

Technical Documentation

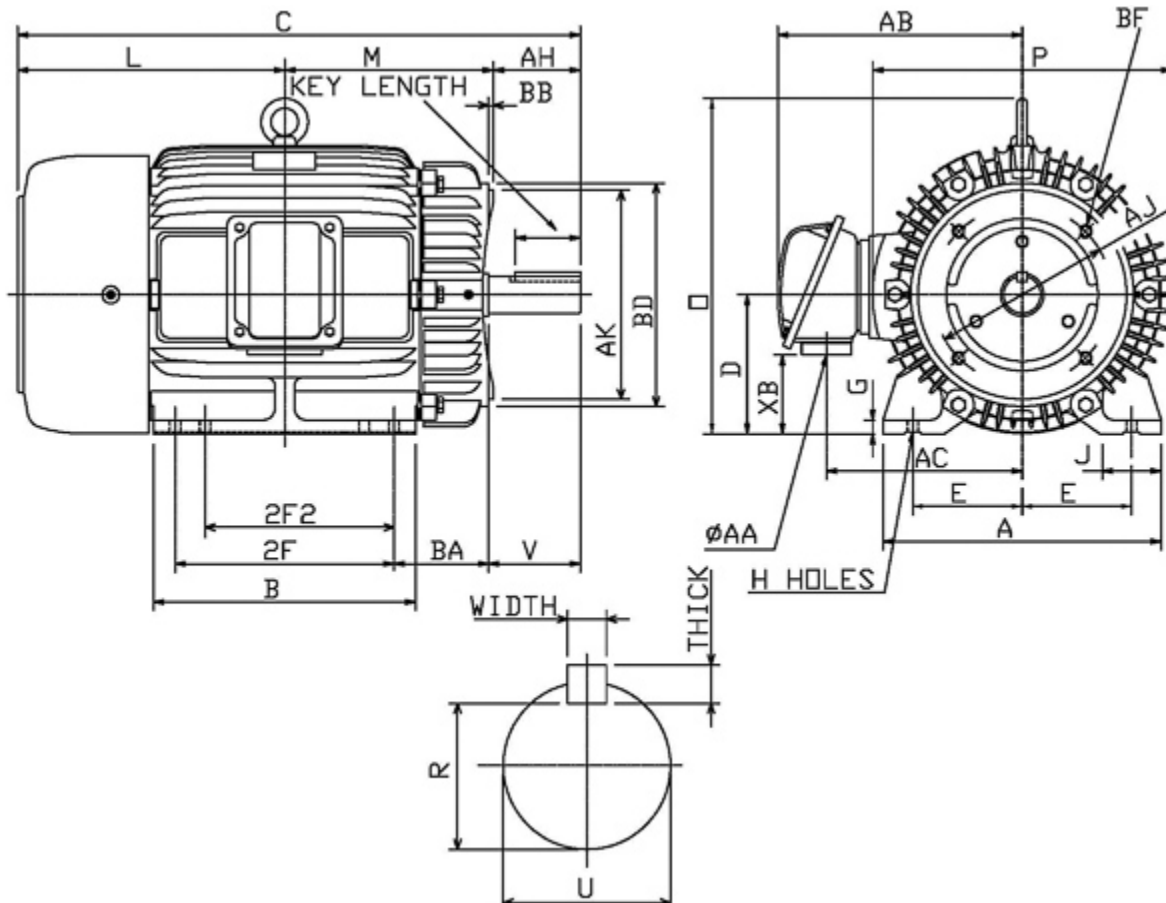
PDH0158C

Optim TEFC | AEHH8N

Date: November 30, 2016

Dimensional Drawing

| Catalogue | Model | HP | Pole | kW | Rating | Voltage | Hz | RPM |
|-----------|--------|----|------|----|------------|-------------|----|-----|
| PDH0158C | AEHH8N | 15 | 8 | 11 | Continuous | 230 / 460 V | 60 | 900 |



| Frame Size | Mounting | | | | | A | B | C | CD | D | |
|------------------|----------|------|----------|---------|--------------------|-------------|------------|-------|------------------------------|------------|-----------|
| | E | 2F | 2F2 | H | BA | | | | | | |
| 286TC | 5.5 | 11 | 9.5 | 0.53 | 4.75 | 14 | 13.2 | 28.3 | | 7 | |
| G | J | K | L | M | O | P | T | Key | | | Keyseat |
| 0.7 | 2.95 | | 13.43 | 9.98 | 14.52 | 15.04 | 1.97 | Width | Thick | Length | R |
| | | | | | | | | 0.5 | 0.5 | 3.28 | 1.591 |
| Terminal Housing | | | | Aux Box | | C/D Flange | | | | | |
| AA | AB | AC | XB | AE | AX | BB | AH | AK | BD | AJ | BF |
| 1.25 NPT | 12.28 | 9.84 | 3.97 | | | 0.25 | 4.37 | 10.5 | 11.22 | 9 | 1/2-13UNC |
| Shaft Extension | | | Bearings | | Approx. Weight Lbs | SPL dBA/3ft | Ins. Class | S.F. | Drive Method | Dimensions | |
| N-W | U | V | DE | NDE | | | | | | | |
| 4.62 | 1.875 | 4.5 | 6311ZZ | 6310ZZ | 449 | 64 | F | 1.15 | Direct Coupling / Belt Drive | Inches | |

Technical Data Sheet

Motor Type: AEHH8N

Catalogue No: PDH0158C

Nameplate Information

| | | | | | | |
|-----------|------------|----------------|-------------|-------------|--------------|----------------|
| HP | Pole | RPM | Frame | Voltage | Hz | Phase |
| 15 | 8 | 880 | 286TC | 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. | | | | | |
| 89.5 | 87.5 | 90.2 | 90.2 | 78.0 | 73.0 | 62.0 |
| Torque | | | | Current (A) | | |
| Full Load (lb-ft) | Locked Rotor (% FLT) | Pull Up (% FLT) | Break Down (% FLT) | No Load | Full Load | Locked Rotor |
| 89.49 | 180 | 170 | 225 | 19.9 / 10.0 | 40.2 / 20.1 | 232 / 116 |
| NEMA KVA Code | Inertia (WR ²) | | | Safe Stall Time (s) | | Noise Level Sound Press. dB(A) |
| | Rotor (lb-ft ²) | NEMA Load (lb-ft ²) | Max. Allowable (lb-ft ²) | Cold | Hot | |
| G | 7.961 | 400.0 | 739.0 | 28 | 20 | 64 |

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 |
| 6311ZZ | 6310ZZ | 449 |

Hazardous Locations Information

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

Connection Diagram

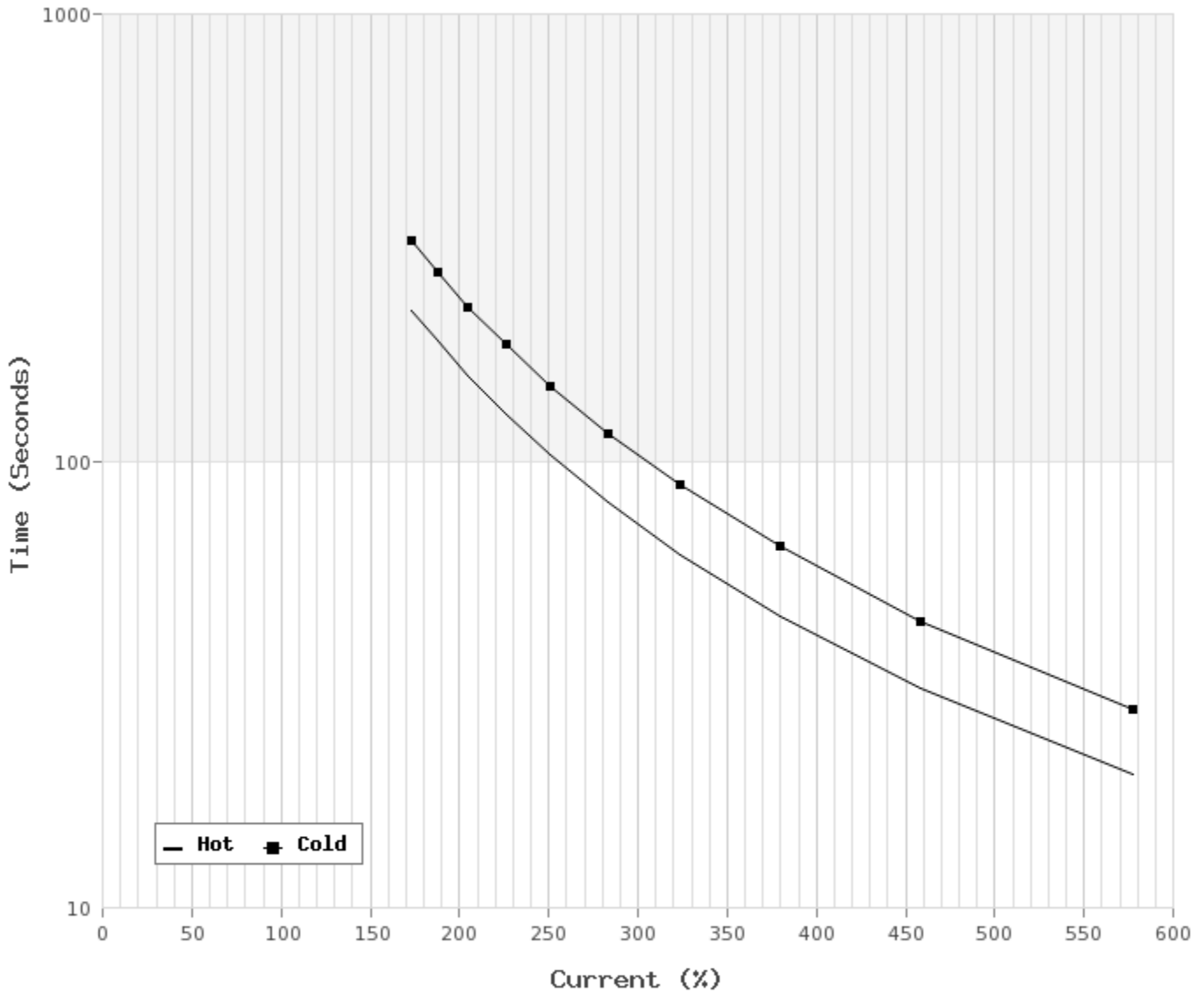


| 12 LEAD DUAL VOLTAGE WYE/DELTA | | | | | | |
|--------------------------------|------------|---------|-------------|-------------|-------------|-------------------------|
| VOLTAGE | CONNECTION | | L1 | L2 | L3 | JOIN |
| HIGH | START | WYE | 1 | 2 | 3 | 4&7,5&8,6&9 10&11&12 |
| | RUN | DELTA | 1,12 | 2,10 | 3,11 | 4&7,5&8,6&9 |
| LOW | START | 2 WYE | 1,7 | 2,8 | 3,9 | 4&5&6 10&11&12 |
| | RUN | 2 DELTA | 1,6,7 12 | 2,4,8 10 | 3,5,9 11 | |

WD_12YD

Thermal Limit Curves

| | | | | | |
|--------------------|-----------------|------------------------|------|--------------------|---------------|
| Motor Type: AEHH8N | | Catalogue No: PDH0158C | | Family: Optim TEFC | |
| HP | 15 | Safe Stall Time | | Full Load A | 40.2 / 20.1 A |
| Voltage | 230 / 460V 60Hz | Hot | 20 s | Locked Rotor A | 577 / 577 % |
| RPM | 900 | Cold | 28 s | Locked Rotor A | 232.0 / 116 A |



T-N and I-N Curves

| | | | | | |
|--------------------|-----------------|------------------------|-------------|--------------------|-----------------|
| Motor Type: AEHH8N | | Catalogue No: PDH0158C | | Family: Optim TEFC | |
| HP | 15 | Full Load T | 89.49 lb-ft | Full Load A | 40.2 / 20.1 A |
| Voltage | 230 / 460V 60Hz | Locked Rotor T | 180 % | Locked Rotor A | 232.0 / 116.0 A |
| RPM | 900 | Pull Up T | 170 % | Break Down T | 225 % |

