

# OceanTools

## PT330

### Underwater Pan & Tilt

The **OceanTools PT330** is a *rugged* and *compact* pan & tilt unit with optional absolute positional feedback and low backlash harmonic drives, designed for a wide range of subsea and underwater applications.



## Overview

The **PT330** may be controlled via RS232, RS485 or by switching  $\pm 24\text{VDC}$  onto each axis. In addition, the **PT330-FB** unit offers **absolute positional feedback** rather than relative positional feedback. Unlike other pan & tilt units, it remembers its pan & tilt positions – even after being powered down.

The units are manufactured using extremely high quality components including brushless DC motors, low backlash harmonic drives and heavy duty bearings on the output shaft.

Multiple units may be connected to a single RS485 twisted pair and a single 24VDC power supply.

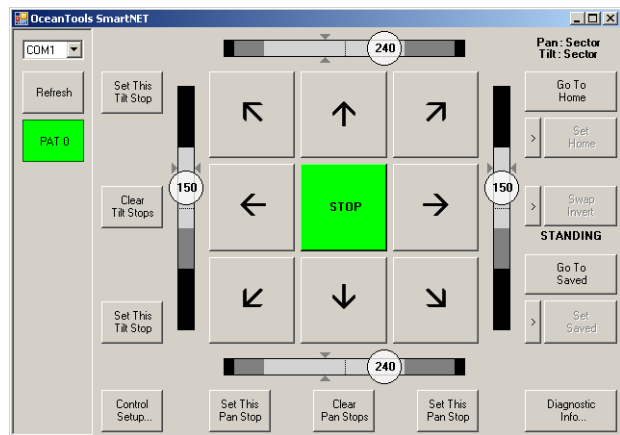
## Key Features

- 3000m rated, oil compensated, compact and rugged
- Movement in both axes simultaneously
- High accuracy  $1^\circ$  absolute positional feedback option
- Telemetry or voltage control

## Software Control

A simple-to-use graphical user interface is supplied free of charge with each **PT330** unit to allow remote control by Windows PC or laptop, using a keyboard or on-screen buttons

The **PT330-FB** also supports on-screen positional feedback, configurable end-stop limits and saved memory positions. Multiple pan & tilt units can be controlled from the same PC if required.



## Surface Interface Box

A **SIB** (Surface Interface Box) supplies DC power to one or more pan & tilt units, and also converts data from RS232 to RS485 and vice versa. Its connectors simplify the task of interfacing a PC's RS232 serial port to a network of RS485 devices, connected and powered over a single umbilical.



## Joystick Controller

**Cyclops** is a portable video control unit featuring a joystick to control pan & tilt movement and an integral positional feedback display. The pan & tilt unit can be sent directly to Home or Saved positions at the press of a button.

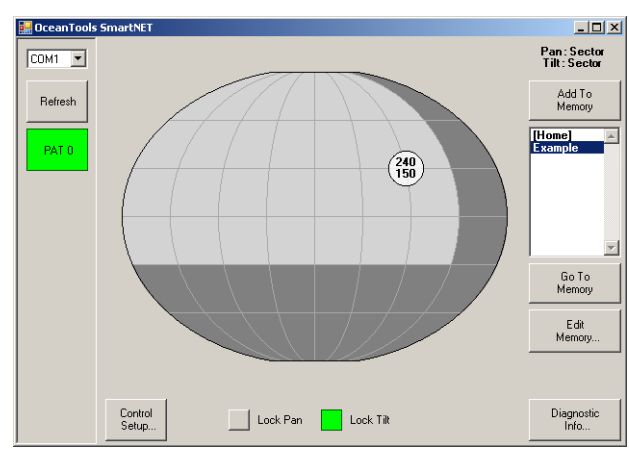
The controller supplies DC power to the pan & tilt and may also power subsea lights and a camera. Video from a connected camera can be fed over the same umbilical as the associated data and power, to a composite video output connector on the controller.



Specifications	
Pan range	330°
Tilt range	180°
Maximum output speed	5°/sec
Feedback resolution	1° (PT330-FB only)
Voltage input	24VDC
Maximum drive current, per axis	1.0A @ 24VDC
Quiescent current	60mA @ 24VDC
Safe working load	10kg
Output torque	up to 6Nm
Gear backlash	34 arcmin
Standard connector	MCBH8M

Dimensions	
Height	340mm
Width	280mm
Depth (excl connector)	100mm
Weight in air	7kg

Environmental	
Depth rating	3000m
Operating temperature	-20°C to +50°C
Housing material	Delrin and Stainless Steel



*Pan and tilt can be controlled by dragging an indicator bubble to the desired position, with a choice of forward spherical projection (above) or plan view (below).*

