



INVENTRA
SURVEILLANCE SYSTEMS

PED12 – Stabilized Electromechanical Pan-Tilt

High-Capacity, Motorized Pan/Tilt for

Long-Range Surveillance, Homeland Security, Vehicle, and Fixed Installations



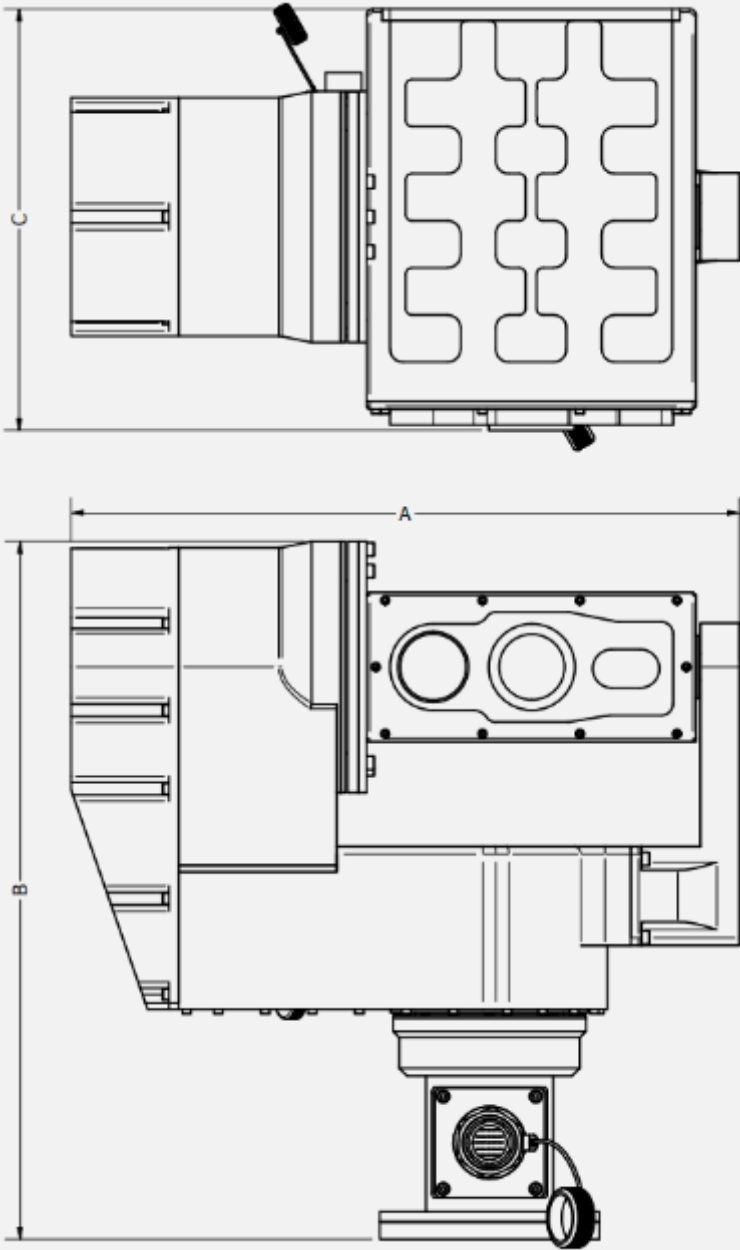
Distinctive Features

- ❖ **High Precision Positioning:** Provides fine control in fast-paced tasks.
- ❖ **Gyro Stabilization:** Ensures smooth tracking on unstable platforms.
- ❖ **Shock and Vibration Resistant:** Maintains stability in high-impact conditions.
- ❖ **Configurable U-Arm Mounting:** Allows width-adjustable payload balancing.
- ❖ **Marine-Compatible Build:** Resistant to corrosion in coastal operations.
- ❖ **Environmental Sealing (IP65):** Engineered for durability in harsh conditions.

Main Features

- ❖ The PED12's robust motorized design is engineered for sustained accuracy across a range of surveillance applications.
- ❖ Its configurable setup supports various sensor suites, featuring gyro-stabilization and video tracking options for enhanced operational versatility in coastal and rugged terrains.

Configuration Breakdown	Positioner – <u>E</u> lectromechanical – <u>D</u> ual Axis – 12 (Product Class) – Pan Speed/Torque – Tilt Speed/Torque
Part Number	PED12-AX-ABX (Check Available Options Below)
Available Customizations	Communication Protocol, Output Speed, Output Torque, Number of Slipping Lines, Mechanical Interfaces
Combinable Platforms	SEBXX – Multi Channel Thermal Imager MES10 – Locked Electromechanical Mast Platform MEM10 – Ultra-Stable Electromechanical Mast Platform TMH10 – Heavy Duty Tripod



PED12 – AX – ABX

Speed/Torque Configuration Breakdown

PED12	AX – Pan Axis Speed/Torque Conf.	ABX – Tilt Axis Speed/Torque Conf.
Positioner – Electromechanical – Dual Axis	Any “A type” configuration is applicable	Any “A type” or “B type” configuration is applicable

Speed/Torque Configuration			A1	A2	A3	A4	B1	B2
PARAMETERS	Nominal Speed	°/s	28	48	96	180	28	48
	Nominal Torque	Nm	185	150	80	60	275	175
	Peak Torque	Nm	225	215	120	100	475	450
	Momentary Peak Torque	Nm	400	400	360	250	875	875

- ❖ Nominal Speed / Nominal Torque represents operation range with 100% duty cycle.
- ❖ Peak Torque represent limits for acceleration and deceleration limits.
- ❖ Momentary Peak Torque represent limits impulsive shock limits device can absorb.

➤ Most common configurations are given below. Any configuration is possible according to table.

Parameters / Configurations			PED12-A2-A1	PED12-A4-A1	PED12-A1-B1
PERFORMANCE PARAMETERS	Pan – Peak Torque	Nm	215	100	225
	Pan –Torque (Nominal)	Nm	150	60	185
	Pan – Speed (Nominal)	°/s	48	180	28
	Tilt – Peak Torque	Nm	225	225	475
	Tilt – Torque (Nominal)	Nm	185	185	275
	Tilt – Speed (Nominal)	°/s	28	28	28
	Pan – Axis Range	°	N x 360°		
	Tilt – Axis Range	°	Up to ±45°		
	Resolution	°	0.002		
	Servo Accuracy	°	0.038	0.032	0.028
	Stabilization Accuracy	°	0.04		
	Weight	kg	16.1	16.1	17.5
	Communication to the Unit	-	Ethernet, RS-485, RS422 (Full Duplex), USB		
	Connector Type	-	MIL-DTL-38999		

OPTIONS	Slipring	-	Up to 76 lines including (1 Gbit Ethernet, RS422, RS232, HD-SDI)
	Stabilization	-	Available
	Dual-Loop Control	-	Position Control at the Order of 0.001° with Secondary Encoder
	Hand Controller	-	Available
	Multiple Payload Interface	-	Available
DIMENSION	Width (A)	mm	430
	Height (B)	mm	445 (depends on slipring configuration)
	Depth (C)	mm	270
ENVIRONMENTAL QUALIFICATIONS	Wind Load	km/h	120
	IP Rating	-	IP65
	Temperature	°C	MIL-STD-810G, Method 502.5 Procedure II – Operational, -32°C MIL-STD-810G, Method 501.5 Procedure II – Operational, +60°C MIL-STD-810G, Method 501.5 Procedure I – Storage; +70°C MIL-STD-810G, Method 502.5 Procedure I – Storage; -40°C
	Low Pressure	-	MIL-STD-810G, Method 500.5 Procedure I – Storage 37,000ft MIL-STD-810G, Method 500.5 Procedure I – Operational 10500ft
	Vibration	-	MIL-STD-810G, Method 514.6 Procedure I Category 20, Figure 514.6C-3
	Shock	-	MIL-STD-810G, Method 516.6 Functional Shock, 20G 11ms, XYZ Axis, 3 Positive and 3 Negative Each Axis
	Humidity	-	MIL-STD-810G, Method 507.5 Procedure I – 90% Noncondensing @60°C, 11 Days
	Rain	-	MIL-STD-810G, Method 506.5 Procedure II
	Salt Fog	-	MIL-STD-810G, Method 509.5, 2 Cycles of 24 Hours
	Dust and Sand	-	MIL-STD-810G, Method 510.5, Procedure I and Procedure II
EMI/EMC	EMI/EMC Compliance	-	CE102 – Conducted Emissions, Power Leads CS101 – Conducted Susceptibility, Power Leads CS114 – Conducted Susceptibility, Bulk Cable Injection CS115 – Conducted Susceptibility, Bulk Cable Injection CS116 – Conducted Susceptibility, Damped Sinusoidal Transients CS118 – Conducted Susceptibility, Personnel Borne ESD RE102 – Radiated Emissions, Electric Field RS103 – Radiated Susceptibility, Electric Field



PED12 – Electromechanical Pan-Tilt Unit

TMH10 – Heavy Duty Tripod Unit