

# ABB BALDOR RELIANCE III

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## Customer information packet

### CEM3120T

1.5HP, 3490RPM, 3PH, 60HZ, 143TC, 3518M, OPSB

Class - None

Division - Not Applicable

**Specifications**

|                                |                                                     |
|--------------------------------|-----------------------------------------------------|
| Enclosure                      | OPSB                                                |
| Frame                          | 143TC                                               |
| Frame Material                 | Steel                                               |
| Frequency                      | 60.00 Hz                                            |
| Haz Area Class and Group       | None                                                |
| Haz Area Division              | Not Applicable                                      |
| Motor Letter Type              | Three Phase                                         |
| Output @ Frequency             | 1.500 HP @ 60 HZ                                    |
| Phase                          | 3                                                   |
| Synchronous Speed @ Frequency  | 3600 RPM @ 60 HZ                                    |
| Voltage @ Frequency            | 230.0 V @ 60 HZ<br>460.0 V @ 60 HZ                  |
| Agency Approvals               | NEMA PREMIUM<br>NEMA PREMIUM (OLD LOGO)<br>CURUSEEV |
| Ambient Temperature            | 40 °C                                               |
| Auxiliary Box                  | NO AUXILLARY BOX                                    |
| Auxiliary Box Lead Termination | None                                                |
| Base Indicator                 | Rigid                                               |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                             |
| Blower                         | None                                                |
| Current @ Voltage              | 2.000 A @ 460.0 V<br>4.000 A @ 230.0 V              |
| Design Code                    | B                                                   |
| Drip Cover                     | No Drip Cover                                       |
| Duty Rating                    | CONT                                                |
| Efficiency @ 100% Load         | 84.0 %                                              |
| Electrically Isolated Bearing  | Not Electrically Isolated                           |
| Feedback Device                | NO FEEDBACK                                         |
| Heater Indicator               | No Heater                                           |
| High Voltage Full Load Amps    | 2.0 a                                               |
| Insulation Class               | F                                                   |

**Part Detail**

|              |            |
|--------------|------------|
| Revision     | E          |
| Type         | AC         |
| Mech. spec.  |            |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 35WGM761   |
| Layout       | 35LYBB102  |
| Eff. date    | 01-02-2026 |
| CD Diagram   | CD0005     |
| Poles        | 02         |
| Leads        | 9#18       |
| Proprietary  | False      |
| Created date | 03-09-2020 |

|                                   |                     |
|-----------------------------------|---------------------|
| <b>Inverter Code</b>              | Inverter Ready      |
| <b>IP Rating</b>                  | NONE                |
| <b>KVA Code</b>                   | L                   |
| <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>                 | 3518M               |
| <b>Mounting Arrangement</b>       | F1                  |
| <b>Number of Poles</b>            | 2                   |
| <b>Overall Length</b>             | 17.07 IN            |
| <b>Power Factor</b>               | 83                  |
| <b>Product Family</b>             | General Purpose     |
| <b>Pulley Face Code</b>           | C-Face              |
| <b>Rodent Screen</b>              | None                |
| <b>Service Factor</b>             | 1.15                |
| <b>Shaft Diameter</b>             | 0.875 IN            |
| <b>Shaft Ground Indicator</b>     | No Shaft Grounding  |
| <b>Shaft Rotation</b>             | Reversible          |
| <b>Speed</b>                      | 3490 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

| NP1259L      |              |      |     |      |   |    |    |   |  |
|--------------|--------------|------|-----|------|---|----|----|---|--|
| CAT.NO.      | CEM3120T     |      |     |      |   |    |    |   |  |
| SPEC.        | 35-0000-0671 |      |     |      |   |    |    |   |  |
| HP           | 1.5          |      |     |      |   |    |    |   |  |
| VOLTS        | 230/460      |      |     |      |   |    |    |   |  |
| AMP          | 4/2          |      |     |      |   |    |    |   |  |
| RPM          | 3490         |      |     |      |   |    |    |   |  |
| FRAME        | 143TC        |      | HZ  | 60   |   |    | PH | 3 |  |
| SER.F.       | 1.15         | CODE | L   | DES  | B | CL | F  |   |  |
| NEMA-NOM-EFF | 84           | PF   | 83  |      |   |    |    |   |  |
| RATING       | 40C AMB-CONT |      |     |      |   |    |    |   |  |
| CC           | 010A         |      |     |      |   |    |    |   |  |
| DE           | 6205         |      | ODE | 6203 |   |    |    |   |  |
| ENCL         | OPSB         | SN   |     |      |   |    |    |   |  |

**AC Induction Motor Performance Data**

Record # 53126

Typical performance - not guaranteed values

| Winding: 35WGM761-R007 |          |              | Type: 3518M                              |  | Enclosure: OPSB |                       |        |
|------------------------|----------|--------------|------------------------------------------|--|-----------------|-----------------------|--------|
| Nameplate Data         |          |              | 460 V, 60 Hz:<br>High Voltage Connection |  |                 |                       |        |
| Rated Output (HP)      |          | 1.5          | Full Load Torque                         |  | 2.26 LB-FT      |                       |        |
| Volts                  |          | 230/460      | Start Configuration                      |  | direct on line  |                       |        |
| Full Load Amps         |          | 4/2          | Breakdown Torque                         |  | 9.32 LB-FT      |                       |        |
| R.P.M.                 |          | 3490         | Pull-up Torque                           |  | 4.18 LB-FT      |                       |        |
| Hz                     | 60 Phase | 3            | Locked-rotor Torque                      |  | 6.79 LB-FT      |                       |        |
| NEMA Design Code       |          | B            | KVA Code                                 |  | L               | Starting Current      | 17.2 A |
| Service Factor (S.F.)  |          | 1.15         | No-load Current                          |  | 1.05 A          |                       |        |
| NEMA Nom. Eff.         |          | 84           | Power Factor                             |  | 83              | Line-line Res. @ 25°C | 12.7 Ω |
| Rating - Duty          |          | 40C AMB-CONT | Temp. Rise @ Rated Load                  |  | 24°C            |                       |        |
| S.F. Amps              |          |              | Temp. Rise @ S.F. Load                   |  | 28°C            |                       |        |
|                        |          |              | Locked-rotor Power Factor                |  | 64              |                       |        |
|                        |          |              | Rotor inertia                            |  | 0.0493 lb-ft²   |                       |        |

**Load Characteristics 460 V, 60 Hz, 1.5 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 43   | 64   | 77   | 83   | 87   | 89   | 85   |
| Efficiency      | 73.9 | 82.4 | 85.1 | 85.1 | 84.3 | 83.1 | 84.6 |
| Speed           | 3574 | 3550 | 3524 | 3496 | 3465 | 3430 | 3477 |
| Line amperes    | 1.14 | 1.35 | 1.63 | 1.99 | 2.41 | 2.84 | 2.24 |

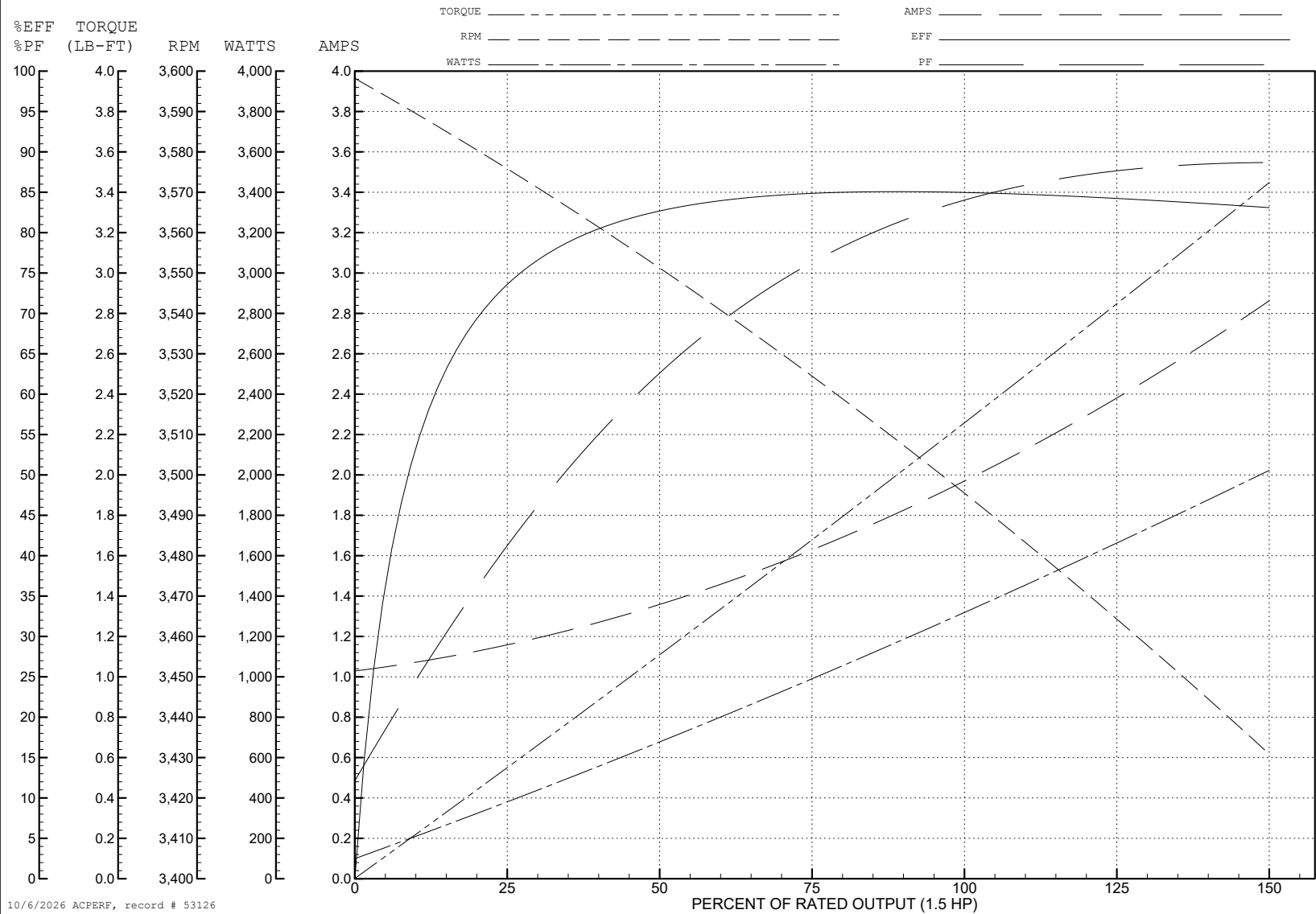
ABB Motors and Mechanical Inc.

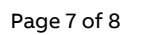
WINDING # 35WGM761

Typical performance - not guaranteed values.

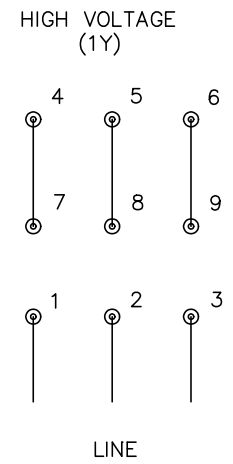
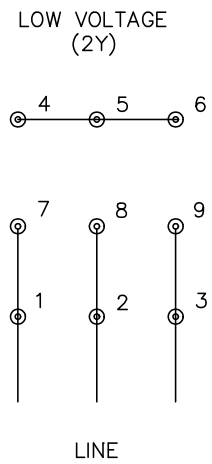
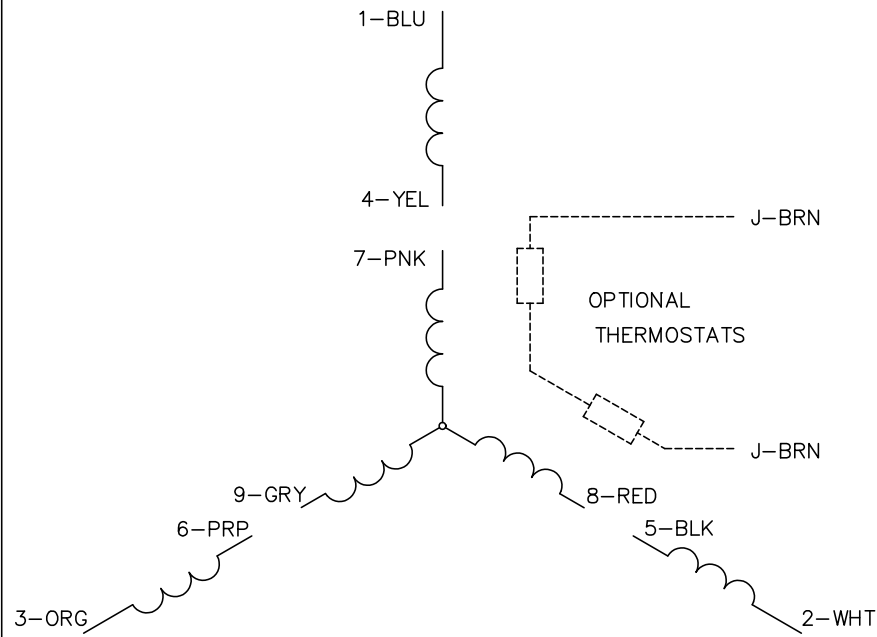
1.5 HP 3 PH 60 HZ 3490 RPM 460 V 3518M

TORQUES (LB-FT): PO=9.32 PU=4.18 LR=6.79 LRA=17.2





CD0005



- NOTES:
- 1. INTERCHANGE ANY TWO LINE LEADS TO REVERSE ROTATION.
  - 2. OPTIONAL THERMOSTATS ARE PROVIDED WHEN SPECIFIED.
  - 3. ACTUAL NUMBER OF INTERNAL PARALLEL CIRCUITS MAY BE A MULTIPLE OF THOSE SHOWN ABOVE.
  - 4. LEAD COLORS ARE OPTIONAL. LEADS MUST ALWAYS BE NUMBERED AS SHOWN.

|                                           |         |                         |              |
|-------------------------------------------|---------|-------------------------|--------------|
| REV. DESC: REVISE TO SHOW OPTIONAL COLORS |         |                         |              |
| REV. LTR: E                               | BY: JLP | REVISED: 01/19/99 10:15 | TDR: 0171435 |
| 900000                                    |         | FILE: AAA00005140       | MDL: -       |
|                                           |         | MTL: -                  |              |

**BALDOR ELECTRIC Co.**

3PH, DV, 9 LEADS

CD0005