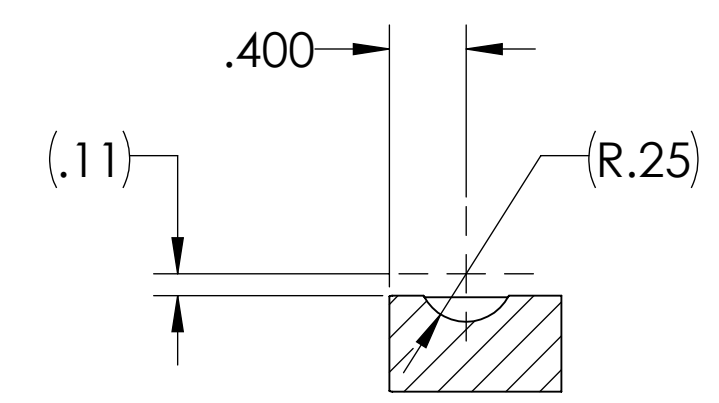


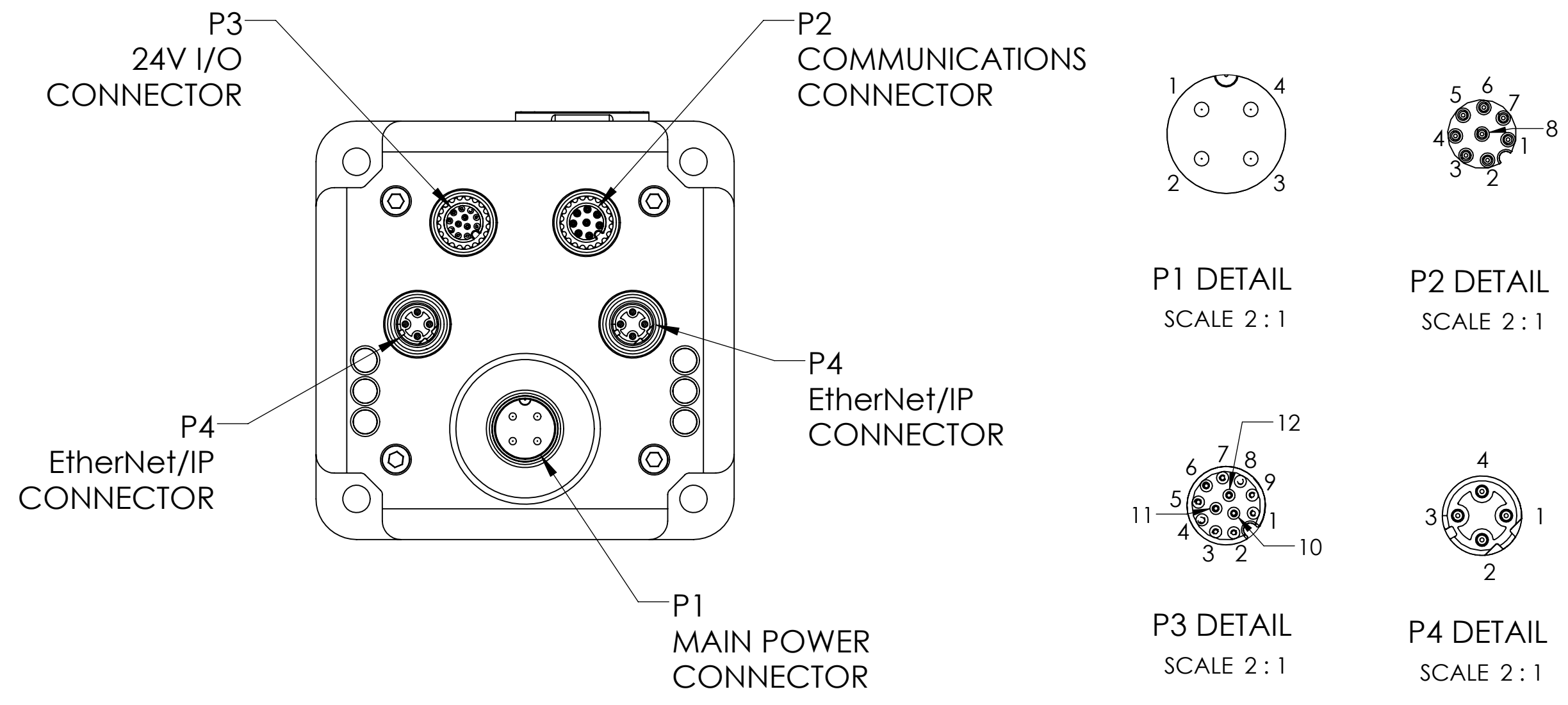
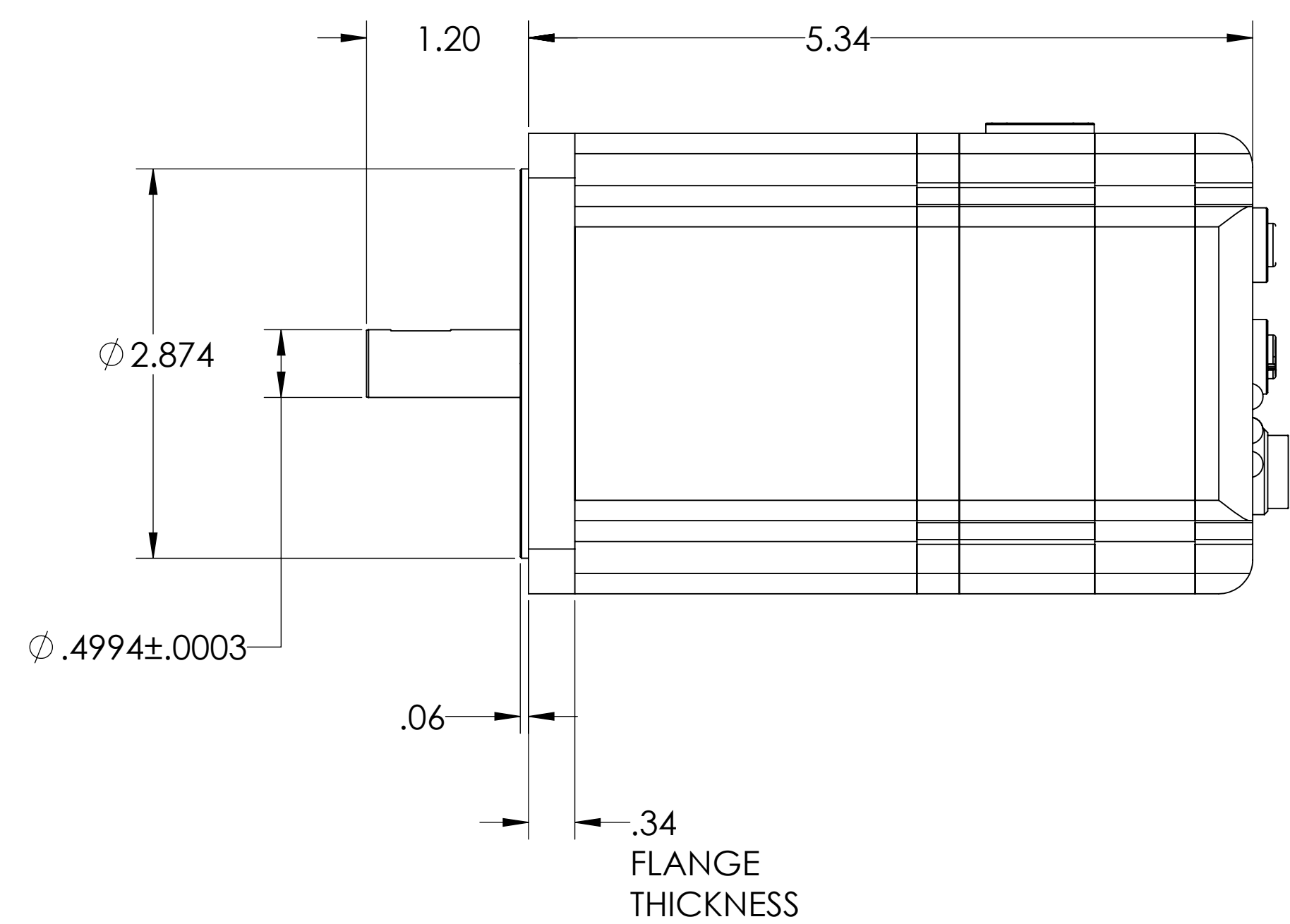
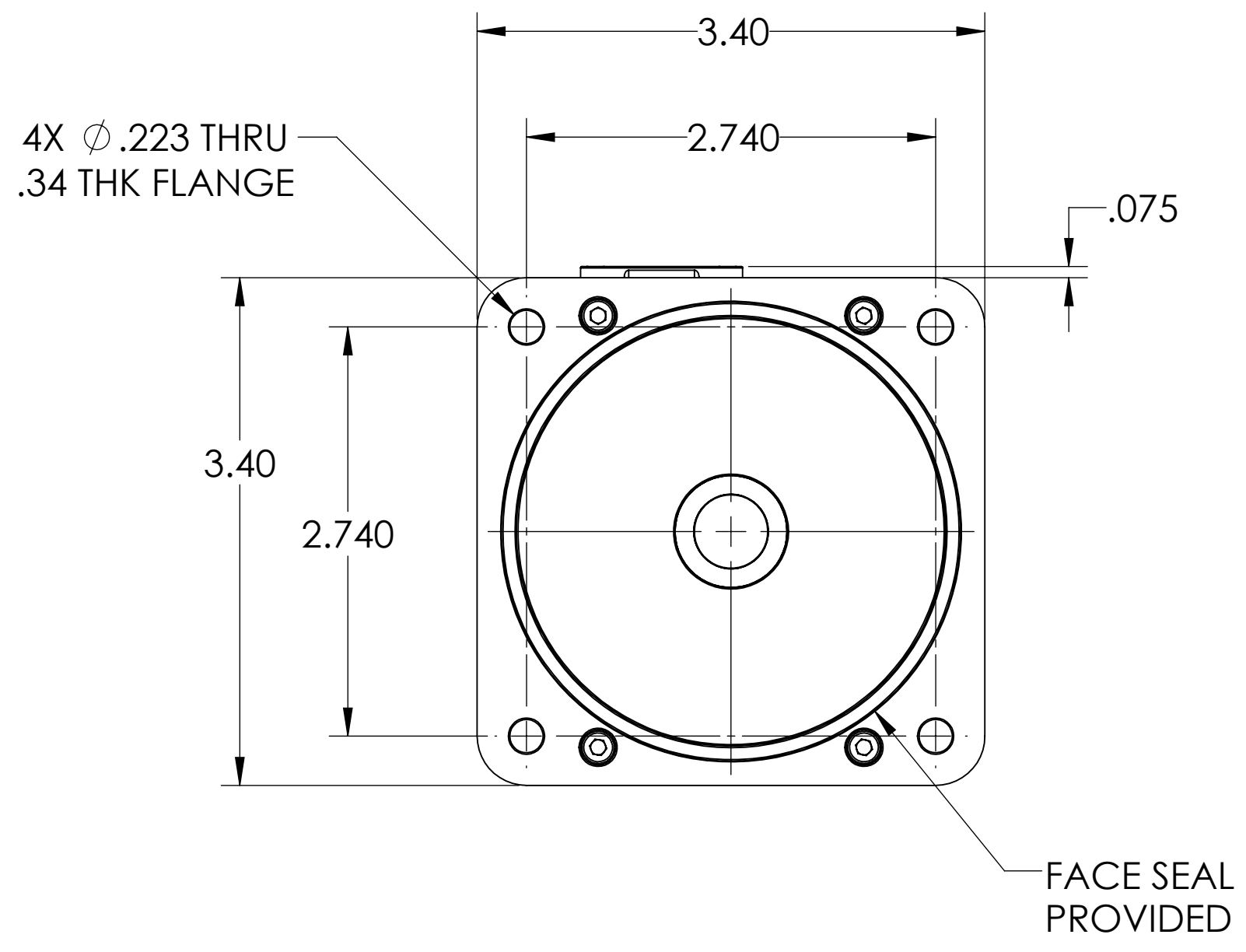
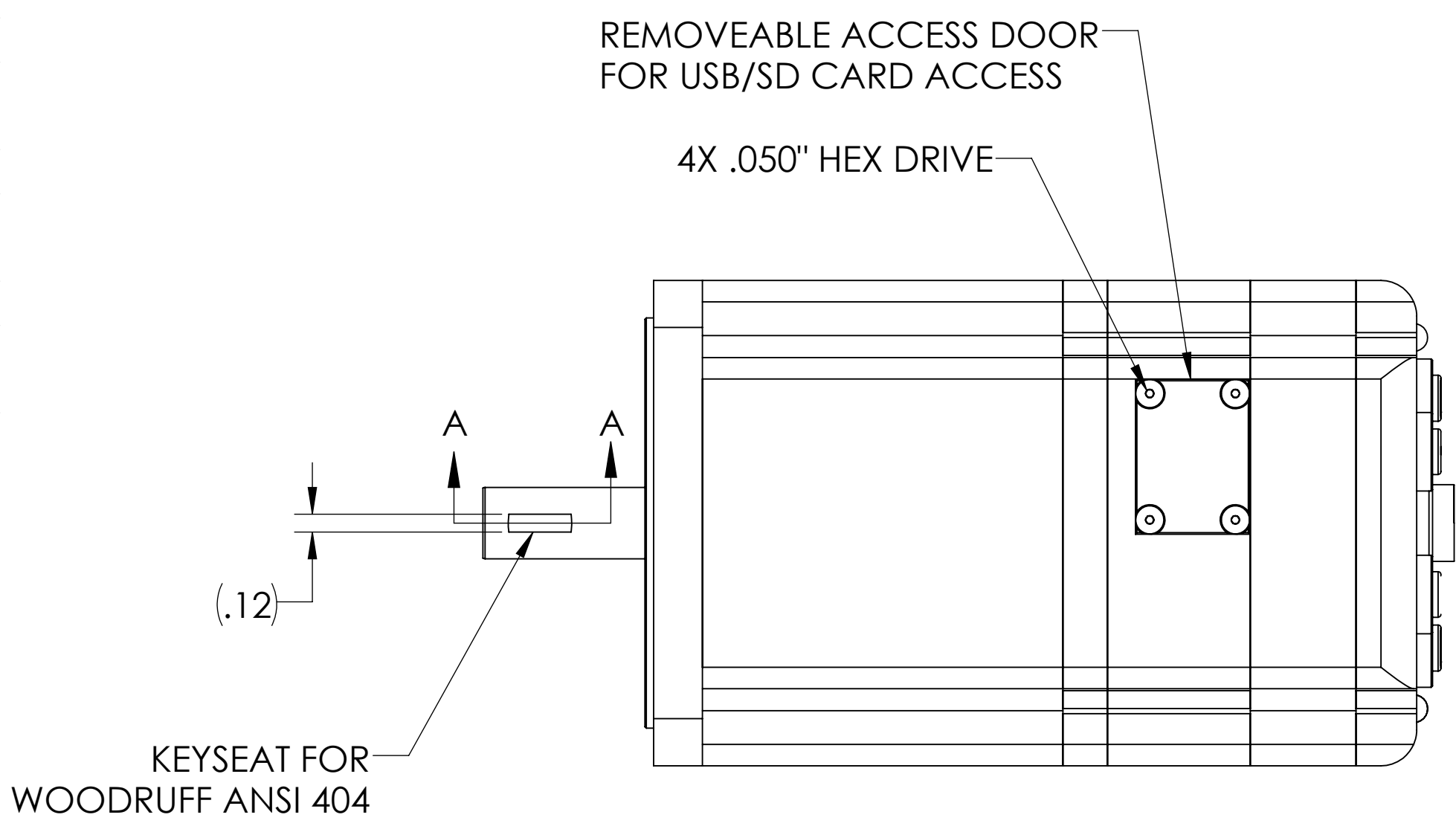
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| REVISION INFORMATION | | | |
|----------------------|----------|----------------------------|----------|
| REV. | ECN | DESCRIPTION | DATE |
| A | SC001626 | PRODUCTION RELEASE | 2/5/2019 |
| B | SC001645 | MODIFIED PERFORMANCE TABLE | 3/6/2019 |
| C | SC001660 | ADDED SURFACE MODEL | 4/1/2019 |

| Performance at 25°C | | |
|------------------------------------|--------|------------------------|
| Performance | Value | Units |
| Continuous Torque @48V | 190 | oz-in |
| Peak Torque | 330 | oz-in |
| Nominal Continuous Power | 460 | Watts |
| No Load Speed | 4900 | RPM |
| Max. Continuous Current @ 4500 RPM | 13 | Amps |
| Peak Power @ 3300 RPM | 1100 | Watts |
| Voltage Constant | 8.9 | V/krpm |
| Inductance | 0.315 | mH |
| Winding resistance | 0.055 | Ohms |
| Encoder Resolution | 4000 | counts/rev |
| Rotor Inertia | 0.0142 | oz-in-sec ² |
| Weight | 6.8 | lb |
| Shaft Diameter | 0.5 | in |
| Shaft, Radial Load | 30 | lb |
| Shaft, Axial Thrust Load | 3 | lb |



SECTION A-A



| P1 Main Power Connector | | | |
|-------------------------|--|-----------------------|-----------------------|
| Pin | Description | Specifications | Notes |
| 1 | Control Power In | +24V (±20%), 32V Max. | Also Supplies I/O |
| 2 | Chassis | | |
| 3 | Control, Com, I/O and Amplifier Ground | Common Ground | Nonisolated |
| 4 | Amplifier Power In | +24V Min, 48V Max. | Powers Amplifier Only |

| P2 Communications Connector | | | |
|-----------------------------|----------------------------------|-----------------------------------|--------------------------------|
| Pin | Description | Specifications | Notes |
| 1 | Control, Com, I/O and Amp Ground | Common Ground | Nonisolated |
| 2 | RS-485 B, Com ch. 0 | 115.2 Kbaud Max. | |
| 3 | RS-485 A, Com ch. 0 | 115.2 Kbaud Max. | |
| 4 | Encoder A+ Input/Output | 125 KHz Individual Line Frequency | Configurable as Encoder Output |
| 5 | Encoder B- Input/Output | 125 KHz Individual Line Frequency | Configurable as Encoder Output |
| 6 | Encoder A- Input/Output | 125 KHz Individual Line Frequency | Configurable as Encoder Output |
| 7 | +5V Out | 50 mA Max. | |
| 8 | Encoder B+ Input/Output | 125 KHz Individual Line Frequency | Configurable as Encoder Output |

| P3 24V I/O Connector | | | |
|----------------------|---------------------------------------|--------------------------------------|----------------------------|
| Pin | Description | Specifications | Notes |
| 1 | IN0 GP, Discrete or Analog Input | Inp Impedance > 10 kohm | For Inputs: |
| 2 | IN1 GP, Discrete or Analog Input | Inp Impedance > 10 kohm | 7 Configurable Inputs |
| 3 | IN2 Pos Limit or GP | Inp Impedance > 10 kohm | Low Lvl Thld: 3.6V Max. |
| 4 | IN3 Neg Limit or GP | Inp Impedance > 10 kohm | High Lvl Thld: 5.0V Min. |
| 5 | IN4 GP or Ext. Enc. Index Capture | Inp Impedance > 10 kohm | Inp Hysteresis: 1.0V Min. |
| 6 | IN5 GP or Int. Enc. Index Capture | Inp Impedance > 10 kohm | Analog Input Scale: 10V FS |
| 7 | IN6 GP, G Cmd | Inp Impedance > 10 kohm | |
| 8 | IN7 Drive Enable | Inp Impedance > 10 kohm | |
| 9 | OUT8 Brake or GP | 250 mAmps Max. | For Outputs: Do Not Exceed |
| 10 | OUT9 NOT FAULT | 250 mAmps Max. | 500 mAmps Combined |
| 11 | +24 VDC Out (Supplied from P1, Pin 1) | 12.5V Min, 23V Max. Load 2 Amps Max. | |
| 12 | Ground Common | Common Ground | Nonisolated |

| P4 EtherNet/IP Connectors | | | |
|---------------------------|-------------|----------------|-------|
| Pin | Description | Specifications | Notes |
| 1 | +TX | | |
| 2 | +RX | | |
| 3 | -TX | | |
| 4 | -RX | | |

| | | | | | | | |
|---|-----------|---|------------|----------------------------|-----------|---|----------------------------------|
| UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ARE: | | CAD GENERATED DRAWING. DO NOT MANUALLY UPDATE | | MOOG ANIMATICS | | 750 WEST SPOUL ROAD SPRINGFIELD, PA 19064 | |
| DECIMALS | ANGLES | APPROVALS | DATE | TITLE | | | |
| XX ±.010 | +0°30' | DRAWN | 01/24/2019 | SMARTMOTOR, SM34, MT2, EIP | | | |
| XXX ±.005 | FRACTIONS | CHECKED | | REV | C | | |
| XXXX ±.0005 | 1/164 | ENG'G | | SIZE | CAGE CODE | DWG. NO. | |
| DO NOT SCALE DRAWING | | MFG ENGR | | D | 1K426 | SM34166MT2-EIP | |
| | | QA | | SCALE | CAD FILE | SM34166MT2-EIP | SHEET 1 OF 1 |
| | | | | 1:1 | | | Released Date: 29-Aug-2019 15:03 |