INVENTRA
SURVEILLANCE SYSTEMS

MEM10 – Ultra Stable Electromechanical Mast System

Mast Unit with Minimum Twist and Deflection for

Long Range Thermal Imaging, Target Tracking Tasks

Distinctive Features

- **Innovative Telescopic Screw Shaft Actuation:** The MEM10 unit stands out with its innovative actuation system using telescopic screw shafts. Unlike traditional mast units driven by a single screw shaft, **the MEM10 employs individual steel telescopic screw shafts to support each outer body node, resulting in an exceptionally rigid system.**
- **High Rigidity and Wind Load Resistance:** The telescopic screw-shaft design, combined with 4-way keyways, contributes to minimum twist and deflection, resulting in an ultra-rigid structure. This structural strength translates to high wind load resistance, making the MEM10 suitable for various challenging environments.

Main Features

- Minimum Twist and Deflection with Telescopic Screw-Shaft and 4-way Keyways
- Able to Use in Extended Height while Vehicle on the Move
- High Wind Load Resistance with Ultra Rigid Structure
- Minimal or No Maintenance with Closed Mechanical Architecture

Configuration Breakdown	**M**ast – **E**lectromechanical – Actuating System (**M**ultiple Screw) – Product Class (10) – Retracted Height (mm) – Extended Height (mm) – Rated Payload Capacity (kg) – Product Specific Codes
Part Number	MEM10-X-X-X (Check Available Options Below)
Available Customizations	Retracted/Extended Height, Payload Capacity, Communication Protocol, Mechanical Interfaces
Combinable Platforms	PEDXX – Electromechanical Positioner Family SEGXX – Stabilized Gimbal Family

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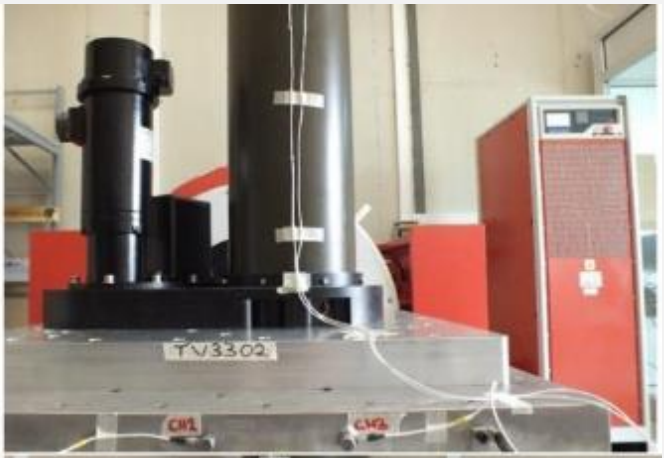
	Parameters		MEM10-1000-2200-125	MEM10-1200-3000-120	MEM10-1800-6000-100	MEM10-2000-7200-100
PERFORMANCE PARAMETERS	Retracted Height	mm	1000	1200	1800	2000
	Extended Height	mm	2200	3000	6000	7200
	Rated Payload Capacity	kg	125	120	100	100
	Weight	kg	72	106	144	219
	Opening Time	s	45	60	120	120
	Actuating Mechanism	-	Telescopic Threaded Rod			
	Voltage (MIL-STD 1275)	V	28VDC			
	Communication to the Unit	-	RS-485/RS422/Ethernet			
	Connector Type	-	MIL-DTL-38999			
	External Paint	-	RAL 9005 MATTE Black Electrostatic Powder Coating			
DIMENSIONS	Retracted Height (A)	mm	1000	1200	1800	2000
	Node Diameter (ØB)	mm	180	200	230	230
	Number of Sections (S)	-	3	5	5	5
OPTIONS	Used in Motion	-				X
	Instant Height Information	-	Available			
	Control Remote for in Vehicle	-	Available			
	Cable Bundling Interface	-	Available			
ENVIRONMENTAL QUALIFICATIONS	Wind Load	km/h	**120 @ 1m^2**			
	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			
	Vibration	-	MIL-STD-810G, Method 514.6 Procedure I Category 20, Figure 514.6C-3			
	Shock	-	MIL-STD-810G, Method 516.6 Procedure I – Functional Shock; 20g 11ms			
	Rain	-	MIL-STD-810G, Method 506.5 Procedure I – Rain and Blowing Rain, 1.7 mm/h			
	Humidity	-	MIL-STD-810G, Method 507.5 Procedure I; 90% Noncondensing			
	Dust and Sand	-	MIL-STD-810G, Method 510.5 Procedure I – Blowing Dusts MIL-STD-810G, Method 510.5 Procedure II – Blowing Sand			



"MEM10 Ultra Stability Electromechanical Mast System" has successfully completed vibration and shock tests without **flange and body support.**

Mast Systems, Integration Workshop