

Technical Documentation

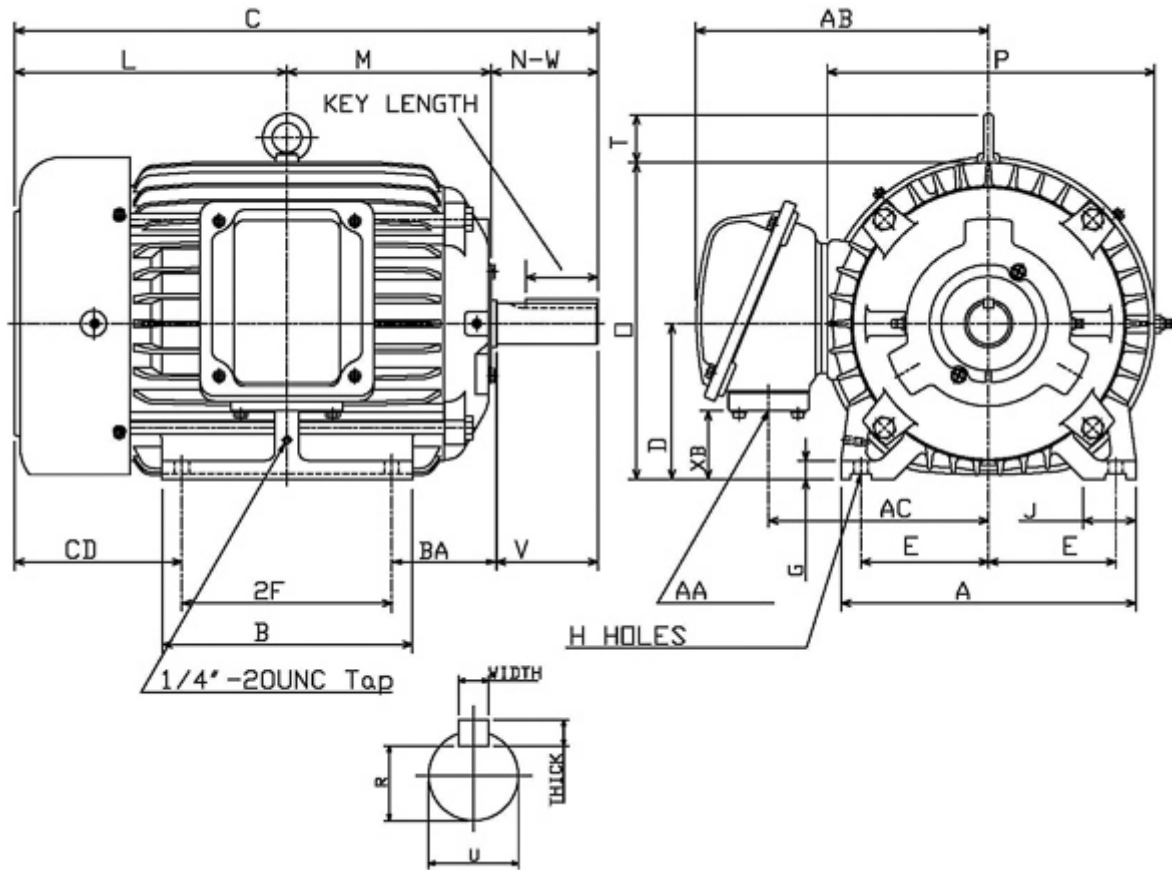
# **APH00285**

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


Date: June 25, 2020

**Dimensional Drawing**

| Catalogue | Model  | HP | Pole | kW  | Rating     | Voltage | Hz | RPM |
|-----------|--------|----|------|-----|------------|---------|----|-----|
| APH00285  | AEHH8R | 2  | 8    | 1.5 | Continuous | 575     | 60 | 900 |



| Frame Size       | Mounting |      |          |         |                    | A           | B          | C     | CD                           | D          |         |
|------------------|----------|------|----------|---------|--------------------|-------------|------------|-------|------------------------------|------------|---------|
|                  | E        | 2F   | 2F2      | H       | BA                 |             |            |       |                              |            |         |
| 213T             | 4.25     | 5.5  |          | 0.41    | 3.5                | 9.85        | 6.89       | 18.26 |                              | 5.25       |         |
| G                | J        | K    | L        | M       | O                  | P           | T          | Key   |                              |            | Keyseat |
| 0.7              | 1.75     |      | 8.63     | 6.1     | 10.62              | 11.1        | 1.65       | 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      |
| NPT1"            | 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  | 6308ZC3  | 6306ZC3 | 167                | 52          | F          | 1.15  | Direct Coupling / Belt Drive | Inches     |         |

|   |                     |
|---|---------------------|
|  |                     |
|   |                     |
|   | Date: June 25, 2020 |

### Technical Data Sheet

|                    |                        |
|--------------------|------------------------|
| Motor Type: AEHH8R | Catalogue No: APH00285 |
|--------------------|------------------------|

#### Nameplate Information

|           |            |                |             |             |              |                |
|-----------|------------|----------------|-------------|-------------|--------------|----------------|
| HP        | Pole       | RPM            | Frame       | Voltage     | Hz           | Phase          |
| 2         | 8          | 865            | 213T        | 575         | 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.                        |                                 |                                      |                     |           |                                |
| 85.5              | 82.5                        | 84.0                            | 82.5                                 | 64.0                | 55.0      | 42.5                           |
| Torque            |                             |                                 |                                      | Current (A)         |           |                                |
| Full Load (lb-ft) | Locked Rotor (% FLT)        | Pull Up (% FLT)                 | Break Down (% FLT)                   | No Load             | Full Load | Locked Rotor                   |
| 12.14             | 190                         | 170                             | 275                                  | 1.9                 | 2.7       | 20                             |
| 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       |                                |
| L                 | 0.586                       | 59.00                           | 285.00                               | 66                  | 46        | 52                             |

#### 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

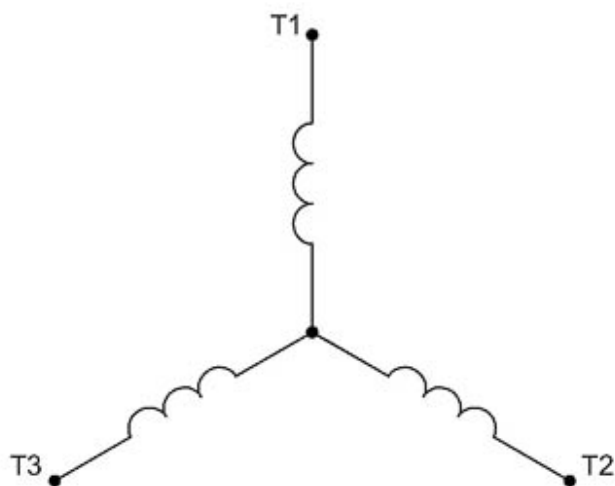
| Bearings |         | Approx. Weight |
|----------|---------|----------------|
| DE       | NDE     | lbs            |
| 6308ZC3  | 6306ZC3 | 167            |

**Nameplate Drawing**

# Advantage Plus IEEE Ready

|              |                   |                |          |                |      |
|--------------|-------------------|----------------|----------|----------------|------|
| TYPE         | AEHH8R            | CAT. NO.       | APH00285 |                |      |
| OUTPUT       | 2 HP 1.5 kW       | FRAME          | 213T     | TEFC           |      |
| R.P.M.       | 865               | POLE           | 8        | INS.           | F    |
| VOLTS        | 575               | PHASE          | 3        | Hz             | 60   |
| AMPS         | 2.7               | CODE           | L        | S.F.           | 1.15 |
| AMBIENT      | 40 °C             | NOM. EFF. 85.5 |          | MIN. EFF. 82.5 |      |
| BEARINGS     | 6308ZC3 / 6306ZC3 |                |          | RATING Cont.   |      |
| SER. NO.     | TBD               | DESIGN         | B        | WT. 167 LBS    |      |
| PWM VFD DUTY | VT                | CT             | CP       | S.F.           |      |
|              | 3-60Hz            | 6-60Hz         | 60-120Hz | 1.0 Only       |      |

**Connection Diagram**

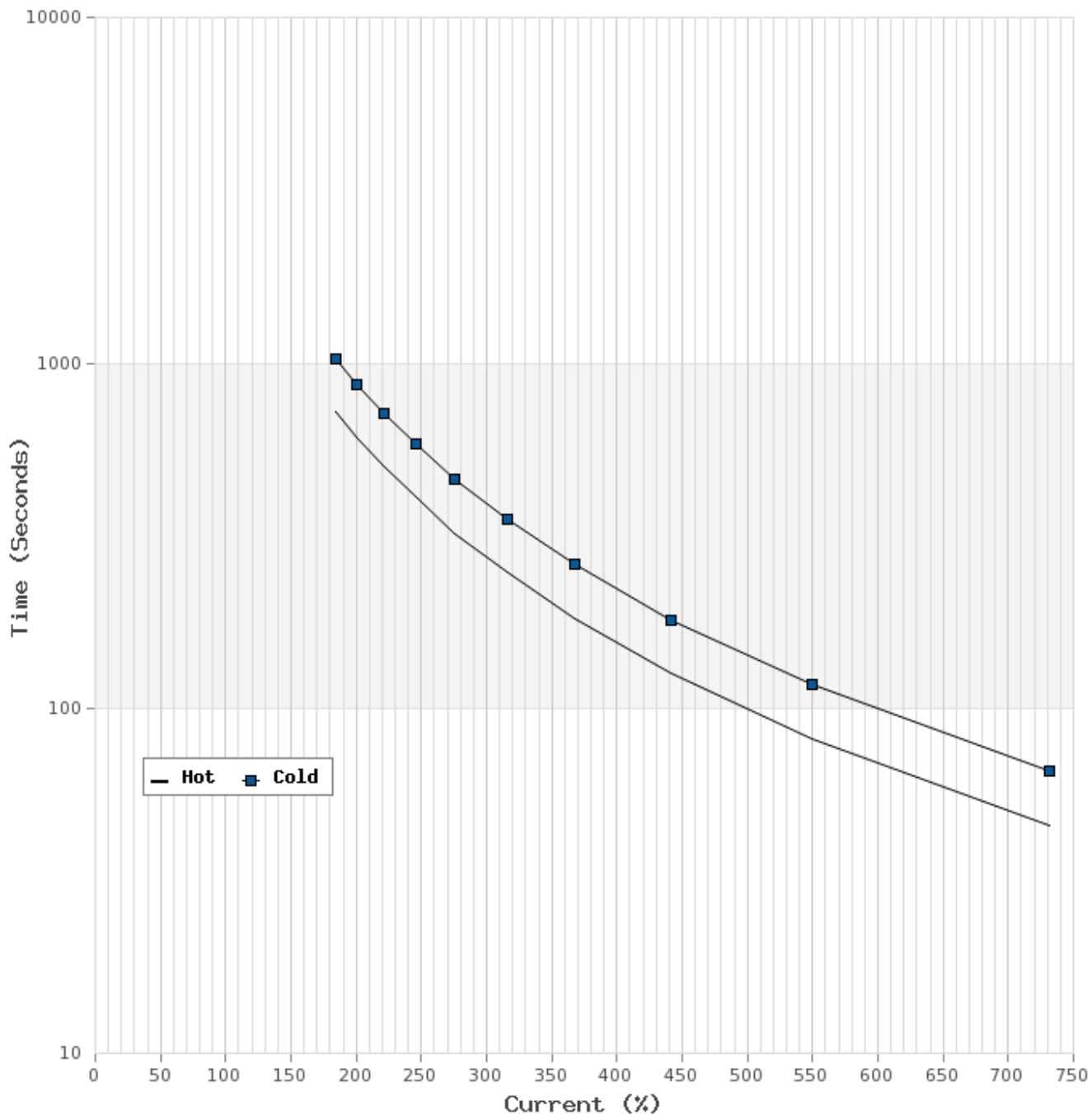


| 3 LEAD  |       | SINGLE VOLTAGE |    |    | WYE |
|---------|-------|----------------|----|----|-----|
| VOLTAGE | CONN. | L1             | L2 | L3 |     |
| -       | WYE   | 1              | 2  | 3  |     |

WD\_3Y

### Thermal Limit Curves

|                    |           |                        |      |                                   |       |
|--------------------|-----------|------------------------|------|-----------------------------------|-------|
| Motor Type: AEHH8R |           | Catalogue No: APH00285 |      | Family: Advantage Plus IEEE Ready |       |
| HP                 | 2         | Safe Stall Time        |      | Full Load A                       | 2.7 A |
| Voltage            | 575V 60Hz | Hot                    | 46 s | % Inrush                          | 730 % |
| RPM                | 900       | Cold                   | 66 s | Locked Rotor A                    | 20 A  |



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

|                    |           |                        |             |                                   |        |
|--------------------|-----------|------------------------|-------------|-----------------------------------|--------|
| Motor Type: AEHH8R |           | Catalogue No: APH00285 |             | Family: Advantage Plus IEEE Ready |        |
| HP                 | 2         | Full Load T            | 12.14 lb-ft | Full Load A                       | 2.7 A  |
| Voltage            | 575V 60Hz | Locked Rotor T         | 190 %       | Locked Rotor A                    | 20.0 A |
| RPM                | 900       | Pull Up T              | 170 %       | Break Down T                      | 275 %  |

