

# ABB BALDOR RELIANCE III

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## Customer information packet

### FPM2543TS-5

50HP, 1770RPM, 3PH, 60HZ, 326TS, 4064M, ODP, F1

**Specifications**

|                                       |                           |
|---------------------------------------|---------------------------|
| <b>Enclosure</b>                      | ODP                       |
| <b>Frame</b>                          | 326TS                     |
| <b>Frame Material</b>                 | Steel                     |
| <b>Frequency</b>                      | 60.00 Hz                  |
| <b>Motor Letter Type</b>              | Three Phase               |
| <b>Output @ Frequency</b>             | 50.000 HP @ 60 HZ         |
| <b>Phase</b>                          | 3                         |
| <b>Synchronous Speed @ Frequency</b>  | 1800 RPM @ 60 HZ          |
| <b>Voltage @ Frequency</b>            | 575.0 V @ 60 HZ           |
| <b>Agency Approvals</b>               | CSA EEV                   |
|                                       | UL                        |
| <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>              | 49.000 A @ 575.0 V        |
| <b>Design Code</b>                    | B                         |
| <b>Drip Cover</b>                     | No Drip Cover             |
| <b>Duty Rating</b>                    | CONT                      |
| <b>Efficiency @ 100% Load</b>         | 93.0 %                    |
| <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>    | 49.0 a                    |
| <b>Insulation Class</b>               | F                         |
| <b>Inverter Code</b>                  | Not Inverter              |
| <b>KVA Code</b>                       | F                         |
| <b>Lifting Lugs</b>                   | Standard Lifting Lugs     |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | D          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  | 40H07      |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 40WGX357   |
| <b>Layout</b>       | 40LYH007   |
| <b>Eff. date</b>    | 07-24-2023 |
| <b>CD Diagram</b>   | CD0382     |
| <b>Poles</b>        | 04         |
| <b>Leads</b>        | 6#8        |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 07-20-2016 |

|                                      |                       |
|--------------------------------------|-----------------------|
| <b>Locked Bearing Indicator</b>      | No Locked Bearing     |
| <b>Motor Lead Exit</b>               | Ko Box                |
| <b>Motor Lead Quantity/Wire Size</b> | 6 @ 8 AWG             |
| <b>Motor Lead Termination</b>        | Flying Leads          |
| <b>Motor Standards</b>               | NEMA                  |
| <b>Motor Type</b>                    | 4064M                 |
| <b>Mounting Arrangement</b>          | F1                    |
| <b>Number of Poles</b>               | 4                     |
| <b>Overall Length</b>                | 25.69 IN              |
| <b>Power Factor</b>                  | 83                    |
| <b>Product Family</b>                | Fire Pump Motor       |
| <b>Pulley End Bearing Type</b>       | Ball                  |
| <b>Pulley Face Code</b>              | Standard              |
| <b>Pulley Shaft Indicator</b>        | Standard              |
| <b>Rodent Screen</b>                 | None                  |
| <b>Service Factor</b>                | 1.15                  |
| <b>Shaft Diameter</b>                | 1.875 IN              |
| <b>Shaft Extension Location</b>      | Pulley End            |
| <b>Shaft Ground Indicator</b>        | No Shaft Grounding    |
| <b>Shaft Rotation</b>                | Reversible            |
| <b>Shaft Slinger Indicator</b>       | No Slinger            |
| <b>Speed</b>                         | 1770 rpm              |
| <b>Speed Code</b>                    | Single Speed          |
| <b>Starting Method</b>               | Wye Start - Delta Run |
| <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**

| NP3454L   |              |          |      |           |          |      |  |          |            |        |       |      |  |
|-----------|--------------|----------|------|-----------|----------|------|--|----------|------------|--------|-------|------|--|
| CAT.NO.   | FPM2543TS-5  |          |      |           | CUST P/N |      |  |          |            | I.P.   | 23    |      |  |
| SPEC.     | 40H007X357H2 |          |      |           | SER.NO.  |      |  |          |            | FRAME  | 326TS |      |  |
| HZ        | 60           | HP       | 50   |           | RPM      | 1770 |  | HZ       |            | HP     |       | RPM  |  |
| VOLTS     | 575          |          |      | CODE      | F        |      |  | VOLTS    |            |        |       | CODE |  |
| AMPS      | 49           |          |      | DES       | B        |      |  | AMPS     |            |        |       | DES  |  |
| EFF       | 93           | SER.F.   | 1.15 |           | PF       | 83   |  | EFF      |            | SER.F. |       | PF   |  |
| RATING    | 40C AMB-CONT |          |      |           | DE BRG   | 6312 |  | GREASE   | POLYREX EM |        |       |      |  |
| BLANK     |              |          |      |           | ODE BRG  | 6309 |  | MTR. WT. | 452        |        |       |      |  |
|           |              |          |      |           | CLASS    | F    |  | PH       | 3          |        |       |      |  |
|           |              |          |      |           | ENCL     | ODP  |  | CC       | 010A       |        |       |      |  |
| HTR-VOLTS |              | HTR-AMPS |      | HTR-WATTS |          |      |  |          |            |        |       |      |  |

**AC Induction Motor Performance Data**

Record # 58308

Typical performance - not guaranteed values

| Winding: 40WGX357-R001 |    |              | Type: 4064M                           |                           | Enclosure: OPSB       |             |         |
|------------------------|----|--------------|---------------------------------------|---------------------------|-----------------------|-------------|---------|
| Nameplate Data         |    |              | 575 V, 60 Hz:<br>Single Voltage Motor |                           |                       |             |         |
| Rated Output (HP)      |    | 50           | Full Load Torque                      |                           | 149 LB-FT             |             |         |
| Volts                  |    | 575          | Start Configuration                   |                           | direct on line        |             |         |
| Full Load Amps         |    | 49           | Breakdown Torque                      |                           | 380 LB-FT             |             |         |
| R.P.M.                 |    | 1770         | Pull-up Torque                        |                           | 194 LB-FT             |             |         |
| Hz                     | 60 | Phase        | 3                                     | Locked-rotor Torque       |                       | 240 LB-FT   |         |
| NEMA Design Code       |    | B            | KVA Code                              | F                         | Starting Current      |             | 279 A   |
| Service Factor (S.F.)  |    | 1.15         |                                       | No-load Current           |                       | 19 A        |         |
| NEMA Nom. Eff.         |    | 93           | Power Factor                          | 83                        | Line-line Res. @ 25°C |             | 0.241 Ω |
| Rating - Duty          |    | 40C AMB-CONT |                                       | Temp. Rise @ Rated Load   |                       | 55°C        |         |
| S.F. Amps              |    |              |                                       | Temp. Rise @ S.F. Load    |                       | 69°C        |         |
|                        |    |              |                                       | Locked-rotor Power Factor |                       | 31.1        |         |
|                        |    |              |                                       | Rotor inertia             |                       | 5.09 LB-FT2 |         |

**Load Characteristics 575 V, 60 Hz, 50 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  | S.F. |
|-----------------|------|------|------|------|------|------|------|
| Power Factor    | 47   | 69   | 78   | 83   | 84   | 84   | 84   |
| Efficiency      | 90.4 | 93.6 | 94   | 93.5 | 92.9 | 91.8 | 93.3 |
| Speed           | 1794 | 1787 | 1779 | 1771 | 1763 | 1752 | 1766 |
| Line amperes    | 22   | 29.2 | 38.2 | 48.5 | 60.1 | 72.7 | 55.5 |

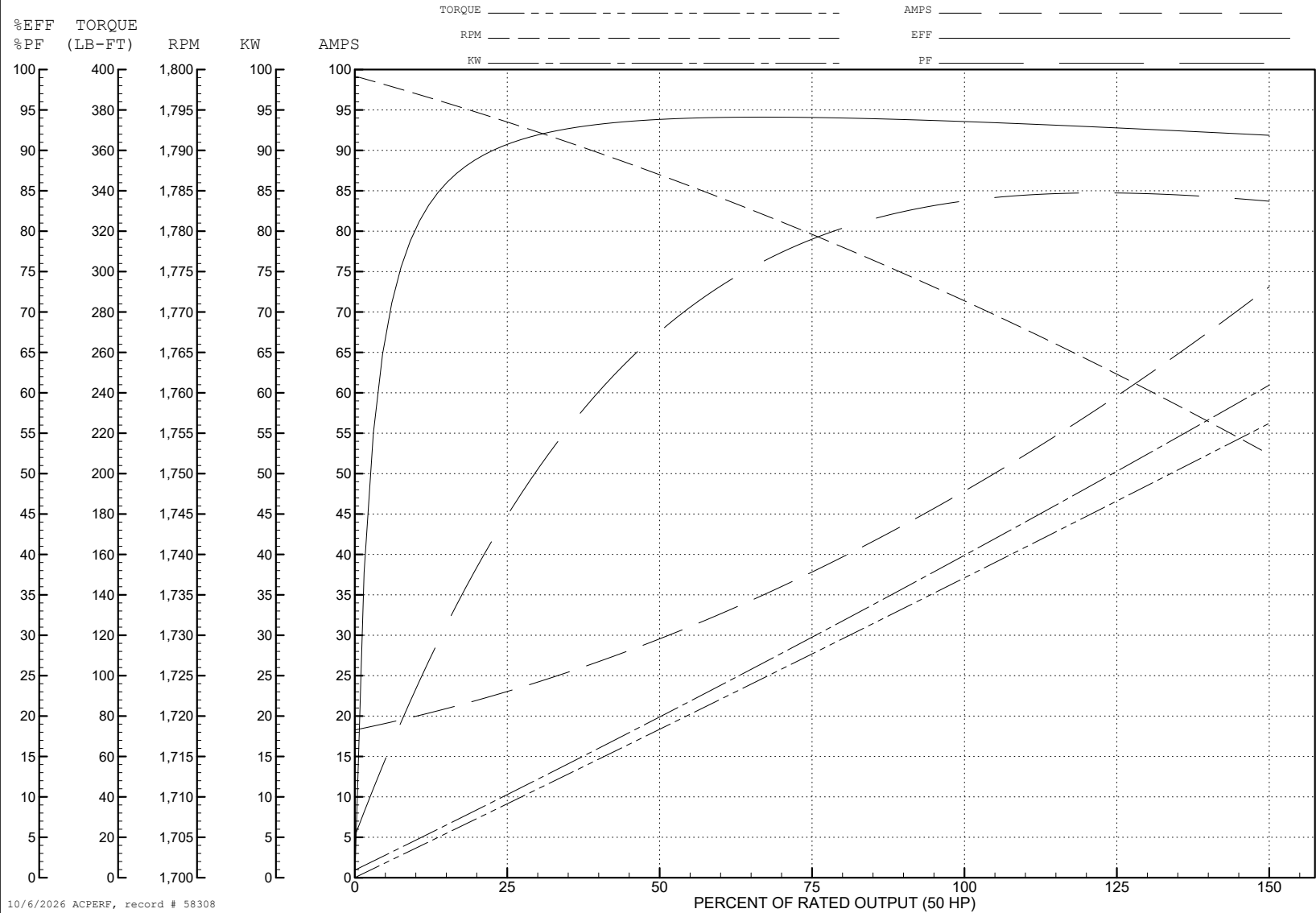
ABB Motors and Mechanical Inc.

WINDING # 40WGx357

Typical performance - not guaranteed values.

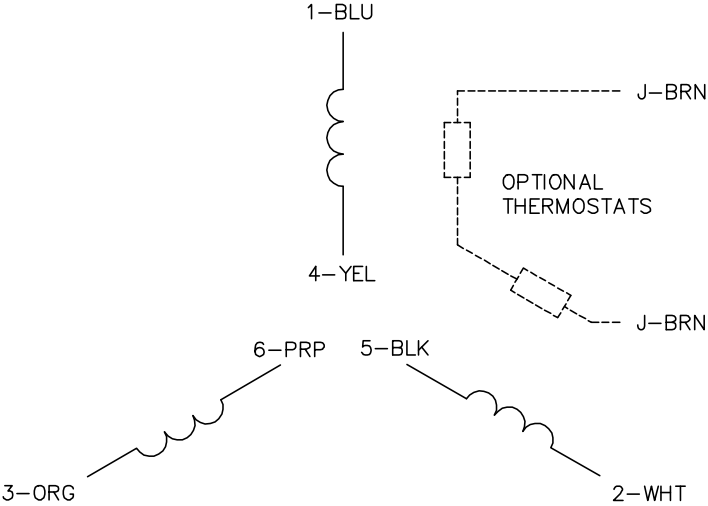
50 HP 3 PH 60 HZ 1770 RPM 575 V 4064M

TORQUES (LB-FT): PO=380 PU=194 LR=240 LRA=279

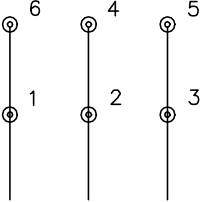




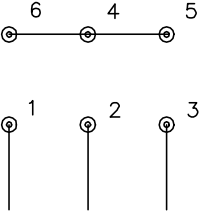
CD0382



RUN CONNECTION  
(1D)



START CONNECTION  
(1Y)



- 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.
  - 5. FOR ACROSS-THE-LINE STARTING, USE 'RUN' CONNECTION.

|                                   |                              |                   |
|-----------------------------------|------------------------------|-------------------|
| REV. DESC: ADD CLASS CONN00000007 |                              |                   |
| REV. LTR: F                       | VERSION: 01                  | TDR: 000001099922 |
| FILE: \AAA\00005\243              | REVISED: 09:05:32 02/19/2019 | BY: ENBRIRO       |
| MTL: —                            |                              |                   |

**BALDOR - RELIANCE®**

3PH, SV, 6 LEADS, Y START/D RUN  
SH 1 of 1

CD0382