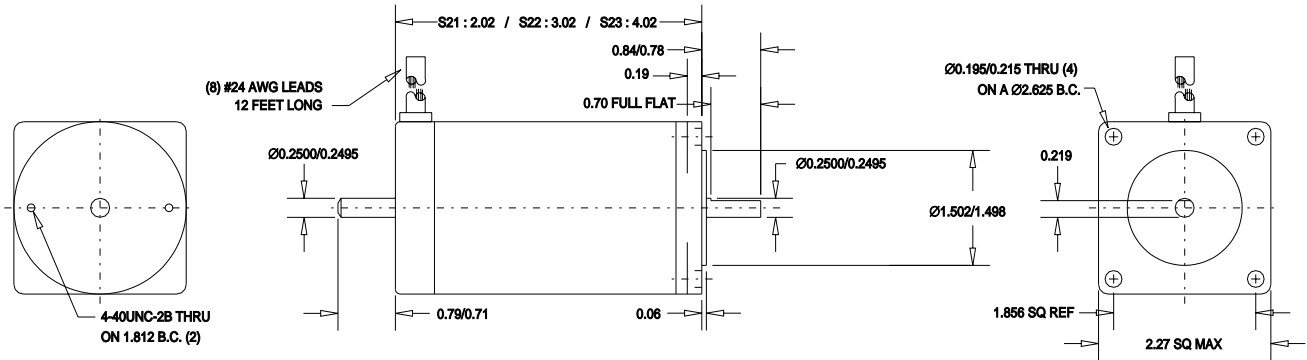




# S21/S22/S23 Hybrid Step Motor Specifications



## Electrical Data

		S21T (Series)	S21V (Parallel)	S22T (Series)	S22V (Parallel)	S23T (Series)	S23V (Parallel)
Continuous Stall Torque	oz-in [N-m]	65 [0.46]		100 [0.71]		125 [0.88]	
Recommended Current/Phase	Amps	1.2	2.4	1.5	3.0	1.75	3.5
Winding Resistance @ Ambient	Ohms	5.4	1.35	4.8	1.2	4.4	1.1
Inductance	mH	18	4.5	18	4.5	18	4.5
Max. Winding Temperature	°F [°C]	212 [100]		212 [100]		212 [100]	

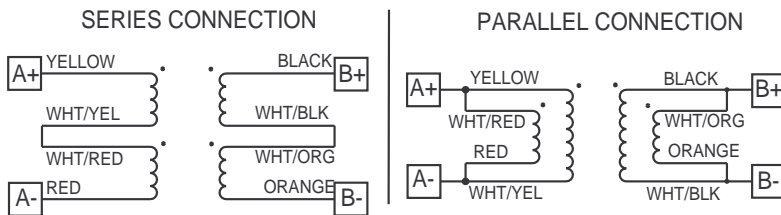
## Mechanical Data

		S21T (Series)	S21V (Parallel)	S22T (Series)	S22V (Parallel)	S23T (Series)	S23V (Parallel)
Rotor Inertia	oz-in-s <sup>2</sup> [kg-m <sup>2</sup> ]	1.66×10 <sup>-3</sup> [1.17×10 <sup>-5</sup> ]		3.31×10 <sup>-3</sup> [2.34×10 <sup>-5</sup> ]		4.97×10 <sup>-3</sup> [3.51×10 <sup>-5</sup> ]	
Axial Shaft Load	lbs [N]	25 [111]		25 [111]		25 [111]	
Radial Shaft Load - @ 0.5"	lbs [N]	5.6 [25]		5.6 [25]		5.6 [25]	
Motor Weight	lbs [kg]	1.6 [0.73]		2.4 [1.1]		3.2 [1.5]	
Step Angle (full step)	degrees	1.8		1.8		1.8	

- Notes**
- Parallel (V) Wiring: 60% Duty Cycle Max. Above 5 rps (300 rpm).
  - Always use at least 50% torque safety margin when applying step motors.

## Motor Wiring

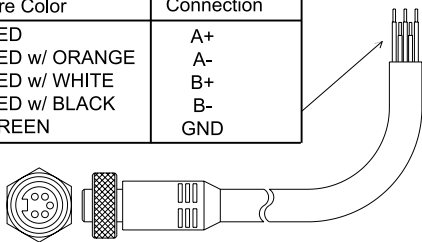
### 12 ft [3.7m] Wire Leads - Models S21N / S22N / S23N



### Quick-Disconnect - Models S21(T/V) / S22(T/V) / S23(T/V)

(Available with NS23T/V and R2S23T/V actuators only)

Quick Disconnect Wire Color	Drive Connection
RED	A+
RED w/ ORANGE	A-
RED w/ WHITE	B+
RED w/ BLACK	B-
GREEN	GND



## S6000 Drive Settings

### S21T (Series)

Motor Current	Inductance
1.2 Amps	16 <sup>+</sup> mH
Tenths of Amps	

### S21V (Parallel)

Motor Current	Inductance
2.4 Amps	4 <sup>+</sup> mH
Tenths of Amps	

### S22T (Series)

Motor Current	Inductance
1.5 Amps	16 <sup>+</sup> mH
Tenths of Amps	

### S22V (Parallel)

Motor Current	Inductance
3.0 Amps	4 <sup>+</sup> mH
Tenths of Amps	

### S23T (Series)

Motor Current	Inductance
1.7 <sup>+</sup> Amps	16 <sup>+</sup> mH
Tenths of Amps	

### S23V (Parallel)

Motor Current	Inductance
3.5 Amps	4 <sup>+</sup> mH
Tenths of Amps	