



# PAN TILT

## TS-MPT-U SERIES

It is designed for use in land and sea vehicles thanks to its fast movement and precise positioning capability. The torque and speed of selected variations can be changed according to the customer's requests.

Two things suffice to best explain this series; compactness and power. Its applications include fixed and mobile border surveillance, coastal surveillance, port and shipping control, customs and coastguard, vehicle mounted surveillance and maritime applications.

### FEATURES

- Robust and compact design
- Long service life
- 100% CNC Machined from high strength 6000 series aluminium and stainless steel.



Payload Capacity  
up to 45 kg



Rated Torque at Tilt Axis  
50 Nm



Position Accuracy  
0,02°



Position Repeatability  
0,02°



Zero backlash

# TECHNICAL DATA / TS-MPT-U SERIES

Product Code	TS-MPT-U-1	TS-MPT-U-2
Payload Capacity	35 kg	45 kg
Rated Torque at Tilt Axis	30 Nm	50 Nm
Power Consumption		
Max. Power Consumption	80 W	120 W
Standby Power Consumption	10 W	25 W
Heater Power	40 W	60 W
Operating Voltage Range *	18-32 V	44-52 V
Pan		
Range of travel *	n × 360° (Continuous Rotation)	n × 360° (Continuous Rotation)
Max. Speed	30 °/s	60 °/s
Min. Speed	0.005°/s	0.005°/s
Tilt		
Range of travel *	90° (+45°/-45°)	90° (+45°/-45°)
Max. Speed	24 °/s	60°/s
Min. Speed	0.005°/s	0.005°/s
Position Accuracy and Repeatability		
Position Accuracy	0.02°	0.02°
Position Repeatability	0.02°	0.02°
Backlash	None	None
Rotation Limits		
Software Limits	Available	Available
Mechanical Limits	Available at Tilt Axis	Available at Tilt Axis
Encoder Type and Position Feedback		
Encoder Type *	Absolute Encoder	Absolute Encoder
Position Feedback	0.005°	0.005°
Operating Temperature		
Working Temperature	-32°C to +55°C	-32°C to +55°C
Storage Temperature	-40°C to +60°C	-40°C to +60°C
Drive Systems		
Drive System (Pan)	Stepper Motor	BLDC Motor
Drive System (Tilt)	Stepper Motor	BLDC Motor
Brake	Magnetic Brake	Magnetic Brake
Construction		
Exterior Finish	Powder Coat Black (Default), Special Finishes Available	
Weight ***	20.6 kg	20.6 kg
Dimensions ***	487.5x540x170 mm	487.5x540x170 mm
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-STD 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	

# TECHNICAL DATA / TS-MPT-U SERIES

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	D38999/20WD35PN
Payload Connector	D38999/20WD35SN	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.