

# MODEL 110 PAN & TILT

Introducing the all new Model 110 Pan & Tilt a precision, closed-loop system designed to position cameras, lights and other sonar equipment up to 250 lbs with ultimate protection against the harshest of subsea environments. The Model 110 is perfectly suited for applications on ROV's, manned submersibles and other subsea platforms. Using brushless motor and strain wave gearing, the Model 110 delivers exceptional reliability and high torque in an extremely compact, lightweight and easy to maintain package. Each axis can operate up to 360° of rotation with speeds up to 10 RPM. The innovative gearbox system offers extra smooth and precise movement.

## MECHANICAL

**Dimensions:** 8.52in (216.4mm) x 5.76in (146.3mm) x 4.55in (115.5mm)

**Weight in Air:** 11lbs; 5kg

**Weight in Water:** 8.3lbs; 3.8kg

**Gears:** Planetary & Strain Wave Gear

**Backlash:** 0°

**Position Limits:** 360 degrees both axis, tilt range will be limited if a yoke is installed.

## ENVIRONMENTAL

**Operational Depth:** 50 meters [164 feet], air filled 1 atmosphere housings

3000 meters [10,000 feet], oil filled with an internal pressure compensator

6000 meters [20,000 feet], oil filled with an external pressure compensator

**Temperature Range:** Storage -40°c -50°c, Operating -5°c - 30°c

**Housing:** Anodized 6061 Aluminum housing and 316 Stainless Steel drive shafts

**O-ring Material:** Buna-N

**Fastener Material:** 316 Stainless Steel

## ELECTRICAL

**Input Voltage:** Selected voltage between 12-330VDC

**Power:** 150w at each axis full speed & load

**Maximum Output Torque:** 40 ft-lbs (40 ft-lb rated torque at 5 rpm or lower)

**Maximum Payload:** 250lbs mounted on tilt axis, 4" from mounting face, 100lbs mounted on tray 6" above TILT Axis

**Output Speed:** Up to 10 RPM, (40 ft-lb rated torque at 5 rpm or lower)

**Position Feedback:** Incremental quadrature magnetic encoder, 92,160 PPR

**Communication:** RS232/RS485, Modbus RTU, CAN open

**Connector:** MCBH8M (customer can specify alternate connectors)



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