Azimuth Positioners - Medium Duty

AL-860-1 • AL-861-1 • AL-862-1 • AL-1260-1 • AL-1262-1 • AL-1760-1 • AL-1762-1 • AL-1763-1
AL-1770-1 • AL-1790-1

The MVG-Orbit/FR Legacy Series Azimuth Positioners provide accurate, balanced rotation, and controllable velocity for the positioning of devices under test. Their rugged, straight-forward construction ensures maximum reliability and trouble-free operation, yielding an outstanding size and weight/performance ratio.

Typically the unit includes the body, precise slew bearings, DC motor, gear reducer, encoder/synchro, and limit switch assemblies. The turntable surface is designed with threaded mounting holes for easy installation of the DUT. An integrated Safe/Operate switch ensures safety.

AL-860-1

Applications

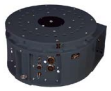
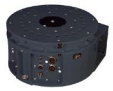
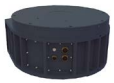
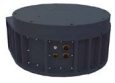
- General Purpose Positioning Subsystems
- Far-Field & Near-Field Antenna Measurements
- Indoor & Outdoor Use

Product Highlights

- Broad Selection – 10 Models
- Vertical Loads Ranging from 8,800 to 30,000 lbs (3,990 to 13,610 kg)
- Turntable Diameters Ranging from 20.3 to 30.0 in (516 to 762 mm)
- Excellent Angular Position Accuracy
- Low Backlash Design
- Precision Bearings
- Closed Loop Servo Control
- Industry-Standard Wiring
- Tachometers/Encoders for Optimal Speed Regulation & Control
- Wide Operating Temperature Range: - 4° F to 140° F (- 20° C to 60° C)
- Fully Enclosed Design of Drive Gear Train & Data Take-Off
- Wide Variety of Available Options

mvg Microwave Vision Group

Specifications - Legacy Series AZ Medium Duty Positioners

PARAMETER	UNITS	POSITIONER MODEL									
		AL-860-1	AL-861-1	AL-862-1	 AL-1260-1	 AL-1262-1	 AL-1760-1	AL-1762-1	 AL-1763-1	AL-1770-1	AL-1790-1
Dimensional Drawing Number	DCD	07-1897	07-1897	07-1897	08-2407	08-2407	06-0085	06-0085	06-0085	10-2116	10-2116
OPERATIONAL											
Bending Moment	ft-lbs	10,000	10,000	10,000	22,000	22,000	35,000	35,000	35,000	35,000	35,000
	kg-m	1,380	1,380	1,380	3,040	3,040	4,840	4,840	4,840	4,840	4,840
Vertical Load	lbs	8,800	8,800	8,800	20,000	20,000	30,000	30,000	30,000	30,000	30,000
	kg	3,990	3,990	3,990	9,070	9,070	13,610	13,610	13,610	13,610	13,610
Delivered Torque	ft-lbs	500	375	250	1,200	550	2,800	1,250	660	5,000	10,000
	kg-m	70	50	35	165	75	390	170	90	690	1,380
Withstand Torque	ft-lbs	600	600	600	2,000	2,000	4,200	4,200	4,200	7,500	12,000
	kg-m	80	80	80	280	280	580	580	580	1,040	1,660
Drive Power	hp	1/3	1/3	1/3	3/4	3/4	3/4	3/4	3/4	3/4	3/4
Nominal Speed	rpm	1.5	2	3	1.3	3	0.5	1.2	2.1	0.2	0.15
Standard Angle Transducer Format		Incremental Encoder	Incremental Encoder	Incremental Encoder	Incremental Encoder	Incremental Encoder	Incremental Encoder	Incremental Encoder	Incremental Encoder	Incremental Encoder	Incremental Encoder
Standard Accuracy	deg	± 0.03	± 0.03	± 0.03	± 0.03	± 0.03	± 0.02	± 0.02	± 0.02	± 0.02	± 0.02
Maximum Backlash	deg	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
PHYSICAL											
Height	in	12.7	12.7	12.7	12.7	12.7	14.4	14.4	14.4	18.7	18.7
	mm	322	322	322	323	323	366	366	366	476	476
Weight	lbs	200	200	200	250	250	500	500	500	560	605
	kg	91	91	91	113	113	227	227	227	254	274
Turntable Diameter	in	20.3	20.3	20.3	24.1	24.1	30.0	30.0	30.0	30.0	30.0
	mm	516	516	516	612	612	762	762	762	762	762
ENVIRONMENTAL											
Operating Temperature	- 4° F to 140° F (- 20° C to 60° C)										

OPTIONS

PARAMETER		UNITS	POSITIONER MODEL									
			AL-860-1	AL-861-1	AL-862-1	AL-1260-1	AL-1262-1	AL-1760-1	AL-1762-1	AL-1763-1	AL-1770-1	AL-1790-1
EN002	Direct Incremental Encoder (High Accuracy)		Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt
	Accuracy	deg	± 0.005	± 0.005	± 0.005	± 0.005	± 0.005	± 0.005	± 0.005	± 0.005	± 0.005	± 0.005
EN003	Direct Absolute Encoder (High Accuracy)		Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt
EN004	Absolute Encoder (Standard Accuracy)		Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt
SR	Slip Ring[2]		SR051L SR101L SR201L SR301L SR402L	SR051L SR101L SR201L SR301L SR402L	SR051L SR101L SR201L SR301L SR402L	SR051L SR101L SR201L SR301L SR402L	SR051L SR101L SR201L SR301L SR402L	SR051L SR101L SR201L SR301L SR402L	SR051L SR101L SR201L SR301L SR402L SR502L	SR051L SR101L SR201L SR301L SR402L SR502L	SR051L SR101L SR201L SR301L SR402L SR502L	SR051L SR101L SR201L SR301L SR402L SR502L
RJ	Rotary Joint[2]		RJ12L RJ18L RJ26L RJ40L RJ50L	RJ12L RJ18L RJ26L RJ40L RJ50L	RJ12L RJ18L RJ26L RJ40L RJ50L	RJ12L RJ18L RJ26L RJ40L RJ50L	RJ12L RJ18L RJ26L RJ40L RJ50L	RJ12L RJ18L RJ26L RJ40L RJ50L	RJ12L RJ18L RJ26L RJ40L RJ50L	RJ12L RJ18L RJ26L RJ40L RJ50L	RJ12L RJ18L RJ26L RJ40L RJ50L	RJ12L RJ18L RJ26L RJ40L RJ50L
TH	Central Thru-Hole Inner Diameter	STD TH Other TH	TH002 TH003	TH002 TH003	TH002 TH003	TH002 TH003	TH002 TH003	TH002 TH003	TH002 TH003	TH002 TH003	TH002 TH003	TH002 TH003
		in	4	4	4	4	4	4	4	4	4	4
		mm	102	102	102	102	102	102	102	102	102	102
EX	Internal Harnessing		EX002	EX002	EX002	EX002	EX002	EX002	EX002	EX002	EX002	EX002
CF	Connector Format		Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt
LS	Leveling Screw (set)		Built-In	Built-In	Built-In	LS001-3	LS001-3	LS001-3	LS001-3	LS001-3	LS001-3	LS001-3
ST	Stow Lock		Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt
MM	Mounting Thread[5]	STD metric Other metric	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003

(-) N/A Opt Optional

Supplied Accessories

Digital Documentation Set

User Manual (Installation, Setup, Operation & Maintenance)

Technical Notes

1 All models are delivered with Incremental Encoder as Standard

2 Slip Ring & Rotary Joint Option Notes:
- Certain slip ring options may require an extension cap that protrudes above the turntable surface. Positioner height may increase. Consult MVG-Orbit/FR
- Slip ring contacts for customer use are provided with dedicated connectors
- When rotary joint and/or slip ring options are specified, no central thru-hole is available to the user. Option TH002 for STD thru-hole, and TH003 for others (OPT) on request, are available in lieu of rotary joint and/or slip ring options

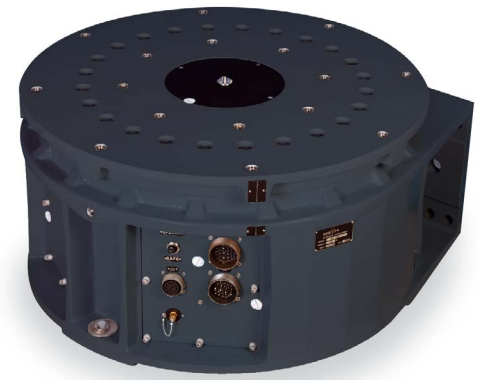
3 All accuracy data is based on no-load conditions. Contact MVG-Orbit/FR for accuracy under load conditions

4 All models are equipped with adjustable limit switches capable of approx 20° to 900° total travel. When rotary joint and slip ring options are specified, limit switches remain but are electrically disabled. Single-axis positioners are factory-set at:
- Azimuth Axis: 400° (± 200°)

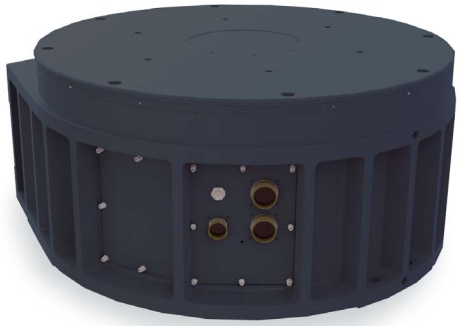
5 Standard interface holes are supplied with inch threads per ICD. Specify MM002 for alternative mm threads or opt MM003 for other interface threads, please consult MVG-Orbit/FR Sales.

6 Other speeds are optional, please consult MVG-Orbit/FR Sales.

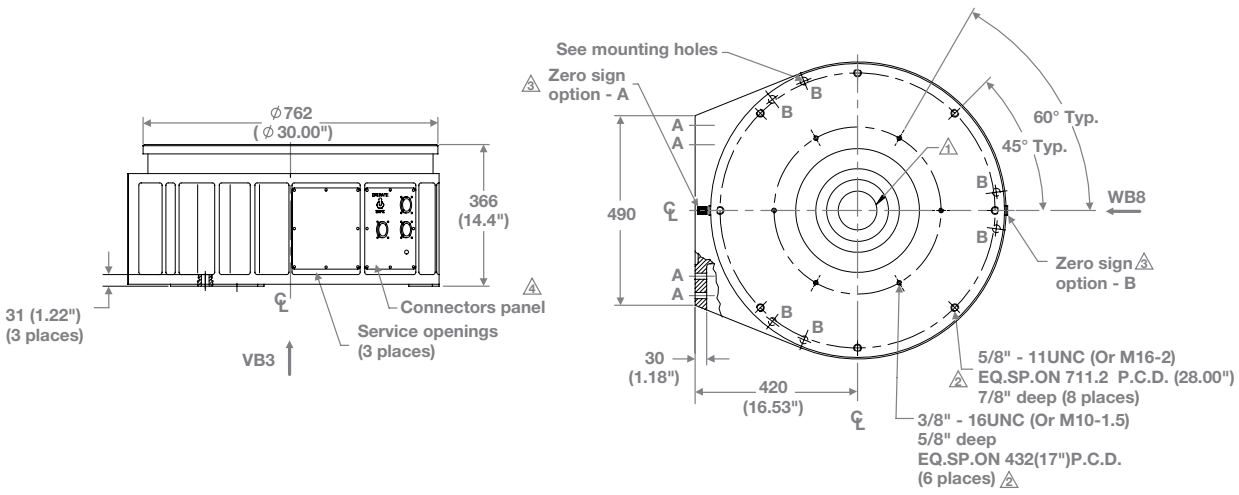
AL-1260-1



AL-1760-1



Dimensional drawing - AL-1760-1*



* Example drawing for general reference, please consult MVG-Orbit/FR for ICD.

Contact your local sales representative for more information
salesteam@mvg-world.com
www.mvg-world.com/positioners

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