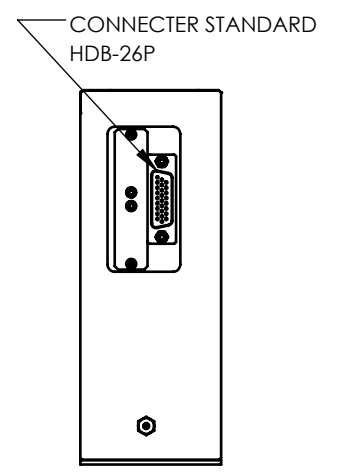
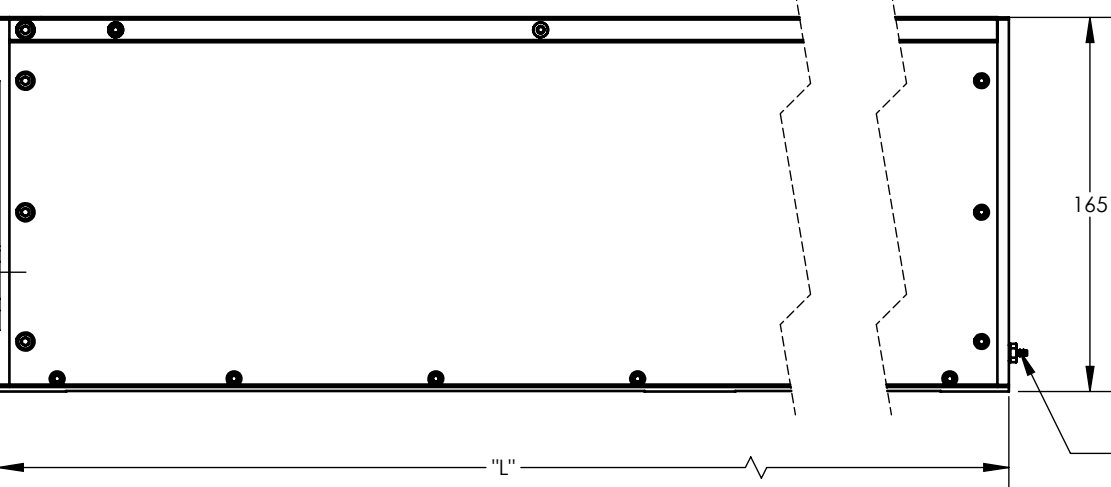
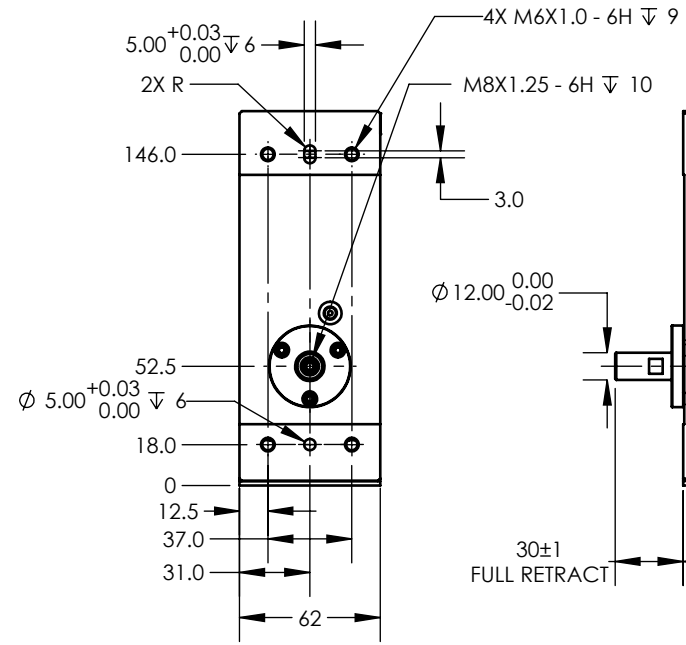


| REV. | ECN. | DESCRIPTION                 | DATE      | APPROVED |
|------|------|-----------------------------|-----------|----------|
| D    | 7285 | ADDED 300mm STROKE, REDRAWN | 7/27/2020 | TW       |

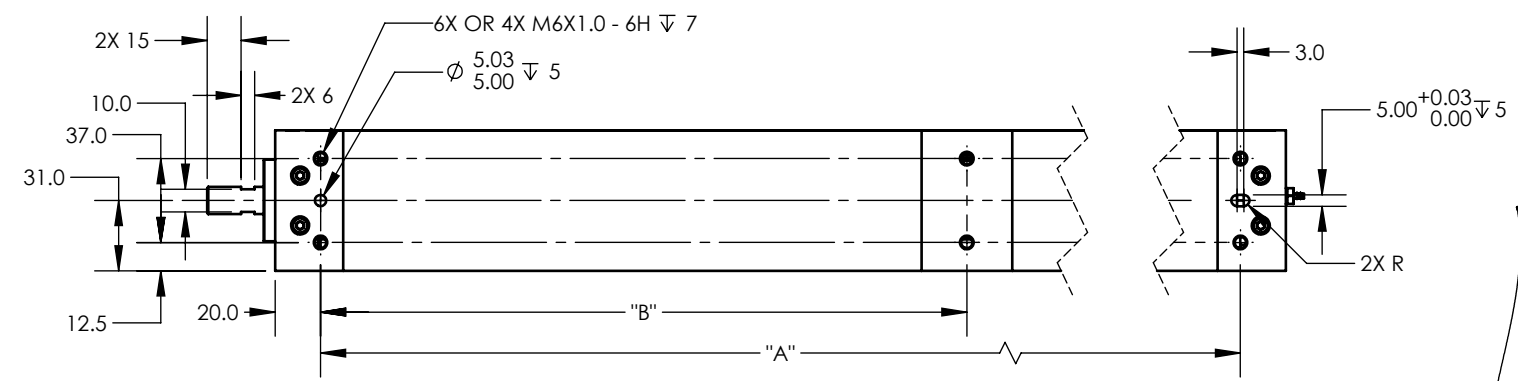
NOTES (UNLESS OTHERWISE SPECIFIED)

- LINEAR SPECIFICATIONS:  
 ENC. RESOLUTION(+A/-A;+B/-B): 1, 5 um  
 ENCODER REPEATABILITY: 20 um  
 INDEX LOCATION(+Z/-Z): 2.0±0.5 mm R.H.STOP  
 LINEAR POLE OITCH: 47.9 mm  
 OPERATING VOLTAGE: 48 Vdc, 2.5A  
 COIL RESISTANCE PER PHASE: 22 Ohm  
 COIL INDUCTANCE PER PHASE: 6 mH  
 PEAK FORCE: 100 N @ 48Vdc, 2.5A  
 FORCE CONSTANT: 40 N/A
- THETA SPECIFICATIONS.  
 ROTARY MOTOR TYPE: HT55, BRUSHLESS  
 R.MOTOR PEAK TORQUE: 2.2 Nm, 6A  
 TORQUE CONSTANT: 0.37 N/A  
 GEAR RATIO: N/A  
 ENC. RESOLUTION: 2000 CPR  
 MAX. SPEED OUTPUT SHAFT: 750 RPM (NON VACUUM),  
 500 RPM (VACUUM)
- GEAR OPTION: 4:1 OR 16:1
- VACUUM OPTION: AVAILABLE
- SPRING OPTION: AVAILABLE
- OPERATING TEMPERATURE: 0°C TO 40°C
- PLATING: CERAKOTE, COLOR, BLACK
- TOLERANCES  
 X.: ±0.5  
 X.X: 0.25

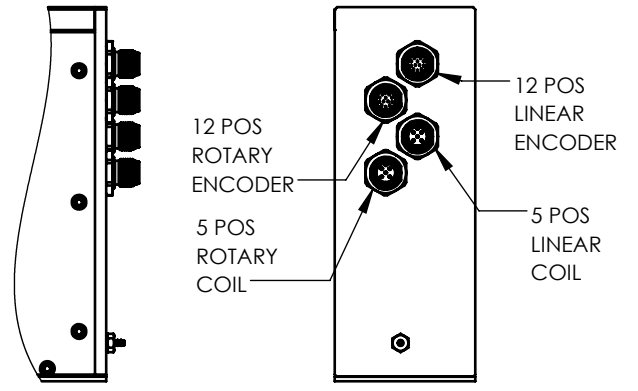


SPECIFICATION WITH GEAR OPTION

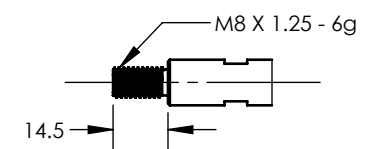
| STANDARD OPTION SPEC         | 4:1 GEAR              | 16:1 GEAR            |
|------------------------------|-----------------------|----------------------|
| ENC. RESOLUTION(+A/-A,+B/-B) | 4 X 2000 CPR          | 16 X 2000 CPR        |
| FINE INDEX (+Z/-Z)           | YES                   | YES                  |
| MOTOR TYPE:                  | HT55, BRUSHLESS       | HT55, BRUSHLESS      |
| PEAK TORQUE: Nm@VDC, A       | 8.0 Nm @ 48 V, 6A     | 30.0 Nm @ 48 V, 6A   |
| TORQUE CONSTANT: Nm/A        | 1.3 Nm/A              | 5.0 Nm/A             |
| MAXIMUM SPEED: RPM           | 170 RPM (WITH 0 LOAD) | 40 RPM (WITH 0 LOAD) |
| GEAR BACK LASH:              | LESS THAN 20 arcmin   | LESS THAN 20 arcmin  |



M12, 12 POS: TE CONNECTIVITY# T4140012121-000  
 M12, 5 POS: TE CONNECTIVITY# T4140012051-000



CONNECTOR OPTION



SHAFT OPTION. MALE

HDB-26 PINOUT

| PIN No | HDB-26P             |
|--------|---------------------|
| 1      | (L) PH. A+          |
| 2      | (L) PH. B+          |
| 3      | (L) PH. Z+          |
| 4      | NC                  |
| 5      | NC                  |
| 6      | NC                  |
| 7      | (R) PH. B+          |
| 8      | (R) PH. A+          |
| 9      | (R) PH. Z+          |
| 10     | (L) PH. A-          |
| 11     | (L) PH. B-          |
| 12     | (L) PH. Z-          |
| 13     | (R) COARSE (OPTION) |
| 14     | NC                  |
| 15     | NC                  |
| 16     | (R) PH. B -         |
| 17     | (R) PH. A -         |
| 18     | (R) PH. Z -         |
| 19     | +5 VDC              |
| 20     | 5V RTN              |
| 21     | (R) MOTOR (U)       |
| 22     | (L) MOTOR (U)       |
| 23     | (L) MOTOR (V)       |
| 24     | (L) MOTOR (W)PINOUT |
| 25     | (R) MOTOR (V)       |
| 26     | (R) MOTOR (W)       |

M12 12P PINOUT

| PIN | DETAIL         |
|-----|----------------|
| 1   | +5 VDC         |
| 2   | PH. Z-         |
| 3   | PH. Z+         |
| 4   | PH. B-         |
| 5   | PH. B+         |
| 6   | PH. A-         |
| 7   | PH. A+         |
| 8   | COARSE INDEX * |
| 9   | 5V RTN         |
| 10  | NC             |
| 11  | NC             |
| 12  | NC             |

\*: ROTARY ONLY

M12 5P PINOUT

| PIN | DETAIL  |
|-----|---------|
| 1   | SHIELD  |
| 2   | MOTOR U |
| 3   | MOTOR V |
| 4   | MOTOR W |
| 5   | NC      |

SPECIFICATION FOR DIRECT DRIVE MOTOR

| MODEL #            | LBR62-050-XX-3 | LBR62-150-XX-3 | LBR62-300-XX-3 |
|--------------------|----------------|----------------|----------------|
| STROKE (mm)        | 50+3 /0        | 150+3 /0       | 300+3 /0       |
| DIMENSION "L" (mm) | 360            | 460            | 610            |
| DIMENSION "A" (mm) | 320            | 420            | 570            |
| DIMENSION "B" (mm) | N/A            | N/A            | 285            |
| MOVING MASS (kg)   | 1.9            | 2.0            | 2.1            |
| TOTAL MASS (kg)    | 8.5            | 11.1           | 14.3           |

UNLESS OTHERWISE SPECIFIED:  
 ALL DIMENSIONS ARE IN MM  
 BREAK EDGES AND REMOVE BURRS  
 TOLERANCES  
 X: ±0.5 X.X: ±0.1  
 X.XX: ±0.05 ANGLE: ±0.1°  
 CONCENTRICITY: ±0.025  
 ROUNDNESS: ±0.025  
 EDGE BREAKS: 0.2 MAX  
 ALL DIMENSIONS AND TOLERANCES ARE FINAL

MATERIAL: SEE BOM  
 FINISH: SEE BOM  
 MACHINE FINISH: 1.6  
 INTERPRET PER: ASME Y14.5-2009  
 THIRD ANGLE PROJECTION

| NAME         | DATE      |
|--------------|-----------|
| DWN BY: TW   | 7/13/2020 |
| CHK BY: TMV  | 7/13/2020 |
| ENG APP: TMV | 7/13/2020 |
| MFG APP:     |           |
| QA APP:      |           |

**SMAC** 5807 VAN ALLEN WAY  
 CARLSBAD CA, 92008  
 (760) 929-7588  
**MOVING COIL ACTUATORS**  
 TITLE: LINEAR TOTARY ACTUATOR  
 SIZE: B PART NO: LBR62-XXX-XX-3 REV: D  
 SCALE: 3:10 DO NOT SCALE SHEET: 1 / 1