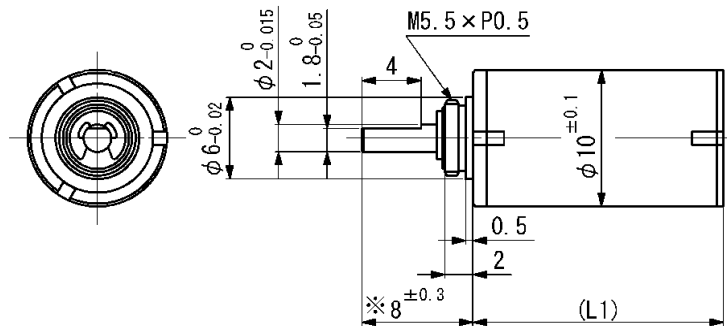


# SSG10

## Spur gearhead



Dimension in

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

General specifications	SSG10	
1 Housing material	Metal	
2 Geartrain material	Metal	
3 Recommended max. input speed	10000	rpm
4 Operation temperature range	-10...+60	°C
5 Backlash at no-load per stage	≤ 7	°
6 Bearings on output shaft	Sintered sleeve bearings	
7 Max. shaft radial load (7mm from flange)	3	N
8 Max. shaft axial load	1	N
9 Max. shaft press fit force	20	N
10 Shaft radial play	≤ 0.03	mm
11 Shaft axial play	≤ 0.2	mm
12 Max. allowable torque (Continuous)	12	mNm
13 Max. allowable torque (Intermittent)	30	mNm

General specifications	SSG10-				
	15	29	49	93	262
12 Reduction ratio (absolute value)	15.40 : 1	29.25 : 1	48.75 : 1	93.43 : 1	261.60 : 1
13 Number of stage	3	4	5	5	6
14 Efficiency	73	66	59	59	53
15 Direction of rotation	≠	=	≠	≠	=
16 Gearhead length: L1	14	16	18	18	20
17 Weight	5.4	6.2	7	7	7.9

Combination		Reduction ratio ( Motor+gearhead total length)				
Type	Model name	15	29	49	93	262
Brushed coreless motor	CMS10-12..S	26	28	30	30	32
	CMS10-18..S	32	34	36	36	38
Brushless coreless motor	BMS10-10..S	24	26	28	28	30
	BMS10-18..S	32	34	36	36	38

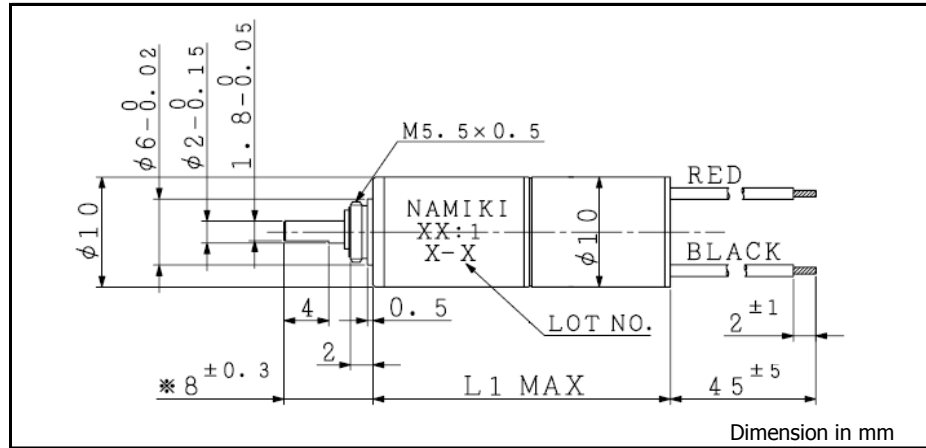
# CMS10-12..S Geared motor (Spur gearhead)

### Spur gearhead

SSG10

### Coreless motor

CMS10-1206  
CMS10-1221  
CMS10-1245



### General specification

	15	29	49	93	262	
1 Reduction ratio(absolute value)	15.40 : 1	29.25 : 1	48.75 : 1	93.43 : 1	261.60 : 1	
2 Number of stage	3	4	5	5	6	
3 Efficiency	73	66	59	59	53	%
4 Direction of rotation	≠	=	≠	≠	=	
5 Geared motor length: L1	26	28	30	30	32	mm
6 Max. allowable torque (Continuous)	12					mNm
7 Max. allowable torque (Intermittent)	30					mNm

### CMS10-1206S Rated voltage: 3.7 V

Ordering number	CMS10-1206S	15	29	49	93	262	
8 Rated torque		1.5	2.6	4.0	7.6	12	mNm
9 Rated speed		1130	600	361	190	73	rpm
10 No load speed		1340	708	426	223	80	rpm
11 No load current		31	28	27	24	21	mA
12 Stall torque		10	17	26	50	128	mNm
13 Stall current		587	587	587	587	587	mA

### CMS10-1221S Rated voltage: 7.4 V

Ordering number	CMS10-1221S	3.6	4.7	13	22	61	
8 Rated torque		1.6	2.7	4.0	7.8	12	mNm
9 Rated speed		1320	698	420	221	85	rpm
10 No load speed		1550	821	494	259	93	rpm
11 No load current		19	17	16	15	12	mA
12 Stall torque		10	18	27	52	132	mNm
13 Stall current		352	352	352	352	352	mA

### CMS12-1245S Rated voltage: 12 V

Ordering number	CMS12-1245S	3.6	4.7	13	22	61	
8 Rated torque		1.6	2.8	4.1	7.9	12	mNm
9 Rated speed		1540	817	492	259	100	rpm
10 No load speed		1810	959	578	303	109	rpm
11 No load current		14	13	12	11	9	mA
12 Stall torque		11	19	28	54	138	mNm
13 Stall current		264	264	264	264	264	mA

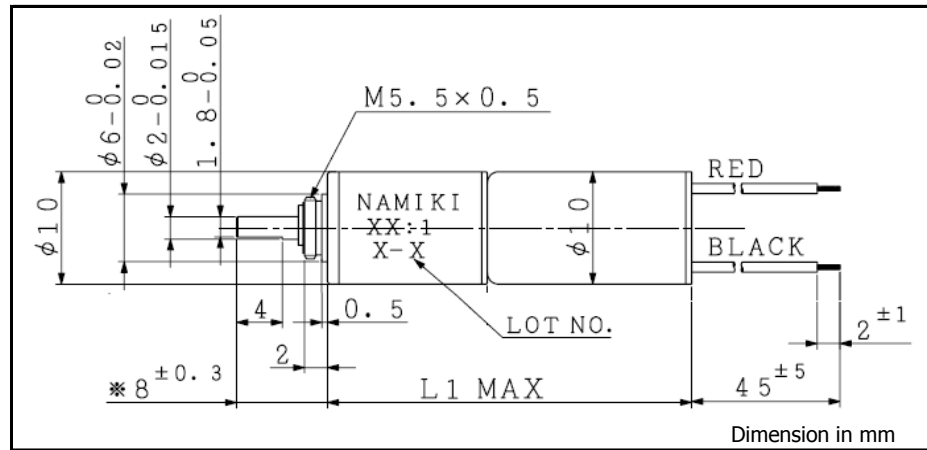
# CMS10-18..S Geared motor (Spur gearhead)

### Spur gearhead

SSG10

### Coreless motor

CMS10-1805  
CMS10-1818  
CMS10-1834



### General specification

	15	29	49	93	262		
1 Reduction ratio(absolute value)	15.40 : 1	29.25 : 1	48.75 : 1	93.43 : 1	261.60 : 1		
2 Number of stage	3	4	5	5	6		
3 Efficiency	73	66	59	59	53	%	
4 Direction of rotation	≠	=	≠	≠	=		
5 Geared motor length: L1	32	34	36	36	38	mm	
6 Max. allowable torque (Continuous)						12	mNm
7 Max. allowable torque (Intermittent)						30	mNm

### CMS10-1805S Rated voltage: 3.7 V

Ordering number	CMS10-1805S	15	29	49	93	262	
8 Rated torque		3.0	5.2	7.8	12	12	mNm
9 Rated speed		672	354	213	115	44	rpm
10 No load speed		785	414	249	130	47	rpm
11 No load current		24	23	23	22	20	mA
12 Stall torque		21	36	54	104	262	mNm
13 Stall current		689	689	689	689	689	mA

### CMS10-1818S Rated voltage: 7.4 V

Ordering number	CMS10-1818S	15	29	49	93	262	
8 Rated torque		3.1	5.2	7.9	12	12	mNm
9 Rated speed		806	425	255	138	53	rpm
10 No load speed		941	496	298	156	56	rpm
11 No load current		15	14	14	13	12	mA
12 Stall torque		21	36	55	105	265	mNm
13 Stall current		418	418	418	418	418	mA

### CMS10-1834S Rated voltage: 12 V

Ordering number	CMS10-1834S	15	29	49	93	262	
8 Rated torque		3.3	5.6	8.4	12	12	mNm
9 Rated speed		999	527	317	172	66	rpm
10 No load speed		1160	610	367	192	69	rpm
11 No load current		12	11	11	10	9	mA
12 Stall torque		24	41	62	119	300	mNm
13 Stall current		357	357	357	357	357	mA

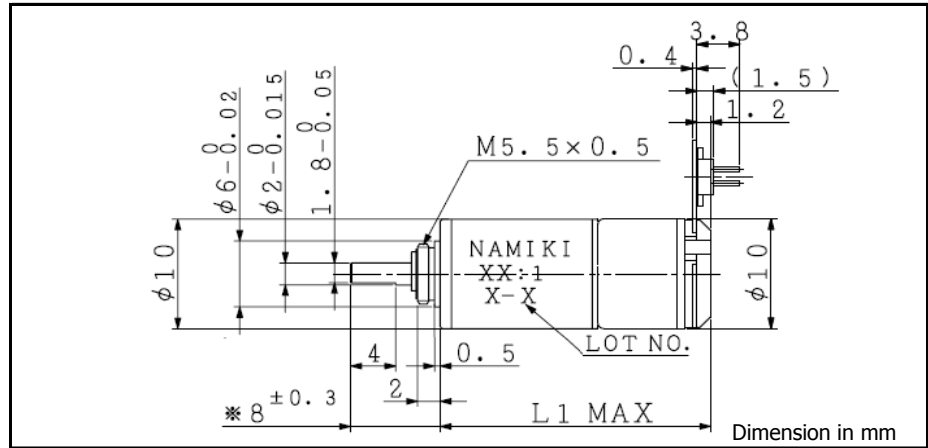
## BMS10-10..S Geared motor (Spur gearhead)

### Spur gearhead

SSG10

### Brushless motor

BMS10-1003  
BMS10-1007



### General specification

	SSG10	15	29	49	93	262	
1 Reduction ratio(absolute value)		15.40 : 1	29.25 : 1	48.75 : 1	93.43 : 1	261.60 : 1	
2 Number of stage		3	4	5	5	6	
3 Efficiency		73	66	59	59	53	%
4 Direction of rotation		≠	=	≠	≠	=	
5 Geared motor length: L1		24	26	28	28	30	mm
6 Max. allowable torque (Continuous)		12					mNm
7 Max. allowable torque (Intermittent)		30					mNm

### **BMS10-1003S Rated voltage: 7.4 V**

Ordering number	BMS10-1003S	15	29	49	93	262	
8 Rated torque		4.9	8.4	12	12	12	mNm
9 Rated speed		3220	1710	1050	650	257	rpm
10 No load speed		4480	2370	1430	753	272	rpm
11 No load current		373	360	350	335	313	mA
12 Stall torque		18	30	45	88	223	mNm
13 Stall current		2552	2552	2552	2552	2552	mA

### **BMS10-1007S Rated voltage: 12.0 V**

Ordering number	BMS10-1007S	15	29	49	93	262	
8 Rated torque		4.8	8.2	12	12	12	mNm
9 Rated speed		3360	1790	1090	683	273	rpm
10 No load speed		4740	2520	1520	800	289	rpm
11 No load current		262	253	246	235	220	mA
12 Stall torque		16	28	43	83	211	mNm
13 Stall current		1632	1632	1632	1632	1632	mA

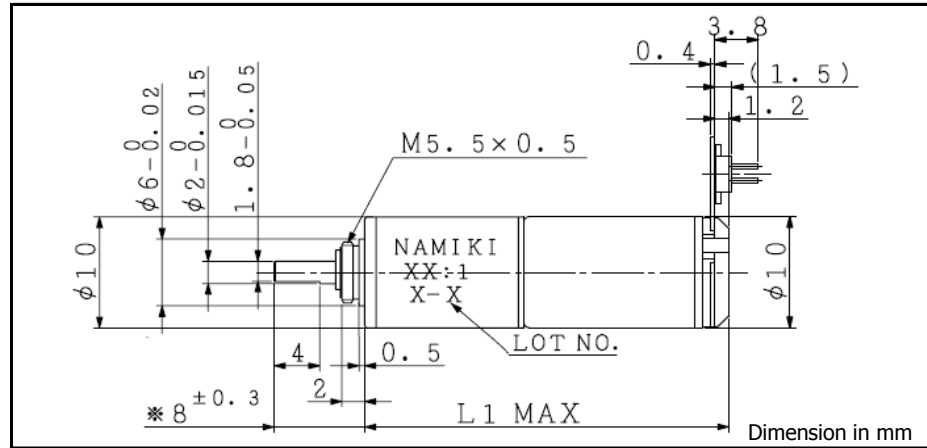
## BMS10-18..S Geared motor (Spur gearhead)

### Spur gearhead

SSG10

### Brushless motor

BMS10-1802  
BMS10-1806



### General specification

	15	29	49	93	262	
1 Reduction ratio(absolute value)	15.40 : 1	29.25 : 1	48.75 : 1	93.43 : 1	261.60 : 1	
2 Number of stage	3	4	5	5	6	
3 Efficiency	73	66	59	59	53	%
4 Direction of rotation	≠	=	≠	≠	=	
5 Geared motor length: L1	32	34	36	36	38	mm
6 Max. allowable torque (Continuous)					12	mNm
7 Max. allowable torque (Intermittent)					30	mNm

### **BMS10-1802S Rated voltage: 7.4 V**

Ordering number	BMS10-1802S	15	29	49	93	262	
8 Rated torque		8.1	12	12	12	12	mNm
9 Rated speed		2030	1100	692	378	139	rpm
10 No load speed		2400	1260	759	397	142	rpm
11 No load current		103	100	97	93	88	mA
12 Stall torque		53	91	136	261	659.0	mNm
13 Stall current		3091	3091	3091	3091	3091	mA

### **BMS10-1806S Rated voltage: 12.0 V**

Ordering number	BMS10-1806S	15	29	49	93	262	
8 Rated torque		7.9	12	12	12	12	mNm
9 Rated speed		2110	1140	720	395	146	rpm
10 No load speed		2510	1320	794	415	148	rpm
11 No load current		69	67	65	62	59	mA
12 Stall torque		50	86	129	247	623	mNm
13 Stall current		1897	1897	1897	1897	1897	mA