

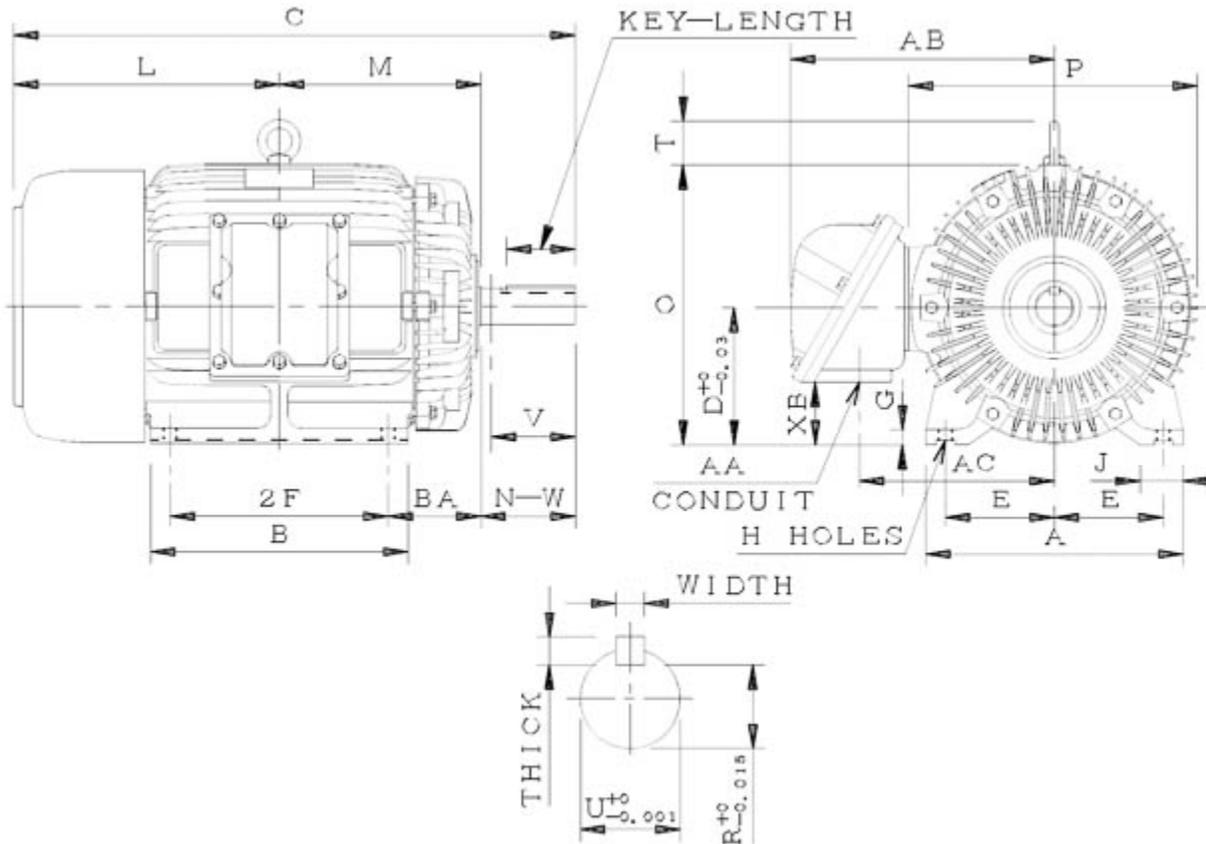
Technical Documentation

XC7/56
Optim TEXP | AEHHXV

Date: December 1, 2016

Dimensional Drawing

| Catalogue | Model | HP | Pole | kW | Rating | Voltage | Hz | RPM |
|-----------|--------|-----|------|-----|------------|-------------|----|------|
| XC7/56 | AEHHXV | 7.5 | 6 | 5.6 | Continuous | 230 / 460 V | 60 | 1200 |



AEHHXV-SMP-4 1 0

| Frame Size | Mounting | | | | | A | B | C | CD | D | |
|------------------|----------|------|----------|---------|--------------------|-------------|------------|-------|------------------------------|------------|---------|
| | E | 2F | 2F2 | H | BA | | | | | | |
| 254T | 5 | 8.25 | | 0.53 | 4.25 | 11.8 | 9.85 | 23.78 | | 6.25 | |
| G | J | K | L | M | O | P | T | Key | | | Keyseat |
| 0.65 | 1.95 | | 11.41 | 8.3 | 12.8 | 13.15 | 2 | 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" | 12.24 | 8.94 | 2.83 | | | | | | | | |
| 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 | 6309ZZ | 6307ZZ | 330 | 57 | F | 1.15 | Direct Coupling / Belt Drive | Inches | |

Technical Data Sheet

Motor Type: AEHHXV

Catalogue No: XC7/56

Nameplate Information

| | | | | | | |
|-----------|------------|----------------|-------------|-------------|------------|----------------|
| HP | Pole | RPM | Frame | Voltage | Hz | Phase |
| 7.5 | 6 | 1170 | 254T | 230 / 460 | 60 | 3 |
| Enclosure | Ins. Class | Service Factor | Time Rating | NEMA Design | Rated Amb. | Rated Altitude |
| TEXP | F | 1.15 | Continuous | C | °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. | | | | | |
| 91.0 | 89.5 | 91.5 | 91.0 | 82.0 | 77.0 | 66.5 |
| Torque | | | | Current (A) | | |
| Full Load (lb-ft) | Locked Rotor (% FLT) | Pull Up (% FLT) | Break Down (% FLT) | No Load | Full Load | Locked Rotor |
| 34 | 240 | 195 | 260 | 8.2 / 4.1 | 18.8 / 9.4 | 127 / 64 |
| 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 | |
| H | 2.158 | 104 | 312 | 36 | 25 | 57 |

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 |

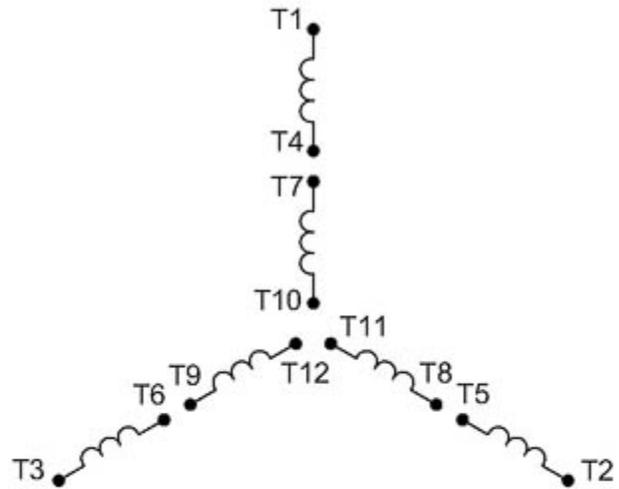
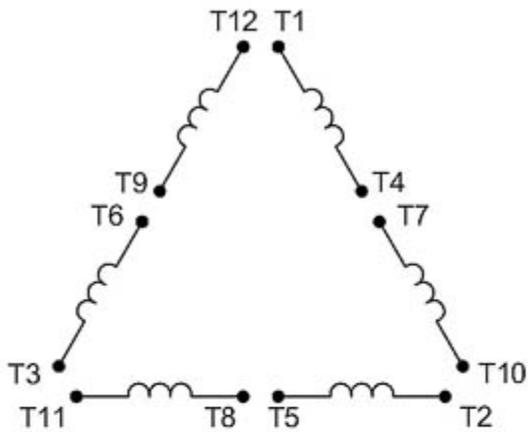
Additional Information

| Bearings | | Approx. Weight |
|----------|--------|----------------|
| DE | NDE | lbs |
| 6309ZZ | 6307ZZ | 330 |

Hazardous Locations Information

| CSA/UL Certified | |
|---|-----------|
| Class I, Div 1, Groups C & D; Class II, Div 1, Groups E, F & G Class I, Zone 1, Groups IIB & IIA; Class II, Div 1, Groups E, F & G | |
| Temp Code (Sinewave / VFD) | T3B / T3B |

Connection Diagram

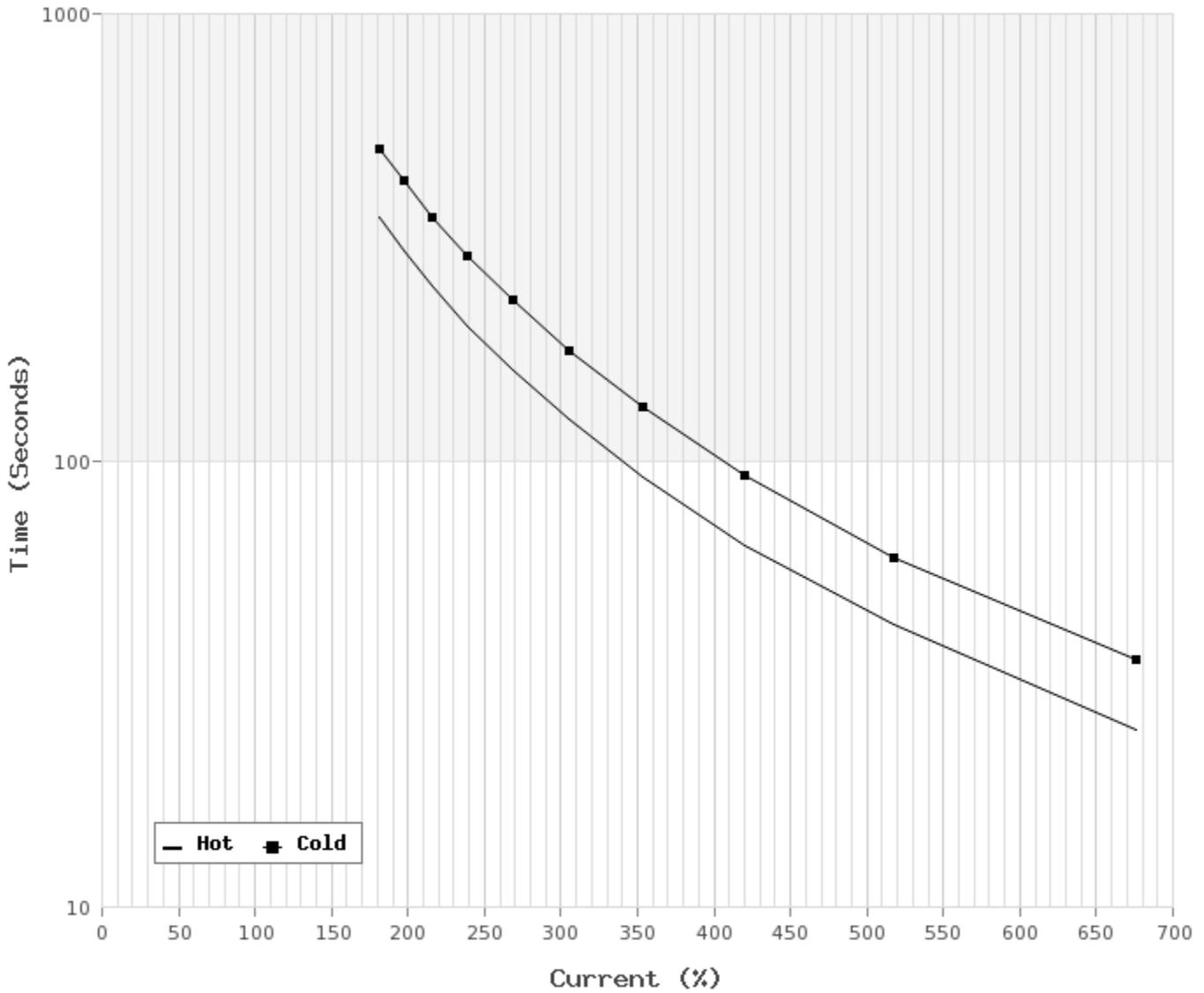


| 12 LEAD DUAL VOLTAGE WYE/DELTA | | | | | | |
|--------------------------------|------------|---------|-------------|-------------|-------------|-------------------------|
| VOLTAGE | CONNECTION | | L1 | L2 | L3 | JOIN |
| HIGH | START | WYE | 1 | 2 | 3 | 4&7,5&8,6&9 10&11&12 |
| | RUN | DELTA | 1,12 | 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: AEHHXV | | Catalogue No: XC7/56 | | Family: Optim TEXP | |
| HP | 7.5 | Safe Stall Time | | Full Load A | 18.8 / 9.4 A |
| Voltage | 230 / 460V 60Hz | Hot | 25 s | Locked Rotor A | 676 / 680 % |
| RPM | 1200 | Cold | 36 s | Locked Rotor A | 127.0 / 64 A |



T-N and I-N Curves

| | | | | | |
|--------------------|-----------------|----------------------|----------|--------------------|----------------|
| Motor Type: AEHHXV | | Catalogue No: XC7/56 | | Family: Optim TEXP | |
| HP | 7.5 | Full Load T | 34 lb-ft | Full Load A | 18.8 / 9.4 A |
| Voltage | 230 / 460V 60Hz | Locked Rotor T | 240 % | Locked Rotor A | 127.0 / 64.0 A |
| RPM | 1200 | Pull Up T | 195 % | Break Down T | 260 % |

