SIDUS Solutions

SS250MKV / SS251MKV / SS252MKV — TrueAxis absolute encoder positioners

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Manufacturer / system supplier: SIDUS Solutions

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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/2025/10/True_Axis_SS250MKV_Series_Absolute_Encoder_Positioner_2025-2.pdf

Manufacturer pages follow unchanged. Local distribution copy.

SIDUS

True Axis SS250MKV Series – Absolute Encoder Positioner

Precision. Power. Performance.

SIDUS' True Axis SS2250MKV series Absolute Encoder Positioner redefines remote positioning with its cutting-edge absolute encoder technology, engineered for extreme demanding environments across oil & gas, offshore, maritime, shipyard, research, and subsea robotics sectors. ***Pinpoint accuracy*** for critical tasks whether aligning sensors, cameras or heavy payloads. ***No homing routines.*** Upon power up, absolute position is there when you need it. Repeatability of position and integrated braking ensures maximum productivity.



Item Description	Housing Material	Depth Rating
True Axis SS250MKV	Hand Anodized Aluminum (Standard)	3000m and 6000m
True Axis SS251MKV	316L Stainless Steel	3000m and 6000m
True Axis SS252MKV	6Al4V Titanium	3000m and 6000m

Features

- Ultra-High Precision Movement
- Maximum Torque: 65 ft lbs / 88 Nm each axis
- Maximum Payload: 150 lbs (68kg)
- Field serviceable modular architecture simplifies maintenance
- Plug-and-Play Absolute Positioning – no calibration*. No homing routines.
- Integrated electrical braking system ensures secure holding and enhanced safety
- Remote configuration & control via serial connection (RS232 or RS 485), enables seamless integration into modern control systems
- Legacy-Compatible hardware upgrade supports legacy systems for upgrade configurations, (*inquire with sales - link to RMA for upgrade here*)

**Factory calibration is simple, no lengthy startup process*

ELECTRICAL

Input Voltage	20-30 VDC
Maximum Drive Current	0.3 - 2.0 A per axis at 50% torque
Maximum Static Current	~5 Amps per axis at max torque
Maximum Output Torque	65 ft lbs (88 Nm)
Maximum Payload	150 lbs (68kg)
Output Speed	0.5˚ to 20˚ per second
Position Feedback Type	Absolute Encoder (AE)
Position Feedback AE Resolution	0.01 degrees
'Go To' Position Accuracy	0.08 degrees
Serial Control	RS485 or RS232 2400-115.2k baud, 8 bit, no parity, 1 Stop bit
Time after the start-up message	150 µsecond
Connector	Customer selectable – Subconn 8 or 5 pin is standard

MECHANICAL

Fasteners	316 Stainless Steel or Titanium
Gears	Precision strain wave gearing
Positional Accuracy/Backlash	0.05˚
Scan Range	360˚ both axis, 180˚ Tilt axis with Yoke
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:** 49.8 lbs (22.6kg) **SS252:** 29.7 lbs (13.5kg)
Weight In Water	**SS250:** 13.5 lbs (6.1kg) **SS251**: 29.36 lbs (13.2kg) **SS252:** 17.6 lbs (8.0kg)
Pressure Compensator	Internal Diaphragm (standard)
Hard Stops	Pan +/-175 ˚, Tilt +/-90 ˚ (standard) or Customer Customizable

ENVIRONMENTAL

Operating Depth	30m (300 ft) Up to 3000m (9843 ft) Up to 6000m (20,000 ft)	Air Filled Oil filled, Standard Internal Compensation Oil filled, 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)
O-Ring Material	Buna-N, Viton or other depending on fluid environment	
Fastener Material	316 Stainless Steel or Titanium	