

Technical Documentation

# **XC0152C**

## **Optim TEXP | AEHHXF**

Date: May 28, 2018

### Technical Data Sheet

Motor Type: AEHHXF

Catalogue No: XC0152C

#### Nameplate Information

|           |            |                |             |             |                |                |
|-----------|------------|----------------|-------------|-------------|----------------|----------------|
| HP        | Pole       | RPM            | Frame       | Voltage     | Hz             | Phase          |
| 15        | 2          | 3530           | 254TC       | 230 / 460   | 60             | 3              |
| Enclosure | Ins. Class | Service Factor | Time Rating | NEMA Design | Rated Amb.     | Rated Altitude |
| TEXP      | F          | 1.15           | Continuous  | B           | -40 to 40°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                            | 90.5                                 | 92.0                | 91.0        | 87.0                           |
| Torque            |                             |                                 |                                      | Current (A)         |             |                                |
| Full Load (lb-ft) | Locked Rotor (% FLT)        | Pull Up (% FLT)                 | Break Down (% FLT)                   | No Load             | Full Load   | Locked Rotor                   |
| 22                | 235                         | 185                             | 285                                  | 7.1 / 3.6           | 33.6 / 16.8 | 232 / 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                              | 32                                   | 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 |

#### Additional Information

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

#### Hazardous Locations Information

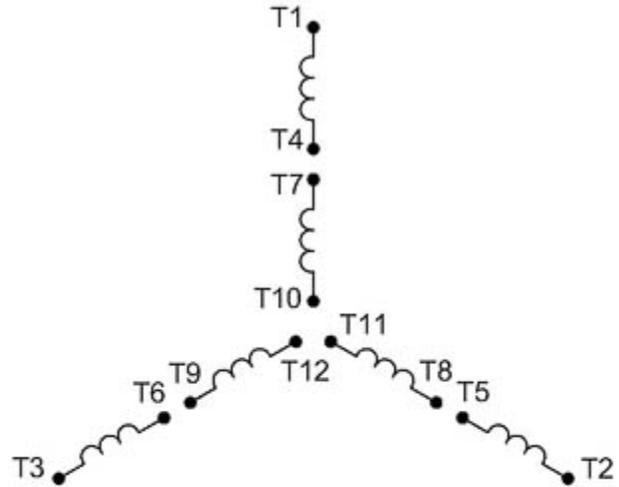
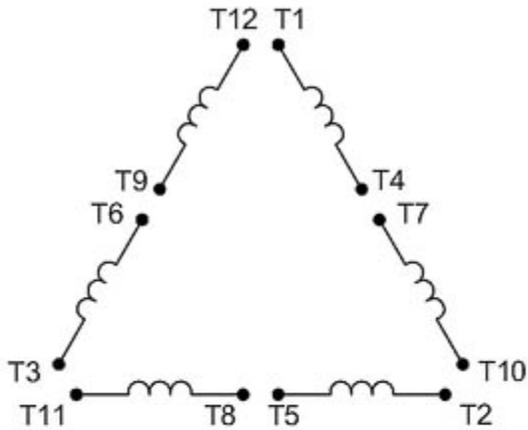
| CSA/UL Certified  |           |
|---|-----------|
| Class I, Div 1, Groups C & D; Class II, Div 1, Groups E, F & G<br>Class I, Zone 1, Groups IIB & IIA; Class II, Div 1, Groups E, F & G |           |
| Temp Code (Sinewave / VFD)  | T3B / T3B |

**Nameplate Drawing**

# Optim TEXP

|                 |                 |                |         |                |      |
|-----------------|-----------------|----------------|---------|----------------|------|
| TYPE            | AEHHXF          | CAT. NO.       | XC0152C |                |      |
| OUTPUT          | 15 HP 11 kW     | FRAME          | 254TC   | TEXP           |      |
| R.P.M.          | 3530            | POLE           | 2       | INS.           | F    |
| VOLTS           | 230 / 460       | PHASE          | 3       | Hz             | 60   |
| AMPS            | 33.6 / 16.8     | CODE           | G       | S.F.           | 1.15 |
| AMBIENT         | 40 °C           | NOM. EFF. 91.0 |         | MIN. EFF. 89.5 |      |
| BEARINGS        | 6309ZZ / 6307ZZ |                |         | RATING Cont.   |      |
| SER. NO.        | TBD             | DESIGN         | B       | WT. 330 LBS    |      |
| PWM VFD<br>DUTY | VT              | CT             | CP      | S.F.           |      |
|                 | 3-60Hz          | 6-60Hz         | 60-90Hz | 1.0 Only       |      |

**Connection Diagram**

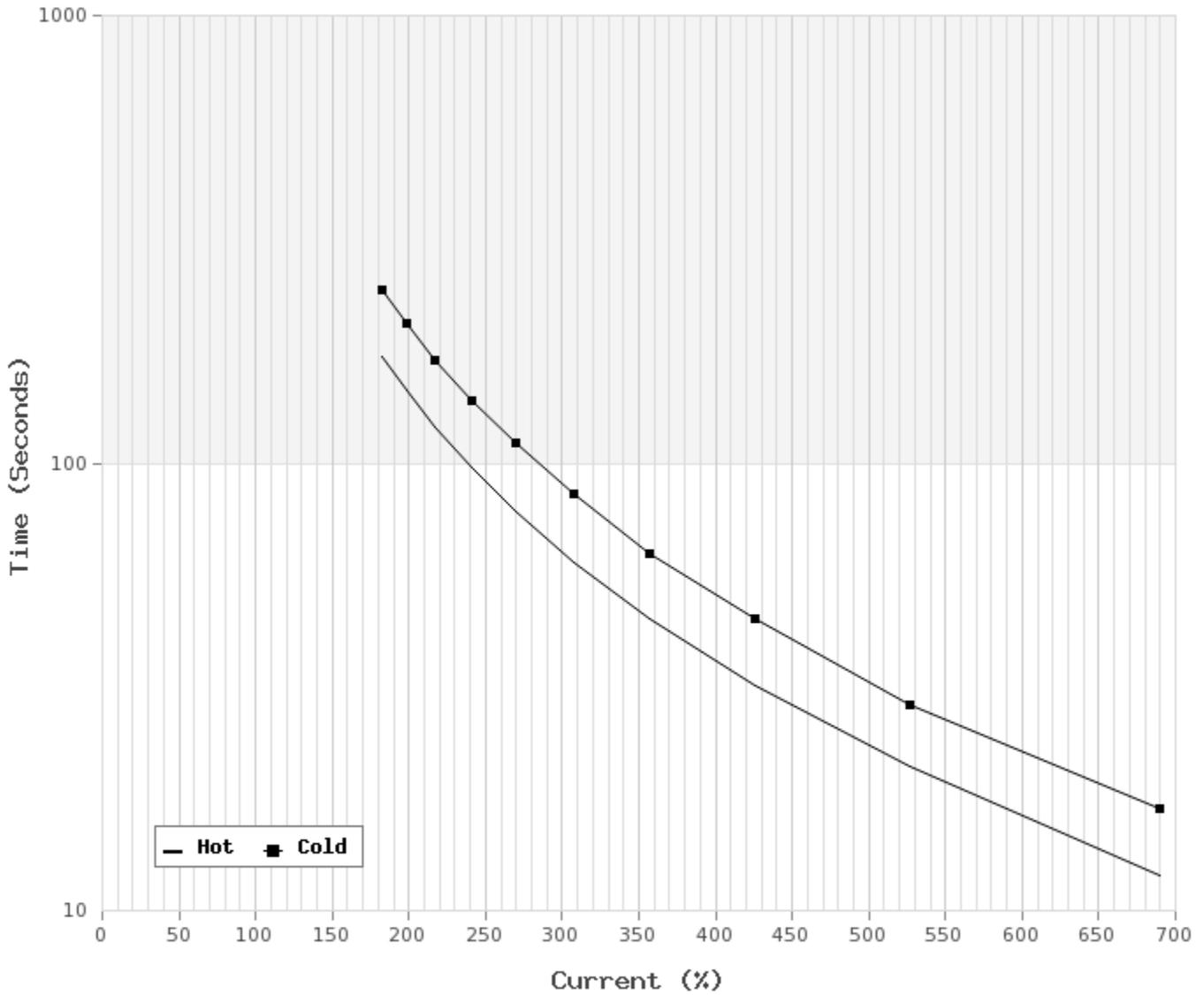


| 12 LEAD DUAL VOLTAGE WYE/DELTA |            |         |             |             |             |                         |
|--------------------------------|------------|---------|-------------|-------------|-------------|-------------------------|
| VOLTAGE                        | CONNECTION | 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

WD\_12YD

**Thermal Limit Curves**

|                    |                 |                       |      |                    |               |
|--------------------|-----------------|-----------------------|------|--------------------|---------------|
| Motor Type: AEHHXF |                 | Catalogue No: XC0152C |      | Family: Optim TEXP |               |
| HP                 | 15              | Safe Stall Time       |      | Full Load A        | 33.6 / 16.8 A |
| Voltage            | 230 / 460V 60Hz | Hot                   | 12 s | Locked Rotor A     | 690 / 690 %   |
| RPM                | 3600            | Cold                  | 17 s | Locked Rotor A     | 232.0 / 116 A |



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

|                    |                 |                       |          |                    |                 |
|--------------------|-----------------|-----------------------|----------|--------------------|-----------------|
| Motor Type: AEHHXF |                 | Catalogue No: XC0152C |          | Family: Optim TEXP |                 |
| HP                 | 15              | Full Load T           | 22 lb-ft | Full Load A        | 33.6 / 16.8 A   |
| Voltage            | 230 / 460V 60Hz | Locked Rotor T        | 235 %    | Locked Rotor A     | 232.0 / 116.0 A |
| RPM                | 3600            | Pull Up T             | 185 %    | Break Down T       | 285 %           |

