>KVA Code</b>                      | <b>M</b>                   |
| <b>Lifting Lugs</b>                  | <b>No Lifting Lugs</b>     |
| <b>Locked Bearing Indicator</b>      | <b>No Locked Bearing</b>   |
| <b>Max Speed</b>                     | <b>2700 rpm</b>            |
| <b>Motor Lead Quantity/Wire Size</b> | <b>9 @ 18 AWG</b>          |
| <b>Motor Lead Termination</b>        | <b>Flying Leads</b>        |
| <b>Motor Standards</b>               | <b>NEMA</b>                |
| <b>Motor Type</b>                    | <b>3542M</b>               |
| <b>Mounting Arrangement</b>          | <b>F1</b>                  |
| <b>Number of Poles</b>               | <b>4</b>                   |
| <b>Overall Length</b>                | <b>15.56 IN</b>            |
| <b>Power Factor</b>                  | <b>75</b>                  |
| <b>Product Family</b>                | <b>General Purpose</b>     |
| <b>Pulley End Bearing Type</b>       | <b>Ball</b>                |
| <b>Pulley Face Code</b>              | <b>Standard</b>            |
| <b>Pulley Shaft Indicator</b>        | <b>Standard</b>            |
| <b>Rodent Screen</b>                 | <b>None</b>                |
| <b>RoHS Status</b>                   | <b>ROHS COMPLIANT</b>      |
| <b>Service Factor</b>                | <b>1.15</b>                |
| <b>Shaft Diameter</b>                | <b>0.875 IN</b>            |
| <b>Shaft Ground Indicator</b>        | <b>No Shaft Grounding</b>  |
| <b>Shaft Rotation</b>                | <b>Reversible</b>          |
| <b>Shaft Slinger Indicator</b>       | <b>No Slinger</b>          |
| <b>Speed</b>                         | <b>1765 rpm</b>            |
| <b>Speed Code</b>                    | <b>Single Speed</b>        |
| <b>Starting Method</b>               | <b>Direct on line</b>      |
| <b>Thermal Device - Bearing</b>      | <b>None</b>                |
| <b>Thermal Device - Winding</b>      | <b>None</b>                |
| <b>Vibration Sensor Indicator</b>    | <b>No Vibration Sensor</b> |
| <b>Winding Thermal 1</b>             | <b>None</b>                |
| <b>Winding Thermal 2</b>             | <b>None</b>                |

**Nameplate**

| NP4423A01A01L |               |         |          |      |      |               |       |      |     |    |       |  |
|---------------|---------------|---------|----------|------|------|---------------|-------|------|-----|----|-------|--|
| CAT #         | SPM3558T      |         |          |      |      | WGT           | 62    | LBS  |     |    |       |  |
| SPEC          | 35E6248Z965   |         |          |      |      | ENCL          | TEFC  |      |     |    |       |  |
| SER #         |               |         |          |      |      | CC            | 010A  | IP   | 54  |    |       |  |
| HP            | 2             | MAG CUR |          |      |      | 3.4/1.7       |       |      |     |    |       |  |
| VOLTS         | 230/460       |         |          |      |      | NEMA NOM. EFF |       |      |     |    | 88.5  |  |
| AMPS          | 5.6/2.8       |         |          |      |      | PF            | 75    |      |     |    |       |  |
| RATING        | 40C AMB-CONT  |         |          |      |      |               |       |      |     |    |       |  |
| RPM           | 1765          |         |          |      |      | MAX RPM       |       | 2700 |     |    |       |  |
| FRAME         | 145T          | HZ      | 60       | CODE |      | M             | CLASS |      | F   |    |       |  |
| SER.F.        | 1.15          | SF AMP  | 6.3/3.15 |      |      |               | PH    | 3    | DES | B  |       |  |
| DE            | 6205          |         | ODE      |      | 6203 |               |       |      |     |    |       |  |
| LUBRICATION   | POLYREX EM    |         |          |      |      |               |       |      |     |    |       |  |
| ID LOGO       | INVERTER TYPE |         |          | VPWM |      | CHP           | 60    | TO   |     | 90 | 1.5:1 |  |
| ID LOGO       | WK2           | 0.303   | CT       | 6    | TO   | 60            | 10:1  |      |     |    |       |  |
| ID LOGO       | SL HZ         | 1.3     | VT       | 3    | TO   | 60            | 20:1  |      |     |    |       |  |
|               |               |         |          |      |      |               |       |      |     |    |       |  |
|               |               |         |          |      |      |               |       |      |     |    |       |  |
|               |               |         |          |      |      |               |       |      |     |    |       |  |
|               |               |         |          |      |      |               |       |      |     |    |       |  |
|               |               |         |          |      |      | QR            |       |      |     |    |       |  |
| YR            |               |         |          |      |      |               |       |      |     |    |       |  |

**AC Induction Motor Performance Data**

Record # 96357

Preliminary Data Sheet

| Winding: 35WGZ965-R001 |      |              | Type: 3542M                              |                       | Enclosure: TEFC |  |
|------------------------|------|--------------|------------------------------------------|-----------------------|-----------------|--|
| Nameplate Data         |      |              | 460 V, 60 Hz:<br>High Voltage Connection |                       |                 |  |
| Rated Output (HP)      |      | 2            | Full Load Torque                         |                       | 5.96 LB-FT      |  |
| Volts                  |      | 230/460      | Start Configuration                      |                       | direct on line  |  |
| Full Load Amps         |      | 5.6/2.8      | Breakdown Torque                         |                       | 26 LB-FT        |  |
| R.P.M.                 |      | 1765         | Pull-up Torque                           |                       | 16.9 LB-FT      |  |
| Hz                     | 60   | Phase        | 3                                        | Locked-rotor Torque   | 18.4 LB-FT      |  |
| NEMA Design Code       | B    | KVA Code     | M                                        | Starting Current      | 27.1 A          |  |
| Service Factor (S.F.)  |      | 1.15         | No-load Current                          |                       | 1.67 A          |  |
| NEMA Nom. Eff.         | 88.5 | Power Factor | 75                                       | Line-line Res. @ 25°C | 6.21 Ω          |  |
| Rating - Duty          |      | 40C AMB-CONT | Temp. Rise @ Rated Load                  |                       | 52°C            |  |
| S.F. Amps              |      | 6.3/3.15     | Temp. Rise @ S.F. Load                   |                       | 61°C            |  |
|                        |      |              | Locked-rotor Power Factor                |                       | 50.7            |  |
|                        |      |              | Rotor inertia                            |                       | 0.303 lb-ft²    |  |

**Load Characteristics 460 V, 60 Hz, 2 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 34   | 53   | 67   | 75   | 81   | 84   | 79   |
| Efficiency      | 79.3 | 86.5 | 88.4 | 88.6 | 87.9 | 86.6 | 88.2 |
| Speed           | 1793 | 1785 | 1776 | 1767 | 1757 | 1746 | 1761 |
| Line amperes    | 1.76 | 2.01 | 2.37 | 2.81 | 3.32 | 3.88 | 3.12 |

ABB Motors and Mechanical Inc.

WINDING # 35WGZ965

Typical performance - not guaranteed values.

2 HP 3 PH 60 HZ 1765 RPM 460 V 3542M

TORQUES (LB-FT): PO=26 PU=16.9 LR=18.4 LRA=27.1





