

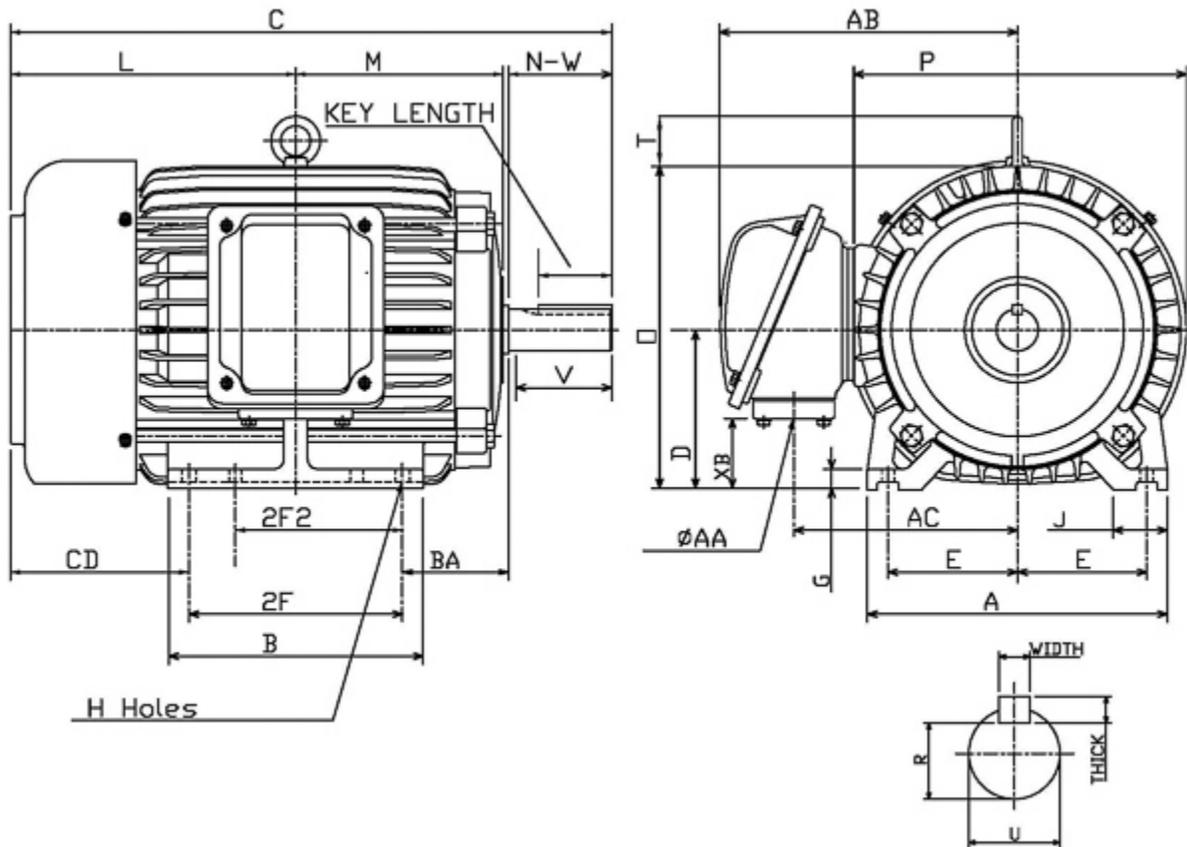
Technical Documentation

**PDH0038**  
**Optim TEFC | AEHH8N**

Date: November 30, 2016

### Dimensional Drawing

| Catalogue | Model  | HP | Pole | kW  | Rating     | Voltage     | Hz | RPM |
|-----------|--------|----|------|-----|------------|-------------|----|-----|
| PDH0038   | AEHH8N | 3  | 8    | 2.2 | Continuous | 230 / 460 V | 60 | 900 |



| Frame Size       | Mounting |      |          |        |                    | A           | B          | C     | CD                           | D          |         |
|------------------|----------|------|----------|--------|--------------------|-------------|------------|-------|------------------------------|------------|---------|
|                  | E        | 2F   | 2F2      | H      | BA                 |             |            |       |                              |            |         |
| 215T             | 4.25     | 7    | 5.5      | 0.41   | 3.5                | 9.85        | 8.35       | 19.48 |                              | 5.25       |         |
| G                | J        | K    | L        | M      | O                  | P           | T          | Key   |                              |            | Keyseat |
| 0.7              | 1.75     |      | 9.1      | 6.81   | 10.8               | 11.1        | 1.46       | Width | Thick                        | Length     | R       |
|                  |          |      |          |        |                    |             |            | 0.312 | 0.312                        | 2.41       | 1.201   |
| Terminal Housing |          |      | Aux Box  |        |                    | C/D Flange  |            |       |                              |            |         |
| AA               | AB       | AC   | XB       | AE     | AX                 | BB          | AH         | AK    | BD                           | AJ         | BF      |
| 1 NPT            | 9.78     | 7.34 | 2.34     |        |                    |             |            |       |                              |            |         |
| Shaft Extension  |          |      | Bearings |        | Approx. Weight Lbs | SPL dBA/3ft | Ins. Class | S.F.  | Drive Method                 | Dimensions |         |
| N-W              | U        | V    | DE       | NDE    |                    |             |            |       |                              |            |         |
| 3.38             | 1.375    | 3.3  | 6308ZZ   | 6306ZZ | 161                | 53          | F          | 1.15  | Direct Coupling / Belt Drive | Inches     |         |

### Technical Data Sheet

Motor Type: AEHH8N

Catalogue No: PDH0038

#### Nameplate Information

|           |            |                |             |             |              |                |
|-----------|------------|----------------|-------------|-------------|--------------|----------------|
| HP        | Pole       | RPM            | Frame       | Voltage     | Hz           | Phase          |
| 3         | 8          | 865            | 215T        | 230 / 460   | 60           | 3              |
| Enclosure | Ins. Class | Service Factor | Time Rating | NEMA Design | Rated Amb.   | Rated Altitude |
| TEFC      | F          | 1.15           | Continuous  | B           | -40 to 40 °C | <3300 ft       |

#### Typical Performance

| Efficiency (%)    |                             |                                 |                                      | Power Factor (%)    |            |                                |
|-------------------|-----------------------------|---------------------------------|--------------------------------------|---------------------|------------|--------------------------------|
| Full Load         |                             | 3/4 Load                        | 1/2 Load                             | Full Load           | 3/4 Load   | 1/2 Load                       |
| Nom.              | Min.                        |                                 |                                      |                     |            |                                |
| 85.5              | 82.5                        | 84.0                            | 82.5                                 | 66.0                | 57.0       | 44.5                           |
| Torque            |                             |                                 |                                      | Current (A)         |            |                                |
| Full Load (lb-ft) | Locked Rotor (% FLT)        | Pull Up (% FLT)                 | Break Down (% FLT)                   | No Load             | Full Load  | Locked Rotor                   |
| 18.21             | 240                         | 230                             | 305                                  | 6.9 / 3.5           | 10.0 / 5.0 | 64 / 32                        |
| NEMA KVA Code     | Inertia (WR <sup>2</sup> )  |                                 |                                      | Safe Stall Time (s) |            | Noise Level Sound Press. dB(A) |
|                   | Rotor (lb-ft <sup>2</sup> ) | NEMA Load (lb-ft <sup>2</sup> ) | Max. Allowable (lb-ft <sup>2</sup> ) | Cold                | Hot        |                                |
| K                 | 0.821                       | 87.0                            | 303.0                                | 58                  | 41         | 53                             |

#### VFD Duty Information

| Speed Range     |                 |                | VFD     |              | S.F.     |
|-----------------|-----------------|----------------|---------|--------------|----------|
| Constant Torque | Variable Torque | Constant Power | Carrier | Type         |          |
| 6-60Hz          | 3-60Hz          | 60-120Hz       | ≤ 5 kHz | VPWM or CPWM | 1.0 Only |

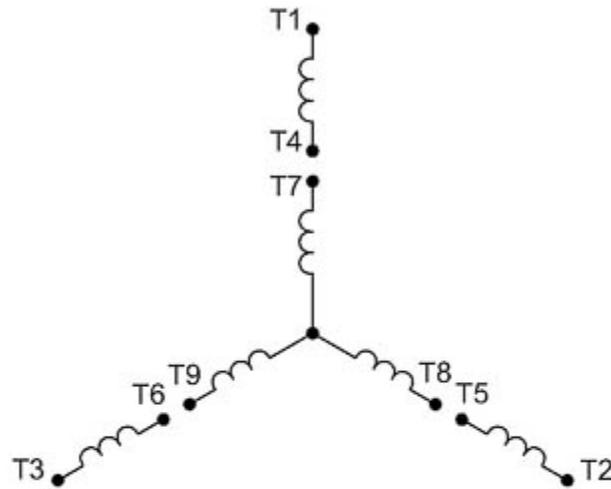
#### Additional Information

| Bearings |        | Approx. Weight |
|----------|--------|----------------|
| DE       | NDE    | lbs            |
| 6308ZZ   | 6306ZZ | 161            |

#### Hazardous Locations Information

| CSA Certified  |           |
|--|-----------|
| Class I, Div 2, Groups B, C & D<br>Class I, Zone 2, Groups IIB+H2, IIB & IIA |           |
| Temp Code (Sinewave / VFD)   | T3A / T3A |

**Connection Diagram**

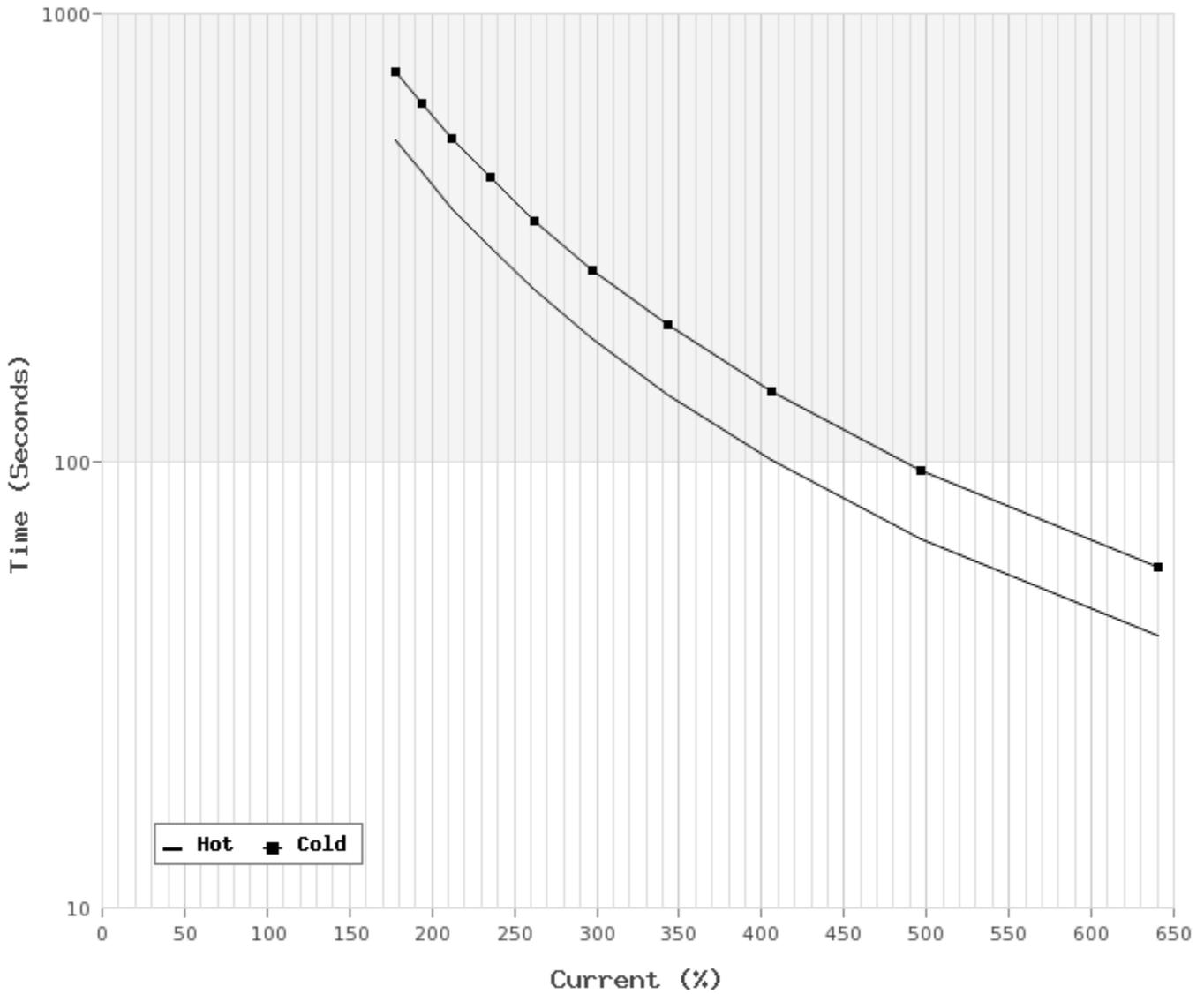


| 9 LEAD DUAL VOLTAGE WYE |       |     |     |     |             |
|-------------------------|-------|-----|-----|-----|-------------|
| VOLTAGE                 | CONN. | L1  | L2  | L3  | JOIN        |
| HIGH                    | WYE   | 1   | 2   | 3   | 4&7,5&8,6&9 |
| LOW                     | 2 WYE | 1,7 | 2,8 | 3,9 | 4&5&6       |

WD\_9Y

**Thermal Limit Curves**

|                    |                 |                       |      |                    |              |
|--------------------|-----------------|-----------------------|------|--------------------|--------------|
| Motor Type: AEHH8N |                 | Catalogue No: PDH0038 |      | Family: Optim TEFC |              |
| HP                 | 3               | Safe Stall Time       |      | Full Load A        | 10.0 / 5.0 A |
| Voltage            | 230 / 460V 60Hz | Hot                   | 41 s | Locked Rotor A     | 643 / 643 %  |
| RPM                | 900             | Cold                  | 58 s | Locked Rotor A     | 64.0 / 32 A  |



**T-N and I-N Curves**

|                    |                 |                       |             |                    |               |
|--------------------|-----------------|-----------------------|-------------|--------------------|---------------|
| Motor Type: AEHH8N |                 | Catalogue No: PDH0038 |             | Family: Optim TEFC |               |
| HP                 | 3               | Full Load T           | 18.21 lb-ft | Full Load A        | 10.0 / 5.0 A  |
| Voltage            | 230 / 460V 60Hz | Locked Rotor T        | 240 %       | Locked Rotor A     | 64.0 / 32.0 A |
| RPM                | 900             | Pull Up T             | 230 %       | Break Down T       | 305 %         |

