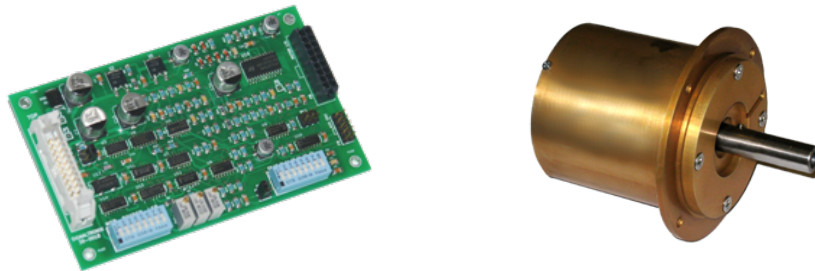


SSR2300 Scan Motor/Controller System

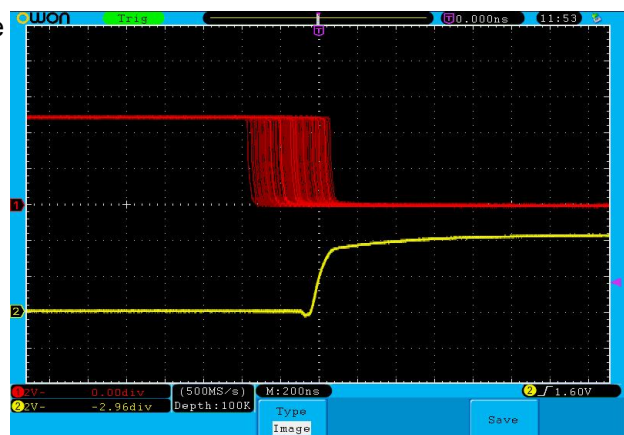
The SSR2300 Scan Motor/Controller family is designed to provide precise rotation of scan mirrors and active E/O payloads operating in the range of 30RPM to 4000RPM. Typical applications include laser leveling systems, laser based position measurement systems, line scan generation, and any optical system requiring precision constant velocity scanning.



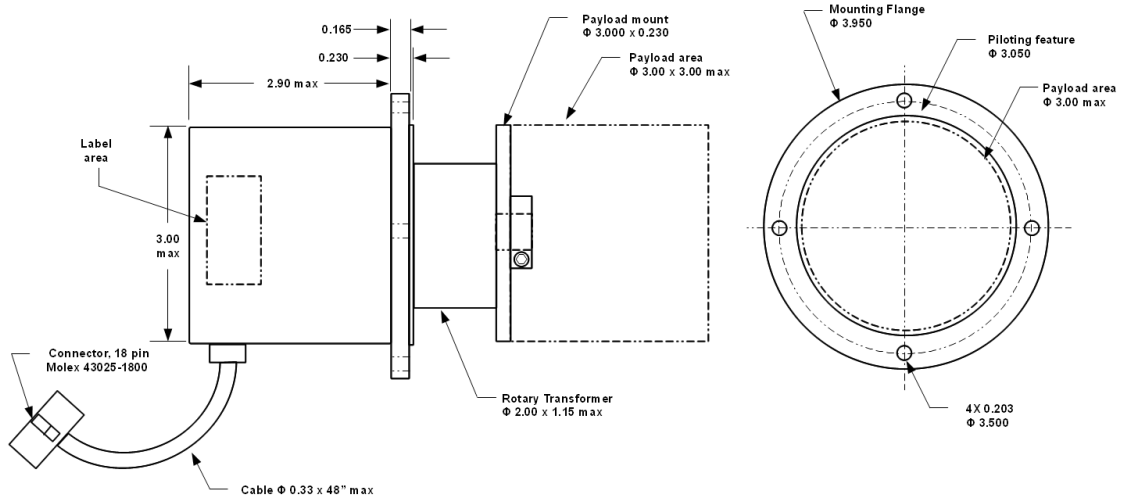
Features:

- Excellent speed stability: Speed jitter <math><0.005\%</math> (50PPM) @ 4KRPM, Std. Dev. of 100 revolutions.
- Cost effective solution for many scanning applications. (Optic or payload additional charge).
- Speed range: 30RPM to 4000RPM, bi-directional rotation.
- Rugged mechanical design & precision, long life ball bearings.
- Phase lock-loop speed control system, no long term speed error.
- Brushless DC motor with optical encoder feedback.
- Optical encoder outputs available. (A, B, and Index).
- Power requirement: 10VDC to 24VDC, 50W max power consumption.
- Rotary transformer option provides up to 2W to power active payloads.
- Accommodates payloads up to 24oz (680g) and 3" x 3" (76mm x 76mm) overall size.
- -25°C to +75°C operating temperature range.
- Custom configurations available to accommodate mounting, payload (optic), and control requirements.

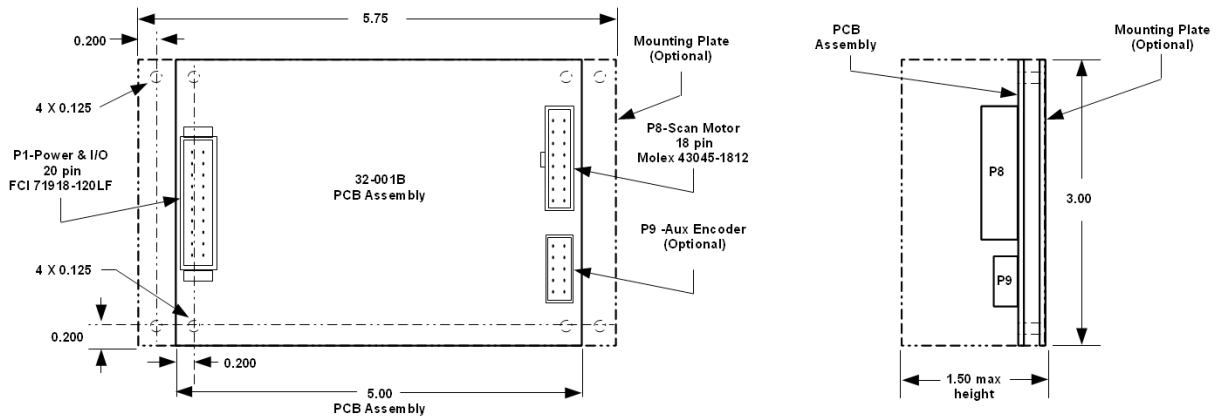
Typical speed jitter at 800RPM as indicated by the on-board encoder index output and measured against the reference generator signal is shown in the adjacent picture. The peak to peak random jitter in this case was observed to be 5.3 PPM (0.00053%).



Scan Motor SSR2300-102A



Controller/Driver 32-001B



Connector Pin Designation

Scan Motor Connector P8	Power and Control Connector P1	
Molex 43045-1812 Mate: 43025-1800	FCI 71918-120LF Mate: 71600-620LF	
J1-1 Motor Phase-A	J2-1 +24VDC Power Input (+12V to +28 range, 2.5A max.)	J2-11 Fault Output
J1-2 Motor Phase-B	J2-2 +24VDC Power Input (Internally connected to J2-1)	J2-12 Encoder Channel-A Output
J1-3 Motor Phase-C	J2-3 Reserved	J2-13 Encoder Channel-B Output
J1-4 Motor Shield	J2-4 Reserved	J2-14 Encoder Index Output
J1-5 Sensor Power (+5V)	J2-5 Power Return	J2-15 Signal Return
J1-6 Hall sensor power GND	J2-6 Power Return	J2-16 RT Excitation + (optional)
J1-7 Hall sensor H1 output	J2-7 Reserved	J2-17 RT Excitation - (optional)
J1-8 Hall sensor H2 output	J2-8 SREF, Input (HCTTL compatible, RPM = SREF/1250 x 60)	J2-18 Reserved
J1-9 Hall sensor H3 output	J2-9 RUN/STOP Input (+5V or open = RUN, 0V = STOP)	J2-19 RT Signal + (optional)
J1-10 Encoder Power (+5V)	J2-10 Signal Return	J2-20 RT Signal - (optional)
J1-11 RT Excitation + (optional)		
J1-12 RT Excitation - (optional)		
J1-13 RT Signal + (optional)		
J1-14 RT Signal - (optional)		
J1-15 Encoder Channel - A		
J1-16 Encoder Channel - B		
J1-17 Encoder Index		
J1-18 Encoder GND		

Typical Application

