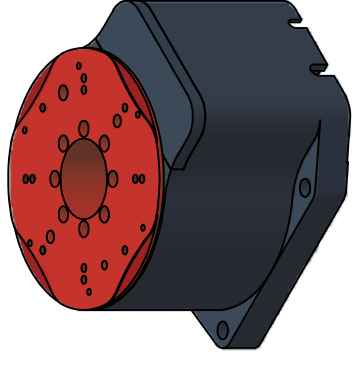




ALIO STAGE AND MOTOR SPECIFICATIONS



BASE MODEL FAMILY	AI-TM-56R		AI-TM-80R		AI-TM-104R		AI-TM-154R		AI-TM-208R-110	
	AI-TM-56R (Standard)	AI-TM-56R-75 (Optional)	AI-TM-80R (Standard)	AI-TM-80R-64 (Optional)	AI-TM-104R (Standard)	AI-TM-104R-68 (Optional)	AI-TM-154R (Standard)	AI-TM-154R-58 (Optional)	AI-TM-208R-98 (Optional)	AI-TM-208R (Standard)
STAGE MODELS AVAILABLE	360 degrees continuous									
TRAVEL	104									
DIAMETER	80									
STAGE HEIGHT	62	75	102	90	68	80	106	58	92	110
PERFORMANCE SPECIFICATIONS [2]	Performance Options									
ANGULAR ACCURACY	ContactALIO									
BIDIRECTIONAL ANGULAR REPEATABILITY	+/- 0.7									
RESOLUTION (ANALOG - STANDARD)	0.039 arc-sec									
RESOLUTION (DIGITAL - OPTIONAL)	0.013 arc-sec									
RESOLUTION (ENCODER LINE COUNT)	15744									
AXIAL RUNOUT (STANDARD)	15	12	10	8	12	9	6	12	9	6
RADIAL RUNOUT (STANDARD)	15	12	10	8	12	9	6	12	9	6
WOBBLE	25	20	15	15	25	15	10	25	15	10
MOTION PROFILE SPECIFICATIONS	Options: 0:01 - 40:0 arc-sec									
MAX VELOCITY [3]	1800									
MAX ACCELERATION [3]	> 3600									
ASSEMBLY MASS	0.65	0.88	1.40	1.9	2.2	2.7	4.5	3.5	4.2	6.7
MAX LOAD (AXIAL)	2.5									
MAX LOAD (RADIAL)	2.5									
MOVING MASS	0.25	0.34	0.50	0.70	0.7	0.9	1.4	1.8	2.1	3.4
ROTATING MASS MOMENT OF INERTIA	85	120	170	500	700	900	1300	5200	6100	9800
MOTOR INFORMATION	FRAMELESS TORQUE MOTOR									
MOTOR TYPE	FRAMELESS TORQUE MOTOR									
MOTOR MODEL	044050-EY	044100-EY	044200-EY	044200-EY	044050-EY	044100-EY	044200-EY	044050-EY	044100-EY	044200-EY
MAGNETIC PITCH (N-N)	120	120	120	120	60	60	60	90	90	40
MAX VOLTAGE (LINE TO LINE) [4]	340	340	340	340	340	340	340	340	340	340
MAX MOTOR TEMP	155	155	155	155	155	155	155	155	155	155
MOTOR CONNECTION	WYE									
TORQUE CONSTANT	0.091	0.187	0.365	0.365	0.34	0.68	1.36	0.36	0.42	0.7
PHASE RESISTANCE (@25°C) [5]	4.5	9.500	9.100	9.100	3.00	3.9	5.70	6.80	5.60	8.10
INDUCTANCE	3.2	10.0	12.8	12.8	4.5	8.9	17.9	9.9	10.2	20.4
CONTINUOUS TORQUE [6]	0.21	0.4	0.6	0.6	1.5	2.6	4.3	0.8	1.0	1.7
CONTINUOUS CURRENT [6]	2.3	1.60	1.60	1.60	4.3	3.8	3.1	2.3	2.5	2.0
PEAK TORQUE [7]	0.66	1.2	1.9	1.9	4.7	8.2	13.7	2.6	3.3	5.5
PEAK CURRENT [7]	7.3	5.00	5.10	5.10	13.6	12.0	10.0	7.2	7.8	6.5
BACK EMF CONSTANT	5.5	14.0	22.0	22.0	21.0	41	82.0	22.0	26.0	52.0

Notes:

- "Standard" models (green cells) are readily available while "Optional" models may have longer lead times. This height and motor stage options are independent of performance specification options.
- Specifications measured on stage centerline, 25mm above mounting surface. ALIO provides NIST traceable proof for all options/spec per quote.
- Stage limitation at no load. Does not account for drive or resolution limitations.
- Back EMF plus IR drop must not exceed maximum line to line bus voltage.
- Resistance values do not include cable resistance. Cable resistance adds 0.3 ohm/m.
- Continuous operating limits are based on continuous operation at maximum temperature with aluminum heat sink (300mm x 300mm x 25mm).
- Maximum on time at peak operating limits is 10 seconds.
- All electrical specifications may vary by 12% from listed values.
- Additional motor and travel options are available for each stage for optimized performance as necessary per customer requirements.

A

DRAWN
NBROWN
CHECKED



TITLE

AI-TM-(DIAMETER)R-(OPTIONAL HEIGHT)

SIZE

B

DWG NO

0010-08010

SCALE

SEE NOTES

2

3

4

1 OF 1

A

1

2

3

4

B