

# ABB BALDOR RELIANCE III

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## Customer information packet

### XM18542T

5HP, RPM, 3PH, 60HZ, 184T, XPFC, F1

Class - CLI GP D; CLII GP F,G

Division - Division I

**Specifications**

|                                       |                                                                                    |
|---------------------------------------|------------------------------------------------------------------------------------|
| <b>Enclosure</b>                      | XPFC                                                                               |
| <b>Frame</b>                          | 184T                                                                               |
| <b>Frame Material</b>                 | Steel                                                                              |
| <b>Frequency</b>                      | 50.00 Hz<br>60.00 Hz                                                               |
| <b>Haz Area Class and Group</b>       | CLI GP D; CLII GP F,G                                                              |
| <b>Haz Area Division</b>              | Division I                                                                         |
| <b>Motor Letter Type</b>              | Three Phase                                                                        |
| <b>Output @ Frequency</b>             | 5.000 HP @ 60 HZ<br>3.000 HP @ 50 HZ                                               |
| <b>Phase</b>                          | 3                                                                                  |
| <b>Synchronous Speed @ Frequency</b>  | 1800 RPM @ 60 HZ                                                                   |
| <b>Voltage @ Frequency</b>            | 460.0 V @ 60 HZ<br>190.0 V @ 50 HZ<br>230.0 V @ 60 HZ<br>380.0 V @ 50 HZ           |
| <b>Agency Approvals</b>               | UL<br>CSA EEV                                                                      |
| <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>    | 30                                                                                 |
| <b>Current @ Voltage</b>              | 11.200 A @ 190.0 V<br>13.600 A @ 230.0 V<br>5.600 A @ 380.0 V<br>6.800 A @ 460.0 V |
| <b>Design Code</b>                    | A                                                                                  |
| <b>Drip Cover</b>                     | No Drip Cover                                                                      |
| <b>Duty Rating</b>                    | CONT                                                                               |

**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>  | 36WGR866   |
| <b>Layout</b>       | 36LYR726   |
| <b>Eff. date</b>    | 07-24-2026 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 9#16       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 09-29-2020 |

|                                      |                            |
|--------------------------------------|----------------------------|
| <b>Efficiency @ 100% Load</b>        | 89.5 %                     |
| <b>Electrically Isolated Bearing</b> | Not Electrically Isolated  |
| <b>Feedback Device</b>               | NO FEEDBACK                |
| <b>Haz Area Temp Code</b>            | T3C                        |
| <b>Heater Indicator</b>              | No Heater                  |
| <b>High Voltage Full Load Amps</b>   | 5.6 a                      |
| <b>Insulation Class</b>              | F                          |
| <b>Inverter Code</b>                 | Inverter Duty              |
| <b>IP Rating</b>                     | NONE                       |
| <b>KVA Code</b>                      | L                          |
| <b>Lifting Lugs</b>                  | No Lifting Lugs            |
| <b>Locked Bearing Indicator</b>      | No Locked Bearing          |
| <b>Max Speed</b>                     | 2700 rpm                   |
| <b>Motor Lead Termination</b>        | Flying Leads               |
| <b>Motor Standards</b>               | NEMA                       |
| <b>Motor Type</b>                    | 3646M                      |
| <b>Mounting Arrangement</b>          | F1                         |
| <b>Number of Poles</b>               | 4                          |
| <b>Overall Length</b>                | 19.74 IN                   |
| <b>Power Factor</b>                  | 74                         |
| <b>Product Family</b>                | General Purpose            |
| <b>Pulley Face Code</b>              | Standard                   |
| <b>Rodent Screen</b>                 | None                       |
| <b>RoHS Status</b>                   | ROHS NON-COMPLIANT         |
| <b>Service Factor</b>                | 1.00                       |
| <b>Shaft Diameter</b>                | 1.125 IN                   |
| <b>Shaft Ground Indicator</b>        | No Shaft Grounding         |
| <b>Shaft Rotation</b>                | Reversible                 |
| <b>Speed</b>                         | 1750 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>      | Normally Closed Thermostat |
| <b>Vibration Sensor Indicator</b>    | No Vibration Sensor        |

|                   |      |
|-------------------|------|
| Winding Thermal 1 | None |
| Winding Thermal 2 | None |

**Nameplate**

| NP0887XPSLEV |                             |        |   |              |         |                  |       |         |          |    |  |
|--------------|-----------------------------|--------|---|--------------|---------|------------------|-------|---------|----------|----|--|
| NO.          |                             |        |   |              |         | CC               | 010A  |         |          |    |  |
| S/N          |                             |        |   |              |         | TEMP CODE        | T3C   |         |          |    |  |
| SPEC.        | 36-0000-0424                |        |   |              |         | INV.TYPE         | PWM   |         |          |    |  |
| CAT.NO.      | XM18542T                    |        |   |              |         | C HP FR          | 60    | C HP TO | 90       |    |  |
| HP           | 5//3                        |        |   |              |         | CT HZ FROM       | 30    |         | CT HZ TO | 60 |  |
| VOLTS        | 230/460                     |        |   |              |         | VT HZ FROM       | 6     |         | VT HZ TO | 60 |  |
| AMPS         | 13.6/6.8//11.2/5.6          |        |   |              | MAG CUR | 7.4/3.7          |       |         |          |    |  |
| RPM          | 1750//1460                  |        |   |              | MX RPM  | 2700             |       |         |          |    |  |
| HZ           | 60//50/6                    | PH     | 3 | CL           | F       | NOM.EFF.         | 89.5  |         |          |    |  |
| SER.F.       | 1.00                        | DES    | A | SL HZ        | 1.4     | WK2              | 0.428 |         |          |    |  |
| FRAME        | 184T                        | RATING |   | 40C AMB-CONT |         |                  |       |         |          |    |  |
|              | 55C AMB AT 1.00 SF SINEWAVE |        |   |              |         |                  |       |         |          |    |  |
|              | NEMA MG-1 PART 5, IP54      |        |   |              |         | 1.15 SF SINEWAVE |       |         |          |    |  |

**AC Induction Motor Performance Data**

Record # 78059

Typical performance - not guaranteed values

| Winding: 36WGR866-R001 |  |                    |  | Type: 3646M                              |  | Enclosure: XPFC          |  |
|------------------------|--|--------------------|--|------------------------------------------|--|--------------------------|--|
| Nameplate Data         |  |                    |  | 460 V, 60 Hz:<br>High Voltage Connection |  |                          |  |
| Rated Output (HP)      |  | 5//3               |  | Full Load Torque                         |  | 14.92 LB-FT              |  |
| Volts                  |  | 230/460//190/380   |  | Start Configuration                      |  | direct on line           |  |
| Full Load Amps         |  | 13.6/6.8//11.2/5.6 |  | Breakdown Torque                         |  | 68.7 LB-FT               |  |
| R.P.M.                 |  | 1750//1460         |  | Pull-up Torque                           |  | 35.1 LB-FT               |  |
| Hz                     |  | 60//50             |  | Phase                                    |  | 3                        |  |
| NEMA Design Code       |  | A                  |  | KVA Code                                 |  | L                        |  |
| Service Factor (S.F.)  |  | 1                  |  | No-load Current                          |  | 3.71 A                   |  |
| NEMA Nom. Eff.         |  | 89.5               |  | Power Factor                             |  | 74                       |  |
| Rating - Duty          |  | 40C                |  | AMB-CONT                                 |  |                          |  |
|                        |  |                    |  | Temp. Rise @ Rated Load                  |  | 58°C                     |  |
|                        |  |                    |  | Locked-rotor Power Factor                |  | 39.7                     |  |
|                        |  |                    |  | Rotor inertia                            |  | 0.428 LB-FT <sup>2</sup> |  |

**Load Characteristics 460 V, 60 Hz, 5 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  |
|-----------------|------|------|------|------|------|------|
| Power Factor    | 36   | 57   | 69   | 76   | 81   | 83   |
| Efficiency      | 80.6 | 87.7 | 89.6 | 89.8 | 89.5 | 88.7 |
| Speed           | 1789 | 1780 | 1770 | 1760 | 1749 | 1737 |
| Line amperes    | 4.01 | 4.72 | 5.7  | 6.83 | 8.1  | 9.53 |

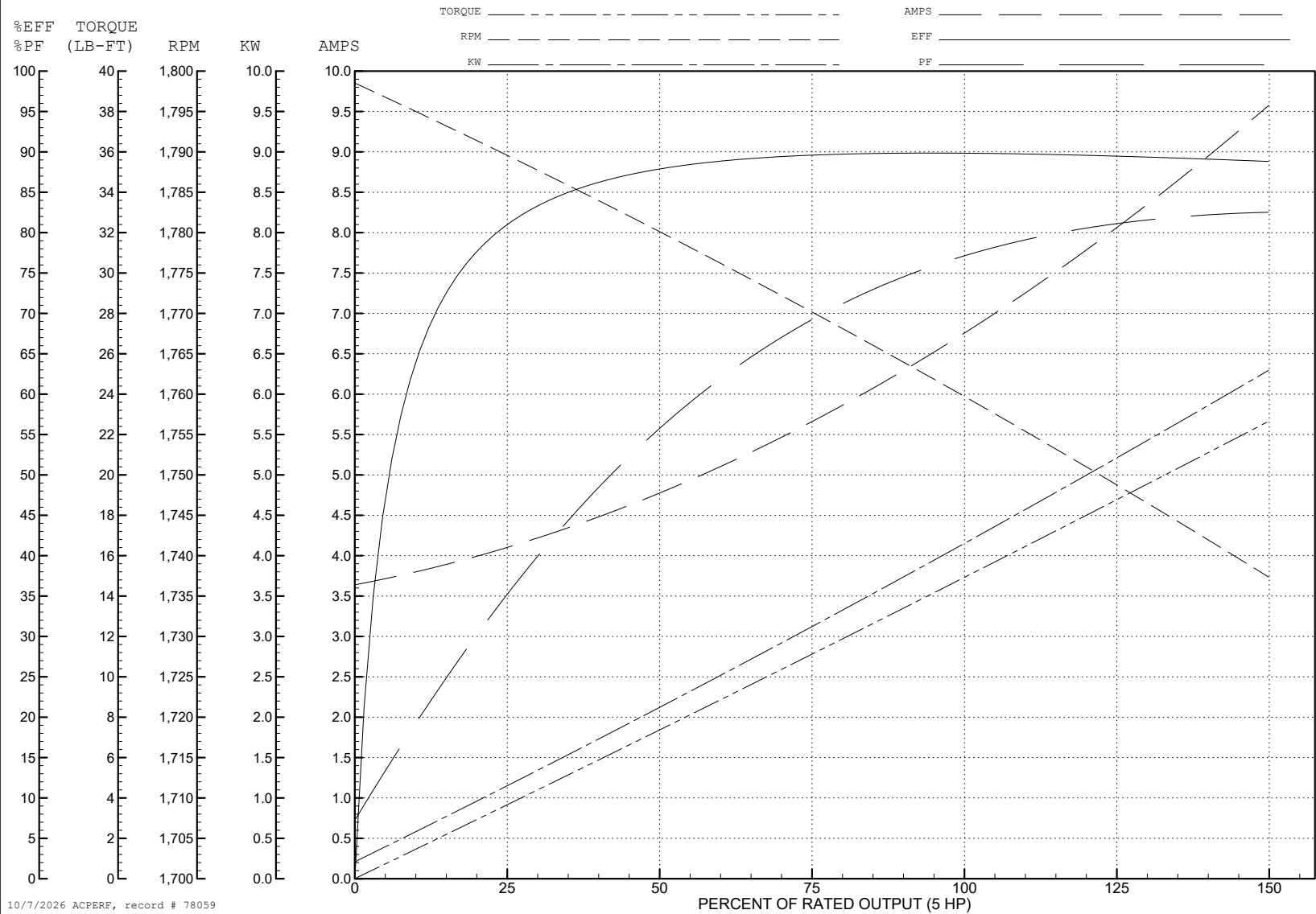
ABB Motors and Mechanical Inc.

WINDING # 36WGR866

Typical performance - not guaranteed values.

5 HP 3 PH 60 HZ 1760 RPM 460 V 3646M

TORQUES (LB-FT): PO=68.7 PU=35.1 LR=42.8 LRA=59.1



**AC Induction Motor Performance Data**

Record # 78060

Typical performance - not guaranteed values

| Winding: 36WGR866-R001 |  |                    |  | Type: 3646M         |  | Enclosure: XPFC                          |  |
|------------------------|--|--------------------|--|---------------------|--|------------------------------------------|--|
| Nameplate Data         |  |                    |  |                     |  | 380 V, 50 Hz:<br>High Voltage Connection |  |
| Rated Output (HP)      |  | 5//3               |  | Full Load Torque    |  | 10.7 LB-FT                               |  |
| Volts                  |  | 230/460//190/380   |  | Start Configuration |  | direct on line                           |  |
| Full Load Amps         |  | 13.6/6.8//11.2/5.6 |  | Breakdown Torque    |  | 65.1 LB-FT                               |  |
| R.P.M.                 |  | 1750//1460         |  | Pull-up Torque      |  | 35.75 LB-FT                              |  |
| Hz                     |  | 60//50             |  | Phase               |  | 3                                        |  |
| NEMA Design Code       |  | A                  |  | KVA Code            |  | L                                        |  |
| Service Factor (S.F.)  |  | 1                  |  | No-load Current     |  | 3.63 A                                   |  |
| NEMA Nom. Eff.         |  | 89.5               |  | Power Factor        |  | 74                                       |  |
| Rating - Duty          |  | 40C                |  | AMB-CONT            |  | Temp. Rise @ Rated Load                  |  |
|                        |  |                    |  |                     |  | Locked-rotor Power Factor                |  |
|                        |  |                    |  |                     |  | Rotor inertia                            |  |

**Load Characteristics 380 V, 50 Hz, 3 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  |
|-----------------|------|------|------|------|------|------|
| Power Factor    | 29   | 47   | 60   | 68   | 75   | 78   |
| Efficiency      | 75.9 | 84.9 | 87.8 | 88.7 | 88.8 | 88.4 |
| Speed           | 1492 | 1485 | 1477 | 1470 | 1461 | 1453 |
| Line amperes    | 3.82 | 4.27 | 4.89 | 5.6  | 6.42 | 7.34 |

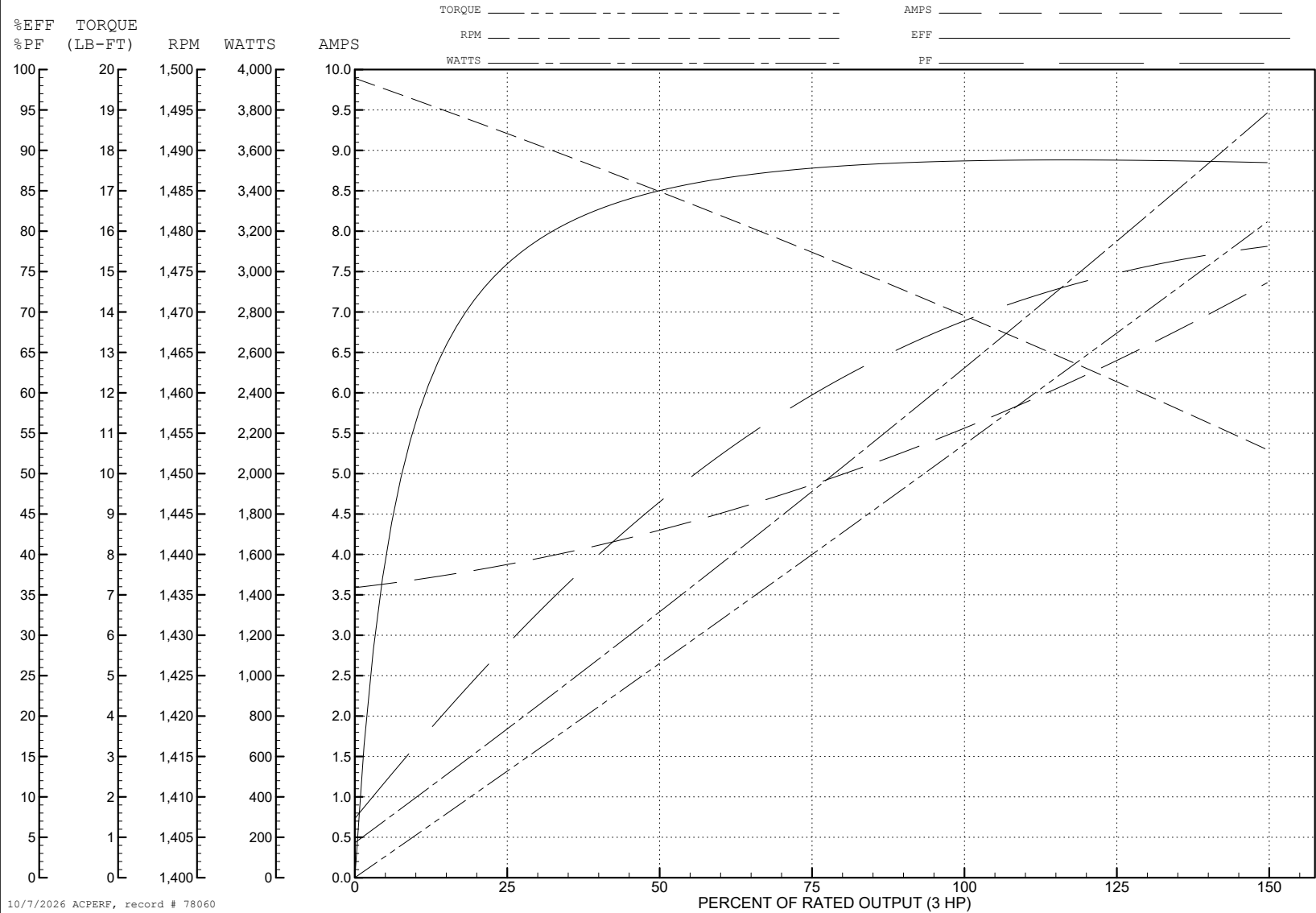
ABB Motors and Mechanical Inc.

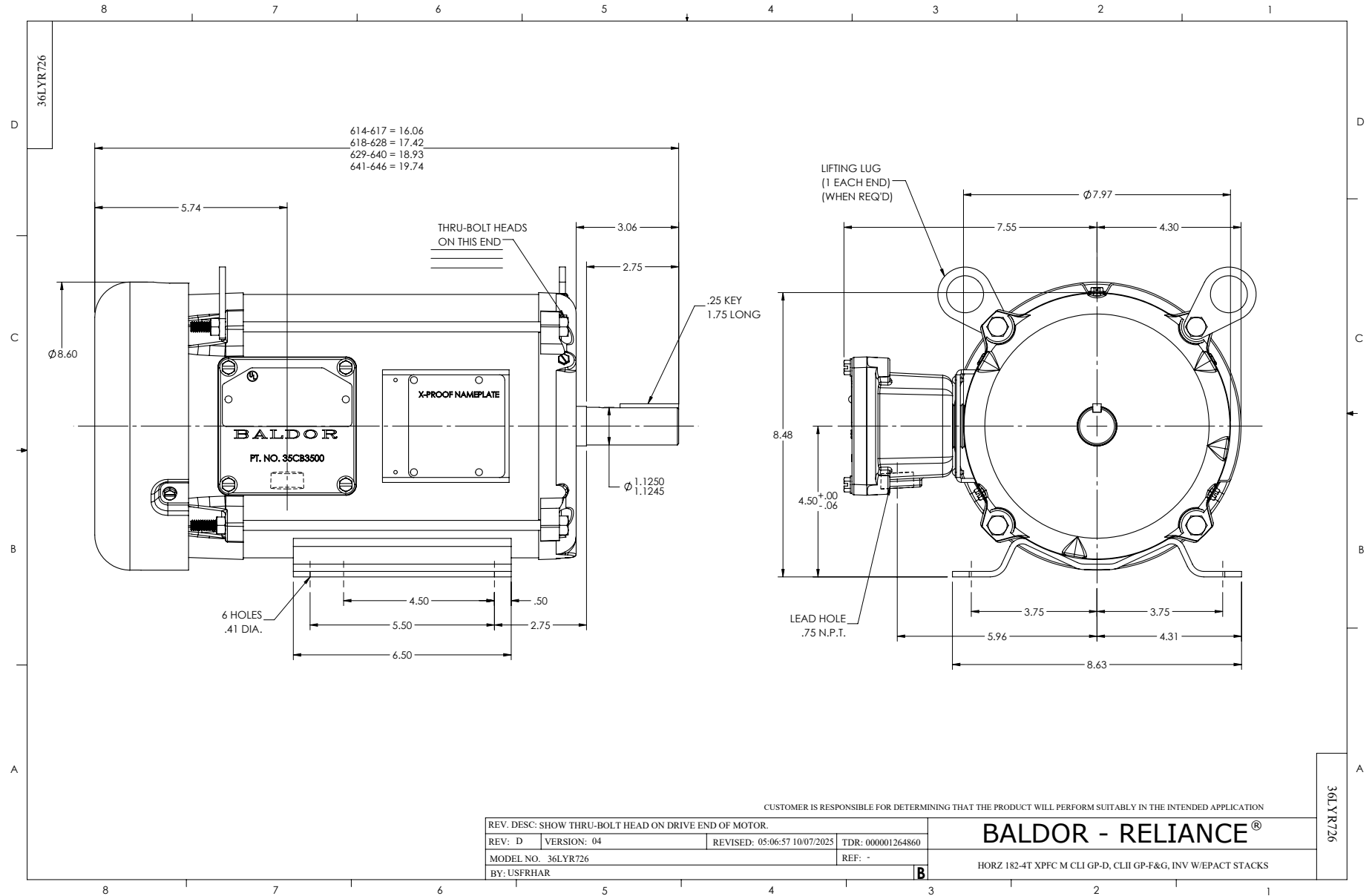
WINDING # 36WGR866

Typical performance - not guaranteed values.

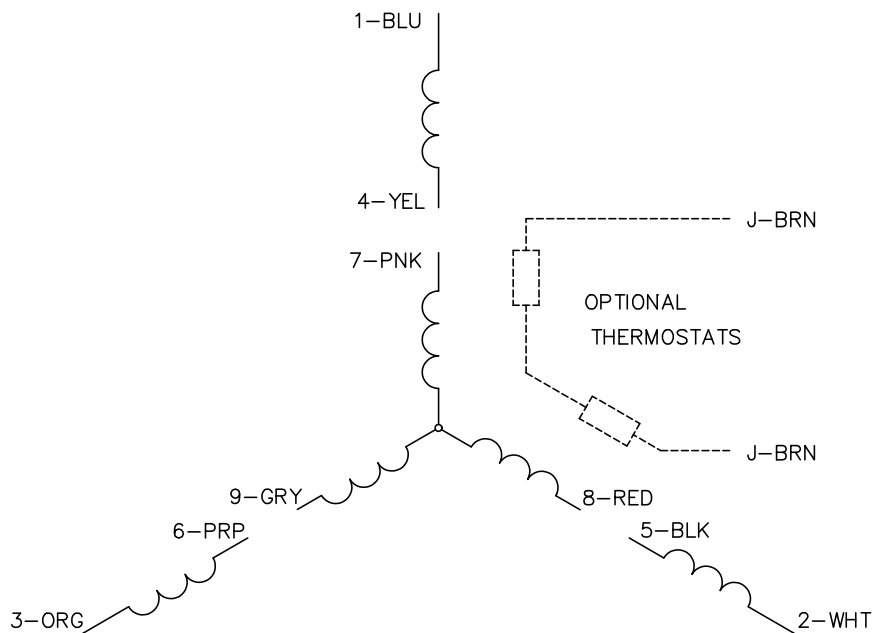
3 HP 3 PH 50 HZ 1470 RPM 380 V 3646M

TORQUES (LB-FT) : PO=65.1 PU=35.75 LR=43.59 LRA=57.03

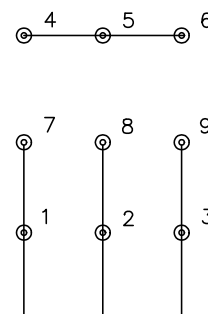




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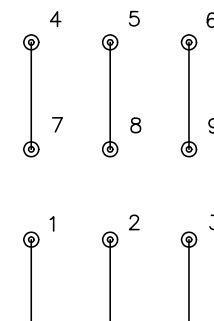


LOW VOLTAGE  
(2Y)



LINE

HIGH VOLTAGE  
(1Y)



LINE

**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