

Polarization Positioners - Light Duty

AL-061-1P • AL-161-1P • AL-360-1P • AL-360-1P15 • AL-360-1P30 • AL-360-1P60 • AL-461-1P • AL-560-1P • AL-560-1P15 • AL-560-1P30 • AL-560-1P60 • AL-760-1P • AL-760-1P15 • AL-760-1P30 • AL-760-1P60 • AL-760-1P-S

The MVG-Orbit/FR Legacy Series Light Duty Polarization Positioners provide accurate, balanced rotation, and controllable velocity for the positioning of light devices in test configurations. Their rugged yet straight-forward construction ensures maximum reliability and trouble-free operation, yielding the best size and weight/performance ratio.

Typically, the unit includes the body, precise slew bearings, a DC motor, gear reducer, encoder/synchro, and limit switch assemblies. The turntable surface is designed with a threaded mounting hole pattern for ease of use. A Safe/Operate switch is included to ensure safety.

AL-360-1P



Applications

- General Purpose Positioning Subsystems
- Far-Field & Near-Field Antenna Measurements
- Indoor & Outdoor Use¹

Product Highlights

- Broad Selection – 16 Models
- Operating Loads Ranging from 10 to 2,000 lbs (4.5 to 910 kg)
- Turntable Diameters Ranging from 2.6 to 12.6 in (66 to 320 mm)
- Excellent Angular Position Accuracy
- Low Backlash Design
- Precision Bearings
- Closed Loop Servo Control
- Industry-Standard Wiring
- Tachometers for Optimum 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

PARAMETER

UNITS

POSITIONER MODEL

AL-061 -1P AL-161-1P AL-461 -1P AL-360-1P AL-360-1P15 AL-360-1P30 AL-360-1P60 AL-560-1P AL-560-1P15 AL-560-1P30 AL-560-1P60 AL-760-1P AL-760-1P15 AL-760-1P30 AL-760-1P60 AL-760-1P-S

ENVIRONMENTAL

Operating Temperature

- 4° F to 140° F (- 20° C to 60° C)

OPTIONS

EN001	Incremental Encoder (Standard Accuracy)		-	-	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt
	Accuracy	deg	-	-	± 0.03	± 0.04	± 0.03	± 0.04	± 0.03	± 0.04	± 0.03	± 0.04	± 0.03	± 0.04	± 0.03	± 0.04	± 0.03	± 0.04	± 0.03
EN002	Direct Incremental Encoder (High Accuracy)		-	-	Opt	Opt	Opt	Opt	Opt	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	± 0.005	± 0.005	± 0.005	± 0.005	± 0.005
EN003 ¹	Direct Absolute Encoder (High Accuracy)		-	Opt	Opt	Opt	Opt	Opt	Opt	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	± 0.005	± 0.005	± 0.005	± 0.005	± 0.005
EN004	Absolute Encoder (Standard Accuracy)		-	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt	Opt
	Accuracy	deg	-	Opt	± 0.04	± 0.04	± 0.04	± 0.04	± 0.04	± 0.04	± 0.04	± 0.04	± 0.04	± 0.04	± 0.04	± 0.04	± 0.04	± 0.04	± 0.04
SR	Slip Ring ²		-	-	SR051L SR101L	SR051L SR101L	SR051L SR101L	SR051L SR101L	SR051L SR101L	SR051L SR101L	SR051L SR101L	SR051L SR101L	SR051L SR101L	SR051L SR101L	SR051L SR101L	SR051L SR101L	SR051L SR101L	SR051L SR101L	SR051L SR101L
			-	-															
RJ	Rotary Joint ²		RJ18L RJ26L RJ40L RJ50L	RJ12UL 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	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
			S	S	TH002 TH003	TH002 TH003	TH002 TH003	TH002 TH003	TH002 TH003	TH002 TH003	TH002 TH003	TH002 TH003	TH002 TH003	TH002 TH003	TH002 TH003	TH002 TH003	TH002 TH003	TH002 TH003	TH002 TH003
TH	Central Thru-Hole Inner Diameter		0.78	1.8	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
			20	44.5	57.15	57.15	57.15	57.15	57.15	57.15	57.15	57.15	57.15	57.15	57.15	57.15	57.15	57.15	57.15
EX	Internal Harnessing		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			-	-	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002
CF	Connector Format		-	-	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002	CF001 CF002
			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
LS	Leveling Screw (set)		-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
			-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
MM	Mounting Thread		MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003
			MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	MM002 MM003	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)

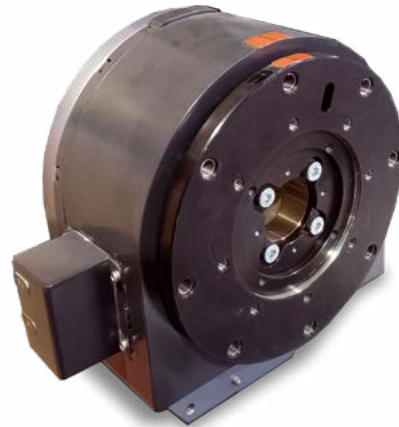
Technical Notes

- 1** EN003: With absolute encoder, positioner size might be increased. Please consult MVG-ORBIT/FR for details.
- 2** Slip Ring & Rotary Joint Option:
 - 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 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 and TH003 are available in lieu of rotary joint and/or slip ring options
 - Slip ring option in the smallest models (AL-061-1, 161-1, 461-1) are unique and need special attention. Please consult MVG-Orbit/FR
- 3** AL-061-1P, AL-161-1P, and AL-461-1P models:
 - Contain restricted limit travel settings of $\pm 200^\circ$, consult MVG-Orbit/FR for details.
 - Rated for indoor use only
 - Interface readout - incremental encoder (synchro not available) interfaces with AL-4160 series motion control systems only
- 4** Indoor and outdoor use for models above AL-360-P, for smaller models, consult your MVG-Orbit/FR contact
- 5** All accuracy data is based on no-load conditions. Contact MVG-Orbit/FR for accuracy under load conditions
- 6** AL-360-1P and larger 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:
 - Polarization Axis: $400^\circ (\pm 200^\circ)$
- 7** All models are delivered standard with incremental encoder
- 8** Other STD turntables with interface for feed are available. Consult MVG-Orbit/FR for details.

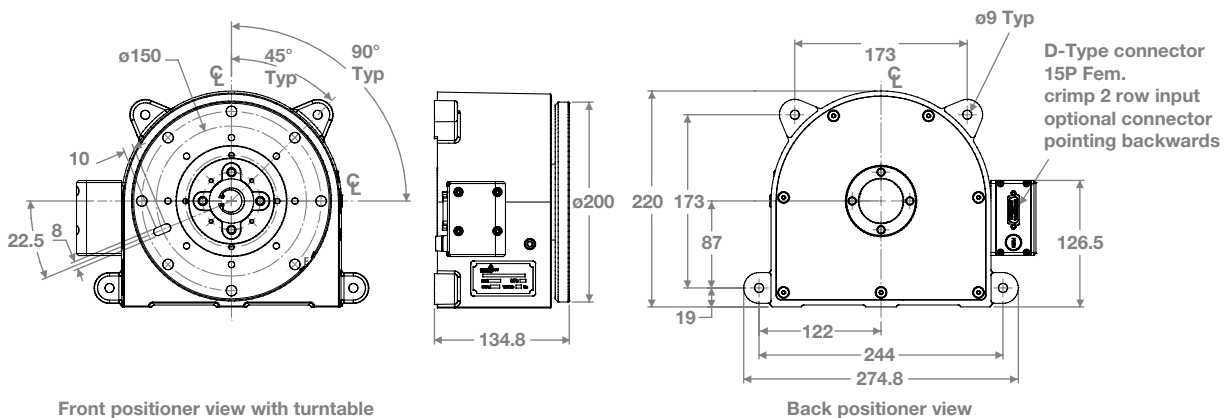
AL-461-1P



AL-161-1P



Dimensional drawing - AL-161-1P*



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



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