

As potentiometer we are using our multi-turn potentiometer type DMG23 and our precision potentiometer type DP113 and DP18. All potentiometers are equipped with end stops. In order to protect the gear against overloading, a special slip clutch is integrated.



Option: sensor output signal: 0...10 VDC or 0/4...20 mA.
 Continuous shaft (rotation speed depending on potentiometer; only possible without sensor level)

Mechanical data

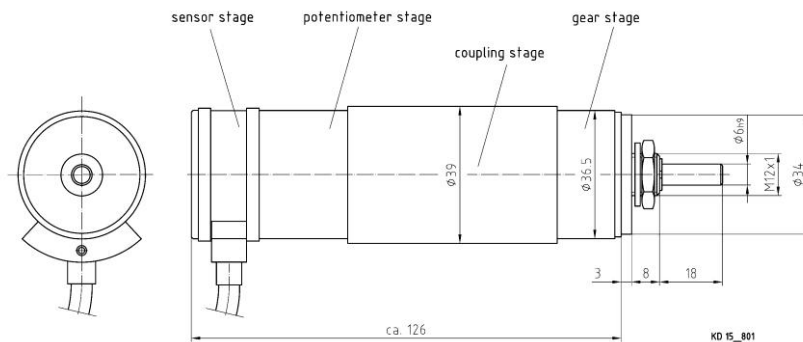
- 1.1 Housing.....: Aluminium
- 1.2 Shaft.....: Stainless steel $\phi 6^{h9}$
- 1.3 Input shaft.....: Gear shaft
- 1.4 Continuous shaft.....: Potentiometer shaft (option)
- 1.5 Bearing.....: Ball bearing / needle bearing
- 1.6 Protection class.....: IP64
- 1.7 Type of connection.....: Cable 3000 mm
- 1.8 Mounted by.....: Central fixing M12x1

Further mechanical and electrical data see potentiometer datasheet.

Gear Reduction Ratio

	1-turn Potentiometer	3-turn Potentiometer	5-turn Potentiometer	10-turn Potentiometer
1	7,2 : 1	21,6 : 1	36 : 1	72 : 1
2	20 : 1	60 : 1	100 : 1	200 : 1
3	32 : 1	96 : 1	160 : 1	320 : 1
4	3,71 : 1	11,13 : 1	18,55 : 1	37,1 : 1
5	9,7 : 1	29,1 : 1	48,5 : 1	97 : 1
6	14 : 1	42 : 1	70 : 1	140 : 1
7	23 : 1	69 : 1	115 : 1	230 : 1
8	43 : 1	129 : 1	215 : 1	430 : 1
9	66 : 1	198 : 1	330 : 1	660 : 1
10	86 : 1	258 : 1	430 : 1	860 : 1
11	134 : 1	402 : 1	670 : 1	1340 : 1
12	159 : 1	477 : 1	795 : 1	1590 : 1
13	246 : 1	738 : 1	1230 : 1	2460 : 1
14	415 : 1	1245 : 1	2075 : 1	4150 : 1
15	592 : 1	1776 : 1	2960 : 1	5920 : 1
16	989 : 1	2967 : 1	4945 : 1	9890 : 1
17	1526 : 1	4578 : 1	7630 : 1	15260 : 1

Available with potentiometer	Available with sensor output signal
DP18	---
DP113	x
DMG23	x
DP18 D2	---
DP113 D2	---
DMG23 D2	---



Gear data

Spur Gear max $\phi 24$ mm	
Spur Gear hox	Straight-toothed
Housing material	Plastic
Output shaft	Stainless steel, hardened
Output shaft bearing	Porous bearing
Radial backlash, 8 mm from flange	max. 0,038 mm
Axial backlash	0,03...0,30 mm
Max. allowable radial load, 8 mm from flange	5 N
Max. allowable radial load	8 N
Max. allowable contact force	500 N
Average transmission play, unloaded	< 2.5°
Recommended engine speed	< 4000 min ⁻¹
Recommended temperature range	-20 °C ... +65 °C
Max. torque	50 Ncm

Planetary Gear hox $\phi 20$ mm	
Housing material	Steel
Gears material	Metal
Max. recommended input rotation speed: - continuous operation	5000 rpm
Transmission play, unloaded	≤ 1°
Output shaft bearing	Ball bearing, prestrained
Max. allowable shaft load: - radial (8,5 mm from flange) - axial	≤ 75 N ≤ 20 N
Max. contact force	≤ 35 N
Bearing clearance (measured at bearing): - radial - axial	≤ 0,02 mm = 0 mm
Operating temperature range	- 30 °C ... + 100° C
Torque at continuous operation	500 mNm
Torque at short-term operation	700 mNm
Efficiency	88 % ... 55 %