

Linear actuator DSZY4-POT (Potentiometer)

The electric linear actuator DSZY4 is suitable for a variety of positioning tasks. It is available in three different models depending on the desired application:

1. DSZY4-STD (Standard)
(standard for all applications without position feedback)
2. **DSZY4-POT**
(with potentiometer for absolute position feedback)
3. DSZY4-HS2
(with 2-channel Hall sensor for incremental position feedback)

Equipped with a trapezoidal screw spindle (ACME screw), these are small, compact and lightweight DC linear drives. By means of an integrated diode circuit, the direction is reversed quickly by simple voltage reversal of the DC motor. As a standard, all DSZY4 types have two integrated, non-adjustable limit switches directly connected to the DC motor. Overloading of the drive can be prevented by separate monitoring and limiting of the current.

Potentiometer
CE



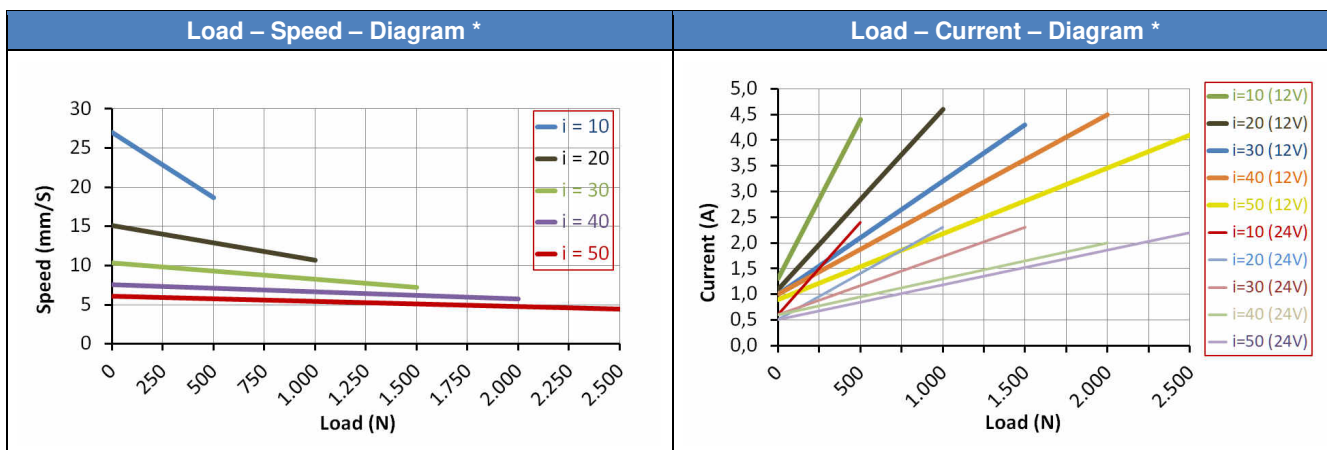
DSZY4

Type code (all options can be combined)

										Optional				
DSZY4	-	12	-	10	-	200	-	POT	-	IP65	-	C	1	1
Type		Input voltage		Gear reduction i		Stroke		Model		IP Code		Front connector (piston rod)		Rear connector (gear cover)
		12 Vdc		10		100 mm		Potentiometer				1 = standard		1 = standard
		24 Vdc		20		150 mm						3 = spherical rod eye		
				30		200 mm						6 = plastic slot		
				40		250 mm								
				50		300 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
10	500	1,500	27.0	18.7	1.3	0.6	4.4	2.4
20	1,000	4,500	14.7	10.4	1.1	0.5	4.6	2.3
30	1,500	4,500	9.9	6.8	1.0	0.6	4.3	2.3
40	2,000	4,500	7.4	5.1	1.0	0.6	4.5	2.0
50	2,500	4,500	5.2	4.4	0.9	0.5	4.1	2.2



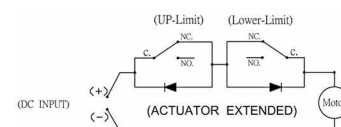
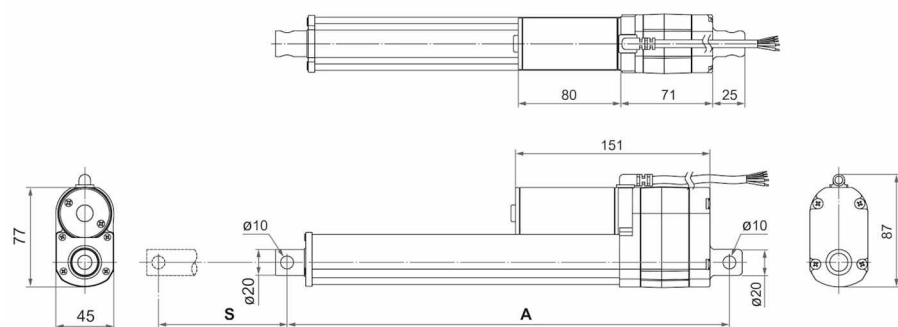
(*) Average values

Additional technical specifications

- Operating voltage 12 Vdc and 24 Vdc
- Thrust and tensile load up to 2,500 N
- Static load 4,500 N
- Duty cycle 25 % (e.g. 1 min continuous operation – 3 min pause)
- Zinc alloy casing
- Aluminum outer tube and push rod
- Working temperature -25 °C – 65 °C
- Protection type IP65 for all models (in idle state)
- Noise level: ≤ 70 dB
- Piston rod secured against rotation – see installation instructions
- CE - EMC 2014/30/EU
- EN 60601 (for 24 Vdc motor without Hall sensor)

Dimensions

Dimensions (length) in mm					
Stroke (S) ± 3 mm	100	150	200	250	300
(A) retracted	242	292	342	392	442
(A+S) extended	342	442	542	642	742



Red wire on "+" and black wire on "-": Actuator extends.

Black wire on "+" and red wire on "-": Actuator retracts.

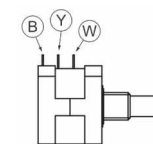
Cable length: 900 mm

Weight

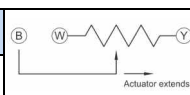
Stroke in mm	100	150	200	250	300
Weight in kg					

Potentiometer

Power		Potentiometer		
Red	Black	White	Yellow	Blue
M+	M-	GND	Vcc	Data

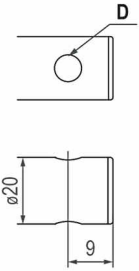
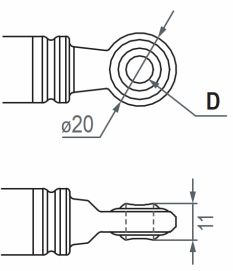
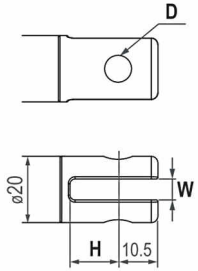


Stroke (mm)	100	150	200	250	300
Resistor value (kOhm)	0.3 - 8.8	0.3 - 9.6	0.3 - 8.9	0.3 - 9.5	0.3 - 9.5



Voltage input range: Vcc to 70Vdc - Output voltage of signal: Data = Vcc - Total resistance tolerance: ±5 %
The resistor increases during extension and decreases during retraction.

Front connector

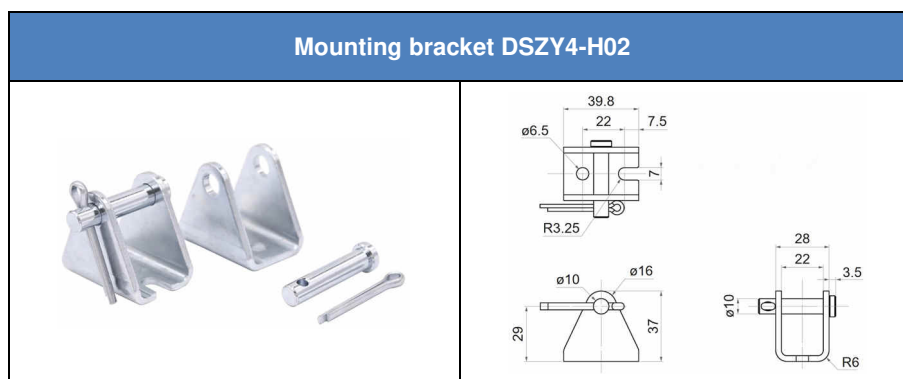
Front connector (piston rod)		
1 = standard (metal)	3 = spherical rod eye	6 = plastic slot
		
D=10 mm	D=8 mm	D=8 mm - W=6 mm H= 15 mm

CAUTION:

C11 is standard and will not be specified in the type code.

If at least one connector is changed, option C must be attached to the type key (e.g. DSZY4...-IP65-C61)

Mounting material



Installation instructions

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 rated current is reached. This can be read in the load-current diagram depending on the selected reduction ratio. Please note the correct supply voltage, which is indicated on the electric linear actuator.


The piston rod extends when the red wire is connected to positive and the black wire to negative. For the retraction of the piston rod, positive must be reversed with negative. The movement always stops automatically when the built-in limit switches are reached or when the voltage is interrupted. The limit switches cannot be changed by the customer.

The load must always be centered in the direction of movement. Transverse forces must be avoided. They shorten the service life and can impede the function or lead to irreparable damage in extreme cases.

The piston rod tube is screwed onto the spindle nut via a thread. It is therefore possible, if necessary, to rotate the piston rod and thus the fastening eye by max. 180° into the desired position.

If no rotational forces act on the piston rod, the latter retains its orientation and does not rotate.

CAUTION: The limit switches have no on/off function for the linear actuator. Therefore, the voltage must be immediately disconnected after the limit switches have been triggered, or the piston must be moved out of the end position in a timely manner.

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