

### Product Data Sheet

Similar to our Light Duty line of actuators but with the benefit of higher IP ratings for more demanding applications.



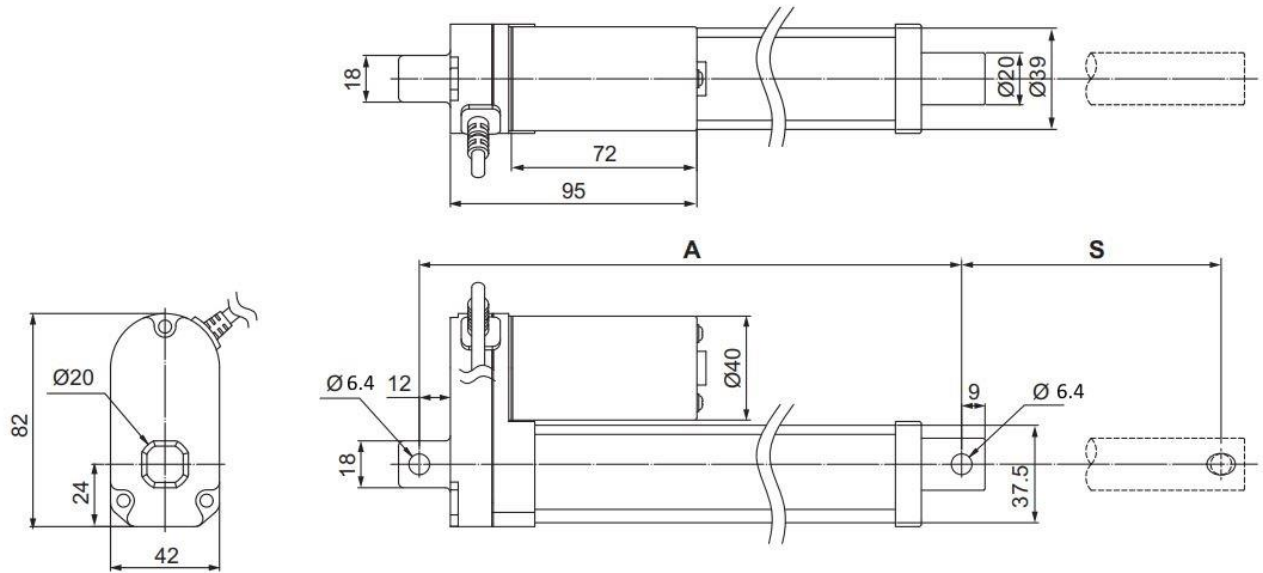
### Standard Features:

- Compact design
- All aluminum frame and extension tube
- Input voltage: 12VDC, 24VDC
- Nominal stroke lengths: 2" [50mm], 4" [100mm], 6" [150mm], 8" [200mm], 10" [250mm], 12" [300mm]
- Standard gear ratio: 20:1 [other ratios available]
- Dynamic load range: 34 lbs. [150 Newtons] –to- 225 lbs. [1000 Newtons]
- Maximum current draw: 2.4 Amps @ 12 VDC
- Typical speed at no load: 0.29 in/sec [7.3 mm/sec] –to- 1.79 in/sec [45.5 mm/sec]
- Typical speed at full load: 0.18 in/sec [4.6 mm/sec] –to- 1.21 in/sec [30.8 mm/sec]
- Standard preset limit switches at both ends of stroke
- Mounting hole diameter (both ends): 1/4" [6.4mm]
- Typical lead wire length: 35" [900mm]
- Duty cycle: 20%, maximum 2 minutes continuous operation in 18 minutes
- Working temperature: -13F [-25C] -to- +149F [+65C]
- Noise level: ≤60dB
- IP rating: IP69K
- Certified: CE Marking, Electromagnetic Compatibility Directive 2014/30/EU

### Accessories:

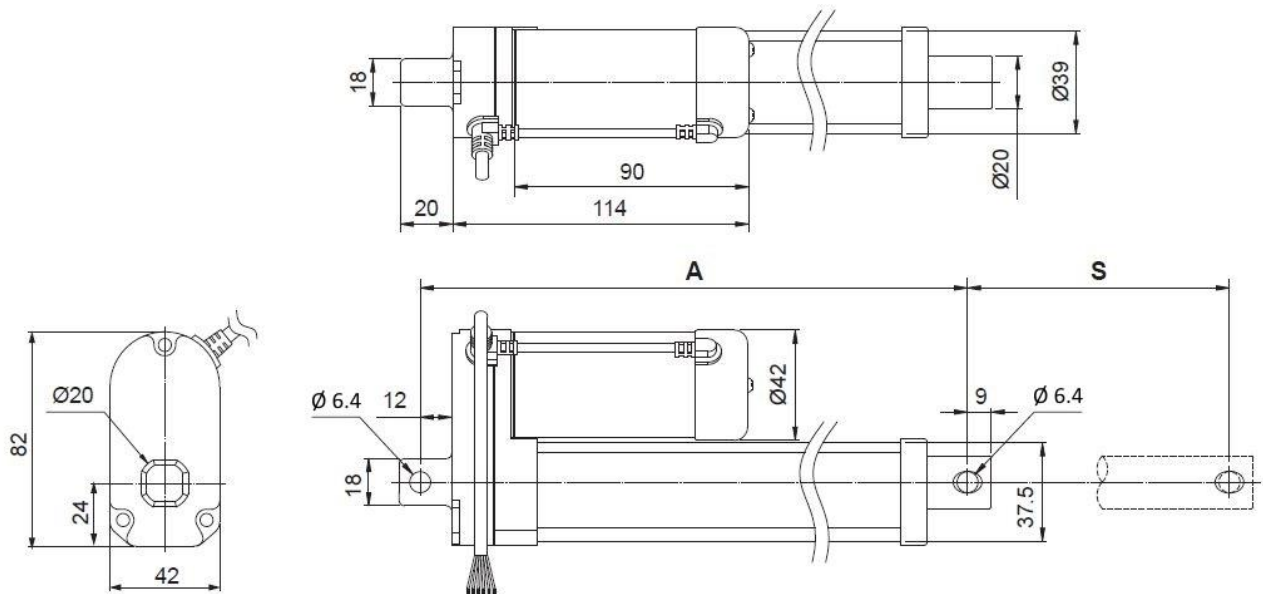
- Mounting brackets
- Direction reversing switches
- Wired and wireless controllers
- Direction reversing relays

### Dimensions – Standard (Without Hall Effects or Potentiometer)



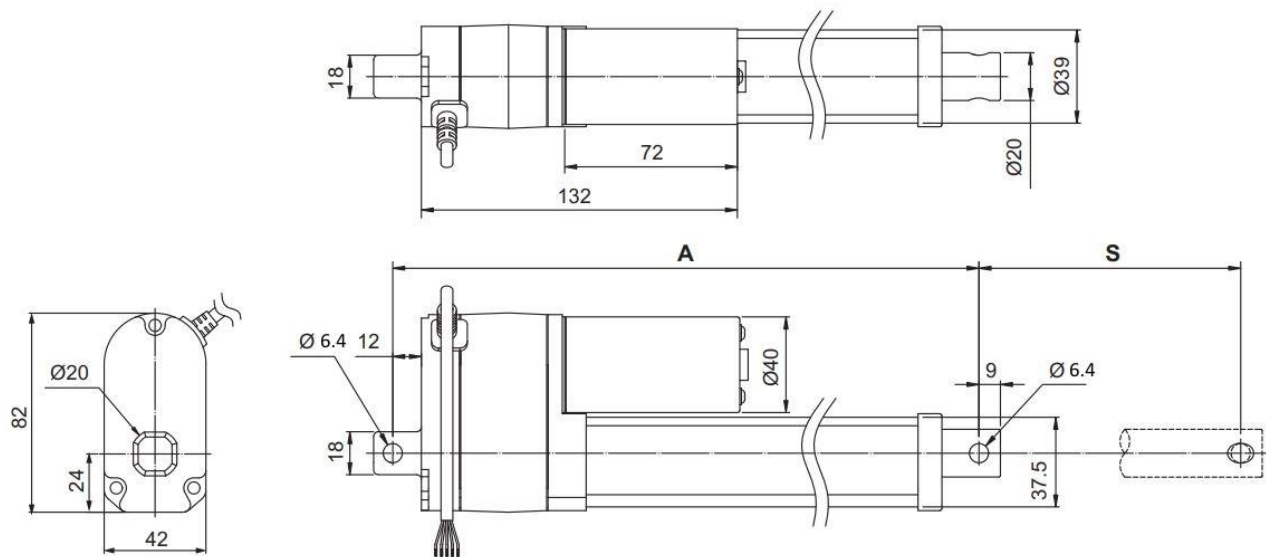
Nominal Stroke	2"		4"		6"		8"		10"		12"	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
Actual Stroke	1.97	50	3.94	100	5.91	150	7.87	200	9.84	250	11.81	300
Retracted Length (A)	6.22	158	8.23	209	10.24	260	12.24	311	14.25	362	16.26	413
Extended Length (B)	8.19	208	12.17	309	16.14	410	20.12	511	24.09	612	28.07	713

### Dimensions – With Hall Effect Sensors



Nominal Stroke	2"		4"		6"		8"		10"		12"	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
Actual Stroke	1.97	50	3.94	100	5.91	150	7.87	200	9.84	250	11.81	300
Retracted Length (A)	6.22	158	8.23	209	10.24	260	12.24	311	14.25	362	16.26	413
Extended Length (B)	8.19	208	12.17	309	16.14	410	20.12	511	24.09	612	28.07	713

### Dimensions – With Potentiometer

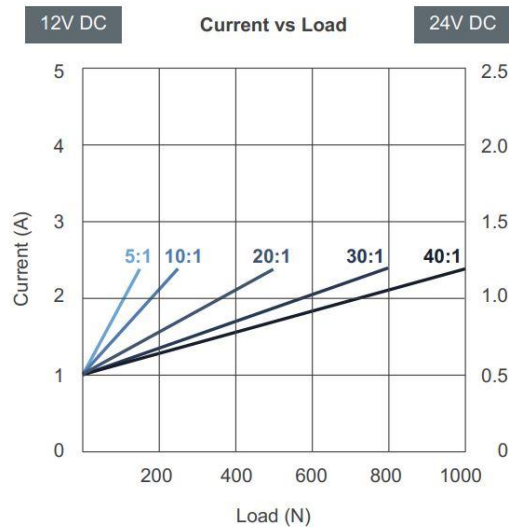
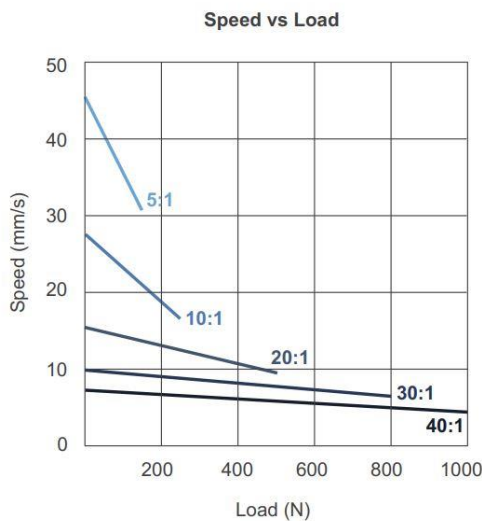


Nominal Stroke	2"		4"		6"		8"		10"		12"	
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm
Actual Stroke	1.97	50	3.94	100	5.91	150	7.87	200	9.84	250	11.81	300
Retracted Length (A)	7.68	195	9.69	246	11.69	297	13.70	348	15.71	399	17.72	450
Extended Length (B)	9.65	245	13.62	346	17.60	447	21.57	548	25.55	649	29.53	750

**Performance Data**

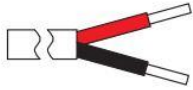
Gear Ratio	Max Load/Dynamic		Self-Locking Ability		Speed/No Load		Speed/Max Load	
	Lbs. [US]	Newtons	Lbs. [US]	Newtons	inches/sec	mm/sec	inches/sec	mm/sec
5:1	34	150	56	250	1.79	45.5	1.21	30.8
10:1	56	250	76	340	1.09	27.7	0.66	16.8
20:1	112	500	153	680	0.61	15.6	0.37	9.5
30:1	180	800	229	1020	0.39	9.9	0.25	6.3
40:1	225	1000	344	1530	0.29	7.3	0.18	4.6

Gear Ratio	Current (A)			
	No Load		Full Load	
	12 VDC	24 VDC	12 VDC	24 VDC
5:1	1.0	0.5	2.4	1.2
10:1	1.0	0.5	2.4	1.2
20:1	1.0	0.5	2.4	1.2
30:1	1.0	0.5	2.4	1.2
40:1	1.0	0.5	2.4	1.2



## Wiring

### Standard



Power	
Red	Black
M +	M -

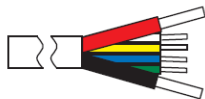
### With Hall Effect Sensor x 1



Power		Signal		
Red	Black	White	Yellow	Blue
M +	M -	GND	VCC	Data 1

Gear Ratio	Signal Resolution	
	Pulses/in	Pulses/mm
5:1	57.66	2.27
10:1	91.94	3.62
20:1	174.24	6.86
30:1	268.48	10.57
40:1	362.46	14.27

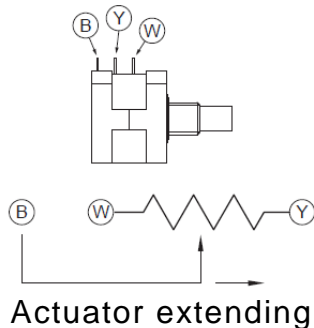
### With Hall Effect Sensor x 2



Power		Signal			
Red	Black	White	Yellow	Blue	Green
M +	M -	GND	VCC	Data 1	Data 2

Gear Ratio	Signal Resolution	
	Pulses/in	Pulses/mm
5:1	57.66	2.27
10:1	91.94	3.62
20:1	174.24	6.86
30:1	268.48	10.57
40:1	362.46	14.27

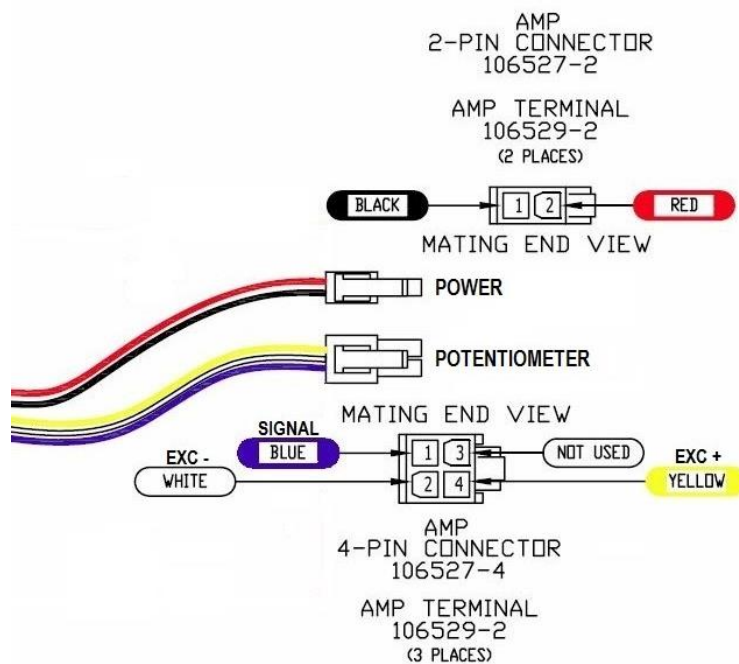
### With Potentiometer (PTO)



When fully retracted, the potentiometer reading will be in the range of 0 - 600Ω (between the blue and the white wires).

When fully extended, the potentiometer reading will be in the range of 8K - 10KΩ (between the blue and the white wires).

### Potentiometer Connector Wiring

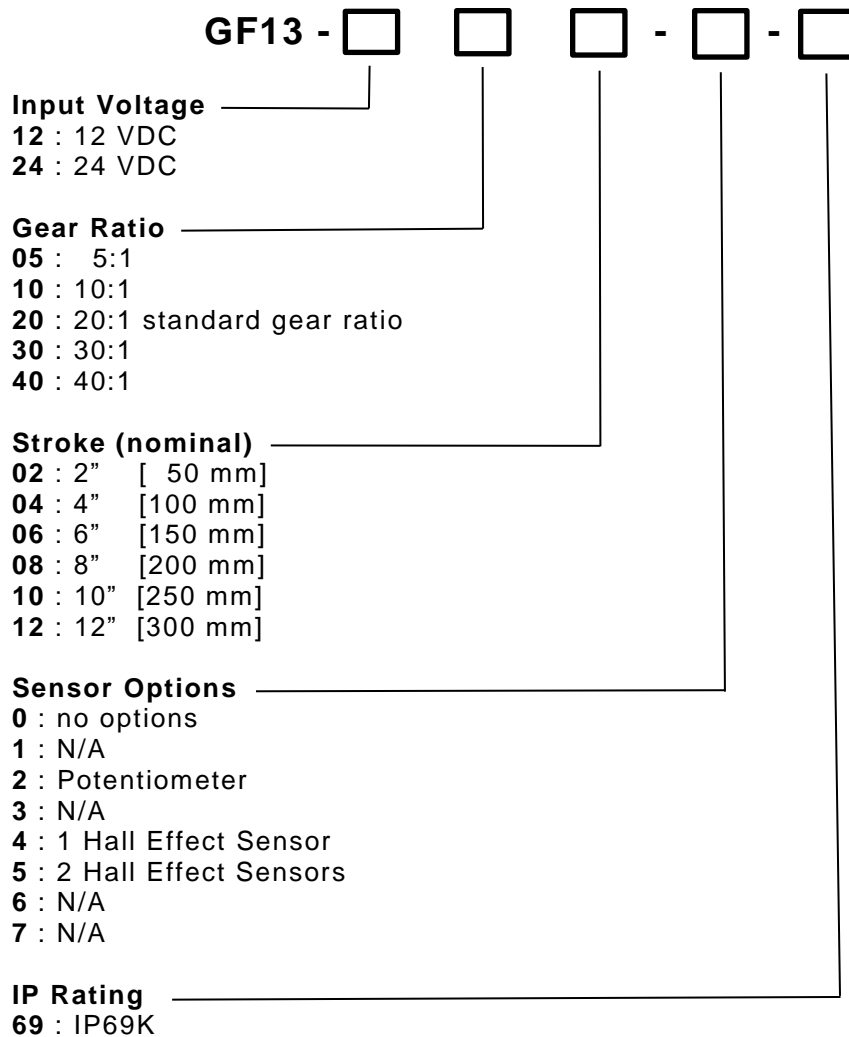


### Certifications

The GF13 actuator is compliant with the following regulations, in terms of the essential conformity requirements of EMC Directive of 2014/30/EU.

Emission	Immunity
EN 55014-1:2006+A1:2009+A2:2011	EN 55014-2:1997+A1:2001+A2+:2008 Category I

### Ordering Key



- Not all combinations stocked

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