

# ABB BALDOR RELIANCE III

---

## Customer information packet

### CDRX21724T

7.5HP, 3510//2910RPM, 3PH, 60/50HZ, 213TC, XP

Class - CLI GP C,D

Division - Division I

**Specifications**

|                                       |                                                                                    |
|---------------------------------------|------------------------------------------------------------------------------------|
| <b>Enclosure</b>                      | XPFC                                                                               |
| <b>Frame</b>                          | 213TC                                                                              |
| <b>Frame Material</b>                 | Iron                                                                               |
| <b>Frequency</b>                      | 50.00 Hz<br>60.00 Hz                                                               |
| <b>Haz Area Class and Group</b>       | CLI GP C,D                                                                         |
| <b>Haz Area Division</b>              | Division I                                                                         |
| <b>Motor Letter Type</b>              | Three Phase                                                                        |
| <b>Output @ Frequency</b>             | 7.500 HP @ 60 HZ<br>5.000 HP @ 50 HZ                                               |
| <b>Phase</b>                          | 3                                                                                  |
| <b>Synchronous Speed @ Frequency</b>  | 3600 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>    | 6                                                                                  |
| <b>Current @ Voltage</b>              | 15.200 A @ 190.0 V<br>18.000 A @ 230.0 V<br>7.600 A @ 380.0 V<br>9.000 A @ 460.0 V |
| <b>Design Code</b>                    | B                                                                                  |
| <b>Drip Cover</b>                     | No Drip Cover                                                                      |
| <b>Duty Rating</b>                    | CONT                                                                               |

**Part Detail**

|                     |            |
|---------------------|------------|
| <b>Revision</b>     | D          |
| <b>Type</b>         | AC         |
| <b>Mech. spec.</b>  |            |
| <b>Base</b>         |            |
| <b>Status</b>       | PRD/A      |
| <b>Elec. spec.</b>  | 07WGY328   |
| <b>Layout</b>       | 07LYJ232   |
| <b>Eff. date</b>    | 02-14-2024 |
| <b>CD Diagram</b>   | CD0005     |
| <b>Poles</b>        | 02         |
| <b>Leads</b>        | 9#14       |
| <b>Proprietary</b>  | False      |
| <b>Created date</b> | 06-21-2019 |

|                                      |                            |
|--------------------------------------|----------------------------|
| <b>Efficiency @ 100% Load</b>        | 90.7 %                     |
| <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>   | 7.6 a                      |
| <b>Insulation Class</b>              | F                          |
| <b>Inverter Code</b>                 | Inverter Duty              |
| <b>IP Rating</b>                     | NONE                       |
| <b>KVA Code</b>                      | H                          |
| <b>Lifting Lugs</b>                  | Standard Lifting Lugs      |
| <b>Locked Bearing Indicator</b>      | Locked Bearing             |
| <b>Max Speed</b>                     | 5400 rpm                   |
| <b>Motor Lead Termination</b>        | Flying Leads               |
| <b>Motor Standards</b>               | NEMA                       |
| <b>Motor Type</b>                    | 0726M                      |
| <b>Mounting Arrangement</b>          | F1                         |
| <b>Number of Poles</b>               | 2                          |
| <b>Overall Length</b>                | 20.78 IN                   |
| <b>Power Factor</b>                  | 87                         |
| <b>Product Family</b>                | General Purpose            |
| <b>Pulley Face Code</b>              | C-Face                     |
| <b>Rodent Screen</b>                 | None                       |
| <b>RoHS Status</b>                   | ROHS NON-COMPLIANT         |
| <b>Service Factor</b>                | 1.00                       |
| <b>Shaft Diameter</b>                | 1.375 IN                   |
| <b>Shaft Ground Indicator</b>        | No Shaft Grounding         |
| <b>Shaft Rotation</b>                | Reversible                 |
| <b>Speed</b>                         | 3510 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**

| NP1401XPSLEV |                  |  |        |   |              |     |                     |      |         |          |  |    |
|--------------|------------------|--|--------|---|--------------|-----|---------------------|------|---------|----------|--|----|
| NO.          |                  |  |        |   |              |     | CC                  | 010A |         |          |  |    |
| S/N          |                  |  |        |   |              |     | TEMP CODE           |      | T3C     |          |  |    |
| SPEC.        | 07-0000-0152     |  |        |   |              |     | INV.TYPE            |      | PWM     |          |  |    |
| CAT.NO.      | CDRX21724T       |  |        |   |              |     | C HP FR             | 60   | C HP TO | 90       |  |    |
| HP           | 7.5//5           |  |        |   |              |     | CT HZ FROM          |      | 6       | CT HZ TO |  | 60 |
| VOLTS        | 230/460//190/380 |  |        |   |              |     | VT HZ FROM          |      | 6       | VT HZ TO |  | 60 |
| AMPS         | 18/9//15.2/7.6   |  |        |   |              |     | MAG CUR             |      | 9.2/4.6 |          |  |    |
| RPM          | 3510//2910       |  |        |   |              |     | MX RPM              |      | 5400    |          |  |    |
| HZ           | 60//50           |  | PH     | 3 | CL           | F   | NOM.EFF.            |      | 90.7    |          |  |    |
| SER.F.       | 1.00             |  | DES    | B | SL HZ        | 1.5 | WK2                 | 0.25 |         |          |  |    |
| FRAME        | 213TC            |  | RATING |   | 40C AMB-CONT |     |                     |      |         |          |  |    |
|              | 55C AMB @ 1.0 SF |  |        |   |              |     |                     |      |         |          |  |    |
|              | 1.15 SF SINEWAVE |  |        |   |              |     | NEMA MG-1 PT 5,IP55 |      |         |          |  |    |

**AC Induction Motor Performance Data**

Record # 74891

Typical performance - not guaranteed values

| Winding: 07WGY328     |  |                  | Type: 0726M  |                                          | Enclosure: XPFC     |                           |             |              |
|-----------------------|--|------------------|--------------|------------------------------------------|---------------------|---------------------------|-------------|--------------|
| Nameplate Data        |  |                  |              | 380 V, 50 Hz:<br>High Voltage Connection |                     |                           |             |              |
| Rated Output (HP)     |  | 7.5//5           |              | Full Load Torque                         |                     | 8.95 LB-FT                |             |              |
| Volts                 |  | 230/460//190/380 |              | Start Configuration                      |                     | direct on line            |             |              |
| Full Load Amps        |  | 18/9//15.2/7.6   |              | Breakdown Torque                         |                     | 36.93 LB-FT               |             |              |
| R.P.M.                |  | 3510//2910       |              | Pull-up Torque                           |                     | 21.54 LB-FT               |             |              |
| Hz                    |  | 60//50           | Phase        | 3                                        | Locked-rotor Torque |                           | 24.82 LB-FT |              |
| NEMA Design Code      |  | B                |              | KVA Code                                 | H                   | Starting Current          |             | 59.17 A      |
| Service Factor (S.F.) |  | 1                |              | No-load Current                          |                     | 3.44 A                    |             |              |
| NEMA Nom. Eff.        |  | 90.7             | Power Factor |                                          | 87                  | Line-line Res. @ 25°C     |             | 1.19 Ω       |
| Rating - Duty         |  | 40C              |              | AMB-CONT                                 |                     | Temp. Rise @ Rated Load   |             | 34°C         |
|                       |  |                  |              |                                          |                     | Locked-rotor Power Factor |             | 38.2         |
|                       |  |                  |              |                                          |                     | Rotor inertia             |             | 0.237 lb-ft² |

**Load Characteristics 380 V, 50 Hz, 5 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150   |
|-----------------|------|------|------|------|------|-------|
| Power Factor    | 48   | 69   | 78   | 84   | 88   | 88    |
| Efficiency      | 76.9 | 85.1 | 87.4 | 88.3 | 87.7 | 86.8  |
| Speed           | 2983 | 2966 | 2947 | 2928 | 2906 | 2882  |
| Line amperes    | 3.83 | 4.82 | 6.18 | 7.62 | 9.17 | 11.03 |

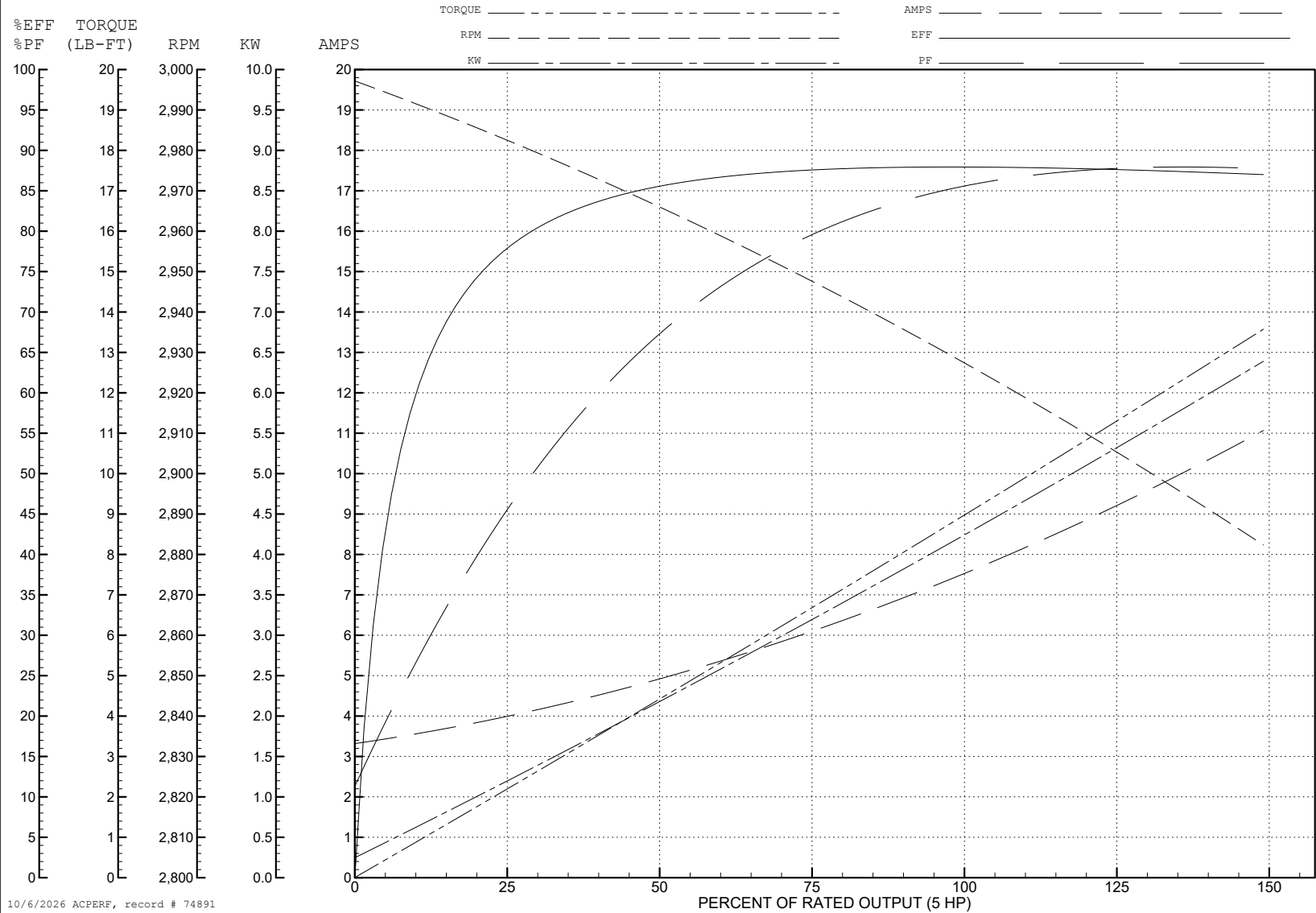
ABB Motors and Mechanical Inc.

WINDING # 07WGY328

Typical performance - not guaranteed values.

5 HP 3 PH 50 HZ 2928 RPM 380 V 0726M

TORQUES (LB-FT) : PO=36.93 PU=21.54 LR=24.82 LRA=59.17



**AC Induction Motor Performance Data**

Record # 74892

Typical performance - not guaranteed values

| Winding: 07WGY328     |        |                  | Type: 0726M  |                                          | Enclosure: XPFC       |                |        |
|-----------------------|--------|------------------|--------------|------------------------------------------|-----------------------|----------------|--------|
| Nameplate Data        |        |                  |              | 460 V, 60 Hz:<br>High Voltage Connection |                       |                |        |
| Rated Output (HP)     |        | 7.5//5           |              | Full Load Torque                         |                       | 11.2 LB-FT     |        |
| Volts                 |        | 230/460//190/380 |              | Start Configuration                      |                       | direct on line |        |
| Full Load Amps        |        | 18/9//15.2/7.6   |              | Breakdown Torque                         |                       | 38.8 LB-FT     |        |
| R.P.M.                |        | 3510//2910       |              | Pull-up Torque                           |                       | 20.4 LB-FT     |        |
| Hz                    | 60//50 | Phase            | 3            | Locked-rotor Torque                      |                       | 23.5 LB-FT     |        |
| NEMA Design Code      |        | B                | KVA Code     | H                                        | Starting Current      |                | 61.1 A |
| Service Factor (S.F.) |        | 1                |              | No-load Current                          |                       | 3.54 A         |        |
| NEMA Nom. Eff.        |        | 90.7             | Power Factor | 87                                       | Line-line Res. @ 25°C |                | 1.19 Ω |
| Rating - Duty         |        | 40C AMB-CONT     |              | Temp. Rise @ Rated Load                  |                       | 44°C           |        |
| S.F. Amps             |        |                  |              | Temp. Rise @ S.F. Load                   |                       | 54°C           |        |
|                       |        |                  |              | Locked-rotor Power Factor                |                       | 33.8           |        |
|                       |        |                  |              | Rotor inertia                            |                       | 0.237 LB-FT2   |        |

**Load Characteristics 460 V, 60 Hz, 7.5 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  |
|-----------------|------|------|------|------|------|------|
| Power Factor    | 52   | 74   | 82   | 87   | 90   | 89   |
| Efficiency      | 83.7 | 89.3 | 90.4 | 90.7 | 89.5 | 88.2 |
| Speed           | 3581 | 3559 | 3537 | 3512 | 3486 | 3456 |
| Line amperes    | 4.04 | 5.31 | 7.04 | 8.9  | 10.9 | 13.3 |

ABB Motors and Mechanical Inc.

WINDING # 07WGY328

Typical performance - not guaranteed values.

7.5 HP 3 PH 60 HZ 3512 RPM 460 V 0726M

TORQUES (LB-FT): PO=38.8 PU=20.4 LR=23.5 LRA=61.1

