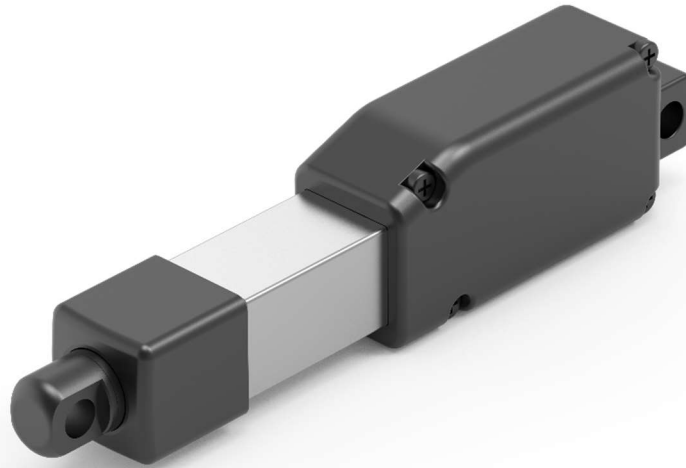


## Product Data Sheet

The GF01 Series of linear actuators are Micro-sized, with an in-line body profile. Applications include Industrial Automation, Mechanical Controls, Robotics, Hobbyist Projects, etc.

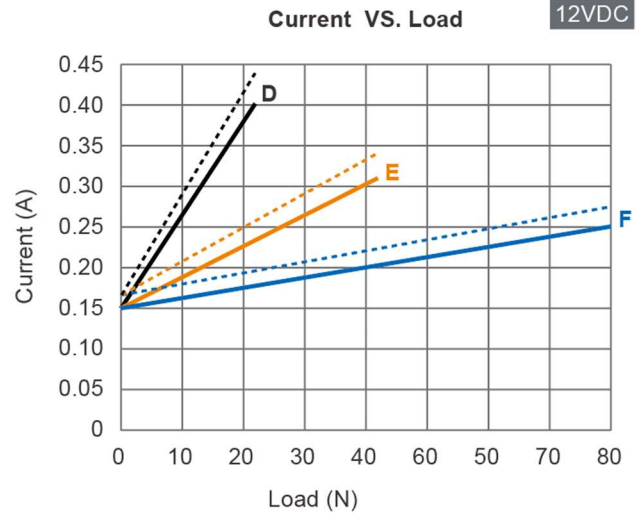
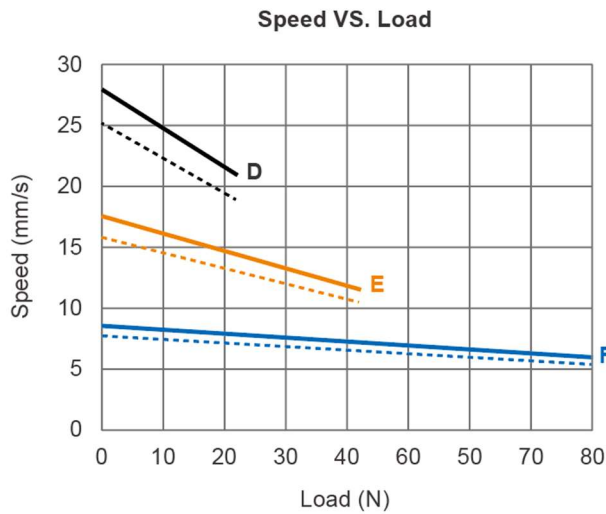


### Standard Features

- Input voltage: 12VDC
- Max. load: 80N (Push/Pull)
- Max. static load: 40N
- Max. speed at no load: 28.0mm/sec (Typical value)
- Speed at max load: 6.0mm/sec (Typical value @ 80N Load)
- Stroke: 10 / 30 / 50 / 100mm
- Noise level:  $\leq 55$ dB
- IP level: IP66 / IP69K (Static; non-action)
- Preset limit switches deenergize actuator at both ends of stroke
- Position feedback potentiometer (Optional – in lieu of limit switches)
- Material: Aluminum extension and inner tube, plastic case.
- Duty cycle: 20%
- Operating ambient temperature:  $-10^{\circ}\text{C} \sim +50^{\circ}\text{C}$

### Performance Data

Gear Ratio	Maximum Load (Push or Pull)	Typical Speed (mm/s)		Typical Current (A)	
		No load	Full load	No load	Full load
(D) 50:1	22 N / 4.9 lbs.	28.0	21.0	0.15	0.40
(E) 100:1	42 N / 9.4 lbs.	17.6	11.6	0.15	0.31
(F) 210:1	80 N / 18.0 lbs.	8.6	6.0	0.15	0.25

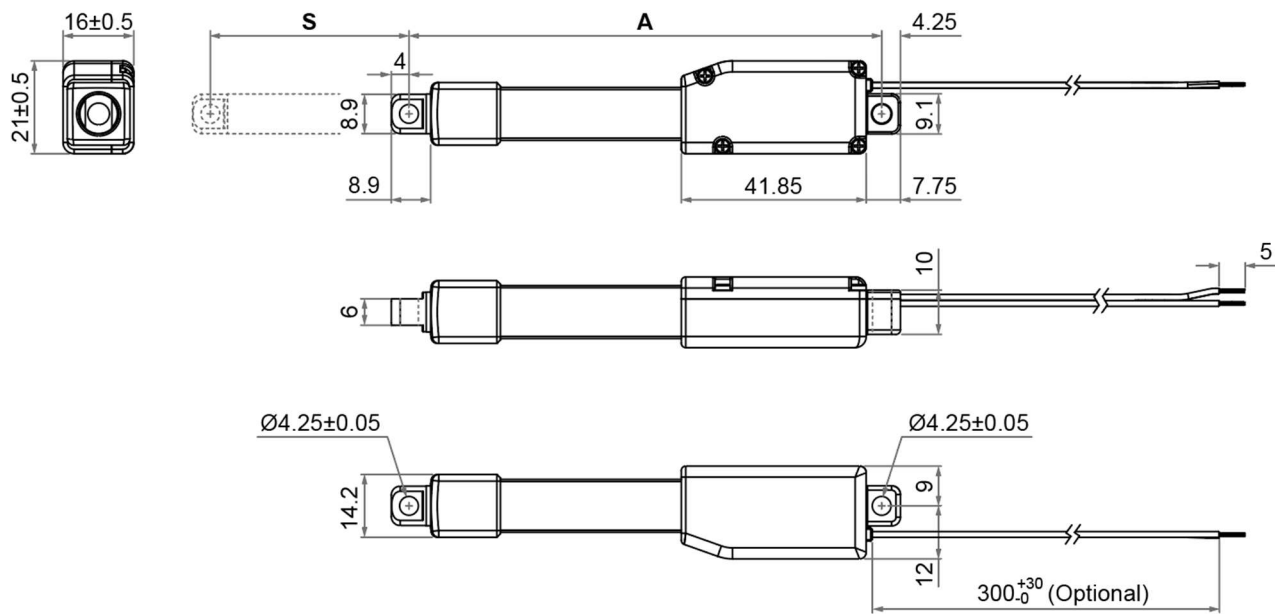


— Typical speed     - - - Min. speed

— Typical current     - - - Max. current

### Dimensions

Model / Stroke:	10mm	30mm	50mm	100mm
Stroke Length (S)	10mm / 0.39"	30mm / 1.18"	50mm / 1.97"	100mm / 3.94"
Retracted Length (A)	67mm / 2.64"	87mm / 3.43"	107mm / 4.21"	157mm / 6.18"
Extended Length (S+A)	77mm / 3.03"	117mm / 4.61"	157mm / 6.18"	257mm / 10.12"



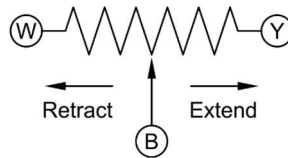
Unit: mm

**Wiring**

Wire Group	Wire Color	Description
Power Input (Motor)	Red	Connect Red to "Vdc +" and Black to "Vdc -" to extend the actuator.
	Black	Connect Black to "Vdc +" and Red to "Vdc -" to retract the actuator.
Potentiometer Feedback (Optional)	Yellow	Connect to any stable High reference voltage (<30V)
	Blue	Position output signal (Potentiometer wiper)
	White	Connect to any stable Low reference voltage (Ground)

**Potentiometer Specifications**

- The Wiper (BLUE) moves from (WHITE) toward (YELLOW) as the actuator extends.



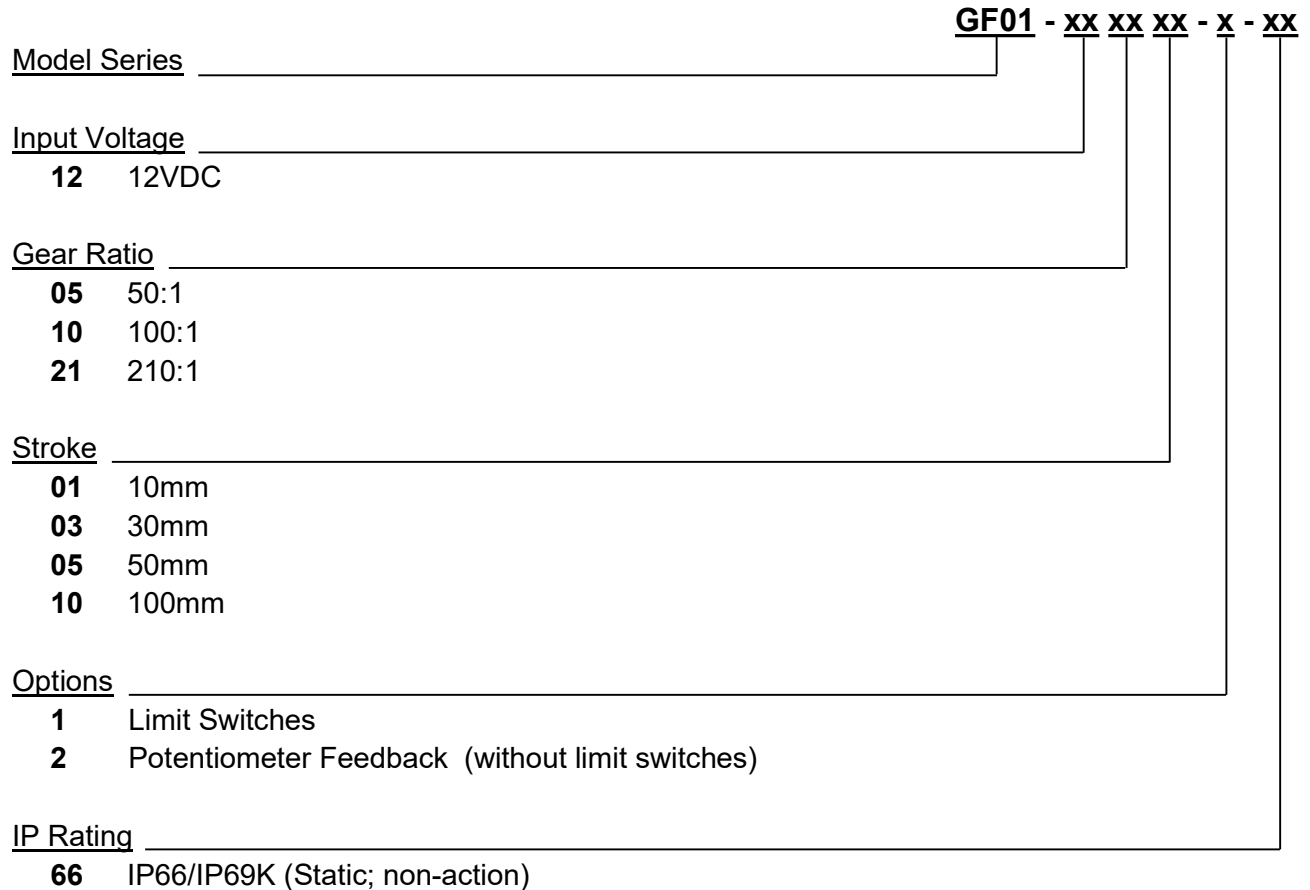
Potentiometer Values, Approximate (Measured between WHITE and BLUE wires)				
Model	$\Omega$ / mm of Travel	Retracted ( $\Omega$ )	Extended ( $\Omega$ )	Tolerance
30mm Stroke	91.0	566	3,296	$\pm 20\%$
50mm Stroke	93.3	197	4,862	$\pm 20\%$
100mm Stroke	113.9	0.4	11,390	$\pm 40\%$

**Note:** The potentiometer option is not available for the 10mm Stroke model.

**Warning**

GF01 actuators with the Potentiometer option **do not** contain internal limit switches to automatically deenergize the motor at either end of stroke. **The actuator may be damaged if run into either physical end of stroke.** Extreme care must be taken, and/or controls implemented to prevent this from occurring.

**Ordering Key**



**Notes:**

1. Some combinations may not be available.
2. The potentiometer option is not available for the 10mm Stroke model.

**Terms of Use**

Determination of product suitability for a specific application is the responsibility of the user. Due to continuing product improvements, all products are subject to change without prior notice. Concentric International reserves the right to discontinue the sale of any product at any time.