

ZP90KCE-TF5

HFC, R-410A, 60 Hz, 3 - Phase, 200/230 V [Also Available with Variable Frequency Drives](#)

Air Conditioning

Production Status: Available for sale to all U.S. customers. Please check with your local Emerson Climate Technologies Representative for international availability.

Summary

| Performance | | |
|--------------------------------------|------------|---------|
| Evaporator Temp. (°F) | 45 | 35 |
| Condensing Temp. (°F) | 130 | 120 |
| Return Gas Temp. (°F) | 65 | 55 |
| Liquid Temp. (°F) | 115 | 105 |
| Capacity (BTU/hr) | 90500 | 80000 |
| Power (W): | 8350 | 7450 |
| Current (Amps): | 26.3 | 24 |
| EER(BTU/Wh): | 10.8 | 10.8 |
| Mass Flow (lbs/hr): | 1340 | 1120 |
| Sound Data @ | | |
| Sound Power (dBA): | 77 Avg | 82 Max |
| Vibration mils(peak-peak): | 2.5 Avg | 4.0 Max |
| Record Date: | 2019-11-15 | |
| Mechanical | | |
| Displacement (in ³ /Rev): | 5.14 | |
| Displacement (ft ³ /Hr): | | |
| Overall Length (in): | 10.38 | |
| Overall Width (in): | 11.23 | |
| Overall Height (in): | 18.75 | |
| Mounting Length (in): | 7.50 | |
| Mounting Width (in): | 7.50 | |

| | |
|-------------------------------------|--------------|
| Mounting Height (in): | 19.50 |
| Suction Size (in),Type: | 1 1 / 8 Stub |
| Discharge Size (in),Type: | 7 / 8 Stub |
| Initial Oil Charge (oz): | 85 |
| Oil Recharge (oz): | 81 |
| Net Weight (lbs): | 127.0 |
| Internal Free Volume (in^3): | 639 |

Horse Power:

*Overall compressor height on Copeland Brand Product's specified mounting grommets.

| | |
|--|------------|
| LRA High* (Amps): | 195.0 |
| LRA Low*(Amps): | |
| LRA Half Winding (Amps): | |
| MCC (Amps): | 46 |
| Max Operating Current (Amps): | 36.0 |
| RLA, MCC/1.4(use for contactor selection)(Amps): | 32.9 |
| RLA, MCC/1.56(use for breaker & wire size selection)(Amps): | 29.5 |
| RPM: | 3500 |
| Box IP : | 21 |
| UL File No: | SA-2337 |
| UL File Date: | 1996-09-27 |

*Low and High refer to the low and high nominal voltage ranges for which the motor is approved.

Capacitors

| Type | Part No | Low MFD | High MFD | Volts | User Description |
|----------------------------|---------|---------|----------|-------|------------------|
| No data available in table | | | | | |

Alternate Applications

| Refrigerant | Voltage | Phase | Frequency | Application |
|-------------|---------|-------|-----------|------------------|
| R-410A HFC | 200/220 | 3 | 50 | Air Conditioning |

Service Parts

| Reference | Component | Quantity | Description | Comment |
|-----------|-------------|----------|---------------------------------|------------------------|
| 1 | 918-0047-00 | 1 | HEATER-CRANKCASE | 120V 90W WRAP AROUND |
| 1 | 918-0047-01 | 1 | HEATER-CRANKCASE | 240V 90W WRAP AROUND |
| 1 | 918-0047-02 | 1 | HEATER-CRANKCASE | 480V, 90W, WRAP AROUND |
| 2 | 527-0116-00 | 1 | SPACER-MOUNTING ASSM | |
| 11 | 998-0010-00 | 1 | SIGHTGLASS KIT | |
| 15 | 910-0715-00 | 1 | VALVE-OIL ADJUSTMENT 1/4FL X M9 | |

Accessories

Accessories

| Category | Part Number | Description |
|------------------------------|-------------------|---|
| (1) Variable Frequency Drive | EVM-322048-E20ENN | EVM, 3Ø, 200-240v, Output 200-240v@48A, Pro, IP20, Standard, No Options, Frame 4 |
| (1) Variable Frequency Drive | EVM-322048-N20MNN | EVM, 3Ø, 200-240v, Output 200-240v@48A, Basic, IP20, Standard, No Options, Frame 4 |
| (1) Variable Frequency Drive | EVM-322048-N20MFN | EVM, 3Ø, 200-240v, Output 200-240v@48A, Basic, IP20, With add on EMI filter, No Options, Frame 4 |
| (1) Variable Frequency Drive | EVM-322048-E20EFN | EVM, 3Ø, 200-240v, Output 200-240v@48A, Pro, IP20, With add on EMI filter, No Options, Frame 4 |
| (1) Variable Frequency Drive | EVH-322048-R21BDN | EVH, 3Ø, 200-240v, Output 200-240v@48A, LCD Keypad, IP21, With 5% DC Link Choke, No Options, Frame 3 |
| (1) Variable Frequency Drive | EVH-322048-R21BEN | EVH, 3Ø, 200-240v, Output 200-240v@48A, LCD Keypad, IP21, With 5% DC Link Choke + EMI Filter, No Options, Frame 3 |
| (1) Variable Frequency Drive | EVH-322048-R54BDN | EVH, 3Ø, 200-240v, Output 200-240v@48A, LCD Keypad, IP54, With 5% DC Link Choke, No Options, Frame 3 |
| (1) Variable Frequency Drive | EVH-322048-R54BEN | EVH, 3Ø, 200-240v, Output 200-240v@48A, LCD Keypad, IP54, With 5% DC Link Choke + EMI Filter, No Options, Frame 3 |

| Category | Part Number | Description |
|------------------------------|-------------------|---|
| (1) Variable Frequency Drive | EVH-322048-R21BDB | EVH, 3Ø, 200-240v, Output 200-240v@48A, LCD Keypad, IP21, With 5% DC Link Choke, With Bypass, Frame H2S |

Electrical Components

| Electrical Components | |
|---------------------------------------|---------------------------|
| Part No: 071-0519-33 | Stator |
| Usage Description: Internal Protector | Part No: 546-2081-43 |
| <u>Vendor Part Number</u> | Usage Description: Stator |
| 35HM409 | Resistance: +/-7% |
| <u>Vendor Name</u> | Start Wdg: 0.40 |
| T. I. | Run Wdg: 0.00 |

Nomenclature

| |
|--------------------------------------|
| ZP90KCE-TF5 |
| Family Series |
| Z: Scroll |
| Application Range |
| P: A/C - R-410A/B |
| Capacity |
| 90K: Capacity Multiplier-1000 |
| Oil Type |
| E: Polyol Ester |
| Motor Type |
| T: 3 Phase |
| Motor Protection |
| F: Internal Inherent Protection |
| Voltage |
| 5: 60Hz (200/230-3) 50Hz (200/220-3) |

Miscellaneous

| Alternate Application | | | | |
|-----------------------|------|-------|---------|-------------|
| Refrigerant | Freq | Phase | Voltage | Application |

Refrigerant **Freq** **Phase** **Voltage** **Application**

Nomenclature

[ZP90KCE-TF5](#)

| Date | Data Group | Field | Old Data | New Data |
|-------------|-------------------|---------------|-----------------|-----------------|
| 24-Nov-2003 | Status | Status | P | A |
| 03-Sep-2003 | Status | Status | A | P |
| 22-Feb-2011 | Sound | Sound Max | 79 | 82 |
| 01-May-2008 | Sound | Sound Ave | 74 | 77 |
| 22-Jun-2006 | Sound | Sound Ave | 77 | 74 |
| 22-Jun-2006 | Sound | Sound Max | 82 | 79 |
| 18-Jul-2005 | Sound | Vibration Max | 3.5 | 4 |
| 09-Jul-2010 | RatingRefNo | RatingRefNo | 03-719 | 10-511 |
| 10-Nov-2003 | RatingRefNo | RatingRefNo | 03-607 | 03-719 |
| 15-Jul-2005 | Rating | PubCode | | Y |