Linear actuator DSZY13-LT-POT-ER2

DSZY13 electric linear actuators are required in a wide variety of applications. Therefore, it is available in three models:

1. DSZY13-LT-ER2
   (with internal limit switches and external, adjustable limit switches)
2. DSZY13-LT-HS-ER2
   (additionally with Hall sensor for incremental position feedback)
3. **DSZY13-LT-POT-ER2**
   (additionally with potentiometer for absolute position feedback)

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. All models contain internal limit switches as well as external quick and easy adjustable limit switches (reed sensors).

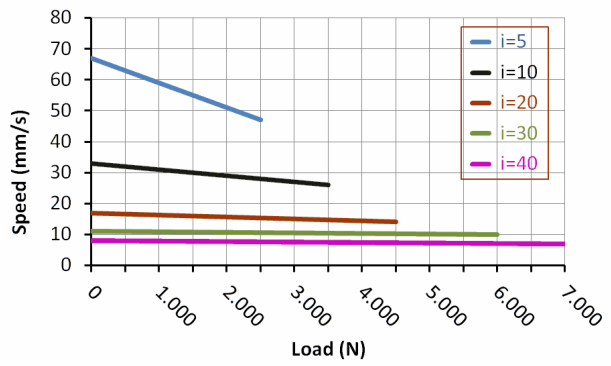
Type code (all options can be combined)

DSZY13 -	12 -	10 -	200 -	LT-POT -	ER2-NC	-	IP66
Type	**Input Voltage**	**Gear reduction i**	**Stroke**	**Model**	**External limit switches**		**IP Code**
	12 Vdc 24 Vdc	05 10 20 30 40	100 mm 150 mm 200 mm 300 mm 450 mm 600 mm	LT-POT: integrated limit switches and potentiometer for absolute position feedback	- ER2-NC (normaly close) - ER2 – NO (normaly open)		optionally: IP69K

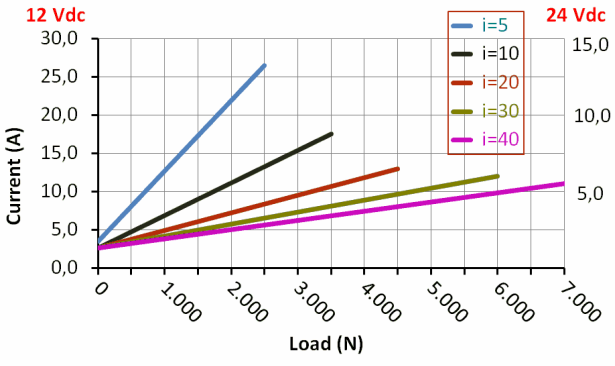
Performance data: Load – Speed – Current

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	8.6
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

Load – Speed – Diagram *



Load – Current – Diagram *



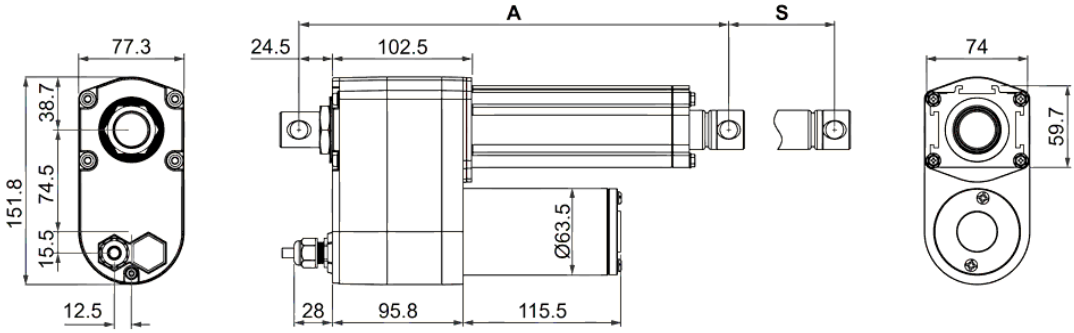
(*) Average values

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 C°
- 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) - optionally: IP69K
- Mechanical overload clutch
- CE - EMV 2014/30/EU
- EN - 55014-1:2017
- EN - 55014-2:2015

Dimensions

Dimensions (length) in mm (Tolerance ± 5 mm)						
Stroke (S)	100	150	200	300	450	600
(A) retracted	415	465	515	665	815	965
(B) extended	515	615	715	965	1,265	1,565



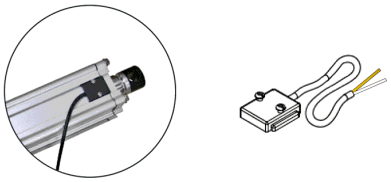
Weight

Stroke in mm	Type	100	150	200	300	450	600
Weight in kg (incl. packing) approx.	LT-ER2			5.8			

Pin assignment

Gear reduction i	5 – 10 – 20 – 30 – 40
Red	Red wire to Vdc „+“ and black wire to Vdc „-“: Pistoon rod extends
Black	

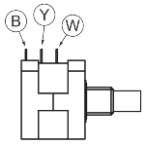
External limit switches ER2 (reed sensors)

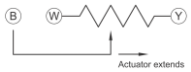


Please indicate the desired option:

ER2-NC (Normaly close)
ER2-NO (Normaly open)

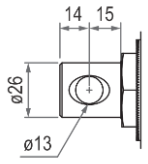
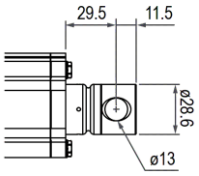
Potentiometer

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

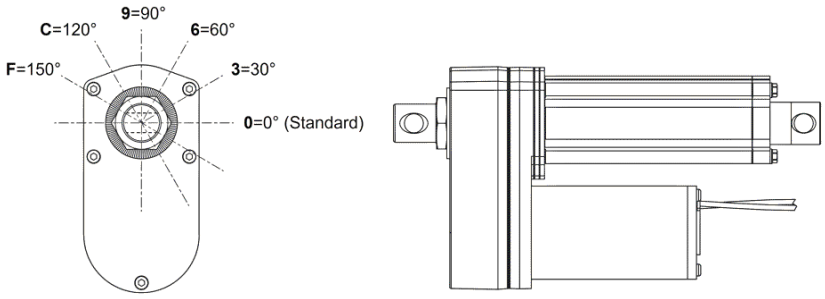
Stroke (mm)	100	150	200	300	450	600	
Resistor value (kOhm)	0.3 - 8.0	0.3 - 8.5	0.3 - 9.1	0.3 - 8.6	0.3 - 9.2	0.3 - 9.8	

Potentiometer: 10 kOhm at 10 turns - Total resistance tolerance: ±5 % - Vcc max. 70 Vdc
The voltage increases linearly when extending and decreases linearly when retracting.

Front and rear connector

Rear connector all Types	Front connector LT
	

Rear connector (Fastening to the gearbox cover)



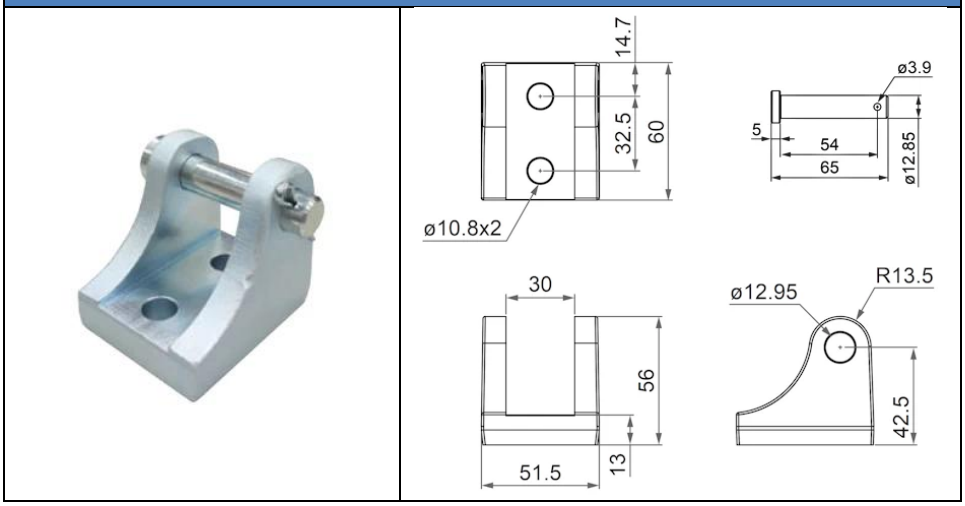
Note: As an example in 0° orientation

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 0 to F is appended to the type code: e.g. DSZY13...-F**6**
The 1st number/letter stands for the gearbox cover. The 2nd number/letter stands for the piston rod.

Mounting material

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.

MSW Motion Control GmbH

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MSW Motion Control GmbH
Vertriebsgesellschaft
Schloßstr. 32/34, 33824 Werther (Westf.)
Germany

anfrage@msw-motion.de
www.msw-motion.de
Phone: +49 (0)5203 919200