

Technical Documentation

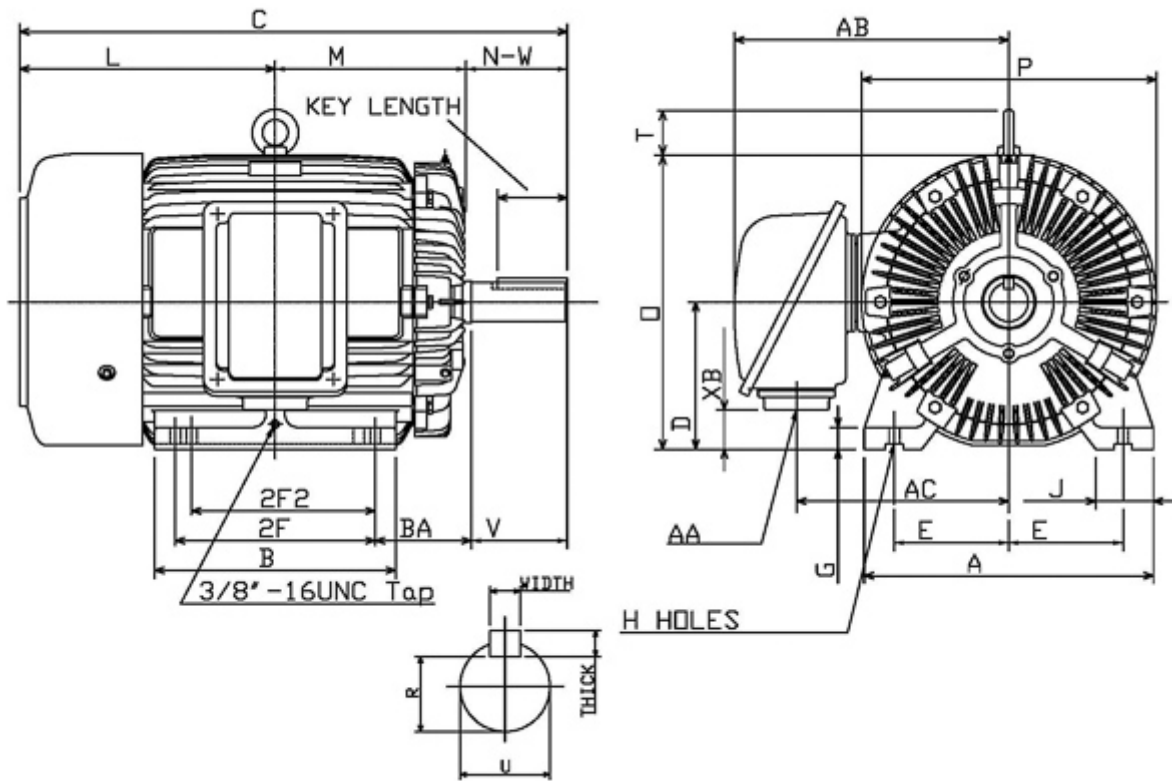
# **APH0408**

## **Advantage Plus IEEE Ready | AEHH8R**


Date: June 26, 2020

**Dimensional Drawing**

| Catalogue | Model  | HP | Pole | kW | Rating     | Voltage | Hz | RPM |
|-----------|--------|----|------|----|------------|---------|----|-----|
| APH0408   | AEHH8R | 40 | 8    | 30 | Continuous | 460     | 60 | 900 |



| Frame Size       | Mounting |       |          |         |                       | A              | B             | C     | CD                                 | D          |              |
|------------------|----------|-------|----------|---------|-----------------------|----------------|---------------|-------|------------------------------------|------------|--------------|
|                  | E        | 2F    | 2F2      | H       | BA                    |                |               |       |                                    |            |              |
| 365T             | 7        | 12.25 | 11.25    | 0.66    | 5.88                  | 17.7           | 14.76         | 33.55 |                                    | 9          |              |
| G                | J        | K     | L        | M       | O                     | P              | T             | Key   |                                    |            | Keyseat<br>R |
|                  |          |       |          |         |                       |                |               | Width | Thick                              | Length     |              |
| 1.32             | 3.54     |       | 15.67    | 11.59   | 17.99                 | 18.03          | 2.76          | 0.625 | 0.625                              | 4.28       | 2.021        |
| Terminal Housing |          |       | Aux Box  |         |                       | C/D Flange     |               |       |                                    |            |              |
| AA               | AB       | AC    | XB       | AE      | AX                    | BB             | AH            | AK    | BD                                 | AJ         | BF           |
| NPT3"            | 16.81    | 12.99 | 2.39     |         |                       |                |               |       |                                    |            |              |
| Shaft Extension  |          |       | Bearings |         | Approx.<br>Weight Lbs | SPL<br>dBA/3ft | Ins.<br>Class | S.F.  | Drive Method                       | Dimensions |              |
| N-W              | U        | V     | DE       | NDE     |                       |                |               |       |                                    |            |              |
| 5.88             | 2.375    | 5.75  | 6313ZC3  | 6213ZC3 | 928                   | 72             | F             | 1.15  | Direct<br>Coupling / Belt<br>Drive | Inches     |              |

|   |                     |
|---|---------------------|
|  |                     |
|   |                     |
|   | Date: June 26, 2020 |

### Technical Data Sheet

|                    |                       |
|--------------------|-----------------------|
| Motor Type: AEHH8R | Catalogue No: APH0408 |
|--------------------|-----------------------|

#### Nameplate Information

|           |            |                |             |             |              |                |
|-----------|------------|----------------|-------------|-------------|--------------|----------------|
| HP        | Pole       | RPM            | Frame       | Voltage     | Hz           | Phase          |
| 40        | 8          | 885            | 365T        | 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 | <1000 m        |

#### Typical Performance

| Efficiency (%)    |                             |                                 |                                      | Power Factor (%)    |           |                                |
|-------------------|-----------------------------|---------------------------------|--------------------------------------|---------------------|-----------|--------------------------------|
| Full Load         |                             | 3/4 Load                        | 1/2 Load                             | Full Load           | 3/4 Load  | 1/2 Load                       |
| Nom.              | Min.                        |                                 |                                      |                     |           |                                |
| 91.7              | 90.2                        | 92.4                            | 91.7                                 | 76.5                | 72.0      | 61.0                           |
| Torque            |                             |                                 |                                      | Current (A)         |           |                                |
| Full Load (lb-ft) | Locked Rotor (% FLT)        | Pull Up (% FLT)                 | Break Down (% FLT)                   | No Load             | Full Load | Locked Rotor                   |
| 237.30            | 200                         | 150                             | 200                                  | 24.3                | 53.4      | 290                            |
| 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       |                                |
| G                 | 19.318                      | 1007.00                         | 1923.00                              | 40                  | 28        | 72                             |

#### 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 |

#### 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)   |
| T3C / T3A  |

#### Additional Certifications

|                               |
|-------------------------------|
| Other Certification           |
| Class II, Div 2, Groups F & G |

#### Additional Information

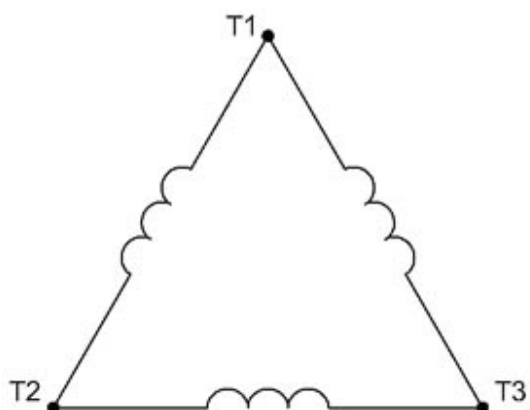
| Bearings |         | Approx. Weight |
|----------|---------|----------------|
| DE       | NDE     | lbs            |
| 6313ZC3  | 6213ZC3 | 928            |

**Nameplate Drawing**

# Advantage Plus IEEE Ready

|              |                   |                |          |                |      |
|--------------|-------------------|----------------|----------|----------------|------|
| TYPE         | AEHH8R            | CAT. NO.       | APH0408  |                |      |
| OUTPUT       | 40 HP 30 kW       | FRAME          | 365T     | TEFC           |      |
| R.P.M.       | 885               | POLE           | 8        | INS.           | F    |
| VOLTS        | 460               | PHASE          | 3        | Hz             | 60   |
| AMPS         | 53.4              | CODE           | G        | S.F.           | 1.15 |
| AMBIENT      | 40 °C             | NOM. EFF. 91.7 |          | MIN. EFF. 90.2 |      |
| BEARINGS     | 6313ZC3 / 6213ZC3 |                |          | RATING Cont.   |      |
| SER. NO.     | TBD               | DESIGN         | B        | WT. 928 LBS    |      |
| PWM VFD DUTY | VT                | CT             | CP       | S.F.           |      |
|              | 3-60Hz            | 6-60Hz         | 60-120Hz | 1.0 Only       |      |

**Connection Diagram**

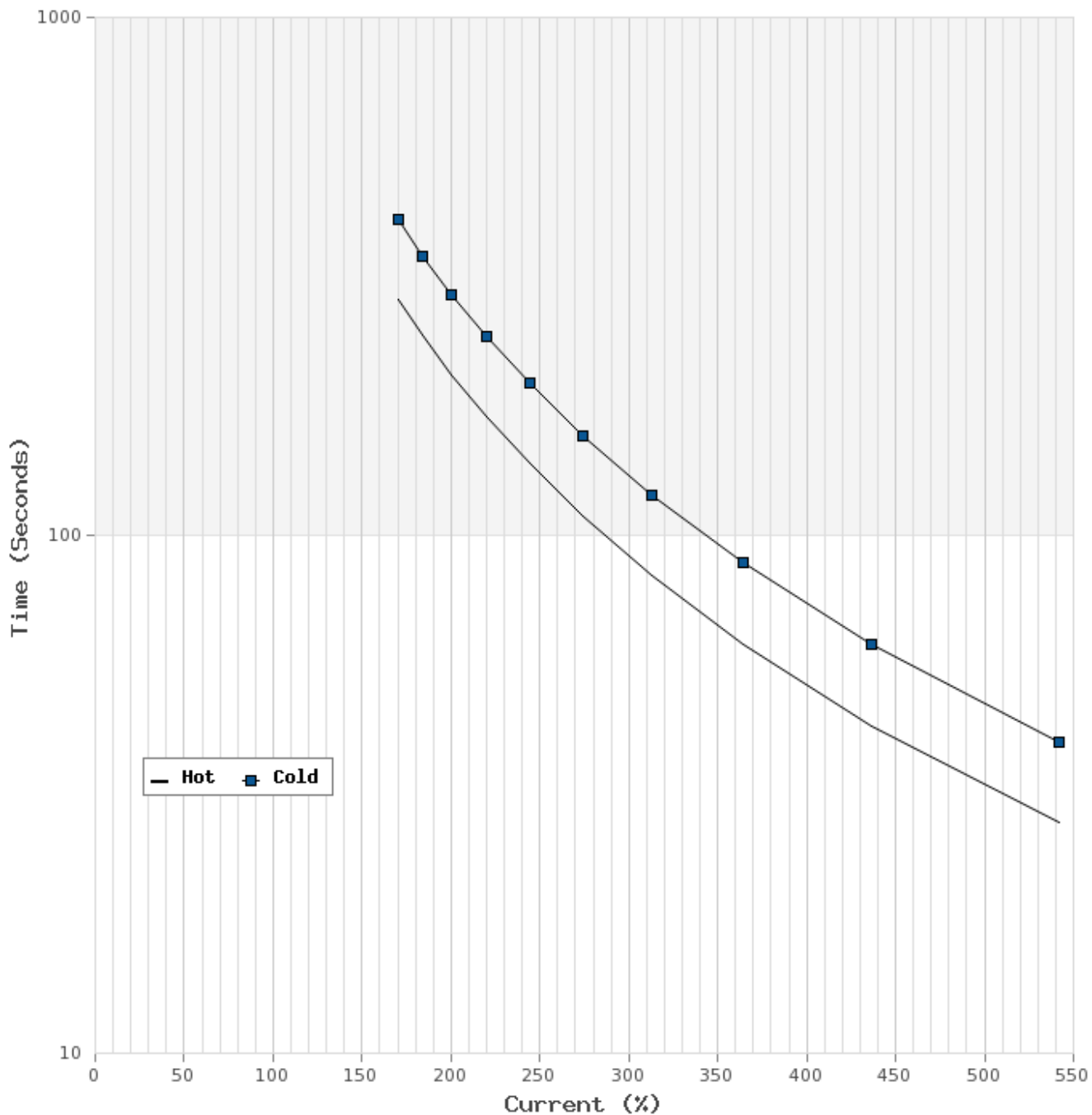


| 3 LEAD  |       | SINGLE VOLTAGE |    |    | DELTA |
|---------|-------|----------------|----|----|-------|
| VOLTAGE | CONN. | L1             | L2 | L3 |       |
| -       | DELTA | 1              | 2  | 3  |       |

WD\_3D

### Thermal Limit Curves

|                    |           |                       |      |                                   |        |
|--------------------|-----------|-----------------------|------|-----------------------------------|--------|
| Motor Type: AEHH8R |           | Catalogue No: APH0408 |      | Family: Advantage Plus IEEE Ready |        |
| HP                 | 40        | Safe Stall Time       |      | Full Load A                       | 53.4 A |
| Voltage            | 460V 60Hz | Hot                   | 28 s | % Inrush                          | 543 %  |
| RPM                | 900       | Cold                  | 40 s | Locked Rotor A                    | 290 A  |



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

|                    |           |                       |              |                                   |         |
|--------------------|-----------|-----------------------|--------------|-----------------------------------|---------|
| Motor Type: AEHH8R |           | Catalogue No: APH0408 |              | Family: Advantage Plus IEEE Ready |         |
| HP                 | 40        | Full Load T           | 237.30 lb-ft | Full Load A                       | 53.4 A  |
| Voltage            | 460V 60Hz | Locked Rotor T        | 200 %        | Locked Rotor A                    | 290.0 A |
| RPM                | 900       | Pull Up T             | 150 %        | Break Down T                      | 200 %   |

