

# ABB BALDOR RELIANCE III

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## Customer information packet

### VEM3559T

3HP, 3450RPM, 3PH, 60HZ, 145TC, 3532M, TEFC, F1

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                             |
|---------------------------------------|-------------------------------------------------------------|
| <b>Enclosure</b>                      | TEFC                                                        |
| <b>Frame</b>                          | 145TC                                                       |
| <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>             | 3.000 HP @ 60 HZ                                            |
| <b>Phase</b>                          | 3                                                           |
| <b>Synchronous Speed @ Frequency</b>  | 3600 RPM @ 60 HZ                                            |
| <b>Voltage @ Frequency</b>            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ                          |
| <b>Agency Approvals</b>               | NEMA PREMIUM<br>CURUSEEV                                    |
| <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>              | 3.600 A @ 460.0 V<br>7.200 A @ 230.0 V<br>7.900 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>         | 86.5 %                                                      |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated                                   |
| <b>Feedback Device</b>                | NO FEEDBACK                                                 |
| <b>Front Face Code</b>                | Standard                                                    |
| <b>Front Shaft Indicator</b>          | None                                                        |
| <b>Heater Indicator</b>               | No Heater                                                   |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | Q          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 35AA003    |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 35WGQ060   |
| <b>Layout</b>       | 35LYAA003  |
| <b>Eff. date</b>    | 01-12-2026 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 02         |
| <b>Leads</b>        | 9#18       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 04-20-2015 |

|                               |                     |
|-------------------------------|---------------------|
| High Voltage Full Load Amps   | 3.6 a               |
| Insulation Class              | F                   |
| Inverter Code                 | Inverter Ready      |
| KVA Code                      | L                   |
| Lifting Lugs                  | No Lifting Lugs     |
| Locked Bearing Indicator      | Locked Bearing      |
| Motor Lead Exit               | Ko Box              |
| Motor Lead Quantity/Wire Size | 9 @ 18 AWG          |
| Motor Lead Termination        | Flying Leads        |
| Motor Standards               | NEMA                |
| Motor Type                    | 3532M               |
| Mounting Arrangement          | F1                  |
| Number of Poles               | 2                   |
| Overall Length                | 14.17 IN            |
| Power Factor                  | 92                  |
| Product Family                | General Purpose     |
| Pulley End Bearing Type       | Ball                |
| Pulley Face Code              | C-Face              |
| Pulley Shaft Indicator        | Standard            |
| Rodent Screen                 | None                |
| RoHS Status                   | ROHS COMPLIANT      |
| Service Factor                | 1.15                |
| Shaft Diameter                | 0.875 IN            |
| Shaft Extension Location      | Pulley End          |
| Shaft Ground Indicator        | No Shaft Grounding  |
| Shaft Rotation                | Reversible          |
| Shaft Slinger Indicator       | No Slinger          |
| Speed                         | 3450 rpm            |
| Speed Code                    | Single Speed        |
| Starting Method               | Direct on line      |
| Thermal Device - Bearing      | None                |
| Thermal Device - Winding      | None                |
| Vibration Sensor Indicator    | No Vibration Sensor |
| Winding Thermal 1             | None                |

**Winding Thermal 2**

**None**

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Nameplate

| NP3441LUA                  |               |     |      |      |     |   |       |   |       |
|----------------------------|---------------|-----|------|------|-----|---|-------|---|-------|
| CAT.NO.                    | VEM3559T      |     |      |      |     |   |       |   |       |
| SPEC                       | 35AA003Q060G1 |     |      |      |     |   |       |   |       |
| HP                         | 3             |     |      |      |     |   |       |   |       |
| VOLTS                      | 230/460       |     |      |      |     |   |       |   |       |
| AMPS                       | 7.2/3.6       |     |      |      |     |   |       |   |       |
| RPM                        | 3450          |     |      |      |     |   |       |   |       |
| FRAME                      | 145TC         |     | HZ   | 60   |     |   | PH    | 3 |       |
| SF                         | 1.15          |     | CODE | L    | DES | B | CLASS | F |       |
| NEMA NOM. EFF              | 86.5          |     | PF   | 92   |     |   |       |   |       |
| RATING                     | 40C AMB-CONT  |     |      |      |     |   |       |   |       |
| CC                         | 010A          |     |      |      |     |   |       |   |       |
| ENCL                       | TEFC          | SER |      |      |     |   |       |   |       |
| DE                         | 6205          |     | ODE  | 6203 |     |   |       |   |       |
| VPWM INVERTER READY        | SFA 8.2/4.1   |     |      |      |     |   |       |   |       |
| CT6-60H(10:1)VT3-60H(20:1  |               |     |      |      |     |   |       |   |       |
| 50Hz 3HP 190/380V 8.8/4.4A |               |     |      |      |     |   |       |   | SF1.0 |

**AC Induction Motor Performance Data**

Record # 50261

Typical performance - not guaranteed values

| Winding: 35WGQ060-R002 |                   | Type: 3532M                              | Enclosure: TEFC |
|------------------------|-------------------|------------------------------------------|-----------------|
| Nameplate Data         |                   | 460 V, 60 Hz:<br>High Voltage Connection |                 |
| Rated Output (HP)      | 3                 | Full Load Torque                         | 4.5 LB-FT       |
| Volts                  | 230/460           | Start Configuration                      | direct on line  |
| Full Load Amps         | 7.2/3.6           | Breakdown Torque                         | 18 LB-FT        |
| R.P.M.                 | 3450              | Pull-up Torque                           | 11 LB-FT        |
| Hz                     | 60 Phase          | Locked-rotor Torque                      | 16 LB-FT        |
| NEMA Design Code       | B KVA Code        | Starting Current                         | 33 A            |
| Service Factor (S.F.)  | 1.15              | No-load Current                          | 1.2 A           |
| NEMA Nom. Eff.         | 86.5 Power Factor | Line-line Res. @ 25°C                    | 4.72 Ω          |
| Rating - Duty          | 40C AMB-CONT      | Temp. Rise @ Rated Load                  | 61°C            |
| S.F. Amps              |                   | Temp. Rise @ S.F. Load                   | 76°C            |

**Load Characteristics 460 V, 60 Hz, 3 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 62   | 81   | 88   | 92   | 93   | 94   | 93   |
| Efficiency      | 83.7 | 87.9 | 88.2 | 87.2 | 85.6 | 83.5 | 86.2 |
| Speed           | 3562 | 3531 | 3498 | 3462 | 3421 | 3375 | 3437 |
| Line amperes    | 1.5  | 2.1  | 2.8  | 3.6  | 4.5  | 5.4  | 4.1  |

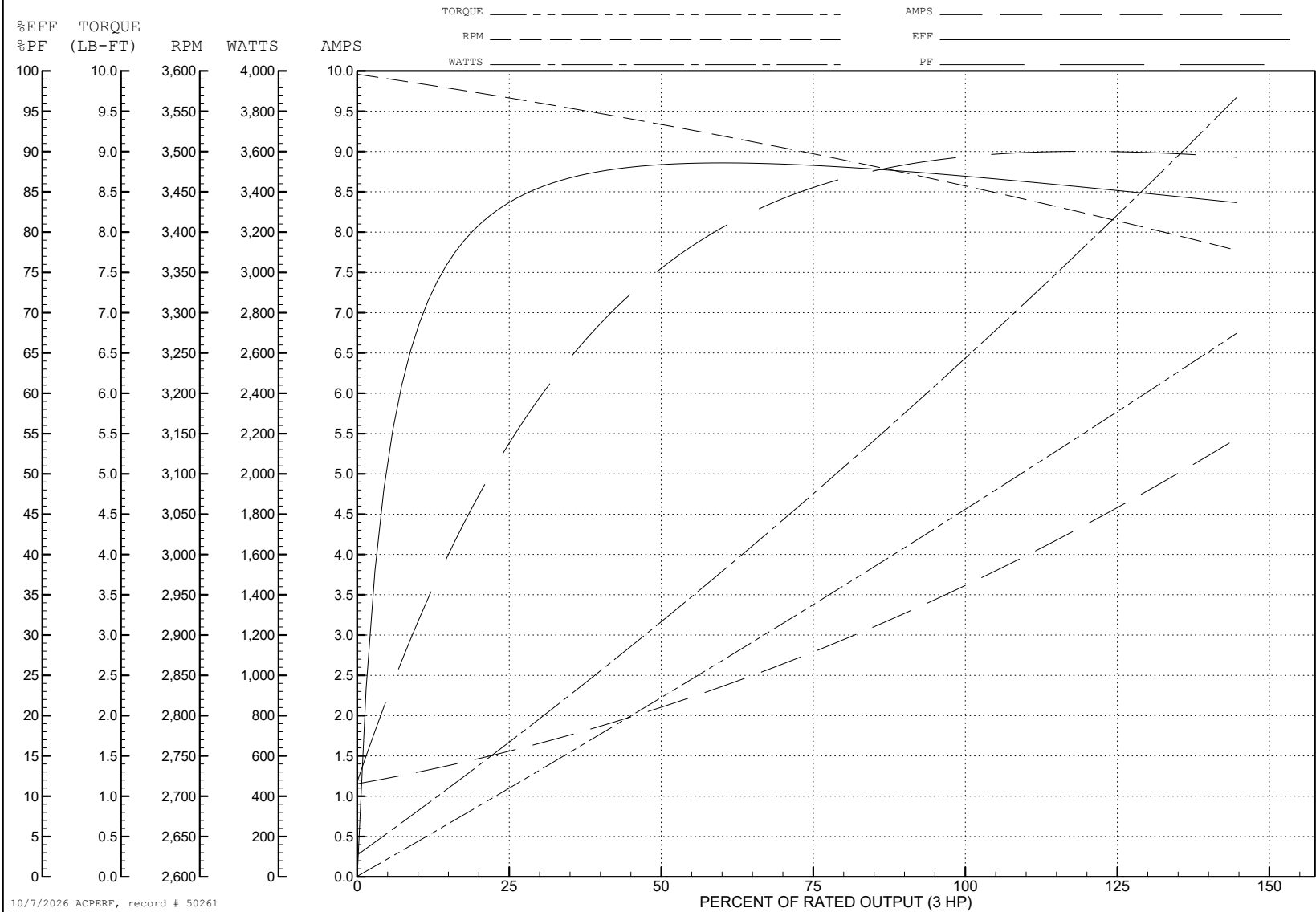
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WINDING # 35WGQ060

Typical performance - not guaranteed values.

3 HP 3 PH 60 HZ 3450 RPM 460 V 3532M

TORQUES (LB-FT): PO=18 PU=11 LR=16 LRA=33



**AC Induction Motor Performance Data**

Record # 59171

Typical performance - not guaranteed values

| Winding: 35WGQ060-R002 |          |         | Type: 3532M                             |  | Enclosure: TEFC           |                       |               |
|------------------------|----------|---------|-----------------------------------------|--|---------------------------|-----------------------|---------------|
| Nameplate Data         |          |         | 230 V, 60 Hz:<br>Low Voltage Connection |  |                           |                       |               |
| Rated Output (HP)      |          | 3       | Full Load Torque                        |  | 4.5 LB-FT                 |                       |               |
| Volts                  |          | 230/460 | Start Configuration                     |  | direct on line            |                       |               |
| Full Load Amps         |          | 7.2/3.6 | Breakdown Torque                        |  | 18 LB-FT                  |                       |               |
| R.P.M.                 |          | 3450    | Pull-up Torque                          |  | 11 LB-FT                  |                       |               |
| Hz                     | 60 Phase | 3       | Locked-rotor Torque                     |  | 16 LB-FT                  |                       |               |
| NEMA Design Code       |          | B       | KVA Code                                |  | L                         | Starting Current      | 66 A          |
| Service Factor (S.F.)  |          | 1.15    | No-load Current                         |  | 2.4 A                     |                       |               |
| NEMA Nom. Eff.         |          | 86.5    | Power Factor                            |  | 92                        | Line-line Res. @ 25°C | 1.17 Ω        |
| Rating - Duty          |          | 40C     | AMB-CONT                                |  | Temp. Rise @ Rated Load   |                       | 61°C          |
| S.F. Amps              |          |         |                                         |  | Temp. Rise @ S.F. Load    |                       | 73°C          |
|                        |          |         |                                         |  | Locked-rotor Power Factor |                       | 47.1          |
|                        |          |         |                                         |  | Rotor inertia             |                       | 0.0885 LB-FT2 |

**Load Characteristics 230 V, 60 Hz, 3 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 57   | 77   | 85   | 88   | 89   | 90   | 89   |
| Efficiency      | 84.1 | 87.9 | 88.4 | 87.2 | 85.7 | 83.5 | 86.3 |
| Speed           | 3562 | 3531 | 3498 | 3462 | 3421 | 3375 | 3437 |
| Line amperes    | 3    | 4.2  | 5.6  | 7.2  | 9    | 10.8 | 8.28 |

ABB Motors and Mechanical Inc.

WINDING # 35WGQ060

Typical performance - not guaranteed values.

3 HP 3 PH 60 HZ 3450 RPM 230 V 3532M

TORQUES (LB-FT): PO=18 PU=11 LR=16 LRA=66

