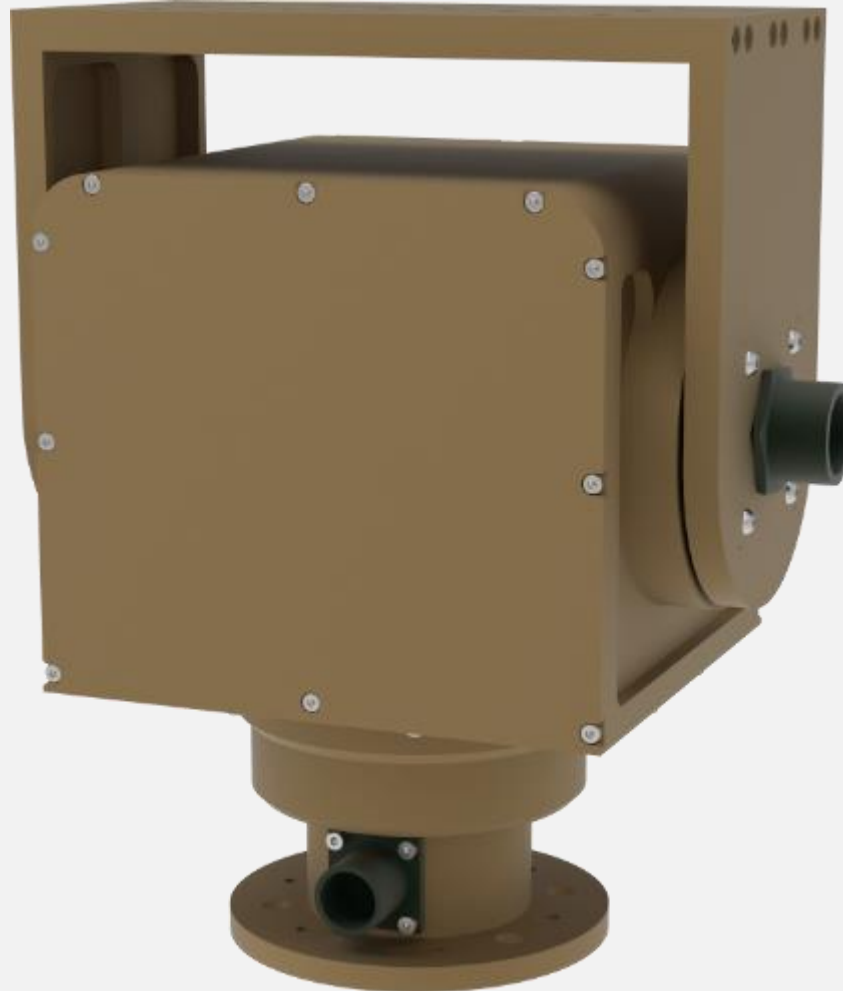




INVENTRA
SURVEILLANCE SYSTEMS

PED08 – Compact Electromechanical Pan-Tilt

Lightweight, Reliable Pan-Tilt with True Servo Control for
Thermal Imagers and Directional Antennas



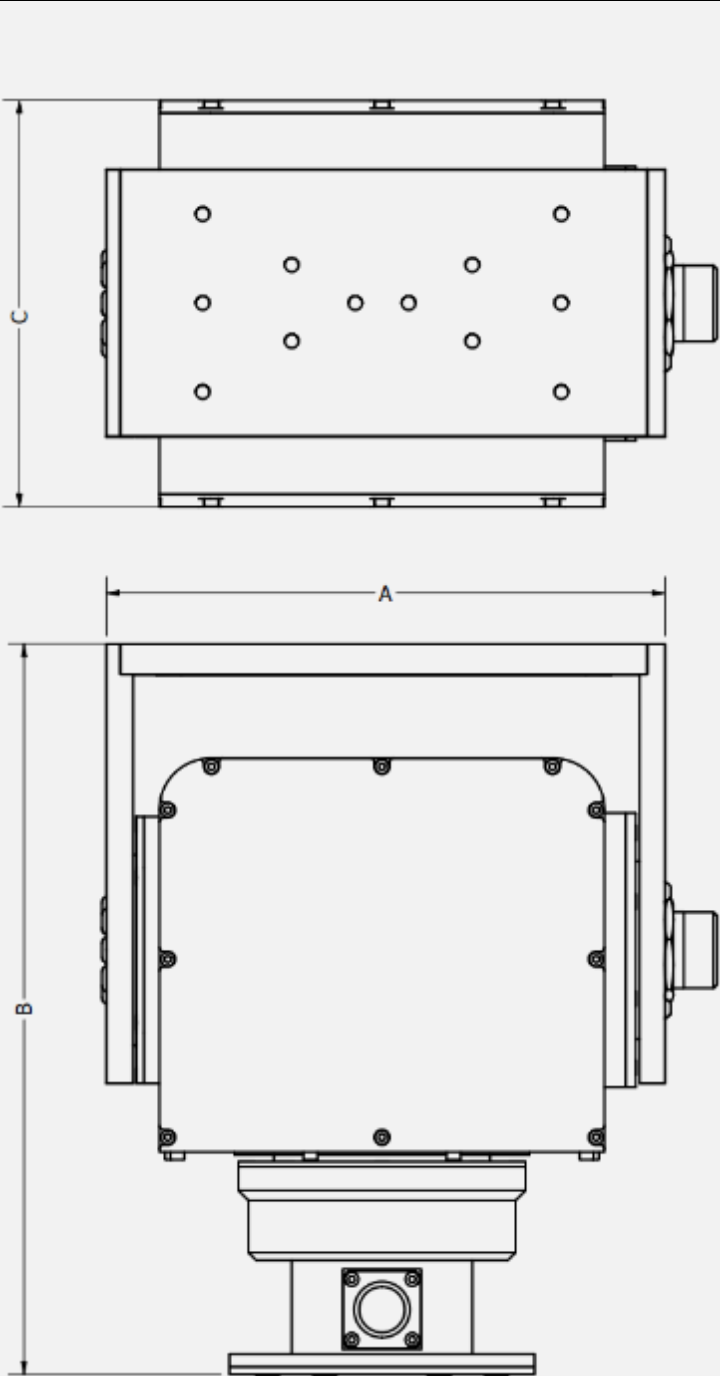
Distinctive Features

- ❖ **True Servo Drive System:** Utilizes brushless motors, enhancing accuracy over stepper motors.
- ❖ **Ultra-Low Power Consumption:** Operates at 10W with "Smart Driving Mode" for efficiency.
- ❖ **Active Disturbance Rejection:** MCU actively counters external interference for steady operation.
- ❖ **High-Resolution Positioning:** 22-bit encoders provide precise positioning and control.
- ❖ **MIL-STD-461G Compliant:** EMI/EMC standards ensure resilience in demanding environments.
- ❖ **Tripod Compatibility:** Mounts on TMH or TMM tripods for versatile field deployment.
- ❖ **Coastal and Seaborne Customization:** Options tailored for marine environments

Main Features

- ❖ The PED08 provides a combination of controllability, positional accuracy, and price/performance ratio, making it suitable for fixed installations as well as light vehicle applications
- ❖ It features MIL-STD-461G EMI/EMC compliance, making it suitable for installations across diverse environments, including ground-based and light vehicle-mounted setups.

Configuration Breakdown	Positioner – <u>E</u> lectromechanical – <u>D</u> ual Axis – 08 (Product Class) – Pan Speed/Torque – Tilt Speed/Torque
Part Number	PED08-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 TMM10 – Medium Duty Tripod TMH10 – Heavy Duty Tripod



INVENTRA
SURVEILLANCE SYSTEMS

PED08 – AX – ABX

Speed/Torque Configuration Breakdown

PED08	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	6	12	24	48	6	12
	Nominal Torque	Nm	85	60	45	30	135	85
	Peak Torque	Nm	120	120	60	50	225	210
	Momentary Peak Torque	Nm	200	200	180	125	400	400

- ❖ 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			PED08-A2-A1	PED08-A4-A1	PED08-A1-B1
PERFORMANCE PARAMETERS	Pan – Speed (Nominal)	°/s	12	48	6
	Pan –Torque (Nominal)	Nm	60	30	85
	Pan – Peak Torque	Nm	120	50	120
	Tilt – Speed (Nominal)	°/s	6	6	6
	Tilt – Torque (Nominal)	Nm	85	85	135
	Tilt – Peak Torque	Nm	120	120	225
	Pan – Axis Range	°	N x 360°		
	Tilt – Axis Range	°	±45°		
	Resolution	°	0.02		
	Accuracy	°	0.12		
	Operating Voltage	VDC	18-48		
	Weight	kg	9.0	9.0	10.5
	Communication to the Unit	-	Ethernet, RS-485, RS422 (Full Duplex), USB		
	Connector Type	-	MIL-DTL-38999		

OPTIONS	Slipring	-	Up to 76 lines including (10A Power, 1 Gbit Ethernet, RS422, RS232, HD-SDI)
	Stabilization	-	Available
	Dual-Loop Control	-	X
	Hand Controller	-	Available
	Multiple Payload Interface	-	Available
DIMENSION	Width (A)	mm	220
	Height (B)	mm	287 (Depend on slipring configuration)
	Depth (C)	mm	160
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 Compliancy	-	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



PED08 – Electromechanical Pan-Tilt Unit

TMM10 – Medium Duty Tripod Unit