

Technical Documentation

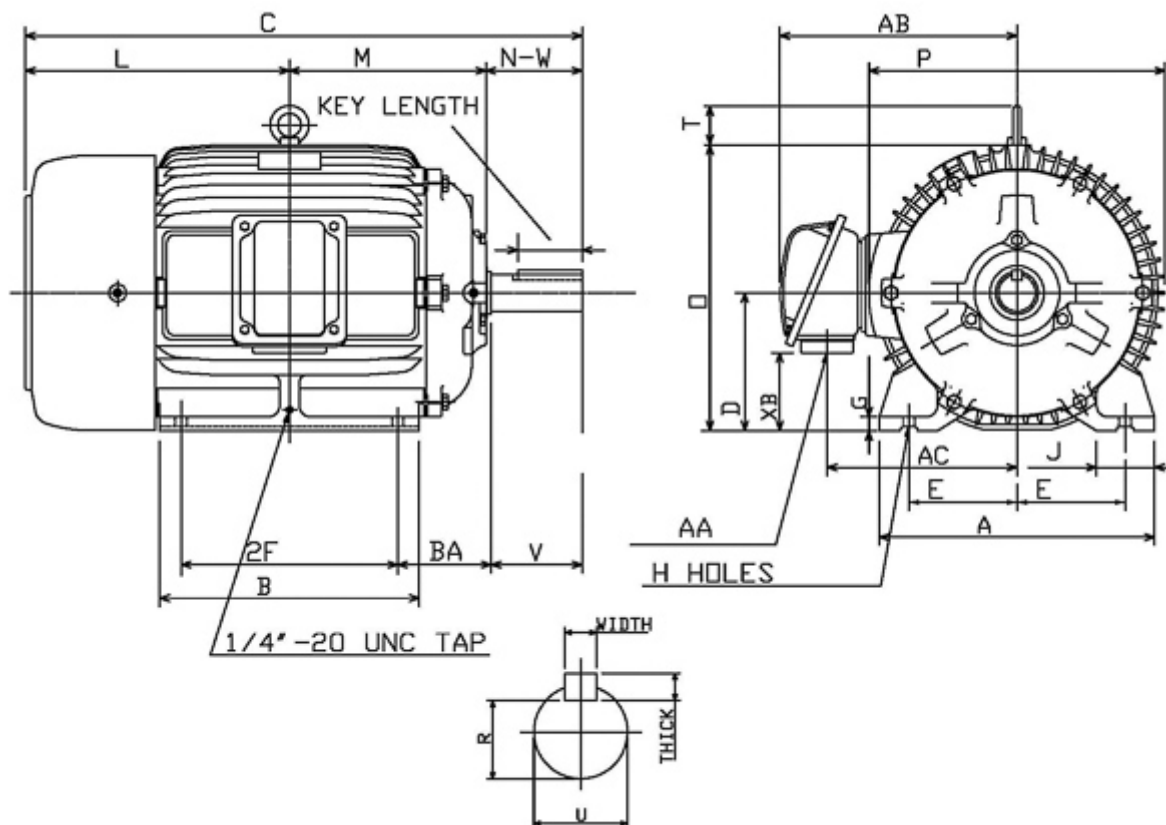
# **APH7/56**

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

Date: June 25, 2020

### Dimensional Drawing

| Catalogue | Model  | HP  | Pole | kW  | Rating     | Voltage | Hz | RPM  |
|-----------|--------|-----|------|-----|------------|---------|----|------|
| APH7/56   | AEHH8R | 7.5 | 6    | 5.6 | Continuous | 460     | 60 | 1200 |



| 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 |
|                  |       |          |          |         |                       |                |               | Width | Thick                              | Length     | R       |
| 0.66             | 1.95  |          | 11.41    | 8.06    | 12.8                  | 13.15          | 2.01          | 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<br>"     | 11.3  | 8.86     | 3.22     |         |                       |                |               |       |                                    |            |         |
| 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     |                       |                |               |       |                                    |            |         |
| 4                | 1.625 | 3.9      | 6309ZC3  | 6307ZC3 | 297                   | 59             | F             | 1.15  | Direct<br>Coupling / Belt<br>Drive | Inches     |         |

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

## Technical Data Sheet

|                    |                       |
|--------------------|-----------------------|
| Motor Type: AEHH8R | Catalogue No: APH7/56 |
|--------------------|-----------------------|

### Nameplate Information

| HP        | Pole       | RPM            | Frame       | Voltage     | Hz           | Phase          |
|-----------|------------|----------------|-------------|-------------|--------------|----------------|
| 7.5       | 6          | 1170           | 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.                        |                                 |                                      |                     |           |                                |
| 91.0              | 89.5                        | 91.0                            | 89.5                                 | 80.5                | 75.0      | 64.0                           |
|                   |                             |                                 |                                      |                     |           |                                |
| Torque            |                             |                                 |                                      | Current (A)         |           |                                |
| Full Load (lb-ft) | Locked Rotor (% FLT)        | Pull Up (% FLT)                 | Break Down (% FLT)                   | No Load             | Full Load | Locked Rotor                   |
| 33.66             | 240                         | 215                             | 270                                  | 4.4                 | 9.6       | 64                             |
|                   |                             |                                 |                                      |                     |           |                                |
| 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       |                                |
| H                 | 2.158                       | 104.00                          | 375.00                               | 36                  | 25        | 59                             |

### 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

### Additional Certifications

| CSA Certified                                                                |           | Other Certification           |
|------------------------------------------------------------------------------|-----------|-------------------------------|
| Class I, Div 2, Groups B, C & D<br>Class I, Zone 2, Groups IIB+H2, IIB & IIA |           | Class II, Div 2, Groups F & G |
| Temp Code (Sinewave / VFD)                                                   | T3C / T3B |                               |

### Additional Information

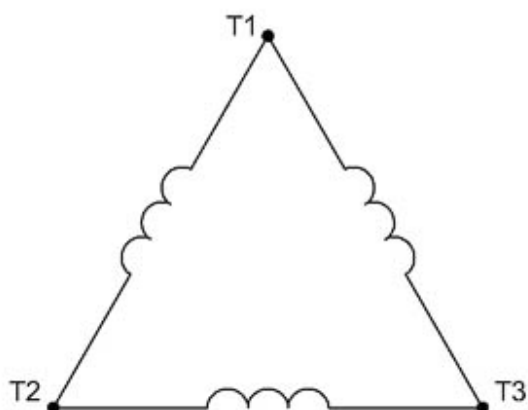
| Bearings |         | Approx. Weight |
|----------|---------|----------------|
| DE       | NDE     | lbs            |
| 6309ZC3  | 6307ZC3 | 297            |

### Nameplate Drawing

## Advantage Plus IEEE Ready

|                 |                   |        |                |          |                |             |
|-----------------|-------------------|--------|----------------|----------|----------------|-------------|
| TYPE            | AEHH8R            |        | CAT. NO.       | APH7/56  |                |             |
| OUTPUT          | 7.5 HP    5.6 kW  |        | FRAME          | 254T     | TEFC           |             |
| R.P.M.          | 1170              |        | POLE           | 6        | INS.           | F           |
| VOLTS           | 460               |        | PHASE          | 3        | Hz             | 60          |
| AMPS            | 9.6               |        | CODE           | H        | S.F.           | 1.15        |
| AMBIENT         | 40 °C             |        | NOM. EFF. 91.0 |          | MIN. EFF. 89.5 |             |
| BEARINGS        | 6309ZC3 / 6307ZC3 |        |                |          | RATING Cont.   |             |
| SER. NO.        | TBD               |        |                | DESIGN   | B              | WT. 297 LBS |
| PWM VFD<br>DUTY | VT                | CT     |                | CP       |                | S.F.        |
|                 | 3-60Hz            | 6-60Hz |                | 60-120Hz |                | 1.0 Only    |

### Connection Diagram

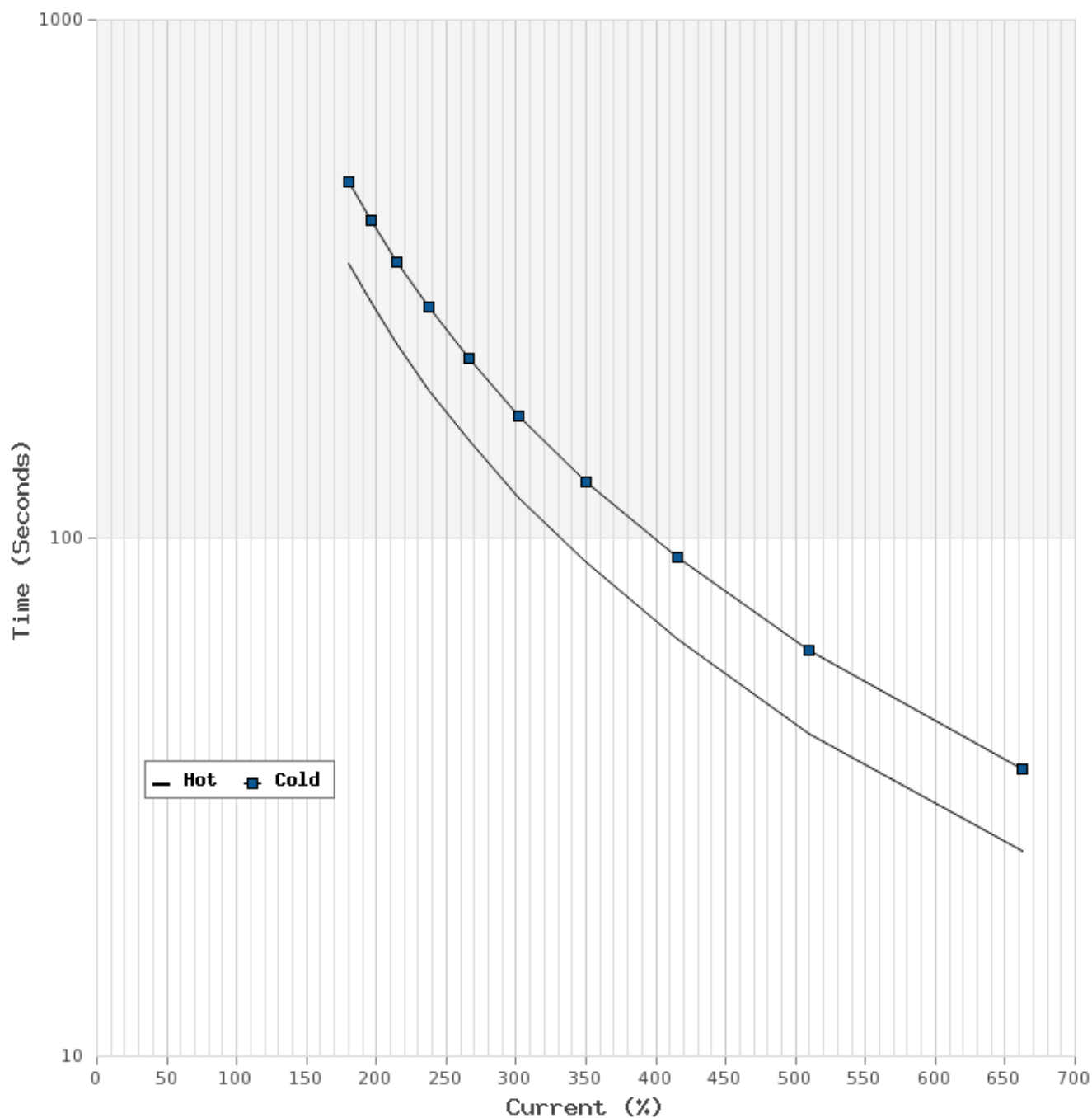


| 3 LEAD  |       | SINGLE VOLTAGE |    |    | DELTA |
|---------|-------|----------------|----|----|-------|
| VOLTAGE | CONN. | L1             | L2 | L3 |       |
| -       | DELTA | 1              | 2  | 3  |       |

WD\_3D

### Thermal Limit Curves

|                    |           |                       |      |                                   |       |
|--------------------|-----------|-----------------------|------|-----------------------------------|-------|
| Motor Type: AEHH8R |           | Catalogue No: APH7/56 |      | Family: Advantage Plus IEEE Ready |       |
| HP                 | 7.5       | Safe Stall Time       |      | Full Load A                       | 9.6 A |
| Voltage            | 460V 60Hz | Hot                   | 25 s | % Inrush                          | 667 % |
| RPM                | 1200      | Cold                  | 36 s | Locked Rotor A                    | 64 A  |



### T-N and I-N Curves

|                    |           |                       |             |                                   |        |
|--------------------|-----------|-----------------------|-------------|-----------------------------------|--------|
| Motor Type: AEHH8R |           | Catalogue No: APH7/56 |             | Family: Advantage Plus IEEE Ready |        |
| HP                 | 7.5       | Full Load T           | 33.66 lb-ft | Full Load A                       | 9.6 A  |
| Voltage            | 460V 60Hz | Locked Rotor T        | 240 %       | Locked Rotor A                    | 64.0 A |
| RPM                | 1200      | Pull Up T             | 215 %       | Break Down T                      | 270 %  |

