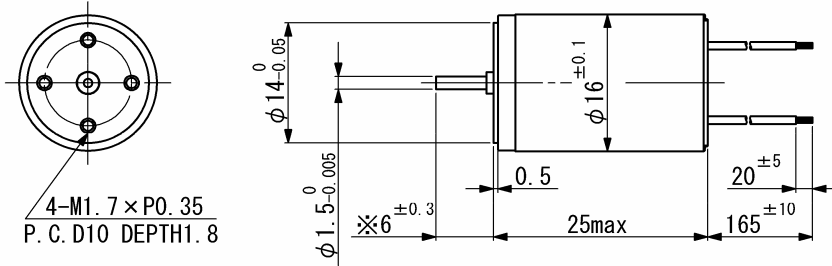


# SCL16-25

Precious metal commutation



Weight 28 g  
Dimension in mm

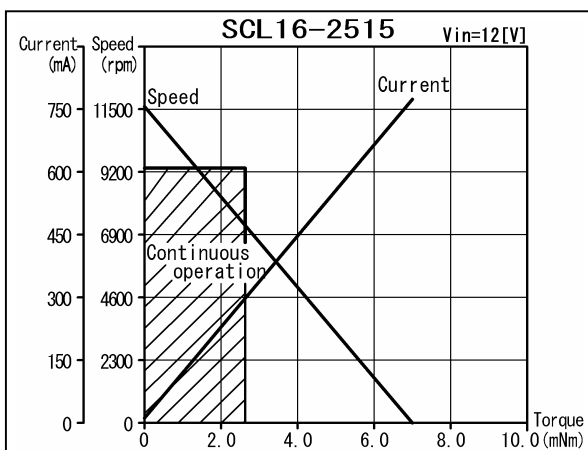
Note) Dimension marked ※ is measured with shaft pushed against motor.

For combination with gearheads: SSG15, SPG16

Ordering number	SCL16-2506	SCL16-2515	SCL16-2555
1 Nominal voltage	6	12	12 V
2 Terminal resistance	6.2	15.5	55.1 $\Omega$
3 Output power	1.4	2.3	0.65 W
4 Efficiency	80	82	76.3 %
5 No-load speed	9100	11600	5770 rpm
6 No-load current	11	7	3.6 mA
7 Stall torque	5.95	7.51	4.3 mNm
8 Friction torque	0.07	0.07	0.07 mNm
9 Back-EMF constant	0.65	1.02	2.05 mV/rpm
10 Torque constant	6.22	9.79	19.52 mNm/A
11 Slope of N-T curve	1530	1550	1382 rpm/mNm
12 Coil inductance	0.12	0.32	1.28 mH
13 Mechanical time constant	9.2	7.5	8.4 ms
14 Rotor inertia	0.57	0.46	0.58 gcm <sup>2</sup>

### Continuous operation

15 Speed range	7300	9300	4620 rpm
16 Max. torque	2.69	2.68	2.15 mNm



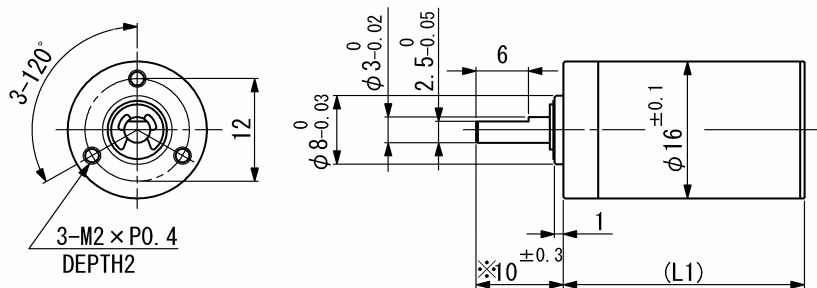
### General specifications

17 Operating temperature	-20...+60	°C
18 Max. coil temperature	+80	°C
19 Thermal resistances	$R_{th1} = 6, R_{th2} = 31$	K/W
20 Bearings type	Sintered sleeves	
21 Max. shaft radial load	1.2 (5 mm)	N
22 Max. shaft axial load	0.2	N
23 Max. axial load at standstill	9.8	N
24 Shaft radial play	0.05	mm
25 Shaft axial play	0.03...0.2	mm

**Options:** Lead wires length, shaft length, special coils, commutator with capacitors.

# SPG16

## Planetary gearhead



Dimension in mm      Note) Dimension marked ⊗ is measured with shaft pushed against gearhead.

**For combination with motors: SCL16-25, SCL16-30, SCL17-30, SCL18-25, SCL18-33**

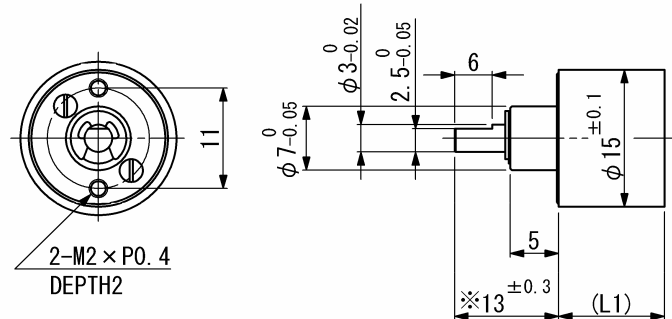
General specifications	SPG16	
Housing material	Metal	
Geartrain material	Steel	
Recommended max. input speed	6000	rpm
Operating temperature range	-10...+60	°C
Backlash at no-load per stage	≤ 1	°
Bearings on output shaft	Sintered sleeve bearings	
Max. shaft radial load (7 mm from flange)	4 (25)	N
Max. shaft axial load	2	N
Max. shaft press fit force	30	N
Shaft radial play	≤ 0.03	mm
Shaft axial play	≤ 0.2	mm

In parenthesis the max. radial load with ball bearing option.

Ratio (nominal)	Stage	Gearhead length, L1 [mm]	Gearhead weight [g]	Max. allowable torque [mNm]		Length with motor [mm]					Efficiency [%]	Direction of rotation
				Continuous	Intermittent	SCL16-25	SCL16-30	SCL17-30	SCL18-25	SCL18-33		
3.6 : 1	1	15.3	20	200	400	40.3	46.7	46.7	40.8	50.3	85	=
4.7 : 1	1	15.3	20	200	400	40.3	46.7	46.7	40.8	50.3	85	=
13 : 1	2	19.5	24.5	200	400	44.5	50.9	50.9	45	54.5	72	=
22 : 1	2	19.5	24.5	200	400	44.5	50.9	50.9	45	54.5	72	=
61 : 1	3	23.7	29	200	400	48.7	55.1	55.1	49.2	58.7	61	=
105 : 1	3	23.7	29	200	400	48.7	55.1	55.1	49.2	58.7	61	=

# SSG15

## Spur gearhead



Dimension in mm

Note) Dimension marked ※ is measured with shaft pushed against gearhead.

**For combination with motors: SCL16-15, SCL16-25, SCL16-30, SCL17-30**

**For combination with motor-tachogenerators: SCL16-44, SCL17-44**

### General specifications

### SSG15

Housing material	Metal	
Geartrain material	Metal	
Recommended max. input speed	6000	rpm
Operating temperature range	-10...+60	°C
Max. backlash at no-load, 5 stages	≤ 5	°
Bearings on output shaft	Sintered sleeve bearings	
Max. shaft radial load (10 mm from flange)	4	N
Max. shaft axial load	2	N
Max. shaft press fit force	30	N
Shaft radial play	≤ 0.03	mm
Shaft axial play	≤ 0.2	mm

Ratio (nominal)	Stage	Gearhead length, L1 [mm]	Gearhead weight [g]	Max. allowable torque [mNm]		Length with motor [mm]						Efficiency [%]	Direction of rotation
				Continuous	Intermittent	SCL16-15	SCL16-25	SCL16-30	SCL17-30	SCL16-44	SCL17-44		
29 : 1	3	9.6	8.9	15	30	27.1	34.6	41	41	54.1	54.2	73	≠
49 : 1	4	11.6	10.3	24	60	29.1	36.6	43	43	56.1	56.2	66	=
71 : 1	4	11.6	10.3	24	60	29.1	36.6	43	43	56.1	56.2	66	=
94 : 1	4	11.6	10.3	24	60	29.1	36.6	43	43	56.1	56.2	66	=
198 : 1	5	13.6	11.5	24	60	31.1	38.6	45	45	58.1	58.2	59	≠