SIDUS Solutions

SS109HT / SS110HT / SS120HT — Compact pan and tilt

Distributed by ROVITEC AS

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Manufacturer / system supplier: SIDUS Solutions

Document type: manufacturer specification

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Applies to the named models and revision only. Housing, interface and performance differences must follow the individual model tables. Source discrepancies are recorded on the ROVITEC product pages; request the approved specification before integration.

Original manufacturer source

https://www.sidus-solutions.com/wp-content/uploads/2025/12/SS109HT_SS110HT_SS120HT_Positioner_Family_Datasheet_2025.pdf

Manufacturer pages follow unchanged. Local distribution copy.

SIDUS

SS109HT / SS110HT / SS120HT ~ Subsea High Torque Positioner Assemblies

SIDUS Solutions' SS109HT, SS110HT, and SS120HT family of high torque, high performance positioners are designed for deepwater, subsea operations where strong currents, and harsh environmental conditions are extreme.



Item Description	Housing Material	Depth Rating
SS109HT	Hard Anodized Aluminum (Standard)	3000m, and 6000m
SS110HT	316L Stainless Steel	3000m, and 6000m
SS120HT	6AI4V Titanium	3000m, and 6000m

Features

- Torque:
  - 14 lbs / 18Nm each axis (24 VDC HT)
- Positional Accuracy: 0.1˚
- Rotation Speed: Up to 20˚ per second
- Scan Range: 360˚ both axis / 180˚ Tilt axis with Yoke
- Depth Rated: 30m (air), 3000m, and 6000m
- Reversible Synchronous Motors
- Low Backlash Harmonic Drives

ELECTRICAL SPECIFICATIONS:

Input Voltage	24 VDC, 24 VAC or 115 VAC
Maximum Drive Current	100mA – 900mA (24 VDC serial, speed dependent) 250mA (24 VDC analog) 750mA (24 VAC) 150mA (115 VAC)
Maximum Static Current	100mA – 1.2 A (24 VDC serial, customer selectable) 650mA (24 VDC analog) 350mA (24 VDC) 100mA (115 VAC)
Maximum Output Torque	**24 VDC** 14 ft lbs (18Nm) **24 AC & 115VAC** 10 ft lbs (13Nm)
Maximum Payload	50 lbs (23kg)
Output Speed	0.5˚ to 20˚ per sec
Position Feedback	12-bit resolution (Approx 0.1)
Communication	Analog, RS485, or RS232
Connector	Customer selectable, Subconn (Standard)

ENVIRONMENTAL SPECIFICATIONS:

Operating Depth (SS109HT)	30m Up to 3000m (9842 ft) Up to 6000m (20,000 ft)	Air Filled Standard Internal Compensator External Compensator
Temperature Range	Operating	-20˚ C ~ 50˚ C (-4˚ F to 122˚ F)
	Storage	-30˚ C ~ 60˚ C (-22˚ F to 140˚ F)
Housing Material	**SS109** Anodized 6061-T6 Aluminum (Standard) **SS110** 316 Stainless Steel **SS120** 6Al4V Titanium	
O-Ring Material	Buna	
Fastener Material	316 Stainless Steel	
Gears	Precision strain wave gearing	
Positional Accuracy/Backlash	<36 arc minutes (Approx 0.05)	
Dimensions	8.45 in x 6.64 in x 3.68 in (215mm x 169mm x 94mm)	
Weight In Air	**SS109HT:** 9.3 lbs (4.2kg) **SS110HT:** 19.3 lbs (8.7kg) **SS120HT:** 12 lbs (5.5kg)	
Weight In Water	**SS109HT:** 5.9 lbs (2.7kg) **SS110HT**: 13.7 lbs (6.2kg) **SS120HT:** 7 lbs (3.2kg)	
Pressure Compensator	Internal Diaphragm	
Position Limits	(optional) +/-175 ˚ Pan, +/-90 ˚ Tilt	



CONTROLS:

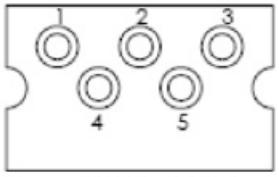
Recommended Controls	Laptop/PC with SIDUS Control Panel GUI Host device with Sidus serial commands Analog with feedback
Optional Controls	Optional integrated functions, Pelco-D Keyboard, mouse, or joystick control, digital feedback option
Control Methods	Laptop/PC with SIDUS Control Panel GUI with RS485 or RS232 to device Optional integrated functions, Pelco-D Keyboard, mouse, or joystick control Analog control with voltage feedback

CONNECTOR PINOUT:

PIN	Function
1	Ground
2	+24 VDC
3	N/C
4	D+
5	D-

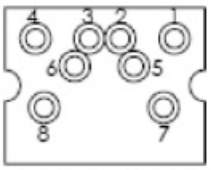
PIN	Function
1	Ground
2	Tilt CCW
3	Tilt CW
4	Pan CW
5	Pan CCW

PIN	Function
1	Ground
2	+24 VDC
3	Signal Ground
4	RX
5	TX



FAWL-5P-BC

PIN	Function	PIN	Function
1	Ground	5	Pan CCW
2	Tilt CCW	6	Tilt Feedback
3	Tilt CW	7	Pan Feedback
4	Pan CW	8	Not Connected



FAWM-8P-BC

DESIGN:

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