



## Product Information Packet

# VEM31109

.5HP,1140RPM,3PH,60HZ,56C,3428M,OPEN,F1

| Part Detail |        |             |            |             |        |               |            |
|-------------|--------|-------------|------------|-------------|--------|---------------|------------|
| Revision:   | D      | Status:     | PRD/A      | Change #:   |        | Proprietary:  | No         |
| Type:       | AC     | Elec. Spec: | 34WGS940   | CD Diagram: | CD0005 | Mfg Plant:    |            |
| Mech. Spec: | 34-274 | Layout:     | 34LY0274   | Poles:      | 06     | Created Date: | 10-08-2014 |
| Base:       | N      | Eff. Date:  | 07-24-2018 | Leads:      | 9#18   |               |            |

| Specs                           |                         |                                |                 |
|---------------------------------|-------------------------|--------------------------------|-----------------|
| Catalog Number:                 | VEM31109                | Insulation Class:              | B               |
| Enclosure:                      | OPEN                    | Inverter Code:                 | Not Inverter    |
| Frame:                          | 56C                     | KVA Code:                      | K               |
| Frame Material:                 | Steel                   | Lifting Lugs:                  | No Lifting Lugs |
| Output @ Frequency:             | .500 HP @ 60 HZ         | Locked Bearing Indicator:      | Locked Bearing  |
| Synchronous Speed @ Frequency:  | 1200 RPM @ 60 HZ        | Motor Lead Quantity/Wire Size: | 9 @ 18 AWG      |
| Voltage @ Frequency:            | 460.0 V @ 60 HZ         | Motor Lead Exit:               | Ko Box          |
|                                 | 230.0 V @ 60 HZ         | Motor Lead Termination:        | Flying Leads    |
| XP Class and Group:             | None                    | Motor Type:                    | 3428M           |
| XP Division:                    | Not Applicable          | Mounting Arrangement:          | F1              |
| Agency Approvals:               | CSA                     | Power Factor:                  | 65              |
|                                 | UR                      | Product Family:                | General Purpose |
| Auxillary Box:                  | No Auxillary Box        | Pulley End Bearing Type:       | Ball            |
| Auxillary Box Lead Termination: | None                    | Pulley Face Code:              | C-Face          |
| Base Indicator:                 | No Mounting             | Pulley Shaft Indicator:        | Standard        |
| Bearing Grease Type:            | Polyrex EM (-20F +300F) | Rodent Screen:                 | None            |
| Blower:                         | None                    | RoHS Status:                   | ROHS COMPLIANT  |
| Current @ Voltage:              | 1.000 A @ 460.0 V       | Shaft Extension Location:      | Pulley End      |

|                                       |                           |                                    |                     |
|---------------------------------------|---------------------------|------------------------------------|---------------------|
|                                       | 2.000 A @ 230.0 V         | <b>Shaft Ground Indicator:</b>     | No Shaft Grounding  |
|                                       | 2.300 A @ 208.0 V         | <b>Shaft Rotation:</b>             | Reversible          |
| <b>Design Code:</b>                   | B                         | <b>Shaft Slinger Indicator:</b>    | No Slinger          |
| <b>Drip Cover:</b>                    | Drip Cover                | <b>Speed Code:</b>                 | Single Speed        |
| <b>Duty Rating:</b>                   | CONT                      | <b>Motor Standards:</b>            | NEMA                |
| <b>Electrically Isolated Bearing:</b> | Not Electrically Isolated | <b>Starting Method:</b>            | Direct on line      |
| <b>Feedback Device:</b>               | NO FEEDBACK               | <b>Thermal Device - Bearing:</b>   | NONE (OLD)          |
| <b>Front Face Code:</b>               | Drip Cover Mounting       | <b>Thermal Device - Winding:</b>   | None                |
| <b>Front Shaft Indicator:</b>         | None                      | <b>Vibration Sensor Indicator:</b> | No Vibration Sensor |
| <b>Heater Indicator:</b>              | No Heater                 | <b>Winding Thermal 1:</b>          | None                |
|                                       |                           | <b>Winding Thermal 2:</b>          | None                |

## Nameplate NP3155L

|                |               |  |      |                |     |      |  |    |   |     |   |
|----------------|---------------|--|------|----------------|-----|------|--|----|---|-----|---|
| CAT.NO.        | VEM31109      |  |      |                |     |      |  |    |   |     |   |
| SPEC.          | 34-0274S940G1 |  |      |                |     |      |  |    |   |     |   |
| HP             | .5            |  |      |                |     |      |  |    |   |     |   |
| VOLTS          | 230/460       |  |      |                |     |      |  |    |   |     |   |
| AMP            | 2/1           |  |      |                |     |      |  |    |   |     |   |
| RPM            | 1140          |  |      |                |     |      |  |    |   |     |   |
| FRAME          | 56C           |  |      |                | HZ  | 60   |  |    |   | PH  | 3 |
| SER.F.         | 1.25          |  | CODE | K              | DES | B    |  | CL | B |     |   |
| F.L. AVG. EFF. | 75.3          |  |      | PF             | 65  |      |  |    |   |     |   |
| RATING         | 40C AMB-CONT  |  |      |                |     |      |  |    |   |     |   |
| CC             |               |  |      | USABLE AT 208V |     |      |  |    |   | 2.3 |   |
| DE             | 6203          |  |      |                | ODE | 6203 |  |    |   |     |   |
| ENCL           | OPEN          |  | SN   |                |     |      |  |    |   |     |   |
|                | SFA 2.2/1.1   |  |      |                |     |      |  |    |   |     |   |

| Parts List    |                                          |          |
|---------------|------------------------------------------|----------|
| Part Number   | Description                              | Quantity |
| SA288163      | SA 34-0274S940G1                         | 1.000 EA |
| RA274361      | RA 34-0274S940G1                         | 1.000 EA |
| NS2512A01     | INSULATOR, CONDUIT BOX X                 | 1.000 EA |
| 34CB3002A     | CB CAST W/.88 DIA HOLE                   | 1.000 EA |
| 51XB1016A07   | 10-16 X 7/16 HXWSSLD SERTYB              | 2.000 EA |
| 11XW1032G06   | 10-32 X .38, TAPTITE II, HEX WSHR SLTD U | 1.000 EA |
| 34EP3200A03SP | FR ENDPLATE, MACH                        | 1.000 EA |
| HW5100A03     | WAVY WASHER (W1543-017)                  | 1.000 EA |
| 34EP3400A05   | PU ENDPLATE, MACH                        | 1.000 EA |
| 34AD2000      | BAFFLE PLATE, STAMPED                    | 1.000 EA |
| 60XW0632A06   | 6-32 X 3/8 TORX HEAD SCREW TAPTITE II    | 4.000 EA |
| 51XN1032A20   | 10-32 X 1 1/4 HX WS SL SR                | 2.000 EA |
| 34FH4000A11   | DRIP COVER, STAMPED,PRIMER               | 1.000 EA |
| 51XW1032A06   | 10-32 X .38, TAPTITE II, HEX WSHR SLTD S | 3.000 EA |
| 34CB4517      | CB LID 4 MTG HOLES .22 DIA STAMPED, FOR  | 1.000 EA |
| 51XW0832A07   | 8-32 X .44, TAPTITE II, HEX WSHR SLTD SE | 4.000 EA |
| HW2501D13     | KEY, 3/16 SQ X 1.375                     | 1.000 EA |
| HA7000A04     | KEY RETAINER 0.625 DIA SHAFTS            | 1.000 EA |
| MG1000Y03     | MUNSELL 2.53Y 6.70/ 4.60, GLOSS 20,      | 0.014 GA |
| 85XU0407S04   | 4X1/4 U DRIVE PIN STAINLESS              | 2.000 EA |
| HA3100A38     | THRUBOLT 10-32 X 9.375                   | 4.000 EA |
| LB1119N       | WARNING LABEL                            | 1.000 EA |
| LC0005        | CONN.DIA.,TY M,9-LD,DUAL VOLT,REVERSING  | 1.000 EA |
| NP3155L       | ALUM SUPER-E UL CSA CC "SEMS"            | 1.000 EA |

| Parts List (continued) |                                         |          |
|------------------------|-----------------------------------------|----------|
| Part Number            | Description                             | Quantity |
| MN416A01               | TAG-INSTAL-MAINT no wire (1200/bx) 5/18 | 1.000 EA |
| 36PA1000               | PKG GRP, PRINT     PK1016A06            | 1.000 EA |
| PK3083T                | STYROFOAM PACKING CRADLE                | 1.000 EA |
| PK3088                 | MICROFOAM, 8"X"8 PERF. SHEETS 5,400/RL  | 1.000 EA |

**AC Induction Motor Performance Data**

Record # 47462 - Typical performance - not guaranteed values

|                               |                    |                        |
|-------------------------------|--------------------|------------------------|
| <b>Winding:</b> 34WGS940-R002 | <b>Type:</b> 3428M | <b>Enclosure:</b> OPEN |
|-------------------------------|--------------------|------------------------|

| Nameplate Data        |              |              |    | 460 V, 60 Hz:<br>High Voltage Connection |                           |
|-----------------------|--------------|--------------|----|------------------------------------------|---------------------------|
| Rated Output (HP)     | .5           |              |    | Full Load Torque                         | 2.36 LB-FT                |
| Volts                 | 230/460      |              |    | Start Configuration                      | direct on line            |
| Full Load Amps        | 2/1          |              |    | Breakdown Torque                         | 7.06 LB-FT                |
| R.P.M.                | 1140         |              |    | Pull-up Torque                           | 5.55 LB-FT                |
| Hz                    | 60           | Phase        | 3  | Locked-rotor Torque                      | 6.2 LB-FT                 |
| NEMA Design Code      | B            | KVA Code     | K  | Starting Current                         | 4.7 A                     |
| Service Factor (S.F.) | 1.25         |              |    | No-load Current                          | 0.68 A                    |
| NEMA Nom. Eff.        | 75.3         | Power Factor | 65 | Line-line Res. @ 25°C                    | 32.597 Ω                  |
| Rating - Duty         | 40C AMB-CONT |              |    | Temp. Rise @ Rated Load                  | 49°C                      |
| S.F. Amps             | 2.2/1.1      |              |    | Temp. Rise @ S.F. Load                   | 66°C                      |
|                       |              |              |    | Locked-rotor Power Factor                | 56                        |
|                       |              |              |    | Rotor inertia                            | 0.0665 LB-FT <sup>2</sup> |

Load Characteristics 460 V, 60 Hz, 0.5 HP

| % of Rated Load | 25     | 50     | 75     | 100    | 125    | 150    | S.F. |
|-----------------|--------|--------|--------|--------|--------|--------|------|
| Power Factor    | 27     | 43     | 54     | 63     | 70     | 75     | 70   |
| Efficiency      | 62.5   | 73.6   | 76.7   | 76.9   | 75.5   | 73.1   | 75.5 |
| Speed           | 1184.7 | 1169.4 | 1153.2 | 1135.4 | 1114.5 | 1089.3 | 1114 |
| Line amperes    | 0.707  | 0.771  | 0.863  | 0.978  | 1.13   | 1.3    | 1.13 |

## Performance Graph at 460V, 60Hz, 0.5HP Typical performance - Not guaranteed values







