

# Specifications

## Flange type Torque Transducer by Optical Transformer method

- ★ Composition apparatus
- 1) Torque Transducer                    Model : TMOFB-5KNM
  - 2) Exclusive signal cable            Model : CAC-169A- \*M (selectable from 10m,20m) 【Option】  
CAC-169B-30M (30m) 【Option】
  - 3) Exclusive transmitter            Model : CSA-562B 【Option】

The following spec. is fulfilled when an exclusive signal cable and exclusive transmitter are combined and adjusted.

★ Spec. of torque transducer

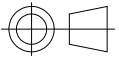
Performance		
Rated capacity(R.C.)	±5kN・m	
Safe overload	240 %R.C.	
Ultimate overload	400 %R.C.	
Rated output(R.O.)	±10 V	
Accuracy of detected value (include Nonlinearity,Hysteresis,Repeatability)	±0.05 %R.O.	
Temperature		
Safe temperature range	-10 ℃ to 60 ℃	
Temperature effect on zero balance	0.05 %R.O./10℃	
Temperature effect on output	0.05 %LOAD/10℃	
Characteristics on rotation		
Maximum number of rotation	6,000 rpm	
Zero point shift by rotation(noise)	0.5 %R.O.p-p(WB=1kHz)	
Others		
IP class	IP54	
Material	Rotor : Alloy steel Stator : Aluminum alloy	
Fatigue life	10 <sup>7</sup> times with rated load	
Mass	Rotor part	10.0 kg
	Stator part	3.5 kg

★ Machine characteristics(Rotor part)

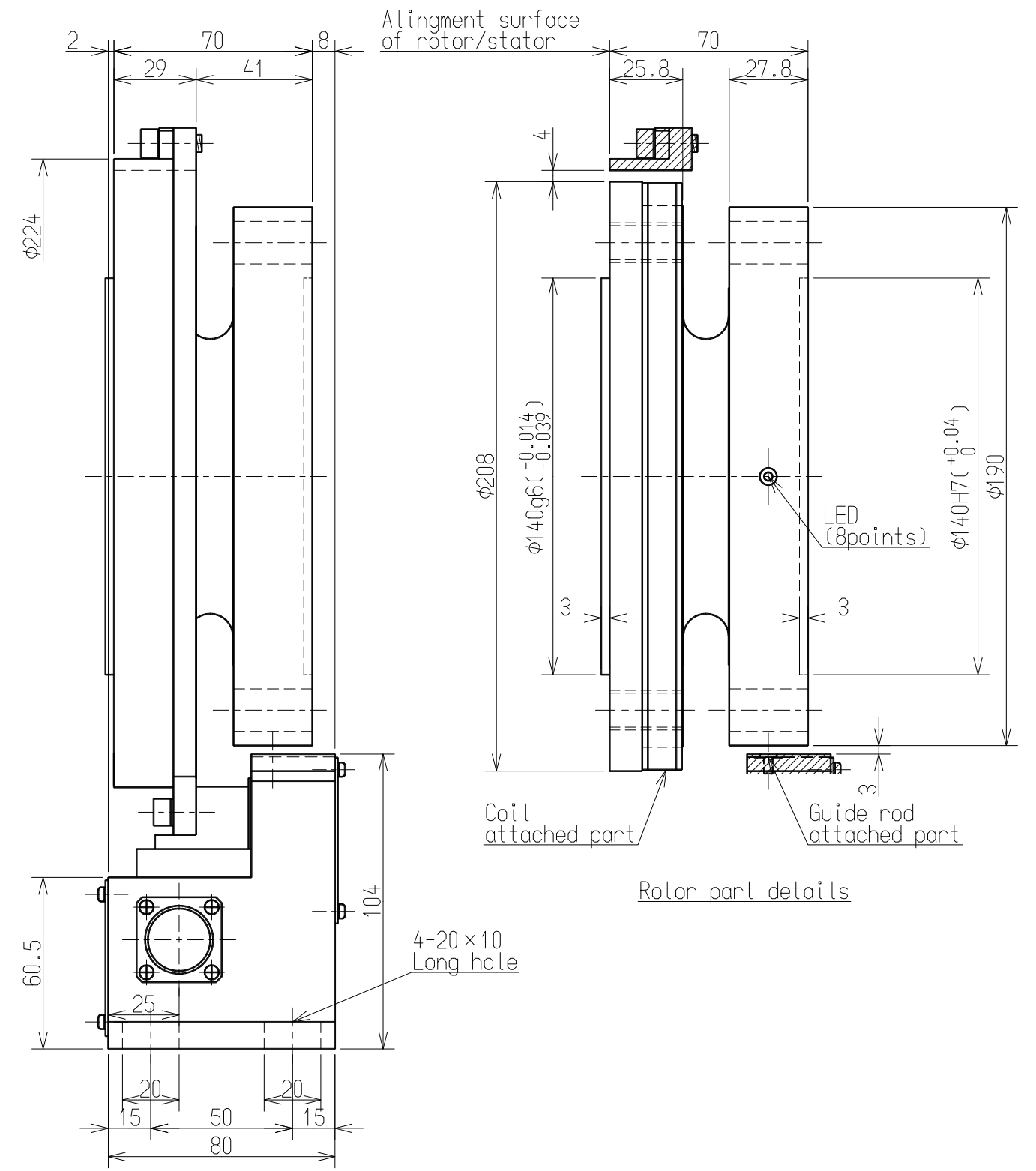
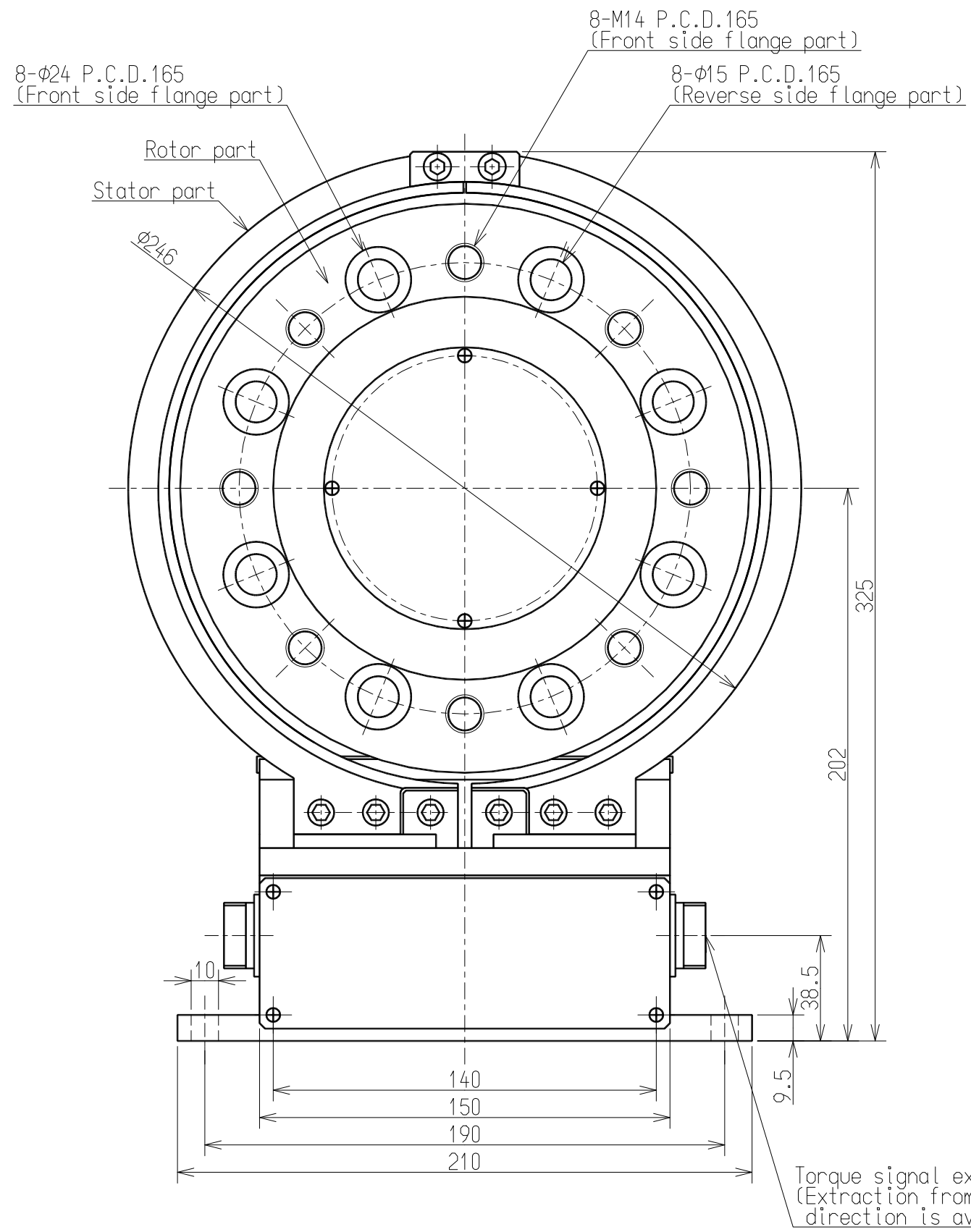
Response Frequency	[kHz]	1
Inertia moment	[kg・cm <sup>2</sup> ]	641.8
Torsion rigidity	[kN・m/rad]	8577
Torsion peculiar pitch	[kHz]	4.237
Bending peculiar pitch(Radial direction)	[kHz]	6.173
Bending peculiar pitch(Thrust direction)	[kHz]	3.289
Twist angle at R.C.	[°]	0.030
Accuracy safe bending load	[N]	7500
Accuracy safe thrust load	[N]	6500

- Accuracy safety bending/thrust load is load value(actual measurement) which generate output error 0.1%R.O.
- Accuracy safety bending load is the result of loading at position 200mm from flange edge.
- All are the guarantee value over static load.

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			<b>ミネベア株式会社</b> MINEBEA CO.,LTD.		 単位 UNIT mm 尺度 SCALE Free	材質 MATERIAL	作成日 DATE 2014.11.24	
			<b>計測機器事業部</b>			表面粗さ SURF.ROUGH.	品名 DESCRIPTION <b>OUTLINE</b>	
					一般公差 TOL 寸法 L    公差 <L≤4    ±0.1 4<L≤16   ±0.2 16<L≤63   ±0.3 63<L≤250 ±0.5 250<L≤1000 ±0.8 角度 DEG ±0.5	熱処理 HEAT TREAT.	品番 PART NO.(MODEL NO.)	葉番 SHEET
						表面処理 FINISH	TMOFB-5KNM	1 / 2
							図番 DRAWING NO.	改訂 REV.
							KT53865-2	-
符号 MARK	日付 DATE	変更事項 REASON	ECN NO.					
-	2014.11.24	NEW						

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<b>ミネベア株式会社</b> <small>MINEBEA CO.,LTD.</small> <b>計測機器事業部</b> <small>MEASURING COMPONENTS BUSINESS UNIT</small>	作成日 DATE 2014.11.24	品名 DESCRIPTION
	<b>OUTLINE</b>	
	品番 PART NO.(MODEL NO.)	葉番 SHEET
	図番 DRAWING NO.	改訂 REV.
	KT53865-2	2 / 2 -