



PAN TILT

TS-MPT H3220 SERIES

The MPT H3220 Series Pan & Tilt Unit is designed to perform precision positioning applications of various sensor units.

It is designed for payloads up to 60 Kg. MPT H3220 Pan & Tilt Units, designed according to military standards and having compact structure, are resistant to all kinds of harsh conditions.

FEATURES

- Robust and compact design.
- High torque and performance.
- Precise positioning.
- Zero backlash.
- High duty cycles.
- Suitable for fixed and mobile environments.
- 100% CNC Machined from high strength 6000 series aluminium and stainless steel.



Payload Capacity
up to 60 kg



Rated Torque at Tilt Axis
90 Nm



Position Accuracy
0,02°



Position Repeatability
0,01°



Zero backlash

TECHNICAL DATA / TS-MPT H3220 SERIES

Product Code	TS-MPT-H3220-1	TS-MPT-H3220-2	TS-MPT-H3220-3	TS-MPT-H3220-4
Payload Capacity	45 kg	45 kg	45 kg	60 kg
Rated Torque at Tilt Axis	70 Nm	70 Nm	70 Nm	90 Nm
Power Consumption				
Max. Power Consumption	100 W	140 W	175 W	250 W
Standby Power Consumption	2 W	2 W	15 W	2 W
Heater Power	40 W	40 W	40 W	40 W
Operating Voltage Range *	18-32 V	18-32 V	44-52 V	44-52 V
Pan				
Range of travel *	n × 360° (Continuous Rotation)	n × 360° (Continuous Rotation)	n × 360° (Continuous Rotation)	n × 360° (Continuous Rotation)
Max. Speed	48 °/s	60°/s	120 °/s	120 °/s
Min. Speed	0.005°/s	0.005°/s	0.005°/s	0.005°/s
Tilt				
Range of travel *	180° (+90°/-90°)	180° (+90°/-90°)	180° (+90°/-90°)	180° (+90°/-90°)
Max. Speed	18 °/s	24°/s	24°/s	40 °/s
Min. Speed	0.005°/s	0.005°/s	0.005°/s	0.005°/s
Position Accuracy and Repeatability				
Position Accuracy	0.02°	0.02°	0.02°	0.05°
Position Repeatability	0.01°	0.01°	0.01°	0.05°
Backlash	None	None	None	None
Rotation Limits				
Software Limits	Available	Available	Available	Available
Mechanical Limits	Available at Tilt Axis	Available at Tilt Axis	Available at Tilt Axis	Available at Tilt Axis
Encoder Type and Position Feedback				
Encoder Type *	Magnetic Incremental Encoder	Magnetic Incremental Encoder	Magnetic Incremental Encoder	Magnetic Incremental Encoder
Position Feedback	0.0048°	0.0048°	0.0048°	0.0048°
Operating Temperature				
Working Temperature	-32°C to +55°C	-32°C to +55°C	-32°C to +55°C	-32°C to +55°C
Storage Temperature	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C	-40°C to +60°C
Drive Systems				
Drive System (Pan)	Stepper Motor	Stepper Motor	BLDC Motor	BLDC Motor
Drive System (Tilt)	Stepper Motor	Stepper Motor	Stepper Motor	BLDC Motor
Brake	Magnetic Brake	None	Magnetic Brake at Tilt Axis None at Pan Axis	Magnetic Brake
Construction				
Exterior Finish	Powder Coat Black (Default), Special Finishes Available			
Weight ***	18 kg			
Dimensions ***	335.6x374.4x222 mm			
Payload Mounting Type	Top or Side Mount			

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Ambient Conditions and EMI/EMC Compatibility	
Electromagnetic Compatibility	MIL-STD-461G (CE102, CS101, CS114, CS115, CS116, CS118, RE102 and RS103)
Min. Operating and Storage Temperature	MIL-STD-810G, Method 502.6 Procedure II and Procedure I
Max Operating and Storage Temperature	MIL-STD-810G, Method 501.6 Procedure II and Procedure I
Thermal Shock	MIL-STD 810G, Method 503.6 Procedure I-C
Moisture Resistance	MIL-STD0 810G, Method 507.6 Procedure II
Rain Resistance	MIL-STD-810G, Method 506.6 Procedure I
Dust and Sand Resistance	MIL-STD-810G, Method 510.6 Procedure I and Procedure II
Vibration Compatibility	MIL-STD-810G, Method 514.7 Procedure I
Shock Compatibility	MIL-STD-810G, Method 516.6 Procedure IV
Icing and Freezing Rain Resistance	MIL-STD-810G, Method 521.3 Procedure I
Protection / IP rating	IP67
Control of Positioner Unit	
Command and Control	GUI-Joystick-Software
Protocol	TS-MPT Protocol and Pelco-D
Power Outputs to Payload *	
24 VDC - user on/off switchable	Optional
12 VDC - user on/off switchable	Optional
5 VDC - user on/off switchable	Optional
Instantly Monitoring	
Power On and Run Time Monitoring	Available
Voltage Monitoring	Available
Current Monitoring	Available
Communication Interfaces to Payload **	
Serial	RS232, RS422, RS485 (2 Channel Configurable)
TTL	1 Channel
IP	1 Channel Gigabit Ethernet
Communication Interfaces to Pantilt	
Serial	RS232 or RS422/RS485
IP	Optional
Connectors *	
Main Connector	D38999/20WD35PN
Payload Connector	D38999/20WD35SN

* If you have other requirements or need further assistance, please reach out to us.

** Configuration is available for particular lines including RF, SDI, HD-SDI, Fiber, etc.

*** The specified values apply to top mount setups.

Please note: Accessories such as cables and power supplies are not included in the package.