SIDUS Solutions

SS250 / SS251 / SS252 — Heavy duty pan and tilt

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Manufacturer / system supplier: SIDUS Solutions

Document type: manufacturer specification

Version 1.0 | August 22, 2025

Source checked: 16 September 2026

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/SS250_SS251_SS252_mkIII_Positioner_Family_Datasheet_2025.pdf

Manufacturer pages follow unchanged. Local distribution copy.

SIDUS

SS250 / SS251 / SS252mkIII ~ Subsea Positioner Assemblies



SIDUS Solutions' SS250, SS251, and SS252 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
SS250	Hard Anodized Aluminum (Standard)	3000m and 6000m
SS251	316L Stainless Steel	3000m and 6000m
SS252	6Al4V Titanium	3000m and 6000m

Features

- Maximum Output Torque: 65 ft lbs / 88 Nm each axis
- Maximum Payload: 150 lbs (68kg)
- Backlash/Positional Accuracy: <3 arc minutes (approx 0.05˚)
- Rotation Speed: 0.5˚ to 20˚ per second
- Depth Rated: 3000m, and 6000m
- Precision strain wave gearing
- Reversible Synchronous Motors
- Low Backlash Harmonic Drives

ELECTRICAL SPECIFICATIONS:

Input Voltage	20-30 VDC
Maximum Drive Current	300mA – 2.2 A (24 VDC serial, speed dependent @ nominal torque) 2.0 A (24 VDC analog)
Maximum Static Current	300mA – 1.2 A (24 VDC serial, customer selectable @ nominal torque) 1.0 A (24 VDC analog)
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	Up to 3000m (9843 ft)	Standard Internal Compensation
	Up to 6000m (20,000 ft)	With External Compensation
Temperature Range	Operating	-20˚ C ~ 50˚ C (-4˚ F to 122˚ F)
	Storage	-30˚ C ~ 60˚ C (-22˚ F to 140˚ F)
Housing Material	**SS250:** Anodized 6061-T6 Aluminum (Standard), other options available **SS251:** 316 Stainless Steel **SS252:** 6Al-4V Titanium	
O-Ring Material	Buna-N, Viton or other depending on fluid environment	
Fastener Material	316 Stainless Steel	

MECHANICAL SPECIFICATIONS:

Maximum Output Torque	65 ft lbs (88 Nm)
Maximum Payload	150 lbs (68kg)
Gears	Precision strain wave gearing
Positional Accuracy/Backlash	<3 arc minutes (approx 0.05˚)
Dimensions	11.5 in (292mm) x 9.7 in (246mm) x 5.1 in (137mm)
Weight In Air	**SS250:** 22.9 lbs (10.4kg) **SS251:** 44.0 lbs (20.0kg) **SS252:** 29.7 lbs (13.5kg)
Weight In Water	**SS250:** 13.5 lbs (6.1kg) **SS251**: 26.0 lbs (11.8kg) **SS252:** 17.6 lbs (8.0kg)
Pressure Compensator	Internal Diaphragm
Position Limits	(optional) +/-175 ˚ Pan, +/-90 ˚ Tilt



CONTROLS:

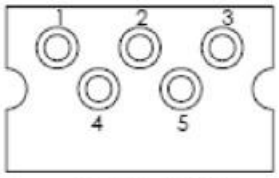
Recommended Controls	Laptop/PC with SIDUS Control Panel GUI Host device with Sidus serial commands Analog with feedback
Optional Controls	Optional integrated functions, Pelco-D Keyboard, mouse, or joystick control, digital feedback option
Control Methods	Laptop/PC with SIDUS Control Panel GUI with RS485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

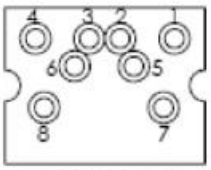
PIN	Function
1	Ground
2	Tilt CCW
3	Tilt CW
4	Pan CW
5	Pan CCW

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



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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

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