

Technical Documentation

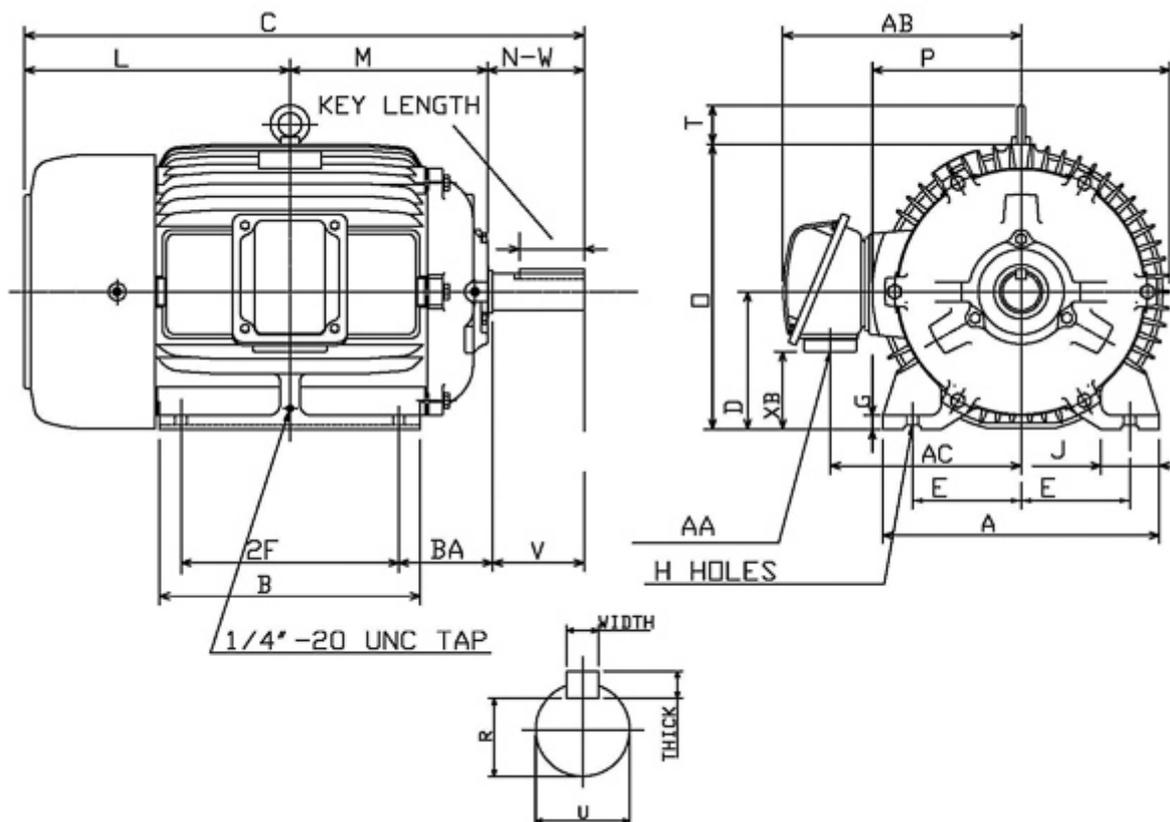
# **APH0152**

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

Date: June 25, 2020

### Dimensional Drawing

| Catalogue | Model  | HP | Pole | kW | Rating     | Voltage | Hz | RPM  |
|-----------|--------|----|------|----|------------|---------|----|------|
| APH0152   | AEHH8R | 15 | 2    | 11 | Continuous | 460     | 60 | 3600 |



| Frame Size       | Mounting |      |          |        |                    | A           | B          | C     | CD                           | D          |         |
|------------------|----------|------|----------|--------|--------------------|-------------|------------|-------|------------------------------|------------|---------|
|                  | E        | 2F   | 2F2      | H      | BA                 |             |            |       |                              |            |         |
| 254T             | 5        | 8.25 |          | 0.53   | 4.25               | 11.81       | 9.85       | 23.78 |                              | 6.25       |         |
| G                | J        | K    | L        | M      | O                  | P           | T          | Key   |                              |            | Keyseat |
| 0.66             | 1.95     |      | 11.41    | 8.06   | 12.8               | 13.15       | 2.01       | Width | Thick                        | Length     | R       |
|                  |          |      |          |        |                    |             |            | 0.375 | 0.375                        | 2.91       | 1.416   |
| Terminal Housing |          |      | Aux Box  |        |                    | C/D Flange  |            |       |                              |            |         |
| AA               | AB       | AC   | XB       | AE     | AX                 | BB          | AH         | AK    | BD                           | AJ         | BF      |
| NPT11/4"         | 11.3     | 8.86 | 3.22     |        |                    |             |            |       |                              |            |         |
| Shaft Extension  |          |      | Bearings |        | Approx. Weight Lbs | SPL dBA/3ft | Ins. Class | S.F.  | Drive Method                 | Dimensions |         |
| N-W              | U        | V    | DE       | NDE    |                    |             |            |       |                              |            |         |
| 4                | 1.625    | 3.9  | 6309ZC3  | 6307C3 | 297                | 73          | F          | 1.15  | Direct Coupling / Belt Drive | Inches     |         |

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

### Technical Data Sheet

|                    |                       |
|--------------------|-----------------------|
| Motor Type: AEHH8R | Catalogue No: APH0152 |
|--------------------|-----------------------|

#### Nameplate Information

|           |            |                |             |             |              |                |
|-----------|------------|----------------|-------------|-------------|--------------|----------------|
| HP        | Pole       | RPM            | Frame       | Voltage     | Hz           | Phase          |
| 15        | 2          | 3525           | 254T        | 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.                        |                                 |                                      |                     |           |                                |
| 92.4              | 91.0                        | 92.4                            | 91.7                                 | 91.5                | 90.5      | 86.0                           |
| Torque            |                             |                                 |                                      | Current (A)         |           |                                |
| Full Load (lb-ft) | Locked Rotor (% FLT)        | Pull Up (% FLT)                 | Break Down (% FLT)                   | No Load             | Full Load | Locked Rotor                   |
| 22.34             | 210                         | 180                             | 270                                  | 3.7                 | 16.6      | 116                            |
| 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                 | 1.088                       | 16.00                           | 41.00                                | 17                  | 12        | 73                             |

#### VFD Duty Information

| Speed Range     |                 |                | VFD     |              | S.F.     |
|-----------------|-----------------|----------------|---------|--------------|----------|
| Constant Torque | Variable Torque | Constant Power | Carrier | Type         |          |
| 6-60Hz          | 3-60Hz          | 60-90Hz        | ≤ 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 / T3B  |

#### Additional Certifications

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

#### Additional Information

| Bearings |        | Approx. Weight |
|----------|--------|----------------|
| DE       | NDE    | lbs            |
| 6309ZC3  | 6307C3 | 297            |

**Nameplate Drawing**

# Advantage Plus IEEE Ready

|              |                  |                |         |                |      |
|--------------|------------------|----------------|---------|----------------|------|
| TYPE         | AEHH8R           | CAT. NO.       | APH0152 |                |      |
| OUTPUT       | 15 HP 11 kW      | FRAME          | 254T    | TEFC           |      |
| R.P.M.       | 3525             | POLE           | 2       | INS.           | F    |
| VOLTS        | 460              | PHASE          | 3       | Hz             | 60   |
| AMPS         | 16.6             | CODE           | G       | S.F.           | 1.15 |
| AMBIENT      | 40 °C            | NOM. EFF. 92.4 |         | MIN. EFF. 91.0 |      |
| BEARINGS     | 6309ZC3 / 6307C3 |                |         | RATING Cont.   |      |
| SER. NO.     | TBD              | DESIGN         | B       | WT. 297 LBS    |      |
| PWM VFD DUTY | VT               | CT             | CP      | S.F.           |      |
|              | 3-60Hz           | 6-60Hz         | 60-90Hz | 1.0 Only       |      |

**Connection Diagram**

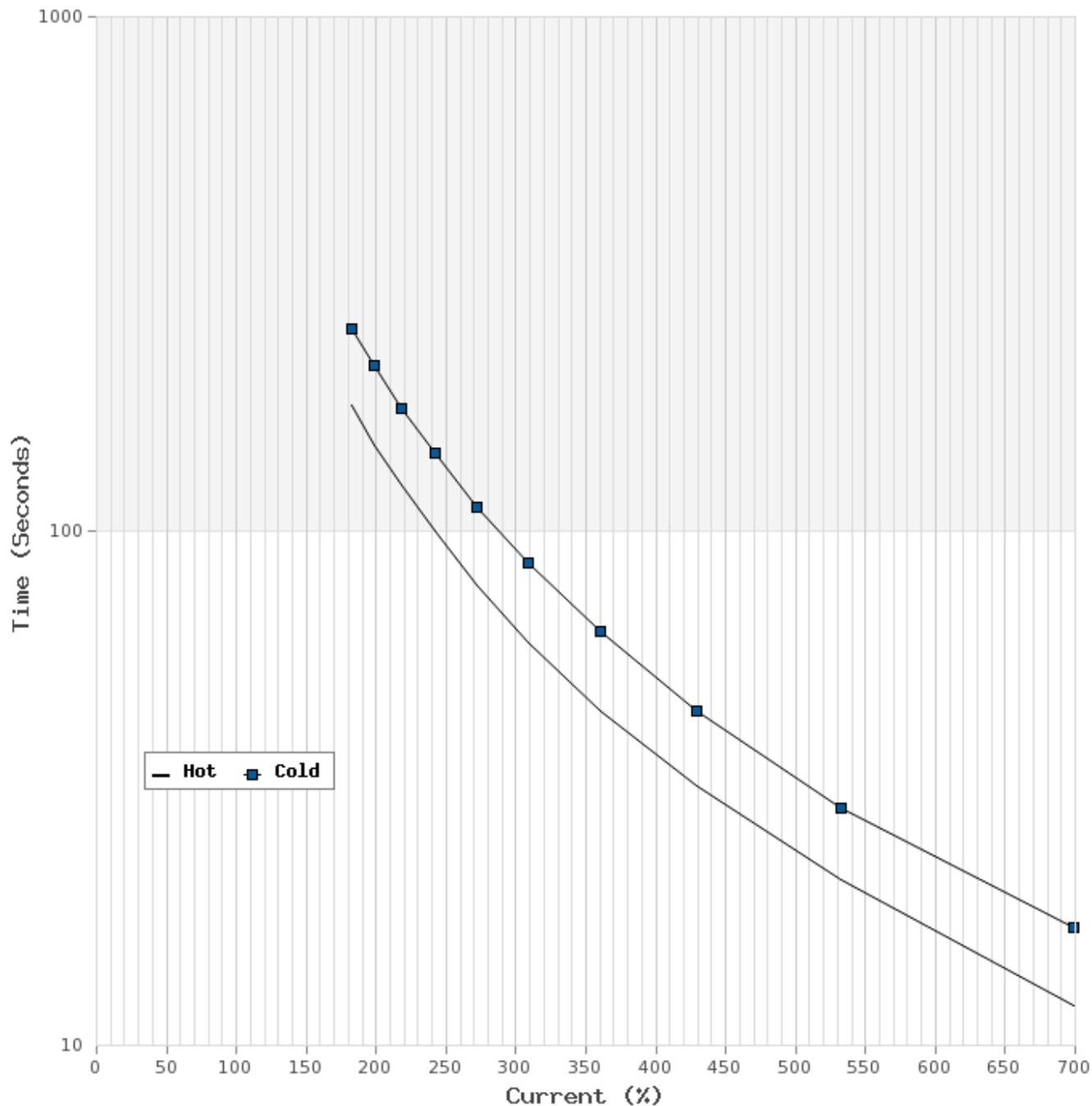


| 3 LEAD  |       | SINGLE VOLTAGE |    |    | DELTA |
|---------|-------|----------------|----|----|-------|
| VOLTAGE | CONN. | L1             | L2 | L3 |       |
| -       | DELTA | 1              | 2  | 3  |       |

WD\_3D

### Thermal Limit Curves

|                    |           |                       |      |                                   |        |
|--------------------|-----------|-----------------------|------|-----------------------------------|--------|
| Motor Type: AEHH8R |           | Catalogue No: APH0152 |      | Family: Advantage Plus IEEE Ready |        |
| HP                 | 15        | Safe Stall Time       |      | Full Load A                       | 16.6 A |
| Voltage            | 460V 60Hz | Hot                   | 12 s | % Inrush                          | 698 %  |
| RPM                | 3600      | Cold                  | 17 s | Locked Rotor A                    | 116 A  |



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

|                    |           |                       |             |                                   |         |
|--------------------|-----------|-----------------------|-------------|-----------------------------------|---------|
| Motor Type: AEHH8R |           | Catalogue No: APH0152 |             | Family: Advantage Plus IEEE Ready |         |
| HP                 | 15        | Full Load T           | 22.34 lb-ft | Full Load A                       | 16.6 A  |
| Voltage            | 460V 60Hz | Locked Rotor T        | 210 %       | Locked Rotor A                    | 116.0 A |
| RPM                | 3600      | Pull Up T             | 180 %       | Break Down T                      | 270 %   |

