

## Overview Product Datasheet DS113

### Servotorq™ iBLDC Intelligent Drives

Models covered: Juno™, Titan™, Leto™ and Atlas™

Servotorq™ is an innovative range of intelligent Brushless Direct Current, (iBLDC) drives designed for the CCTV, video conferencing, broadcast TV and defence industries.



#### Key Features

- Unique family of solutions for direct drive
- Designed in the UK
- In-built intelligent control and drive electronics
- Fast, smooth and silent operation
- Outstanding positional repeatability
- Zero backlash
- Long life
- Low power

#### Description

Servotorq™ is an innovative range of brushless direct current, iBLDC motors designed by Overview Ltd. specifically for applications requiring the precise positioning of sensors such as cameras. There are currently four model variants in the product family – Juno, Titan, Leto and Atlas.

Titan was developed to drive the next generation of discrete surveillance domes and video conferencing cameras. Its small size, silent operation and outstanding positional accuracy make it ideal for video conferencing cameras and small PTZ surveillance cameras.

Leto provides twice the torque available from Titan whilst maintaining the same footprint and features. It has been developed for platforms with larger camera modules, i.e. 4k variants with their large lens assemblies, which require more torque than Titan and Juno can provide to move and control the heavier load accurately.

Juno is the latest addition to the iBLDC range. Designed to be a highly cost-effective solution where smooth, silent, reliable operation is essential but positional repeatability of 0.1° is adequate. Juno has a small footprint, similar to Titan and Leto, and has been created for use in video conferencing cameras, discrete surveillance products and other motion platforms. It is also perfect for many non surveillance applications and surveillance applications where short zoom lenses are used.

Atlas is a physically larger variant of the Titan design providing approximately 50 times more torque. It offers the same near silent, smooth, fast and accurate operation as Titan. Atlas is capable of moving much larger payloads such as dual head camera platforms, rugged camera enclosures with integrated illuminators and many other applications requiring a smooth, fast and highly accurate positioning platform.

The Servotorq™ architecture incorporates control and drive electronics into the motor itself, allowing users to integrate a high-performance positioning system into their product with a minimum of development effort. All four offerings share the same comprehensive control protocol, and simply require DC power and an I<sup>2</sup>C communications link for control data. Overview supplies tools and support for integrating and using the entire iBLDC drive family in a wide variety of custom applications.

Titan, Leto and Atlas drives are available in production quantities today. Juno will be available from early Q2 2018.

## Technical Summary – Servotorq™ iBLDC Drives

Product name	<u>Juno</u>	<u>Titan</u>	<u>Leto</u>	<u>Atlas</u>
<b>Electrical specifications</b>				
Nominal voltage	12V DC	12V DC	24V DC	48V DC
Current at max torque (at nominal voltage)	510mA	510mA	600mA	1.12A
Initialisation current	Load dependent	600mA	600mA	1.12A
Idle, no load, current	90mA	90mA	45mA	30mA
Position command and read-back resolution (deg)	0.1	0.0055		0.0055
Maximum speed (deg/s)	300	720		450
Min. non-zero speed (deg/s)	0.1	0.05		0.05
<b>Mechanical specifications</b>				
Weight	96g			1.2kg
Rotor moment of inertia	140gcm <sup>2</sup>			12Kgcm <sup>2</sup>
Stall torque	41mNm		90mNm	2.0Nm
Moving Torque (at 360°s <sup>-1</sup> )	36mNm		72mNm	1.7Nm
Perpendicularity (deg)	< +/-1	< +/-0.5		< +/-0.5
Maximum radial load	102N			550N
Maximum axial load	19N			550N
Bearing type	Deep groove ball bearing (shielded)			Deep groove ball bearing (sealed)
Rotation range	Software configurable for continuous or limited rotation range			
Index position	Limited rotation: configurable relative to customer mechanical fitted end-stop	Limited rotation: configurable, relative to mechanical end-stop Continuous rotation: configurable, relative to index sensor position		Configurable, relative to mechanical end-stop (limited rotation only) or index sensor position
Rotor and Stator mounting faces	Opposite sides of motor			Same side of motor
Hollow spindle bore internal diameter	8mm			18mm
<b>Environmental specifications</b>				
Operational temperature range	-20°C to +70°C			
Humidity range (standard operation)	Up to 95% (non-condensing)			

Note: Data sheet may change without notice.