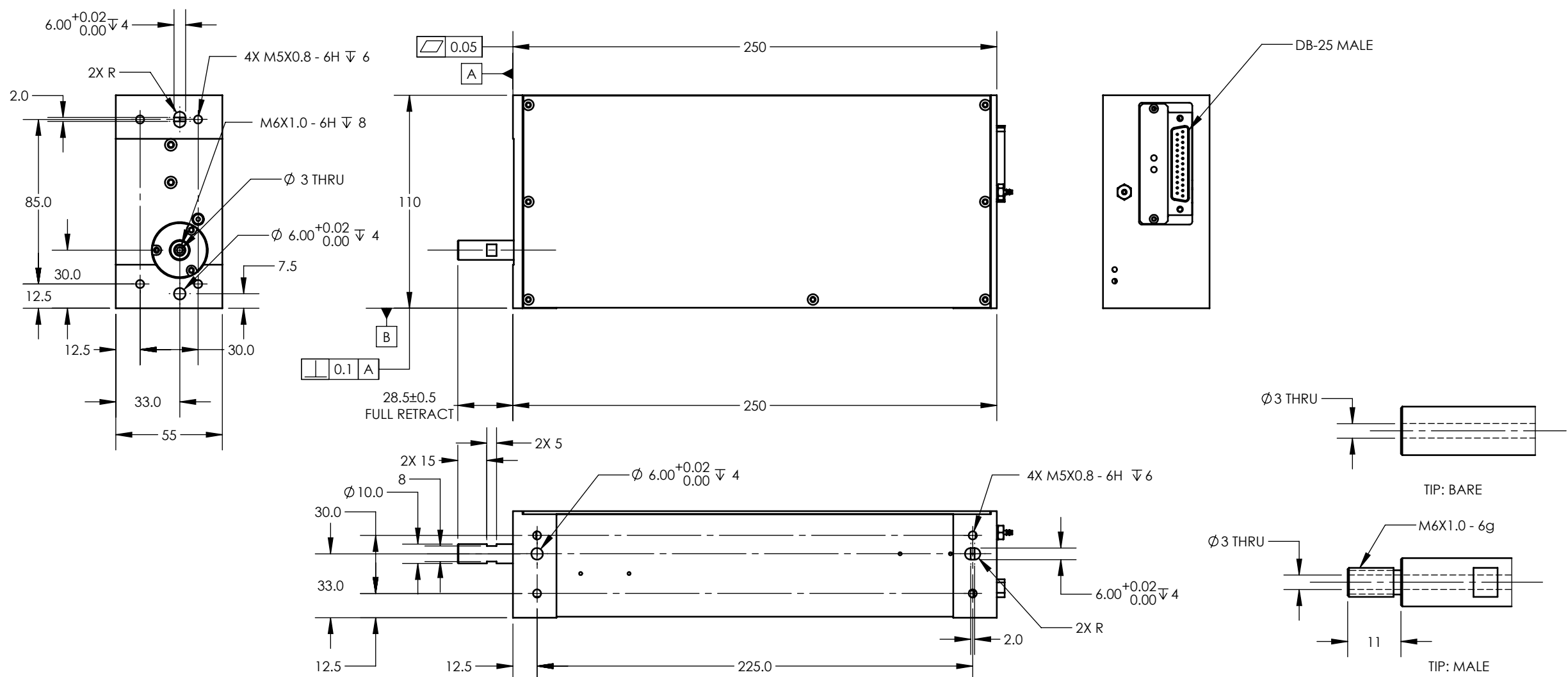


NOTES (UNLESS OTHERWISE SPECIFIED)

- 1. LINEAR SPECIFICATIONS:  
 LINEAR STROKE: 50 +3/-0 mm  
 ENC. RESOLUTION(+A/-A;+B/-B): 5, 1, 0.5, 0.1 um  
 ENCODER REPEATABILITY: ±4 COUNT  
 OPERATING VOLTAGE: 24, 48 Vdc  
 COIL RESISTANCE: 15 Ohm (24Vdc)  
 24 Ohm (48Vdc)  
 PEAK FORCE: 25 N @ 1.6A (24Vdc)  
 40 N @ 1.8A (48Vdc)  
 FORCE CONSTANT: 19 N/A (24Vdc)  
 27 N/A (48Vdc)  
 MOVING MASS: 0.76 kg (DIRECT DRIVE)  
 TOTAL MASS: 3.2 kg
- 2. ROTARY SPECIFICATIONS: SEE TABLE
- 3. VACUUM OPTION: N/A
- 4. SPRING OPTION: N/A
- 5. OPERATING TEMPERATURE: 0°C TO 40°C

REVISIONS				
REV	ECR	DESCRIPTION	DATE	APPROVED
L	7580	UPDATED MOTOR SPECIFICATION, REDRAWN	5/26/2021	TW



DIRECT DRIVE, FEMALE SHAFT MODEL

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

#22: ONLY FOR GEAR MODEL

LAR55-050-5X-1

STANDARD OPTION SPEC	DIRECT DRIVE	4:1 GEAR	16:1 GEAR
ENC. RESOLUTION(+A/-A, +B/-B)	2000 CPR	4 X 2000 CPR	16 X 2000 CPR
FINE INDEX (+Z/-Z)	YES	YES	YES
MOTOR TYPE:	DC BRUSH(HANSEN 40mm)	DC BRUSH(HANSEN 40mm)	DC BRUSH(HANSEN 40mm)
PEAK TORQUE: Nm@VDC, A	0.13 Nm @ 24VDC, 2A	0.48 Nm @ 24VDC, 2A	1.8 Nm @ 24VDC, 2A
TORQUE CONSTANT: Nm/A	0.069 Nm/A	0.25 Nm/A	0.94 Nm/A
MAXIMUM SPEED: RPM	2300 RPM(WITH 0 LOAD & NON VACUUM) 500 RPM (WITH 0 LOAD & VACUUM)	500 RPM (WITH 0 LOAD)	240 RPM (WITH 0 LOAD)
GEAR BACK LASH:	N/A	LESS THAN 20 arcmin	LESS THAN 35 arcmin

LAR55-050-7X-1

STANDARD OPTION SPEC	DIRECT DRIVE	4:1 GEAR	16:1 GEAR
ENC. RESOLUTION(+A/-A, +B/-B)	2000 CPR	4 X 2000 CPR	16 X 2000 CPR
FINE INDEX (+Z/-Z)	YES	YES	YES
MOTOR TYPE:	DC BRUSH(HANSEN 40mm)	DC BRUSH(HANSEN 40mm)	DC BRUSH(HANSEN 40mm)
PEAK TORQUE: Nm@VDC, A	0.26 Nm @ 48VDC, 4A	0.96 Nm @ 48VDC, 4A	3.6 Nm @ 48VDC, 4A
TORQUE CONSTANT: Nm/A	0.069 Nm/A	0.25 Nm/A	0.94 Nm/A
MAXIMUM SPEED: RPM	4500 RPM(WITH 0 LOAD & NON VACUUM) 500 RPM (WITH 0 LOAD & VACUUM)	1000 RPM (WITH 0 LOAD & NON VACUUM) 500 RPM (WITH 0 LOAD & VACUUM)	240 RPM (WITH 0 LOAD)
GEAR BACK LASH:	N/A	LESS THAN 20 arcmin	LESS THAN 35 arcmin

UNLESS OTHERWISE SPECIFIED:  
 ALL DIMENSIONS ARE IN MM  
 BREAK EDGES AND REMOVE BURRS  
 TOLERANCES:  
 X: ±0.5 X.X: ±0.1  
 X.XX: ±0.03 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	TW	DATE	5/26/2021
DWN BY	TW	DATE	5/26/2021
CHK BY	TMV	DATE	5/26/2021
ENG APP	TMV	DATE	5/26/2021
MFG APP			
QA APP			

**SMAC**  
 MOVING COIL ACTUATORS  
 5807 VAN ALLEN WAY  
 CARLSBAD CA, 92008  
 (760) 929-7588

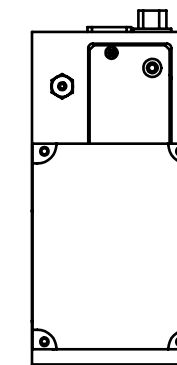
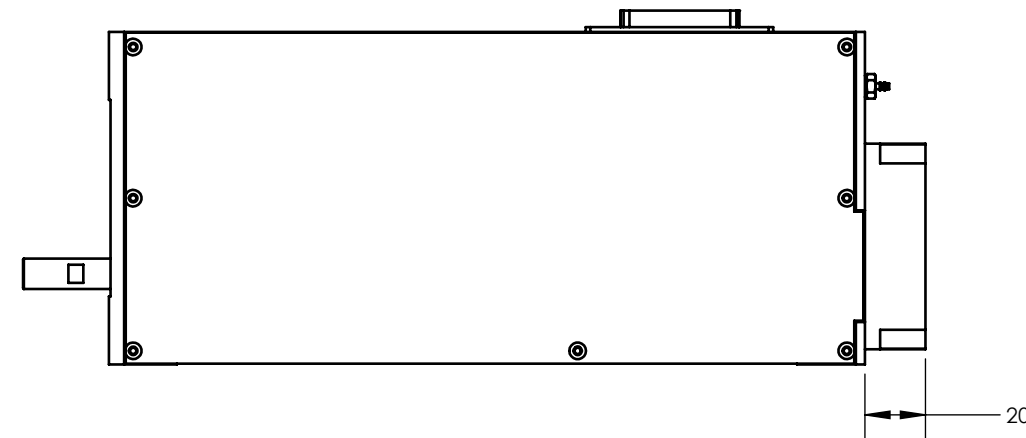
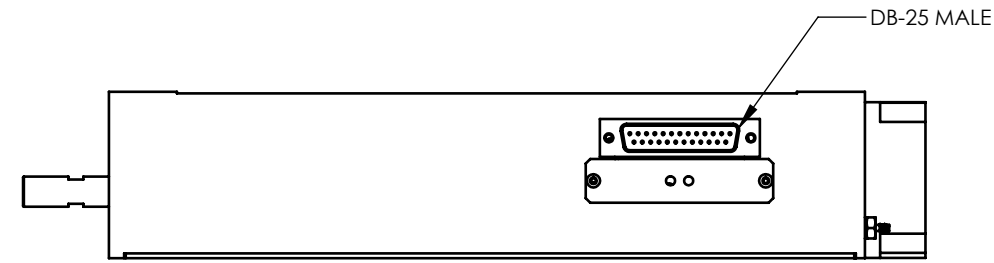
**LINEAR ROTARY ACTUATOR**  
 SIZE: B PART NO: LAR55-050-XX-1  
 SCALE: 4:10 DO NOT SCALE SHEET: 1 / 2

4

3

2

1



4:1, 16:1 GEAR OPTION  
 MOUNTING HOLE LOCATION IS SAME  
 AS DIRECT DRIVE MODEL

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 MOVING COIL ACTUATORS  
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 CARLSBAD CA, 92008  
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TITLE:  
**LINEAR ROTARY  
 ACTUATOR**

SIZE: **B** PART NO: **LAR55-050-XX-1** REV: **L**

REF. NUMBER	LAR55-050	SCALE: 4:10	DO NOT SCALE	SHEET: 2 / 2
CONTRACT	STD			

4

3

2

1

B

B

A

A