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# Customer information packet

## VDRX050744

.75//.5HP, 1765//1470RPM, 3PH, 60//50HZ, 56C

Class - CLI GP C,D

Division - Division I

## Specifications

|                                |                                                                                                       |
|--------------------------------|-------------------------------------------------------------------------------------------------------|
| Enclosure                      | XPFC                                                                                                  |
| Frame                          | 56C                                                                                                   |
| Frame Material                 | Steel                                                                                                 |
| Frequency                      | 50.00 Hz<br>60.00 Hz                                                                                  |
| Haz Area Class and Group       | CLI GP C,D                                                                                            |
| Haz Area Division              | Division I                                                                                            |
| Motor Letter Type              | Three Phase                                                                                           |
| Output @ Frequency             | .500 HP @ 50 HZ<br>.750 HP @ 60 HZ                                                                    |
| Phase                          | 3                                                                                                     |
| Synchronous Speed @ Frequency  | 1800 RPM @ 60 HZ                                                                                      |
| Voltage @ Frequency            | 380.0 V @ 50 HZ<br>230.0 V @ 60 HZ<br>190.0 V @ 50 HZ<br>460.0 V @ 60 HZ                              |
| Agency Approvals               | CSA<br>UL                                                                                             |
| Ambient Temperature            | 40 °C                                                                                                 |
| Auxiliary Box                  | NO AUXILLARY BOX                                                                                      |
| Auxiliary Box Lead Termination | None                                                                                                  |
| Base Indicator                 | No Mounting                                                                                           |
| Bearing Grease Type            | Polyrex EM (-20F +300F)                                                                               |
| Blower                         | None                                                                                                  |
| Constant Torque Speed Range    | 6                                                                                                     |
| Current @ Voltage              | 2.420 A @ 208.0 V<br>2.400 A @ 230.0 V<br>2.200 A @ 190.0 V<br>1.200 A @ 460.0 V<br>1.100 A @ 380.0 V |
| Design Code                    | B                                                                                                     |
| Drip Cover                     | No Drip Cover                                                                                         |

## Part detail

|              |            |
|--------------|------------|
| Revision     | -          |
| Type         | AC         |
| Mech. spec.  | 35X748     |
| Base         |            |
| Status       | PRD/A      |
| Elec. spec.  | 35WGG069   |
| Layout       | 35LYX748   |
| Eff. date    | 06-04-2025 |
| CD Diagram   | CD0005     |
| Poles        | 04         |
| Leads        | 9#18       |
| Proprietary  | False      |
| Created date | 06-04-2025 |

|                               |                           |
|-------------------------------|---------------------------|
| Duty Rating                   | CONT                      |
| Efficiency @ 100% Load        | 82.5 %                    |
| Electrically Isolated Bearing | Not Electrically Isolated |
| Feedback Device               | NO FEEDBACK               |
| Front Shaft Indicator         | None                      |
| Haz Area Temp Code            | T3C                       |
| Heater Indicator              | No Heater                 |
| High Voltage Full Load Amps   | 1.1 a                     |
| Insulation Class              | F                         |
| Inverter Code                 | Inverter Duty             |
| KVA Code                      | K                         |
| Lifting Lugs                  | No Lifting Lugs           |
| Locked Bearing Indicator      | Locked Bearing            |
| Max Speed                     | 2700 rpm                  |
| Motor Lead Quantity/Wire Size | 9 @ 18 AWG                |
| Motor Lead Termination        | Flying Leads              |
| Motor Standards               | NEMA                      |
| Motor Type                    | X3514M                    |
| Mounting Arrangement          | F1                        |
| Number of Poles               | 4                         |
| Overall Length                | 14.31 IN                  |
| Power Factor                  | 74                        |
| Product Family                | General Purpose           |
| Pulley End Bearing Type       | Ball                      |
| Pulley Face Code              | C-Face                    |
| Pulley Shaft Indicator        | Standard                  |
| Rodent Screen                 | None                      |
| Service Factor                | 1.00                      |
| Shaft Diameter                | 0.625 IN                  |
| Shaft Ground Indicator        | No Shaft Grounding        |
| Shaft Rotation                | Reversible                |
| Shaft Slinger Indicator       | No Slinger                |
| Speed                         | 1470 rpm                  |
|                               | 1765 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        |
| <b>Winding Thermal 1</b>          | None                       |
| <b>Winding Thermal 2</b>          | None                       |

## Nameplate

| NP1401XPSL |                  |        |              |       |                      |            |       |          |    |  |  |
|------------|------------------|--------|--------------|-------|----------------------|------------|-------|----------|----|--|--|
| NO.        |                  |        |              |       |                      | CC         |       |          |    |  |  |
| S/N        |                  |        |              |       |                      | TEMP CODE  | T3C   |          |    |  |  |
| SPEC.      | 35X748G069G3     |        |              |       |                      | INV.TYPE   | PWM   |          |    |  |  |
| CAT.NO.    | VDRX050744       |        |              |       |                      | C HP FR    | 60    | C HP TO  | 90 |  |  |
| HP         | .75//.5          |        |              |       |                      | CT HZ FROM | 6     | CT HZ TO | 60 |  |  |
| VOLTS      | 230/460//190/380 |        |              |       |                      | VT HZ FROM | 6     | VT HZ TO | 60 |  |  |
| AMPS       | 2.4/1.2//2.2/1.1 |        |              |       | MAG CUR              | 1.7/.85    |       |          |    |  |  |
| RPM        | 1765//1470       |        |              |       | MX RPM               | 2700       |       |          |    |  |  |
| HZ         | 60//50           | PH     | 3            | CL    | F                    | NOM.EFF.   | 82.5  |          |    |  |  |
| SER.F.     | 1.00             | DES    | B            | SL HZ | 1.2                  | WK2        | 0.101 |          |    |  |  |
| FRAME      | 56C              | 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 # 89843

Typical performance - not guaranteed values

| Winding: 35WGG069-R027 |                  | Type: 3514M                              | Enclosure: XPFC |                           |              |
|------------------------|------------------|------------------------------------------|-----------------|---------------------------|--------------|
| Nameplate Data         |                  | 380 V, 50 Hz:<br>High Voltage Connection |                 |                           |              |
| Rated Output (HP)      | .75//.5          | Full Load Torque                         | 1.79 LB-FT      |                           |              |
| Volts                  | 230/460//190/380 | Start Configuration                      | direct on line  |                           |              |
| Full Load Amps         | 2.4/1.2//2.2/1.1 | Breakdown Torque                         | 7.1 LB-FT       |                           |              |
| R.P.M.                 | 1765//1470       | Pull-up Torque                           | 4.1 LB-FT       |                           |              |
| Hz                     | 60//50           | Phase                                    | 3               | Locked-rotor Torque       | 4.8 LB-FT    |
| NEMA Design Code       | B                | KVA Code                                 | K               | Starting Current          | 7.7 A        |
| Service Factor (S.F.)  |                  |                                          | 1               | No-load Current           | 0.83 A       |
| NEMA Nom. Eff.         | 82.5             | Power Factor                             | 74              | Line-line Res. @ 25°C     | 30.3 Ω       |
| Rating - Duty          | 40C              | AMB-CONT                                 |                 | Temp. Rise @ Rated Load   | 21°C         |
|                        |                  |                                          |                 | Locked-rotor Power Factor | 72.2         |
|                        |                  |                                          |                 | Rotor inertia             | 0.101 lb-ft² |

**Load Characteristics 380 V, 50 Hz, 0.5 HP**

| % of Rated Load | 25   | 50   | 75   | 100  | 125  | 150  |
|-----------------|------|------|------|------|------|------|
| Power Factor    | 28   | 43   | 56   | 66   | 73   | 78   |
| Efficiency      | 63.5 | 75.7 | 79.7 | 81.1 | 81.1 | 80.2 |
| Speed           | 1492 | 1486 | 1480 | 1472 | 1465 | 1456 |
| Line amperes    | 0.84 | 0.89 | 0.97 | 1.07 | 1.21 | 1.37 |

ABB Motors and Mechanical Inc.

WINDING # 35WGG069

Typical performance - not guaranteed values.

0.5 HP 3 PH 50 HZ 1472 RPM 380 V 3514M

TORQUES (LB-FT): PO=7.1 PU=4.1 LR=4.8 LRA=7.7





