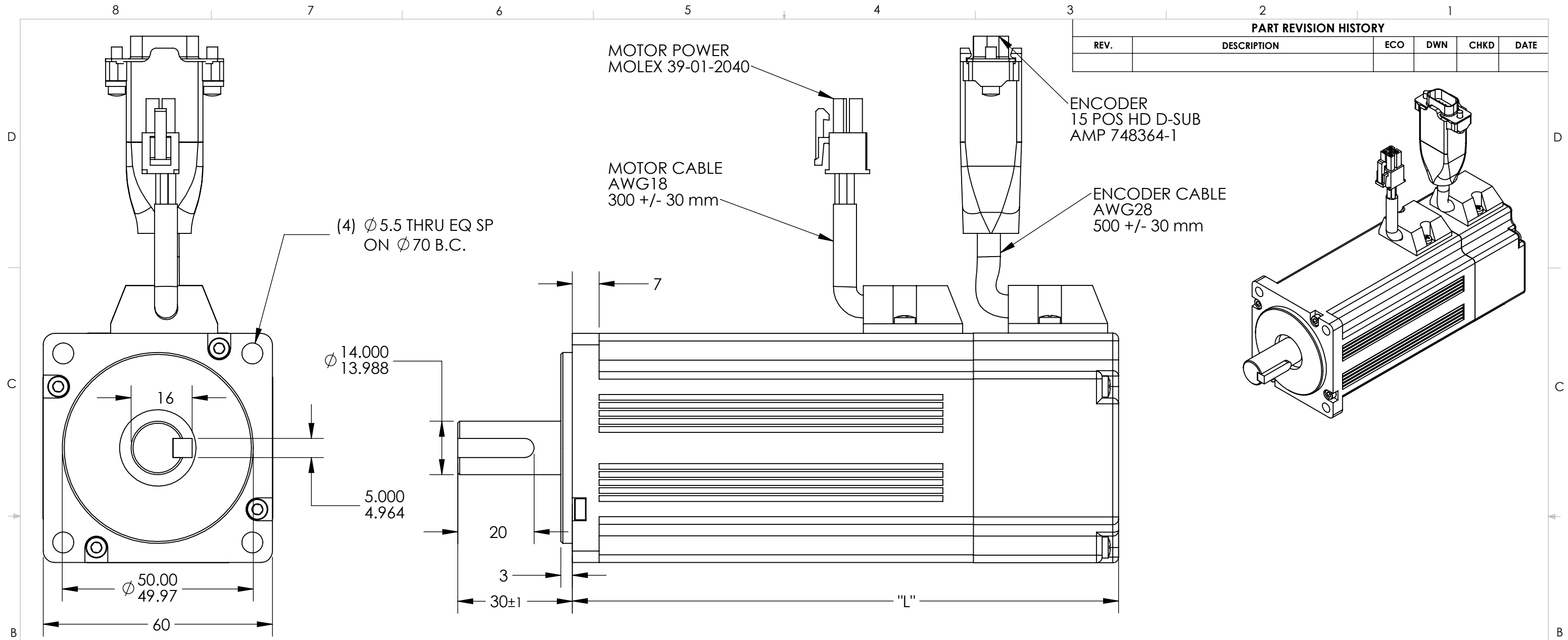


| PART REVISION HISTORY |             |     |     |      |      |
|-----------------------|-------------|-----|-----|------|------|
| REV.                  | DESCRIPTION | ECO | DWN | CHKD | DATE |
|                       |             |     |     |      |      |



| MOTOR PARAMETERS         |        |         |         |
|--------------------------|--------|---------|---------|
|                          |        | EP60-1B | EP60-3B |
| SUPPLY VOLTAGE           | VDC    | 72      | 72      |
| MAX BUS VOLTAGE          | VDC    | 310     | 310     |
| RATE SPEED               | RPM    | 4000    | 4000    |
| RATED STALL TORQUE       | N-m    | .3      | 1.3     |
| RATED TORQUE @ 4000 RPM  | N-m    | 0.25    | 1.0     |
| POWER @ RATED SPEED      | WATTS  | 105     | 418     |
| PEAK TORQUE              | N-m    | .75     | 3       |
| CONTINUOUS CURRENT 0-p   | AMPS   | 2       | 7.6     |
| PEAK CURRENT 0-p         | AMPS   | 6       | 22.8    |
| VOLTAGE CONSTANT, Ke rms | V/KRPM | 13      | 13      |
| TORQUE CONSTANT, Kt rms  | N-m/A  | .125    | .125    |
| RESISTANCE               | OHM    | 2.3     | 0.44    |
| INDUCTANCE               | mH     | 1.9     | 0.48    |
| MOMENT OF INERTIA        | Kg-cm2 | 0.1     | 0.29    |
| INSULATION CLASS         |        | F       | F       |
| WEIGHT                   | Kg     | 0.8     | 1.5     |
| LENGTH "L"               | mm     | 103     | 143     |

| FEEDBACK     |         |          |
|--------------|---------|----------|
| AMP 748364-1 |         |          |
| Pin          | Color   | Function |
| 1            | Red     | 5 vdc    |
| 2            | Black   | GND      |
| 3            | Brown   | Chl A    |
| 4            | White   | Chl A/   |
| 5            | Blue    | Chl B    |
| 6            | Green   | Chl B/   |
| 7            | Orange  | Index    |
| 8            | Yellow  | Index/   |
| 9            |         |          |
| 10           |         |          |
| 11           | Violet  | COMM A   |
| 12           | WHT/BRN | COMM B   |
| 13           | WHT/ORG | COMM C   |
| 14           |         |          |
| 15           | Shield  | Shield   |

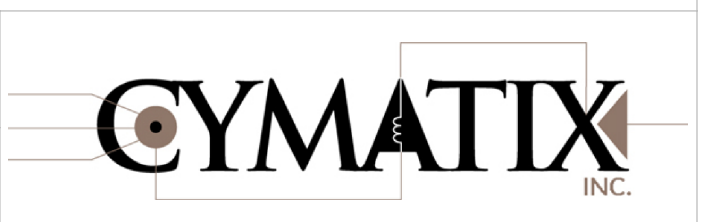
| ENCODER SPECIFICATIONS |                    |
|------------------------|--------------------|
| TYPE                   | OPTICAL            |
| OUTPUT TYPE            | LINE DRIVER        |
| LINE COUNT             | 5000               |
| GATED                  | A / B AT 90 DEDREE |
| INPUT VOLTAGE          | 5 VDC +/- 5%       |
| CURRENT                | 55 mA TYPICAL      |

| Motor leads      |         |          |
|------------------|---------|----------|
| Molex 39-01-2040 |         |          |
| Pin              | Color   | Function |
| 1                | Yellow  | Phase U  |
| 2                | Green   | Phase V  |
| 3                | Blue    | Phase W  |
| 4                | GRN/YEL | CASE     |

NOTE: Kt AND Ke BASED ON TRAPAZOIDAL DRIVE 8 POLE DESIGN

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| TOLERANCES UNLESS OTHERWISE SPECIFIED (U.O.S.) |           |        |            |
|--|-----------|--------|------------|
| DECIMALS                                       | C'BREAKS  | FRAC.  | MACH. FIN. |
| .XX = ± .01                                    | .010/.020 | 1/64   | 125 /      |
| .XXX = ± .005                                  | FILLETS   | ANGLES |            |
| .XXXX = ± .0005                                | .020 MAX  | 1°     |            |



|             |     |                                     |          |
|-------------|-----|-------------------------------------|----------|
| MATERIAL    |     | TITLE: BRUSHLESS DC MOTOR - ENCODER |          |
| FINISH      |     | PART NO. EP60-_B-MX5000-CN-001      |          |
| DRAWN       | JPB | DATE                                | 05/24/17 |
| CHECKED     | TPB | DATE                                | 05/24/17 |
| SCALE: NONE |     | SHEET 1 OF 1                        |          |
| DWG.NO. R   |     | PART REV. A                         |          |