



Technical Documentation

APH0108-841

Advantage Plus IEEE 841 | AEHH8B

Beaver Electrical Machinery Ltd.

Date: July 25, 2022



Dimensional Drawing

| Catalogue | Type | HP | RPM | Voltage | Hz | Frame Size |
|-------------|--------|----|-----|---------|----|------------|
| APH0108-841 | AEHH8B | 10 | 900 | 460 | 60 | 284T |

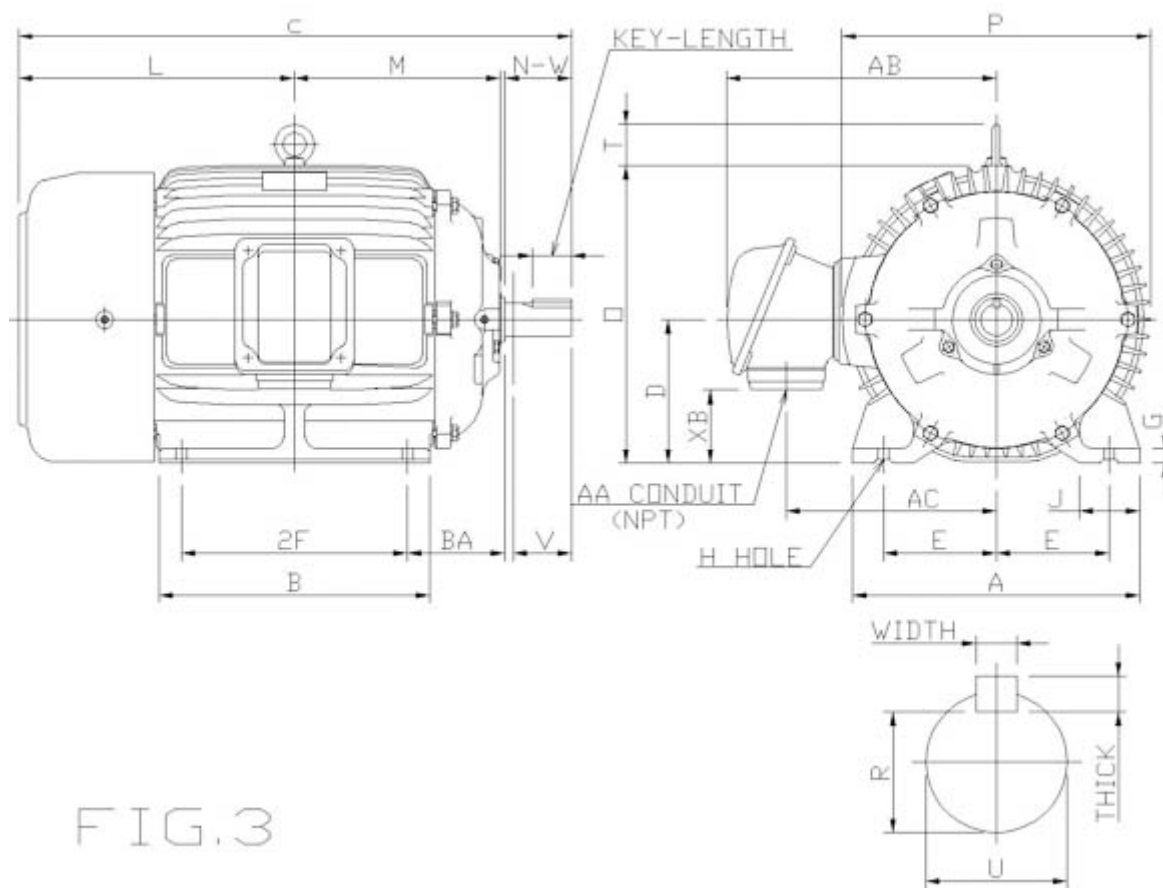


FIG.3



| Mounting | | | | | A | B | C | CL1 | CL2 | D | G |
|----------|-----|-----|------|------|-------|-------|------|-----|-----|---|-----|
| E | 2F1 | 2F2 | H | BA | | | | | | | |
| 5.5 | 9.5 | | 0.53 | 4.75 | 13.98 | 11.69 | 26.8 | | | 7 | 0.7 |

| J | K | L | M | O | P | T |
|------|---|-------|------|------|-------|------|
| 2.95 | | 12.68 | 9.23 | 14.5 | 15.05 | 2.36 |

| Terminal Housing | | | |
|------------------|-------|-------|------|
| AA | AB | AC | XB |
| NPT11/2" | 13.27 | 10.35 | 3.54 |

| Shaft Extension | | | Key | | | Keyseat |
|-----------------|-------|-----|-------|-------|--------|---------|
| N-W | U | V | Width | Thick | Length | R |
| 4.62 | 1.875 | 4.5 | 0.5 | 0.5 | 3.28 | 1.591 |

| Bearings | | Weight Lbs | Drive Method | Dimensions |
|----------|---------|------------|------------------------------|------------|
| DE | NDE | | | |
| 6311ZC3 | 6310ZC3 | 407 | Direct Coupling / Belt Drive | Inches |

| | | |
|-----------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------|
|  | Beaver Electrical Machinery Ltd. |  |
| | | |
| | Date: July 25, 2022 | |

Technical Data Sheet

| | |
|--------------------|---------------------------|
| Motor Type: AEHH8B | Catalogue No: APH0108-841 |
|--------------------|---------------------------|

Nameplate Information

| | | | | | | |
|-----------|------------|----------------|-------------|-------------|--------------|----------------|
| HP | Pole | RPM | Frame | Voltage | Hz | Phase |
| 10 | 8 | 885 | 284T | 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. | | | | | |
| 89.5 | 87.5 | 89.5 | 87.5 | 73.5 | 66 | 53.5 |
| Torque | | | | Current (A) | | |
| Full Load (lb-ft) | Locked Rotor (% FLT) | Pull Up (% FLT) | Break Down (% FLT) | No Load | Full Load | Locked Rotor |
| 59.33 | 235 | 210 | 280 | 8.2 | 14.2 | 81 |
| 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 | 5.421 | 273 | 588 | 32 | 22 | 59 |

VFD Duty Information

| Max HP | Current (A) | Speed Range | | VFD | | S.F. |
|--------|-------------|-----------------|-----------------|------------|--------------|------|
| | | Constant Torque | Variable Torque | Carrier Hz | Type | |
| 10 | 14.23 | 6-60Hz | 3-60Hz | 3-6kHz | VPWM or CPWM | 1 |

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 |

Additional Certifications

| |
|---------------------|
| Other Certification |
|---------------------|

Additional Information

| Bearings | | Approx. Weight |
|----------|---------|----------------|
| DE | NDE | lbs |
| 6311ZC3 | 6310ZC3 | 407 |

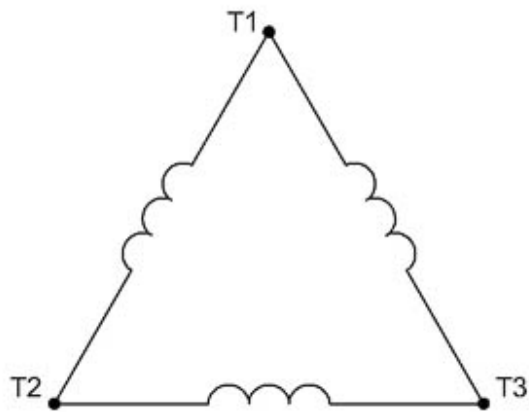
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|-----------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------|
|  | Beaver Electrical Machinery Ltd. |  |
| | | |
| | Date: July 25, 2022 | |

Nameplate Drawing

| | | | | | |
|-------------------------|-------------------|----------------|-------------|----------------|------|
| Advantage Plus IEEE 841 | | | | | |
| TYPE | AEHH8B | CAT. NO. | APH0108-841 | | |
| OUTPUT | 10 HP 7.46 kW | FRAME | 284T | TEFC | |
| R.P.M. | 885 | POLE | 8 | INS. | F |
| VOLTS | 460 | PHASE | 3 | Hz | 60 |
| AMPS | 14.2 | CODE | H | S.F. | 1.15 |
| AMBIENT | 40 °C | NOM. EFF. 89.5 | | MIN. EFF. 87.5 | |
| BEARINGS | 6311ZC3 / 6310ZC3 | | | RATING Cont. | |
| SER. NO. | TBD | DESIGN | B | WT. 407 LBS | |
| PWM VFD DUTY | VT | CT | CP | S.F. | |
| | 3-60Hz | 6-60Hz | 60-120Hz | 1 | |



Connection Diagram



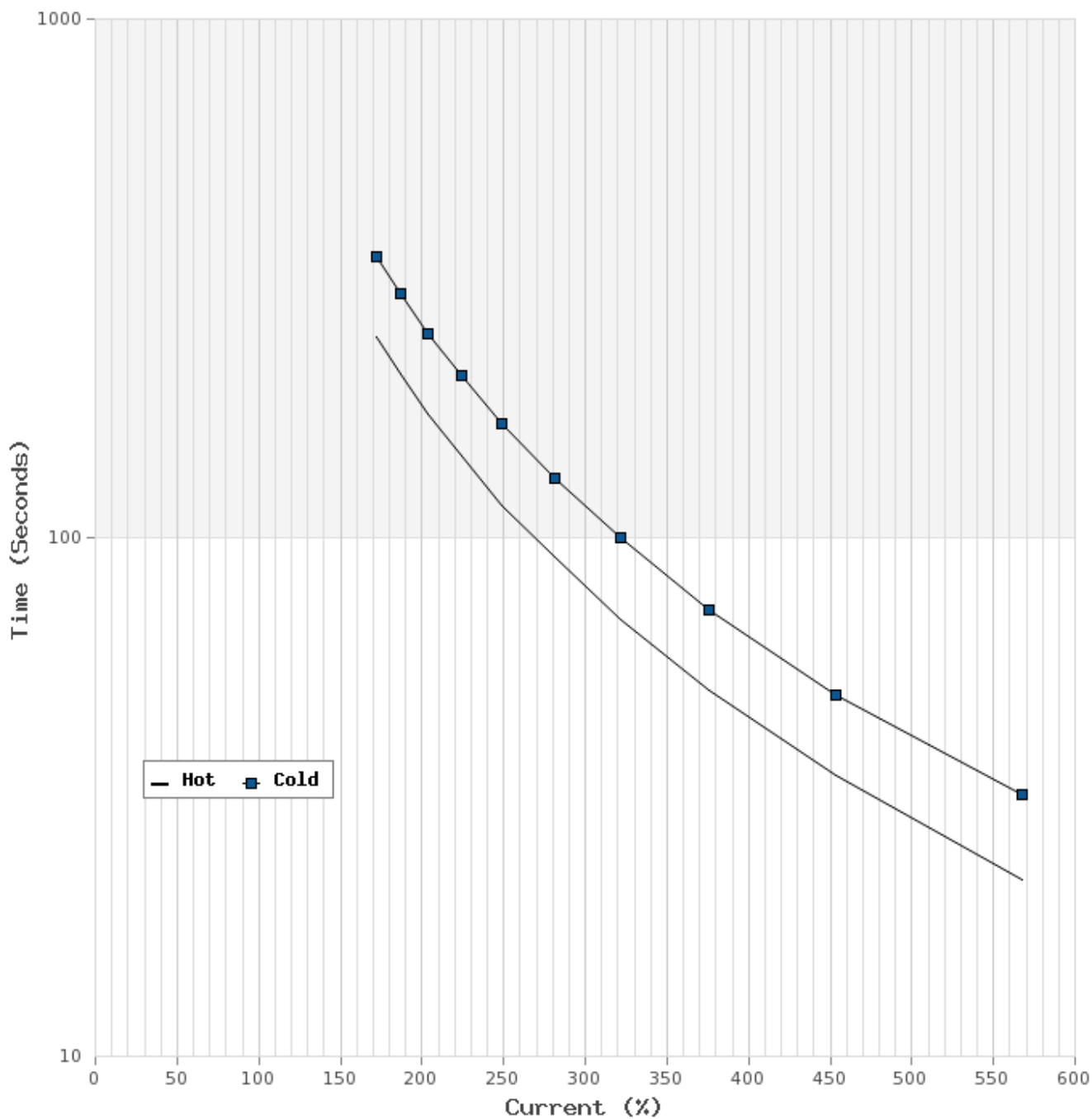
| 3 LEAD SINGLE VOLTAGE DELTA | | | | | |
|-----------------------------|-------|----|----|----|--|
| VOLTAGE | CONN. | L1 | L2 | L3 | |
| - | DELTA | 1 | 2 | 3 | |

WD_3D



Thermal Limit Curves

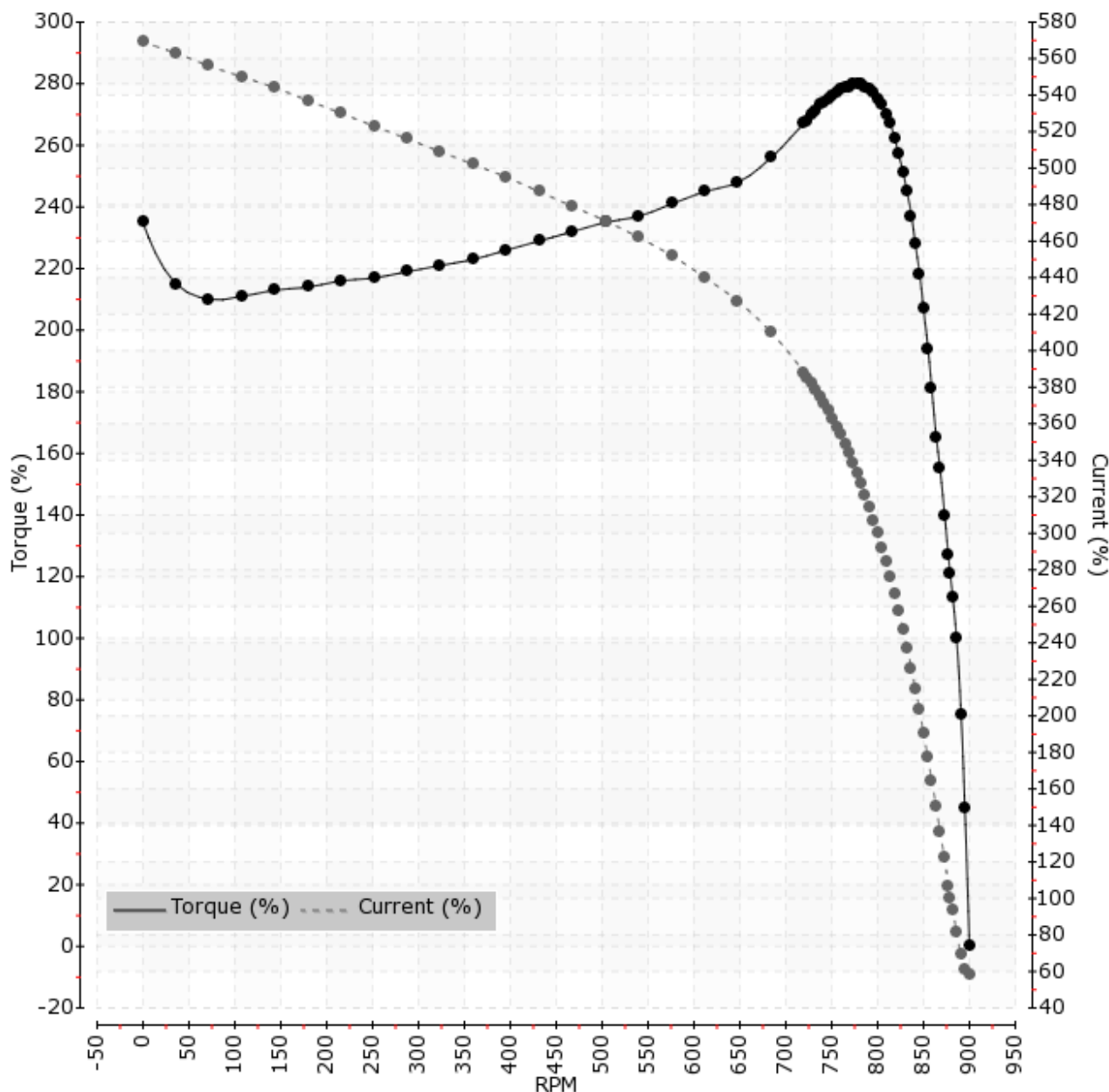
| | | | | | |
|--------------------|-----------|---------------------------|------|---------------------------------|--------|
| Motor Type: AEHH8B | | Catalogue No: APH0108-841 | | Family: Advantage Plus IEEE 841 | |
| HP | 10 | Safe Stall Time | | Full Load A | 14.2 A |
| Voltage | 460V 60Hz | Hot | 22 s | % Inrush | 569 % |
| RPM | 900 | Cold | 32 s | Locked Rotor A | 81 A |





T-N and I-N Curves

| | | | | | |
|--------------------|-----------|---------------------------|-------------|---------------------------------|--------|
| Motor Type: AEHH8B | | Catalogue No: APH0108-841 | | Family: Advantage Plus IEEE 841 | |
| HP | 10 | Full Load T | 59.33 lb-ft | Full Load A | 14.2 A |
| Voltage | 460V 60Hz | Locked Rotor T | 235 % | Locked Rotor A | 81.0 A |
| RPM | 900 | Pull Up T | 210 % | Break Down T | 280 % |





Dimensional Drawing (50 Hz)

| Catalogue | Model | HP | Pole | kW | Rating | Voltage | Hz | RPM |
|-------------|--------|----|------|------|------------|---------|----|-----|
| APH0108-841 | AEHH8B | 10 | 8 | 7.46 | Continuous | 380 | 50 | |

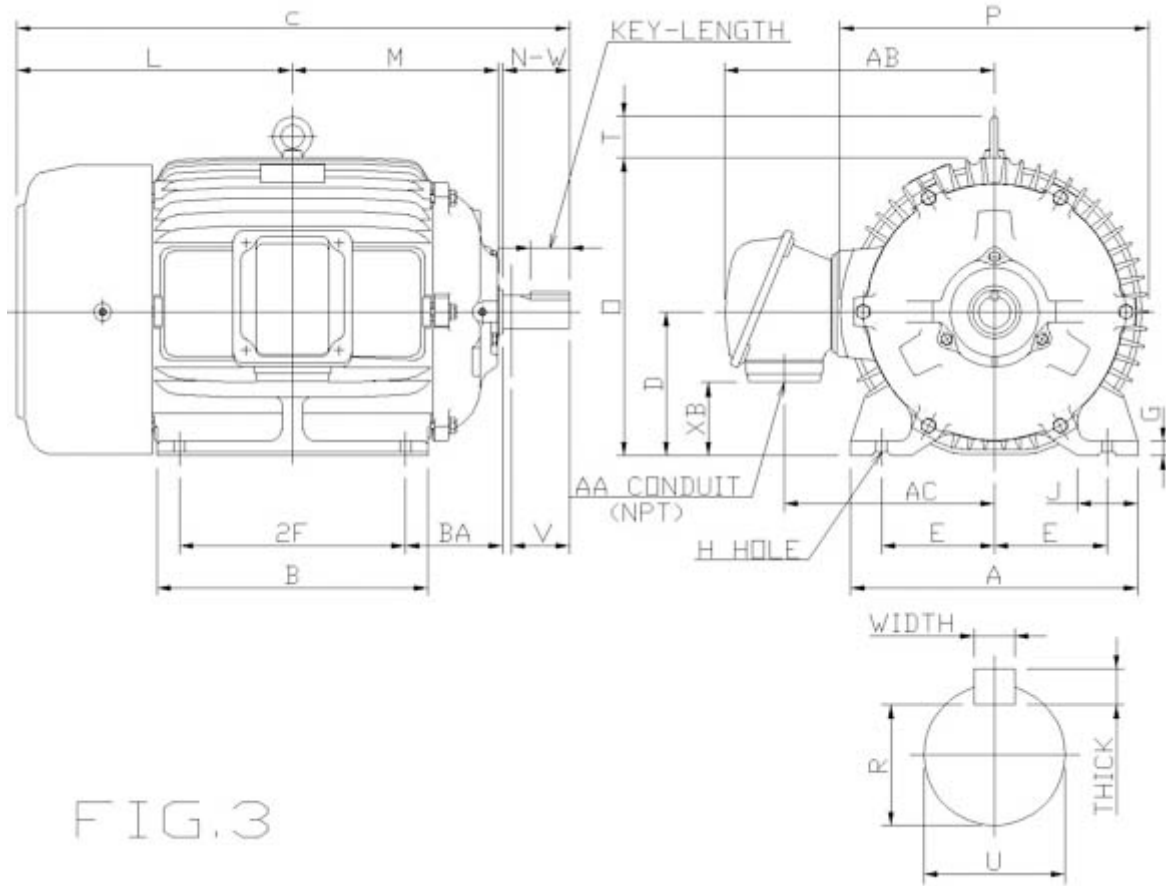




FIG. 3

| Frame Size | Mounting | | | | | A | B | C | CD | D | |
|------------------|----------|-------|----------|---------|-----------------------|----------------|---------------|-------|------------------------------------|------------|--------------|
| | E | 2F | 2F2 | H | BA | | | | | | |
| 284T | 5.5 | | | 0.53 | 4.75 | 13.98 | 11.69 | 26.8 | | 7 | |
| G | J | K | L | M | O | P | T | Key | | | Keyseat R |
| | | | | | | | | Width | Thick | Length | |
| 0.7 | 2.95 | | 12.68 | 9.23 | 14.5 | 15.05 | 2.36 | 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 |
| NPT11/2" | 13.27 | 10.35 | 3.54 | | | | | | | | |
| 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 | 6311ZC3 | 6310ZC3 | 407 | 59 | F | 1 | Direct Coupling / Belt Drive | Inches | |

| | | |
|-----------------------------------------------------------------------------------|----------------------------------|-------------------------------------------------------------------------------------|
|  | Beaver Electrical Machinery Ltd. |  |
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| | Date: July 25, 2022 | |

Technical Data Sheet (50 Hz)

| | |
|--------------------|---------------------------|
| Motor Type: AEHH8B | Catalogue No: APH0108-841 |
|--------------------|---------------------------|

Nameplate Information

| | | | | | | |
|-----------|------------|----------------|-------------|-------------|--------------|----------------|
| HP | Pole | RPM | Frame | Voltage | Hz | Phase |
| 10 | 8 | | 284T | 380 | 50 | 3 |
| Enclosure | Ins. Class | Service Factor | Time Rating | NEMA Design | Rated Amb. | Rated Altitude |
| TEFC | F | 1 | 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. | | | | | |
| 87.5 | 85.5 | 88.5 | 88.5 | 83 | 79.00 | 69.00 |
| Torque | | | | Current (A) | | |
| Full Load (lb-ft) | Locked Rotor (% FLT) | Pull Up (% FLT) | Break Down (% FLT) | No Load | Full Load | Locked Rotor |
| 73 | 190 | 170 | 240 | 6.6 | 15.6 | 107 |
| 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 | 5.421 | 423 | 758 | 30 | 21 | 59 |

VFD Duty Information

| Speed Range | | | VFD | | S.F. |
|-----------------|-----------------|----------------|---------|--------------|------|
| Constant Torque | Variable Torque | Constant Power | Carrier | Type | |
| 6-50Hz | 3-50Hz | 50-100Hz | 3-6kHz | VPWM or CPWM | 1 |

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 |

Additional Certification

| |
|---------------------|
| Other Certification |
|---------------------|

Additional Information

| Bearings | | Approx. Weight |
|----------|---------|----------------|
| DE | NDE | lbs |
| 6311ZC3 | 6310ZC3 | 407 |