

# ABB BALDOR RELIANCE III

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## Customer information packet

### EM31104

.33HP, 1725RPM, 3PH, 60HZ, 56, 3416M, ODP, F1, N

Class - None

Division - Not Applicable

**Specifications**

|                                       |                                                            |
|---------------------------------------|------------------------------------------------------------|
| <b>Enclosure</b>                      | ODP                                                        |
| <b>Frame</b>                          | 56                                                         |
| <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>             | .330 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>               | 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>                 | Rigid                                                      |
| <b>Bearing Grease Type</b>            | Polyrex EM (-20F +300F)                                    |
| <b>Blower</b>                         | None                                                       |
| <b>Current @ Voltage</b>              | .700 A @ 460.0 V<br>1.400 A @ 230.0 V<br>1.700 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>         | 73.4 %                                                     |
| <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                                                  |
| <b>High Voltage Full Load Amps</b>    | 0.7 a                                                      |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | L          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 34B061     |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 34WGS936   |
| <b>Layout</b>       | 34LYB061   |
| <b>Eff. date</b>    | 12-30-2024 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 9#18       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 03-04-2014 |

|                                      |                            |
|--------------------------------------|----------------------------|
| <b>Insulation Class</b>              | <b>F</b>                   |
| <b>Inverter Code</b>                 | <b>Not Inverter</b>        |
| <b>KVA Code</b>                      | <b>N</b>                   |
| <b>Lifting Lugs</b>                  | <b>No Lifting Lugs</b>     |
| <b>Locked Bearing Indicator</b>      | <b>No Locked Bearing</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>3416M</b>               |
| <b>Mounting Arrangement</b>          | <b>F1</b>                  |
| <b>Number of Poles</b>               | <b>4</b>                   |
| <b>Overall Length</b>                | <b>10.25 IN</b>            |
| <b>Power Factor</b>                  | <b>66</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>1.35</b>                |
| <b>Shaft Diameter</b>                | <b>0.625 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>No Slinger</b>          |
| <b>Speed</b>                         | <b>1725 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**

| NP3155L        |              |  |      |      |     |   |  |    |   |  |  |
|----------------|--------------|--|------|------|-----|---|--|----|---|--|--|
| CAT.NO.        | EM31104      |  |      |      |     |   |  |    |   |  |  |
| SPEC.          | 34B061S936G1 |  |      |      |     |   |  |    |   |  |  |
| HP             | .33          |  |      |      |     |   |  |    |   |  |  |
| VOLTS          | 230/460      |  |      |      |     |   |  |    |   |  |  |
| AMP            | 1.4/.7       |  |      |      |     |   |  |    |   |  |  |
| RPM            | 1725         |  |      |      |     |   |  |    |   |  |  |
| FRAME          | 56           |  | HZ   | 60   |     |   |  | PH | 3 |  |  |
| SER.F.         | 1.35         |  | CODE | N    | DES | B |  | CL | F |  |  |
| F.L. AVG. EFF. | 73.4         |  | PF   | 66   |     |   |  |    |   |  |  |
| RATING         | 40C AMB-CONT |  |      |      |     |   |  |    |   |  |  |
| CC             |              |  |      |      |     |   |  |    |   |  |  |
| DE             | 6203         |  | ODE  | 6203 |     |   |  |    |   |  |  |
| ENCL           | ODP          |  | SN   |      |     |   |  |    |   |  |  |
|                | SFA 1.6/.8   |  |      |      |     |   |  |    |   |  |  |

**AC Induction Motor Performance Data**

Record # 44897

Typical performance - not guaranteed values

| Winding: 34WGS936-R001 |          |         | Type: 3416M                              |  | Enclosure: OPEN         |                       |          |
|------------------------|----------|---------|------------------------------------------|--|-------------------------|-----------------------|----------|
| Nameplate Data         |          |         | 460 V, 60 Hz:<br>High Voltage Connection |  |                         |                       |          |
| Rated Output (HP)      |          | .33     | Full Load Torque                         |  | 1.007 LB-FT             |                       |          |
| Volts                  |          | 230/460 | Start Configuration                      |  | direct on line          |                       |          |
| Full Load Amps         |          | 1.2/.6  | Breakdown Torque                         |  | 4.56 LB-FT              |                       |          |
| R.P.M.                 |          | 1725    | Pull-up Torque                           |  | 3.18 LB-FT              |                       |          |
| Hz                     | 60 Phase | 3       | Locked-rotor Torque                      |  | 3.82 LB-FT              |                       |          |
| NEMA Design Code       |          | B       | KVA Code                                 |  | L                       | Starting Current      | 4.74 A   |
| Service Factor (S.F.)  |          | 1.35    | No-load Current                          |  | 0.445 A                 |                       |          |
| NEMA Nom. Eff.         |          | 73.4    | Power Factor                             |  | 66                      | Line-line Res. @ 25°C | 43.915 Ω |
| Rating - Duty          |          | 40C     | AMB-CONT                                 |  | Temp. Rise @ Rated Load |                       | 18°C     |
| S.F. Amps              |          | 1.5/.7  | Temp. Rise @ S.F. Load                   |  | 24°C                    |                       |          |
|                        |          |         | Locked-rotor Power Factor                |  | 58                      |                       |          |
|                        |          |         | Rotor inertia                            |  | 0.0381 LB-FT2           |                       |          |

**Load Characteristics 460 V, 60 Hz, 0.33 HP**

| % of Rated Load | 25     | 50     | 75     | 100    | 125    | 150    | S.F.  |
|-----------------|--------|--------|--------|--------|--------|--------|-------|
| Power Factor    | 30     | 45     | 57     | 66     | 73     | 78     | 75    |
| Efficiency      | 55.9   | 69.8   | 74.8   | 76.7   | 76.9   | 76.2   | 76.6  |
| Speed           | 1785.9 | 1772.3 | 1758.5 | 1743.2 | 1726.8 | 1709.1 | 1720  |
| Line amperes    | 0.458  | 0.497  | 0.55   | 0.617  | 0.696  | 0.787  | 0.732 |

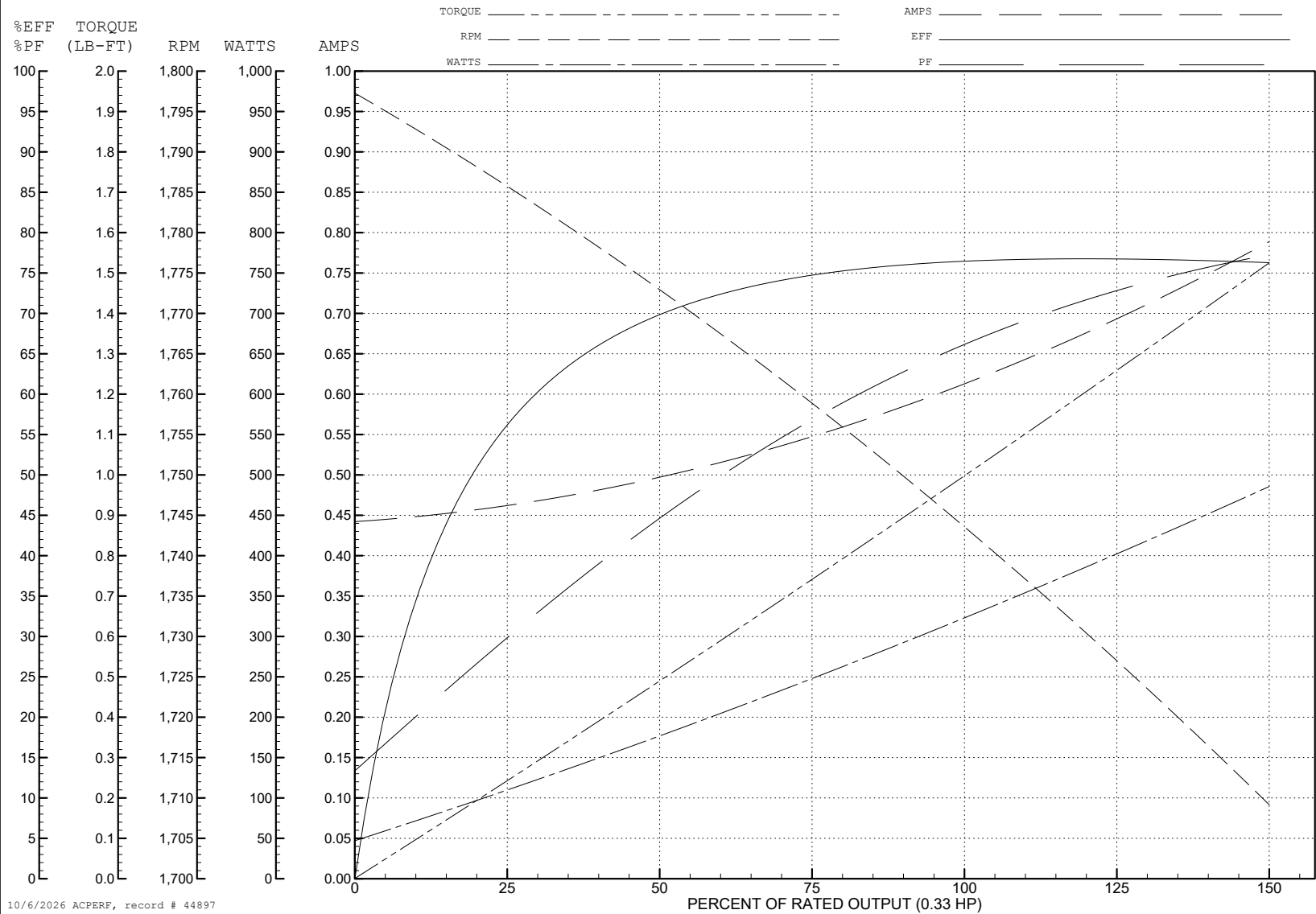
ABB Motors and Mechanical Inc.

WINDING # 34WGS936

Typical performance - not guaranteed values.

0.33 HP 3 PH 60 HZ 1725 RPM 460 V 3416M

TORQUES (LB-FT) : PO=4.56 PU=3.18 LR=3.82 LRA=4.74



**AC Induction Motor Performance Data**

Record # 49383

Typical performance - not guaranteed values

| Winding: 34WGS936-R001 |          |         | Type: 3416M                             |  | Enclosure: OPEN         |                       |          |
|------------------------|----------|---------|-----------------------------------------|--|-------------------------|-----------------------|----------|
| Nameplate Data         |          |         | 230 V, 60 Hz:<br>Low Voltage Connection |  |                         |                       |          |
| Rated Output (HP)      |          | .33     | Full Load Torque                        |  | 1.007 LB-FT             |                       |          |
| Volts                  |          | 230/460 | Start Configuration                     |  | direct on line          |                       |          |
| Full Load Amps         |          | 1.2/.6  | Breakdown Torque                        |  | 4.56 LB-FT              |                       |          |
| R.P.M.                 |          | 1725    | Pull-up Torque                          |  | 3.18 LB-FT              |                       |          |
| Hz                     | 60 Phase | 3       | Locked-rotor Torque                     |  | 3.82 LB-FT              |                       |          |
| NEMA Design Code       |          | B       | KVA Code                                |  | L                       | Starting Current      | 9.48 A   |
| Service Factor (S.F.)  |          | 1.35    | No-load Current                         |  | 0.89 A                  |                       |          |
| NEMA Nom. Eff.         |          | 73.4    | Power Factor                            |  | 66                      | Line-line Res. @ 25°C | 10.979 Ω |
| Rating - Duty          |          | 40C     | AMB-CONT                                |  | Temp. Rise @ Rated Load |                       | 18°C     |
| S.F. Amps              |          | 1.5/.7  | Temp. Rise @ S.F. Load                  |  | 24°C                    |                       |          |
|                        |          |         | Locked-rotor Power Factor               |  | 58                      |                       |          |
|                        |          |         | Rotor inertia                           |  | 0.0381 LB-FT2           |                       |          |

**Load Characteristics 230 V, 60 Hz, 0.33 HP**

| % of Rated Load | 25     | 50     | 75     | 100    | 125    | 150    | S.F.  |
|-----------------|--------|--------|--------|--------|--------|--------|-------|
| Power Factor    | 30     | 45     | 57     | 66     | 73     | 78     | 75    |
| Efficiency      | 55.9   | 69.8   | 74.8   | 76.7   | 76.9   | 76.2   | 76.6  |
| Speed           | 1785.9 | 1772.3 | 1758.5 | 1743.2 | 1726.8 | 1709.1 | 1720  |
| Line amperes    | 0.916  | 0.994  | 1.1    | 1.234  | 1.392  | 1.574  | 1.464 |

ABB Motors and Mechanical Inc.

WINDING # 34WGS936

Typical performance - not guaranteed values.

0.33 HP 3 PH 60 HZ 1725 RPM 230 V 3416M

TORQUES (LB-FT) : PO=4.56 PU=3.18 LR=3.82 LRA=9.48

