

# ABB BALDOR RELIANCE III

---

## Customer information packet

### CFSWDM3559-E

3HP, 3470RPM, 3PH, 60HZ, 56C, TEFC, F1

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                    |
|---------------------------------------|----------------------------------------------------|
| <b>Enclosure</b>                      | TEFC                                               |
| <b>Frame</b>                          | 56C                                                |
| <b>Frame Material</b>                 | Stainless 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>               | UR<br>WEEE<br>CE<br>NEMA PREMIUM<br>CSA EEV<br>CSA |
| <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>              | 3.600 A @ 460.0 V<br>7.200 A @ 230.0 V             |
| <b>Design Code</b>                    | A                                                  |
| <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                                        |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | E          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  |            |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 35WGR930   |
| <b>Layout</b>       | 35LYE4741  |
| <b>Eff. date</b>    | 11-27-2024 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 02         |
| <b>Leads</b>        | 9#18       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 12-13-2019 |

|                                    |                        |
|------------------------------------|------------------------|
| <b>Heater Indicator</b>            | No Heater              |
| <b>High Voltage Full Load Amps</b> | 3.6 a                  |
| <b>Insulation Class</b>            | H                      |
| <b>Inverter Code</b>               | Inverter Ready         |
| <b>KVA Code</b>                    | P                      |
| <b>Lifting Lugs</b>                | No Lifting Lugs        |
| <b>Locked Bearing Indicator</b>    | Locked Bearing         |
| <b>Motor Lead Termination</b>      | Flying Leads           |
| <b>Motor Standards</b>             | NEMA                   |
| <b>Motor Type</b>                  | 3546M                  |
| <b>Mounting Arrangement</b>        | F1                     |
| <b>Number of Poles</b>             | 2                      |
| <b>Overall Length</b>              | 16.21 IN               |
| <b>Power Factor</b>                | 90                     |
| <b>Product Family</b>              | WD All SS Encapsulated |
| <b>Pulley Face Code</b>            | C-Face                 |
| <b>Rodent Screen</b>               | None                   |
| <b>Service Factor</b>              | 1.15                   |
| <b>Shaft Diameter</b>              | 0.625 IN               |
| <b>Shaft Ground Indicator</b>      | No Shaft Grounding     |
| <b>Shaft Rotation</b>              | Reversible             |
| <b>Speed</b>                       | 3470 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                   |

**Nameplate**

| NP4427ABB01 |               |        |         |         |      |          |        |             |       |      |        |       |  |
|-------------|---------------|--------|---------|---------|------|----------|--------|-------------|-------|------|--------|-------|--|
| CAT #       | CFSWDM3559-E  |        |         |         |      | WGT      | 28     |             | KG    |      |        |       |  |
| SPEC        | 35-0000-0507  |        |         |         |      | ENCL     | TEFC   |             |       |      |        |       |  |
| SER #       |               |        |         |         |      | CC       | 010A   |             | IP    | 69   |        |       |  |
| KW          | 3HP           |        |         | MAG CUR |      | 2.5/1.25 |        |             |       | IE   | 3      |       |  |
| VOLTS       | 230/460       |        |         |         |      |          |        |             |       |      |        |       |  |
| AMPS        | 7.2/3.6       |        |         |         |      | PF       | 90     |             |       |      |        |       |  |
| RATING      | 40C AMB-CONT  |        |         |         |      | IC       | 411    |             |       |      |        |       |  |
| RPM         | 3470          |        |         |         |      | (1/MIN)  |        | MAX (1/MIN) |       | 5400 |        |       |  |
| FRAME       | 56C           |        | HZ      | 60      |      | CODE     | P      |             | CLASS | H    |        |       |  |
| SER.F.      | 1.15          | SF AMP | 8.3/4.1 |         |      |          | PH     | 3           | DES   | A    |        |       |  |
| EFF 60HZ    | 86.5          |        | %(100%) |         | 87.2 |          | %(75%) |             | 86.3  |      | %(50%) |       |  |
| EFF 50HZ    | N/A           |        | %(100%) |         | N/A  |          | %(75%) |             | N/A   |      | %(50%) |       |  |
| DE          | 6205          |        |         | ODE     | 6205 |          |        |             |       |      |        |       |  |
| LUBRICATION | POLYREX EM    |        |         |         |      |          |        |             |       |      |        |       |  |
| ID LOGO     | INVERTER TYPE |        |         | VPWM    |      | CHP      | 60     |             | TO    | 90   |        | 1.5:1 |  |
| ID LOGO     | WK2           | 0.127  | CT      | 15      | TO   | 60       |        | 4:1         |       |      |        |       |  |
| ID LOGO     | SL HZ         | 2.2    | VT      | 6       | TO   | 60       |        | 10:1        |       |      |        |       |  |
|             |               |        |         |         |      |          |        |             |       |      |        |       |  |
|             |               |        |         |         |      |          |        |             |       |      |        |       |  |
| YR          |               |        |         |         |      |          |        | QR          |       |      |        |       |  |

**AC Induction Motor Performance Data**

Record # 55293

Typical performance - not guaranteed values

| Winding: 35WGR930-R011 |    |              | Type: 3546M  |                                          | 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                         |                       | 17.2 LB-FT     |        |
| R.P.M.                 |    | 3470         |              | Pull-up Torque                           |                       | 10.5 LB-FT     |        |
| Hz                     | 60 | Phase        | 3            | Locked-rotor Torque                      |                       | 17 LB-FT       |        |
| NEMA Design Code       |    | A            | KVA Code     | P                                        | Starting Current      |                | 48.3 A |
| Service Factor (S.F.)  |    | 1.15         |              | No-load Current                          |                       | 1.25 A         |        |
| NEMA Nom. Eff.         |    | 86.5         | Power Factor | 90                                       | Line-line Res. @ 25°C |                | 3.47 Ω |
| Rating - Duty          |    | 40C AMB-CONT |              | Temp. Rise @ Rated Load                  |                       | 63°C           |        |
| S.F. Amps              |    |              |              | Temp. Rise @ S.F. Load                   |                       | 74°C           |        |
|                        |    |              |              | Locked-rotor Power Factor                |                       | 42.3           |        |
|                        |    |              |              | Rotor inertia                            |                       | 0.127 LB-FT2   |        |

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

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 59   | 79   | 87   | 90   | 91   | 90   | 91   |
| Efficiency      | 80.1 | 86.4 | 87.3 | 86.9 | 85.7 | 83.9 | 86.2 |
| Speed           | 3567 | 3541 | 3510 | 3479 | 3443 | 3403 | 3457 |
| Line amperes    | 1.53 | 2.07 | 2.78 | 3.55 | 4.42 | 5.4  | 4.07 |

ABB Motors and Mechanical Inc.

WINDING # 35WGR930

Typical performance - not guaranteed values.

3 HP 3 PH 60 HZ 3470 RPM 460 V 3546M

TORQUES (LB-FT): PO=17.2 PU=10.5 LR=17 LRA=48.3





