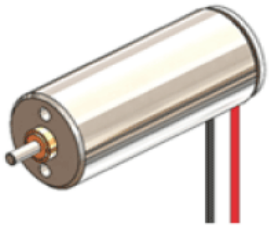
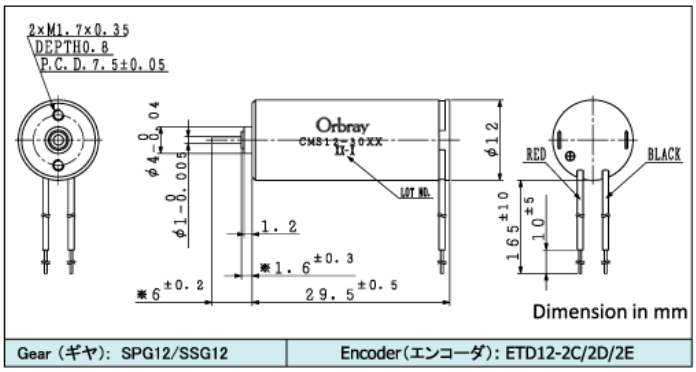
CMS12-3005/CMS12-3010

DC Coreless Motors　CMS Series

Precious metal commutation, Sleeve bearing Brushed Motor.





CMS12-30 Specifications

		Brushed Motor CMS12-3005	Brushed Motor CMS12-3010	
1	Nomal voltage	7.4	12.0	V
2	No load speed	13000	15000	rpm
3	No load current	16	12	mA
4	Stall torque	8.55	9.40	mNm
5	Stall current	1605	1254	mA

		Brushed Motor CMS12-3005	Brushed Motor CMS12-3010	
6	Output power	2.9	3.7	W
7	Max efficiency	81	82	%
8	Terminal resistance	4.61	9.57	Ω
9	Rated torque	0.785	0.827	mNm
10	Rated speed	11806	13684	rpm
11	Rated current	162	121	mA
12	Friction torque	0.09	0.09	mNm
13	Back-EMF constant	0.563	0.792	mV/rpm
14	Torque constant	5.38	7.57	mNm/A
15	Slope of N-T curve	1521	1597	rpm/mNm
16	Mechanical time constant	5.5	5.6	ms
17	Rotor inertia	0.35	0.33	gcm^2
18	Max torque	2.85	3.13	mNm

*CMS12-30 is a Brushed Motor with a diameter of 12 mm and length of 30 mm.

* How to read the model number (motor only)　「CMS xx - yy zz」

CMS…Coreless Brushed Motor standard series、xx…Diameter(mm)、yy…Length(mm)、zz…Terminal resistance (Ω, approximate value)

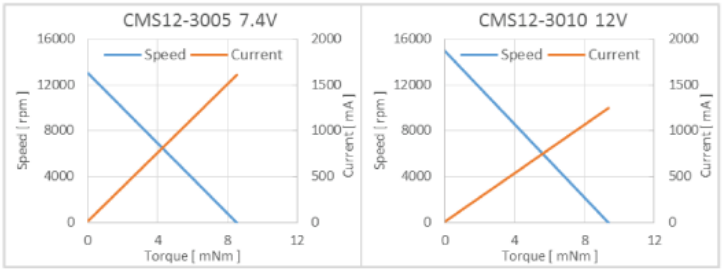
Mechanical data

19	Shaft raddial play	0.05	mm
20	Shaft axial play	0.03~0.2	mm
21	Max shaft radial load	0.5 (5mm*)	N
22	Max shaft axial load	0.15	N
23	Max shaft axial load at standstill	7.8	N

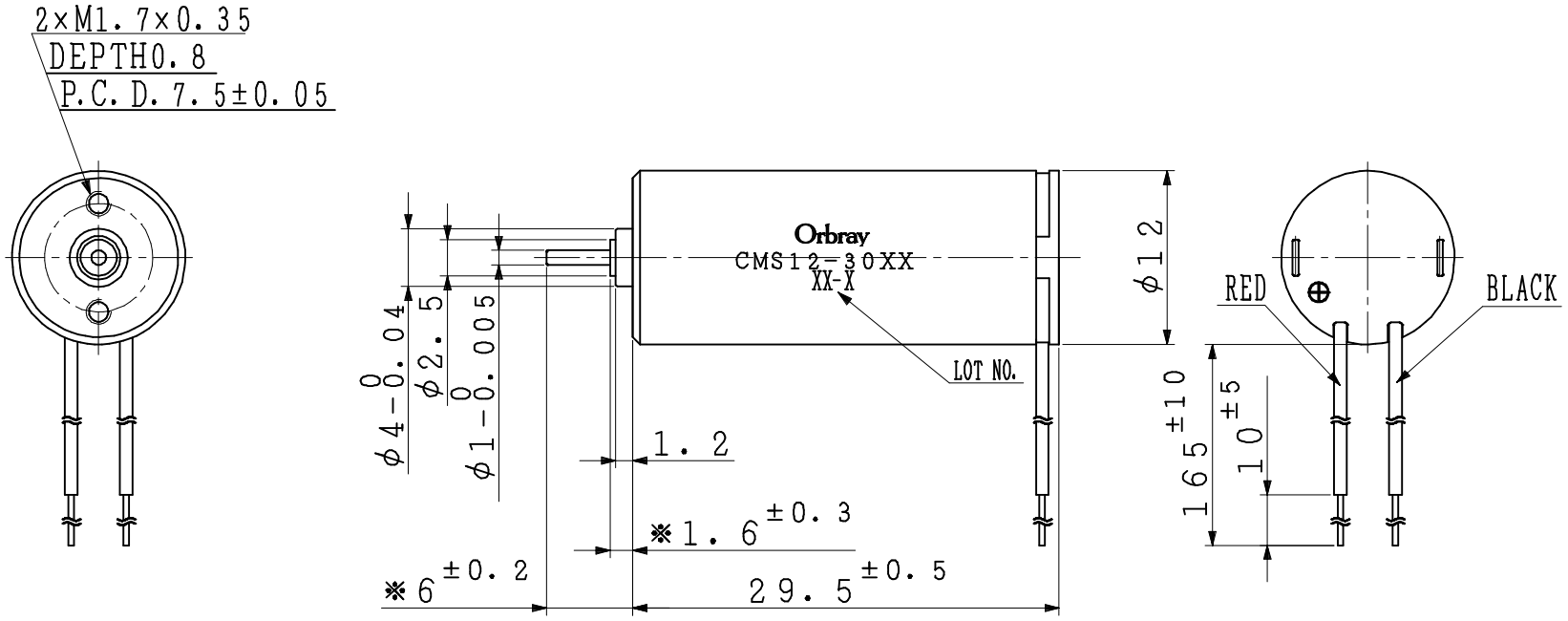
*measured at () mm from flange

Environmental data

24	Operating temperature	-20~60	℃
25	Max coil temperature	80	℃
26	Weight	19.5	g
27	Number of segments	5	
28	Bearing type	Sintered sleeve	


CMS12-3005 7.4V
Speed
Current
Speed [rpm]
Current [mA]
Torque [mNm]
16000
12000
8000
4000
0
2000
1500
1000
500
0
4
8
12
CMS12-3010 12V
Speed
Current
Speed [rpm]
Current [mA]
Torque [mNm]

Orbray



NOTE 1)MARKED(※)IS SHAFT LENGTH MEASURED WHEN IT IS PUSHED TO MOTOR SIDE.
※印寸法はシャフトをモータ側に押しつけた時の値を示す。

2)LOT NO.
EXAMPLE)JANUARY, 2018
『18－A』
- JANUARY:A, FEBRUARY:B･･･DECEMBER:L
  1月：A、2月：B・・・12月：L
- 『－』　:MADE IN THAILAND
- 『－』有り :海外工場生産
- 『－』NONE :MADE IN JAPAN
- 『－』無し :国内工場生産
- THE END TWO DIGIT OF CHRISTIAN YEAR
  西暦年数末尾数字2桁

3)THE LEAD WIRE IS AWG28 UL3302.
リード線はAWG28　UL3302を使用する。

4)OUTSIDE DIAMETER IS NOT APPLIED TO THE CAULKING.
外径寸法公差はカシメ部を除く。

5)2×M1.7 AND LEAD WIRE DRAWING POSITIONS ARE OUT OF DIMENSIONAL CONTROL.
2×M1．7とリード線引き出し角度は寸法管理外とする。

TOLERANCE					
DIMENSION(±)					ANGLE
	0	1	2	3	
L≦6	0.05	0.1	0.1	0.2	±1°
6<L≦30	0.1	0.1	0.2	0.5	
30<L≦120	0.15	0.2	0.3	0.8	
120<L	0.2	0.3	0.5	1.2	

MATERIAL	FINISH	QTY.

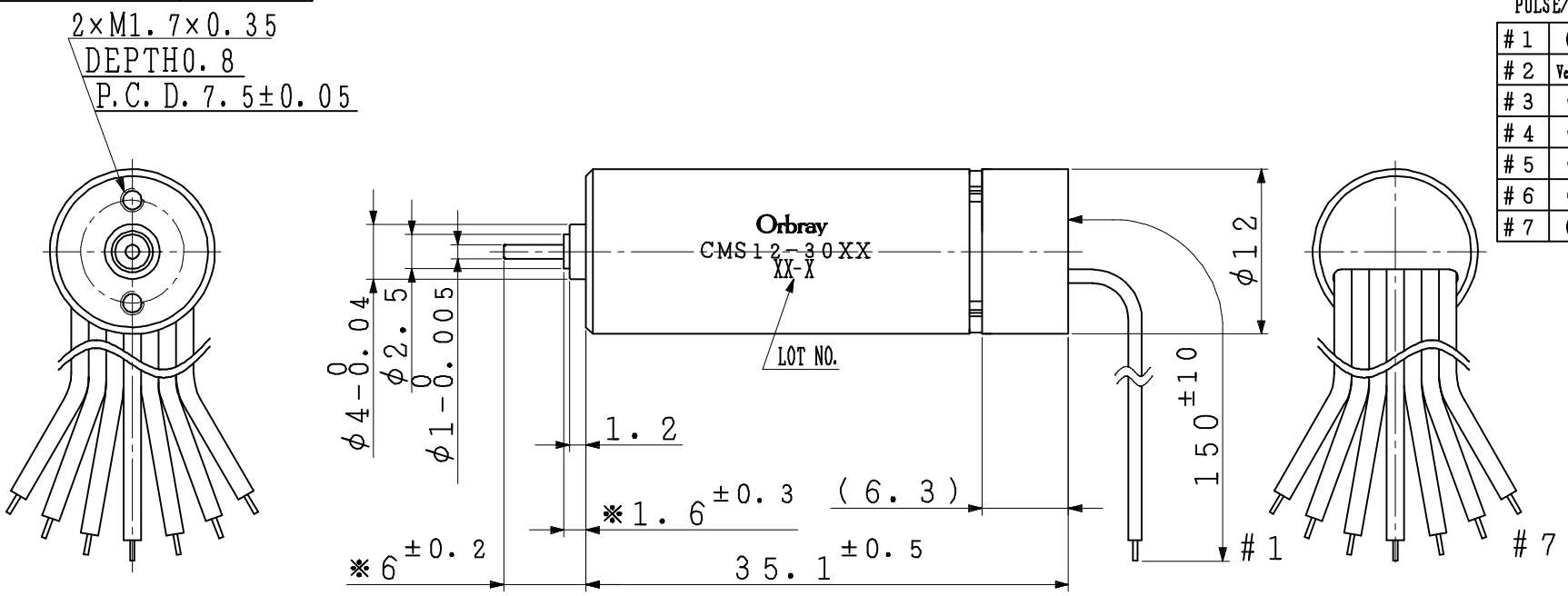
APPD.	CHK.	DSGN.	DRW.
・ ・	・ ・	15-Jan-18	15-Jan-18

SYM.	DATE	NOTE	DRW.	CHK.	APPD.
△×					
△×					
△×					
△×					
△×					

SCALE	2/1	TYPE	CMS12-30
UNIT	1/1mm	TITLE	OUTLINE DRAWING
DWG.NO.			
REF.NO.			
CHK.NO.		REMARK	Rev.00

A4E

Orbray



OPTICAL ENCODER
ELECTRICAL CONNECTIONS
PULSE/REV

#1	(MOTOR+)
#2	Vcc(DC5V±10%)
#3	Ch. A
#4	Ch. B
#5	Ch. Z
#6	GND
#7	(MOTOR−)

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- THE END TWO DIGIT OF CHRISTIAN YEAR
  西暦年数末尾数字2桁

3)THE LEAD WIRE IS AWG28 UL4539.
リード線はAWG28 UL4539を使用する。

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DIMENSION(±)					ANGLE
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30<L≦120	0.15	0.2	0.3	0.8	
120<L	0.2	0.3	0.5	1.2	

MATERIAL	FINISH	QTY.

APPD.	CHK.	DSGN.	DRW.
・ ・	・ ・	15-Jan-18	15-Jan-18

SYM.	DATE	NOTE	DRW.	CHK.	APPD.
△×					
△×					
△×					
△×					
△×					

SCALE	2/1	TYPE	CMS12-30 0
UNIT	1/1mm	TITLE	OUTLINE DRAWING
DWG.NO.			
REF.NO.			
CHK.NO.		REMARK	Rev.00

A4E