

Linear actuator DSZY3-POT (Potentiometer)

DSZY3 electric linear actuators are required in a wide variety of applications. Therefore, it is available in six models:

1. DSZY3-STD (Standard)
(for all applications without position feedback)
2. **DSZY3-POT**
(with potentiometer for absolute position feedback)
3. DSZY3-HS2
(with 2-channel Hall sensor for incremental position feedback)
4. DSZY3-LT
(with integrated, adjustable limit switches)
5. DSZY3-LT-POT
6. DSZY3-LT-HS2

Equipped with a ball screw spindle (Ball screw), it is a durable and robust DC linear drive, thus achieving high self-locking. In addition, mechanical overload protection has been integrated.

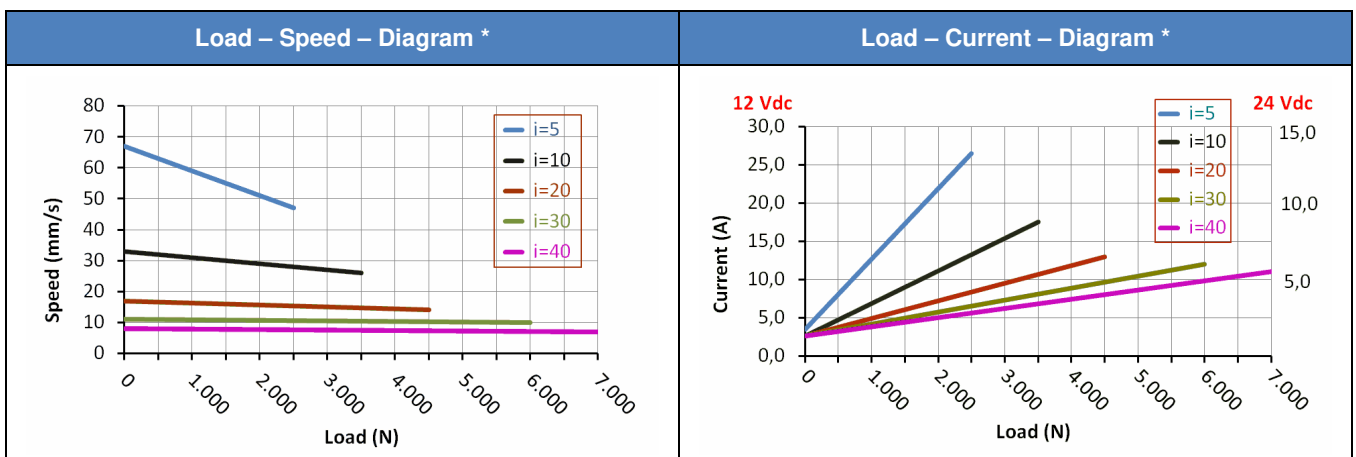


Type code (all options can be combined)

DSZY3	-	12	-	10	-	203	-	POT	-	IP65
Type		Input voltage		Gear reduction i		Stroke		Model		IP Code
		12 Vdc		05		102 mm		POT: Potentiometer		
		24 Vdc		10		153 mm		(without limit switches,		
				20		203 mm		with position feedback)		
				30		254 mm				
				40		305 mm				
						457 mm				
						610 mm				

Performance data: Load – Speed – Current

Gear reduction i	Dynamic load (N)	Static load (N)	Typical speed * (mm/s)		Typical current * (A)			
			minimum load	maximum load	minimum load		maximum load	
					12 Vdc	24 Vdc	12 Vdc	24 Vdc
5	2,500	approx. 5,000	67.1	47.2	3.4	2.6	26.4	13.2
10	3,500	approx. 6,000	33.5	26.7	2.6	1.6	17.6	8.8
20	4,500	approx. 8,000	16.8	14.3	2.6	1.6	13.2	6.6
30	6,000	approx. 11,000	11.2	9.8	2.6	1.6	12.1	6.1
40	7,000	13,600	8.4	7.4	2.6	1.6	11.0	5.5



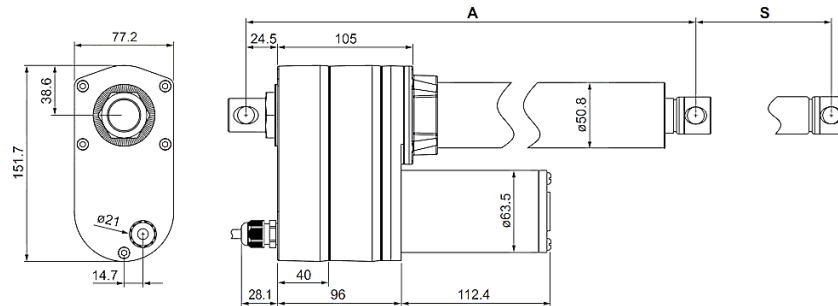
(*) Average values

Additional technical specifications

- Thrust and tensile load up to 7,000 N
- Static load up to 13,600 N (at $i=40$)
- Working temperature -25 C° to $+65\text{ C}^\circ$
- Duty cycle 25 % (2 min continuous operation – 6 min pause)
- Zinc alloy casing
- **Stainless steel** piston rod
- IP Code IP65 for all models (in idle state)
- CE - EMV 2014/30/EU (EN 61000-6-3:2007+A1:2011)
- EN -61000-6-1:2007
- IEC 61000-4-2:2008
- IEC 61000-4-3:2006+A1:2007+A2:2100
- IEC 61000-4-8:2009

Dimensions

Dimensions (length) in mm (Tolerance ± 5 mm)							
Stroke (S) ± 3 mm	102	153	203	254	305	457	610
(A) retracted	342	393	444	495	546	775	928
(A+S) extended	444	546	647	749	851	1,232	1,538



Weight

Stroke in mm	Type	102	153	203	254	305	457	610
Weight in kg (incl. packing) approx.	POT			6.0				

Pin assignment

Gear reduction i	05 – 10 – 20 – 30 – 40
Red	Red wire to Vdc „+“ and black wire to Vdc „-“:
Black	Piston rod extends

Potentiometer

Power		Potentiometer (10 kOhm)		
Red	Black	White	Yellow	Blue
		GND	Vcc	Data

Stroke (mm)	102	153	203	254	305	457	610
Resistor value (kOhm) Tolerance: ± 0.3 k Ω	0.3 - 8.1	0.3 - 8.7	0.3 - 9.2	0.3 - 7.4	0.3 - 8.8	0.3 - 9.4	0.3 - 9.9

Potentiometer: 10 kOhm at 10 turns - Total resistance tolerance: $\pm 5\%$ - Vcc max. 70 Vdc

Front and rear connector

Rear connector all Types	Font connector (piston rod) POT, HS2, LT, LT-POT, LT-HS2

Fastening to the gearbox cover

Note: As an example in 0° orientation

The mounting holes on the piston rod and on the gearbox cover are designed in the 0° orientation as standard. Optionally, a different angle (see picture) can be selected for the gearbox cover and piston rod. The angle between the selectable stages is 30° in each case.

Option C1 to C5 is appended to the type code: DSZY3.....-C34
The 1st number stands for the gearbox cover. The 2nd number stands for the piston rod.

Mounting material

Clamp DSZY2/3/5/6/8-H01	Mounting bracket DSZY2/3/5/6/8-H02

Installation instructions

Please note the correct supply voltage as indicated on the electric linear actuator. It must be ensured that the load is not greater than shown in the diagram. To protect against overload, the voltage must be switched off when the maximum current is reached. This can be read in the diagram depending on the selected reduction ratio.

The piston rod is secured against rotation.

In an emergency, the linear actuator is protected by a mechanical overload clutch. The response of this clutch is expressed in a loud rattling tone.

CAUTION: The overload coupling is not designed for continuous use. Instead, it is intended for emergencies, for example, if current monitoring fails. The use of external limit switches is therefore strongly recommended in the standard model.

CAUTION: Please observe the correct wiring for the retraction or extension (see pin assignment in the data sheet).

The load should always be centered in the direction of movement. Transverse forces must be avoided. They always shorten the service life and can impede the function or even destroy the device in extreme cases.

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