



ALIO STAGE AND MOTOR SPECIFICATIONS

MODEL	UNITS	AI-LM-10000-AB8	AI-LM-15000-AB8	AI-LM-20000-AB8	AI-LM-30000-AB8	AI-LM-40000-AB8	AI-LM-50000-AB8	AI-LM-60000-AB8	AI-LM-80000-AB8	AI-LM-100000-AB8
TRAVEL	mm	100	150	200	300	400	500	600	800	10000
MAX VELOCITY [7]	m/s					2.0				
MAX ACCELERATION [7]	G					2.0				
ASSEMBLY MASS	kg	12.5	13	14	15.5	17	18.5	20	23	26
X MOVING MASS	kg					5.4				
MAX Z LOAD	N					600				
MAX Y LOAD	N					320				
MAX PITCH MOMENT	N-m					79				
MAX ROLL MOMENT	N-m					75				
MAX YAW MOMENT	N-m					37				
AIR SUPPLY REQUIRED [7]	psi					60-100				
AIR CONSUMPTION	NLPM					14				
VERTICAL Z STIFFNESS	N/um					480				
HORIZONTAL Y STIFFNESS	N/um					140				



MOTOR INFORMATION	DEFAULT MOTOR
MOTOR TYPE	LINEAR BRUSHLESS
MOTOR MODEL [6]	P15-2
MAGNETIC PITCH (N-N)	30.48
MAX VOLTAGE (LINE TO LINE) [1]	500
ELECTRICAL TIME CONSTANT	0.20
MAX MOTOR TEMP	130
DELTA CONNECTION	
FORCE CONSTANT	24.2
PHASE RESISTANCE (@25° C) [2]	13.3
PHASE RESISTANCE (@130° C) [2]	18.4
INDUCTANCE	4.2
CONTINUOUS FORCE [3]	70
CONTINUOUS CURRENT [3]	2.9
PEAK FORCE [4]	222
PEAK CURRENT [4]	9.2
BACKEMF CONSTANT	24.2
WYE CONNECTION	
FORCE CONSTANT	41.9
PHASE RESISTANCE (@25° C) [2]	39.9
PHASE RESISTANCE (@130° C) [2]	55.2
INDUCTANCE	12.6
CONTINUOUS FORCE [3]	70
CONTINUOUS CURRENT [3]	1.7
PEAK FORCE [4]	222
PEAK CURRENT [4]	5.3
BACKEMF CONSTANT	41.9

Notes:

- Back EMF plus IR drop must not exceed maximum line to line voltage.
- Resistance values do not include cable resistance. Cable resistance adds 0.146 ohm/m for Delta connection and 0.44 ohm/m for Wye Connection.
- Continuous operating limits are based on continuous operation at maximum temperature with aluminum heat sink (300mm x 12.5mm x motor length).
- Maximum on time at peak operating limits is 10 seconds.
- All specifications may vary by 12% from listed values.
- Additional motor options are available for optimized performance as necessary per customer requirements.
- Specifications are dependent on load and center of gravity.

AIR QUALITY REQUIREMENTS

AIR SUPPLY MUST BE FREE OF CONTAMINANTS AND MOISTURE (<85% RELATIVE HUMIDITY). FILTERED AIR SUPPLY TO ISO 8573.1 QUALITY CLASS 3 OR BETTER

CLASS: 3 (MINIMUM)
 DIRT: 5 MICRON PARTICAL SIZE OR SMALLER
 WATER: -4 F, PRESSURE DEWPOINT (128 ppm. vol.) AT 100 psig
 OIL: 1.0 mg/m**3 (INCLUDING VAPOR)

CLASS: 2 (RECOMMENDED)
 DIRT: 1 MICRON PARTICAL SIZE OR SMALLER
 WATER: -40 F, PRESSURE DEWPOINT (16 ppm. vol.) AT 100 psig
 OIL: 1 mg/m**3 (INCLUDING VAPOR)

ALIO INDUSTRIES PROPRIETARY INFORMATION
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DRAWN NBROWN
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5/12/2012

TITLE

AI-LM-(TRAVEL)00-AB8

SIZE B
 DWG NO 0010-08017

REV 001

FINISH SEE NOTES
 SCALE

ALIO STD TEMPLATE - REV 006 SHEET 1 OF 1