

# ABB BALDOR RELIANCE III

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## Customer information packet

### ECP3580T

1HP, 3450RPM, 3PH, 60HZ, 143T, 0516M, TEFC, F1

Class - CLI GP A,B,C,D

Division - Division II

**Specifications**

|                                       |                                                          |
|---------------------------------------|----------------------------------------------------------|
| <b>Enclosure</b>                      | TEFC                                                     |
| <b>Frame</b>                          | 143T                                                     |
| <b>Frame Material</b>                 | Iron                                                     |
| <b>Frequency</b>                      | 60.00 Hz                                                 |
| <b>Haz Area Class and Group</b>       | CLI GP A,B,C,D                                           |
| <b>Haz Area Division</b>              | Division II                                              |
| <b>Motor Letter Type</b>              | Three Phase                                              |
| <b>Output @ Frequency</b>             | 1.000 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>               | CSA EEV<br>NEMA PREMIUM<br>NEMA_PREMIUM<br>UR<br>CCSA US |
| <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>Constant Torque Speed Range</b>    | 6                                                        |
| <b>Current @ Voltage</b>              | 2.800 A @ 230.0 V<br>1.400 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>         | 84.0 %                                                   |
| <b>Electrically Isolated Bearing</b>  | Not Electrically Isolated                                |
| <b>Enclosure Modification</b>         | Severe Duty Features                                     |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | AB         |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 05F008     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 05WGW546   |
| <b>Layout</b>       | 05LYF008   |
| <b>Eff. date</b>    | 08-05-2026 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 02         |
| <b>Leads</b>        | 9#18       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 02-24-2009 |

|                                      |                                    |
|--------------------------------------|------------------------------------|
| <b>Feedback Device</b>               | <b>NO FEEDBACK</b>                 |
| <b>Front Face Code</b>               | <b>Standard</b>                    |
| <b>Front Shaft Indicator</b>         | <b>None</b>                        |
| <b>Haz Area Temp Code</b>            | <b>T4</b>                          |
| <b>Heater Indicator</b>              | <b>No Heater</b>                   |
| <b>High Voltage Full Load Amps</b>   | <b>1.4 a</b>                       |
| <b>Insulation Class</b>              | <b>F</b>                           |
| <b>Inverter Code</b>                 | <b>Inverter Duty</b>               |
| <b>KVA Code</b>                      | <b>L</b>                           |
| <b>Lifting Lugs</b>                  | <b>Standard Lifting Lugs</b>       |
| <b>Locked Bearing Indicator</b>      | <b>No Locked Bearing</b>           |
| <b>Max Speed</b>                     | <b>5400 rpm</b>                    |
| <b>Motor Lead Exit</b>               | <b>Ko Box</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>0516M</b>                       |
| <b>Mounting Arrangement</b>          | <b>F1</b>                          |
| <b>Number of Poles</b>               | <b>2</b>                           |
| <b>Overall Length</b>                | <b>12.88 IN</b>                    |
| <b>Power Factor</b>                  | <b>82</b>                          |
| <b>Product Family</b>                | <b>Super-E Chemical Processing</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>Service Factor</b>                | <b>1.15</b>                        |
| <b>Shaft Diameter</b>                | <b>0.875 IN</b>                    |
| <b>Shaft Extension Location</b>      | <b>Pulley End</b>                  |
| <b>Shaft Ground Indicator</b>        | <b>No Shaft Grounding</b>          |
| <b>Shaft Rotation</b>                | <b>Reversible</b>                  |
| <b>Shaft Slinger Indicator</b>       | <b>Shaft Slinger</b>               |
| <b>Speed</b>                         | <b>3450 rpm</b>                    |
| <b>Speed Code</b>                    | <b>Single Speed</b>                |

|                            |                     |
|----------------------------|---------------------|
| 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                |

**Nameplate**

| NP3258       |              |      |  |      |     |  |   |    |   |
|--------------|--------------|------|--|------|-----|--|---|----|---|
| CAT.NO.      | ECP3580T     |      |  |      |     |  |   |    |   |
| SPEC.        | 05F008W546G1 |      |  |      |     |  |   |    |   |
| HP           | 1 TE         |      |  |      |     |  |   |    |   |
| VOLTS        | 230/460      |      |  |      |     |  |   |    |   |
| AMP          | 2.8/1.4      |      |  |      |     |  |   |    |   |
| RPM          | 3450         |      |  |      |     |  |   |    |   |
| FRAME        | 143T         | HZ   |  | 60   | PH  |  | 3 |    |   |
| SER.F.       | 1.15         | CODE |  | L    | DES |  | B | CL | F |
| RATING       | 40C AMB-CONT |      |  |      |     |  |   |    |   |
| SN           |              |      |  |      |     |  |   |    |   |
| DE           | 6205         | ODE  |  | 6205 |     |  |   |    |   |
| NEMA-NOM-EFF | 84           | PF   |  | 82   |     |  |   |    |   |
| G.MIN.EFF    | 81.5         | CC   |  | 010A |     |  |   |    |   |
| T. CODE      | T4           | T=   |  | 135  |     |  |   |    |   |

| NP3261      |              |                         |     |
|-------------|--------------|-------------------------|-----|
| SPEC.       | 05F008W546G1 |                         |     |
| D.E. BRG.   | 25BC02XP30X  |                         |     |
| O.D.E. BRG. | 25BC02XP30X  |                         |     |
| GREASE      | POLYREX EM   |                         |     |
| RPM MAX     | 5400         | MAX. KVAR               | 0.2 |
| BLANK       |              |                         |     |
| INV.TYPE    | PWM          |                         |     |
| T=          | 135          |                         |     |
| C HP FR     | 60           | C HP TO                 | 90  |
| CT HZ FROM  | 6            | CT HZ TO                | 60  |
| VT HZ FROM  | 3            | VT HZ TO                | 60  |
| HTR-VOLTS   |              | HTR-AMPS                |     |
| HTR-WATTS   |              | MAX. SPACE HEATER TEMP. |     |

**AC Induction Motor Performance Data**

Record # 47147

Typical performance - not guaranteed values

| Winding: 05WGW546-R015 |    |         | Type: 0516M                              |                     | Enclosure: TEFC         |                       |               |        |
|------------------------|----|---------|------------------------------------------|---------------------|-------------------------|-----------------------|---------------|--------|
| Nameplate Data         |    |         | 460 V, 60 Hz:<br>High Voltage Connection |                     |                         |                       |               |        |
| Rated Output (HP)      |    | 1       | Full Load Torque                         |                     | 1.5 LB-FT               |                       |               |        |
| Volts                  |    | 230/460 | Start Configuration                      |                     | direct on line          |                       |               |        |
| Full Load Amps         |    | 2.8/1.4 | Breakdown Torque                         |                     | 6.5 LB-FT               |                       |               |        |
| R.P.M.                 |    | 3450    | Pull-up Torque                           |                     | 4.8 LB-FT               |                       |               |        |
| Hz                     | 60 | Phase   | 3                                        | Locked-rotor Torque |                         | 5.7 LB-FT             |               |        |
| NEMA Design Code       |    | B       | KVA Code                                 | L                   | Starting Current        |                       | 12.1 A        |        |
| Service Factor (S.F.)  |    | 1.15    | No-load Current                          |                     | 0.68 A                  |                       |               |        |
| NEMA Nom. Eff.         |    | 84      | Power Factor                             |                     | 82                      | Line-line Res. @ 25°C |               | 15.3 Ω |
| Rating - Duty          |    | 40C     | AMB-CONT                                 |                     | Temp. Rise @ Rated Load |                       | 33°C          |        |
| S.F. Amps              |    |         |                                          |                     | Temp. Rise @ S.F. Load  |                       | 38°C          |        |
|                        |    |         |                                          |                     | Rotor inertia           |                       | 0.0442 LB-FT2 |        |

**Load Characteristics 460 V, 60 Hz, 1 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 45   | 65   | 77   | 83   | 87   | 87   | 85   |
| Efficiency      | 70.4 | 80.6 | 84   | 84.6 | 84.7 | 83.7 | 84.7 |
| Speed           | 3567 | 3539 | 3510 | 3479 | 3446 | 3410 | 3459 |
| Line amperes    | 0.75 | 0.9  | 1.09 | 1.33 | 1.56 | 1.88 | 1.47 |

ABB Motors and Mechanical Inc.

WINDING # 05WGW546

Typical performance - not guaranteed values.

1 HP 3 PH 60 HZ 3450 RPM 460 V 0516M

TORQUES (LB-FT): PO=6.5 PU=4.8 LR=5.7 LRA=12.1





