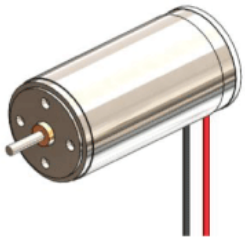
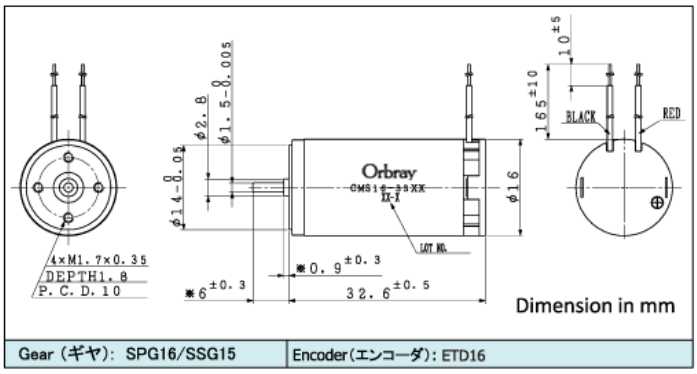
CMS16-3302/CMS16-3306/CMS16-3317

DC Coreless Motors　CMS Series

Precious metal commutation, Sleeve bearing Brushed Motor.





CMS16-33 Specifications

		Brushed Motor CMS16-3302	Brushed Motor CMS16-3306	Brushed Motor CMS16-3317	
1	Nomal voltage	7.4	12.0	24.0	V
2	No load speed	10100	9900	11600	rpm
3	No load current	17	10	6	mA

		Brushed Motor CMS16-3302	Brushed Motor CMS16-3306	Brushed Motor CMS16-3317	
4	Stall torque	26.13	24.66	28.09	mNm
5	Stall current	3761	2155	1432	mA
6	Output power	6.9	6.4	8.5	W
7	Max efficiency	87	87	88	%
8	Terminal resistance	1.97	5.57	16.76	Ω
9	Rated torque	1.626	1.576	1.690	mNm
10	Rated speed	9500	9300	10900	rpm
11	Rated current	250	147	92	mA
12	Friction torque	0.12	0.12	0.12	mNm
13	Back-EMF constant	0.731	1.204	2.063	mV/rpm
14	Torque constant	6.98	11.49	19.70	mNm/A
15	Slope of N-T curve	386	402	412	rpm/mNm
16	Mechanical time constant	4.4	4.4	4.4	ms
17	Rotor inertia	1.10	1.04	1.02	gcm^2
18	Max torque	8.71	8.22	9.36	mNm

*CMS16-33 is a with a diameter of 16 mm and length of 33 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)

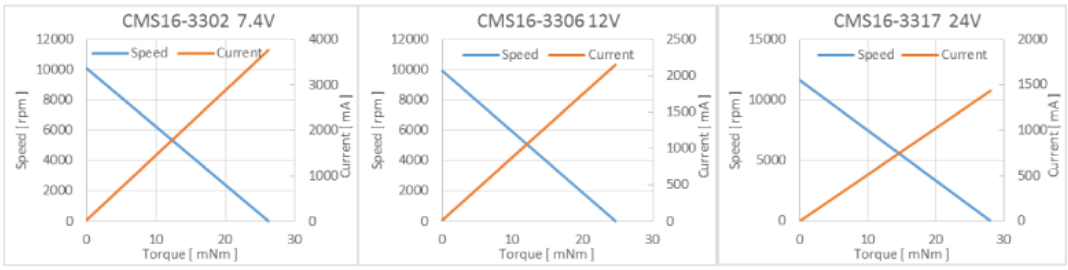
Mechanical data

19	Shaft raddial play	0.05	mm
20	Shaft axial play	0.03~0.2	mm
21	Max shaft radial load	1.2 (5mm*)	N
22	Max shaft axial load	0.2	N
23	Max shaft axial load at standstill	9.8	N

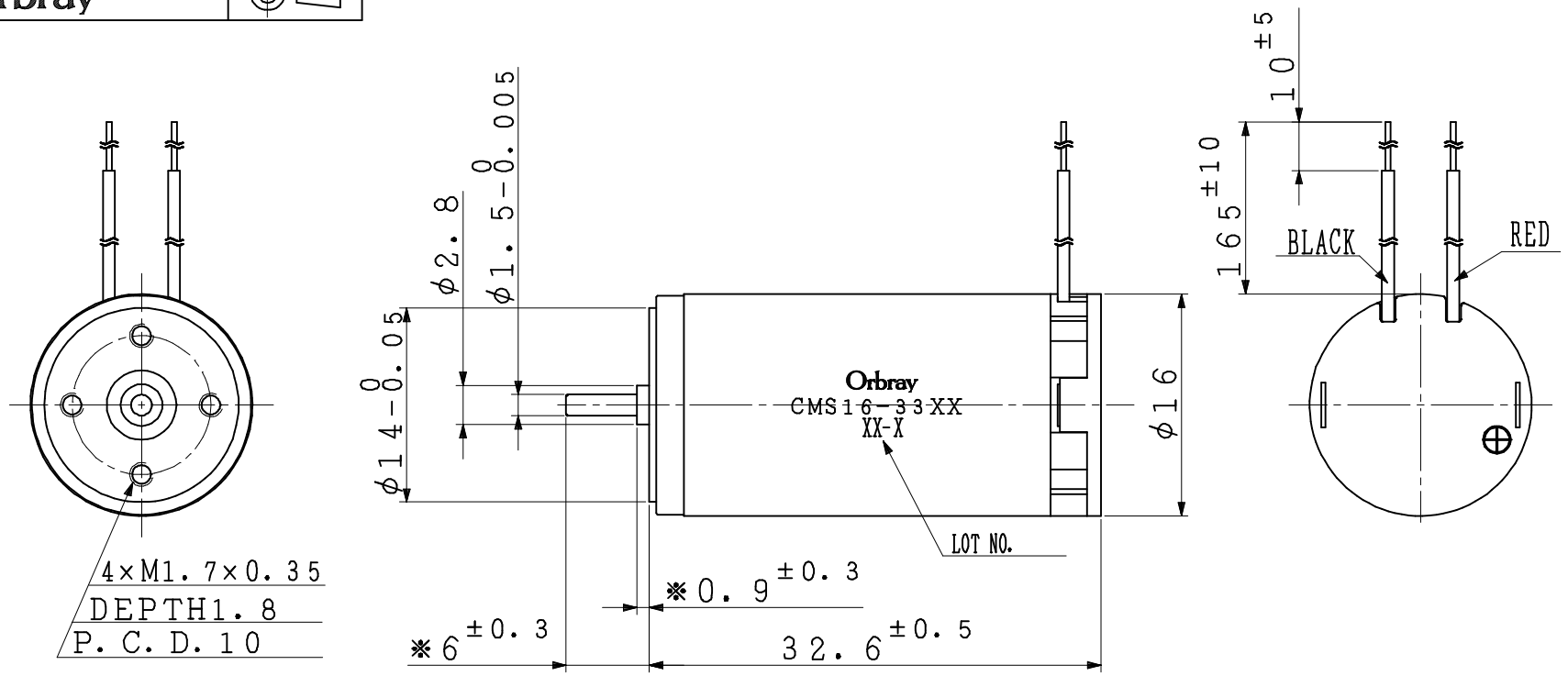
*measured at () mm from flange

Environmental data

24	Operating temperature	-20~60	℃
25	Max coil temperature	80	℃
26	Weight	37.7	g
27	Number of segments	7	
28	Bearing type	Sintered sleeve	


CMS16-3302 7.4V
Speed
Current
Speed [rpm]
Current [mA]
Torque [mNm]
CMS16-3306 12V
Speed
Current
Speed [rpm]
Current [mA]
Torque [mNm]
CMS16-3317 24V
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)4×M1.7 AND LEAD WIRE DRAWING POSITIONS ARE OUT OF DIMENSIONAL CONTROL.
4×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.

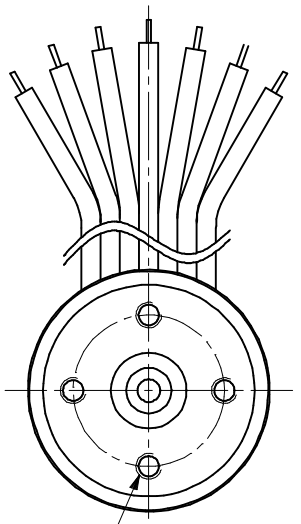
APPD.	CHK.	DSGN.	DRW.
・ ・	・ ・	30Jan'18	30-Jan-'18

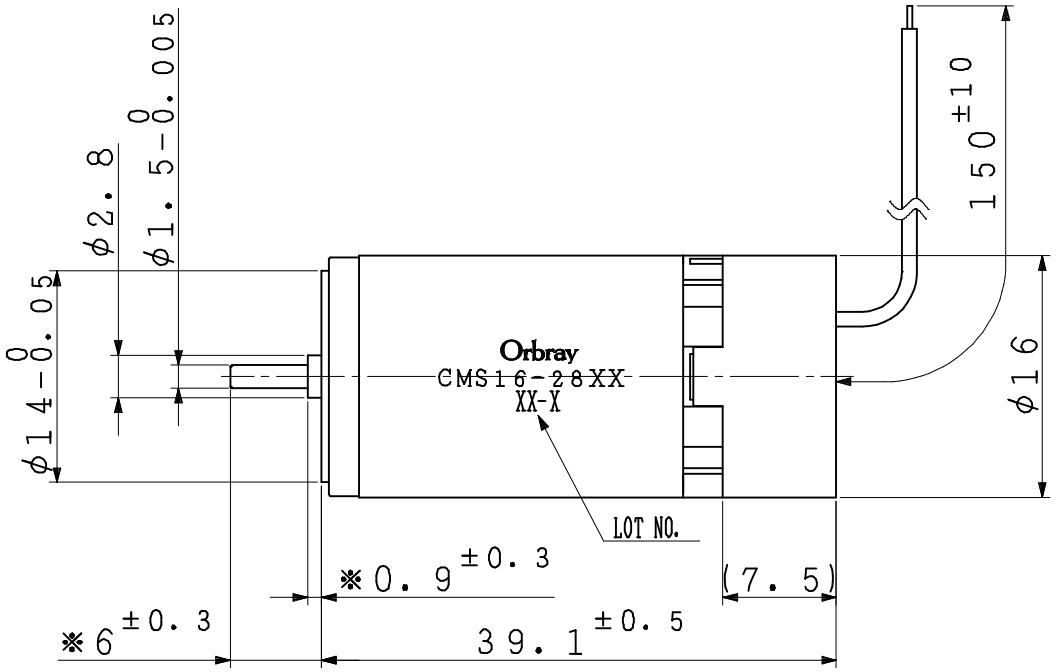
SYM.	DATE	NOTE	DRW.	CHK.	APPD.
△×					
△×					
△×					
△×					
△×					

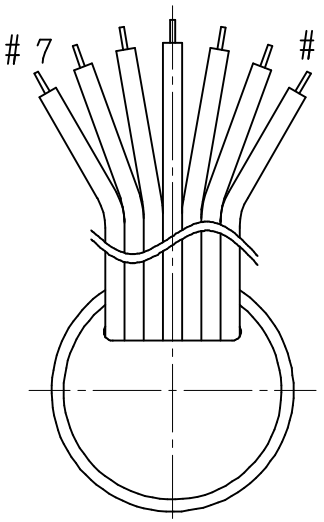
SCALE	2/1	TYPE	CMS16-33
UNIT	1/1mm	TITLE	OUTLINE DRAWING
DWG.NO.			
REF.NO.			
CHK.NO.		REMARK	Rev.00

A4E

Orbray







4×M1.7×0.35
DEPTH1.8
P.C.D.10

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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APPD.	CHK.	DSGN.	DRW.
・ ・	・ ・	30Jan'18	30-Jan-18

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

SCALE	2/1	TYPE	CMS16-33　0
UNIT	1/1mm	TITLE	OUTLINE DRAWING
DWG.NO.			
REF.NO.			
CHK.NO.		REMARK	Rev.00

A4E