

Specifications / flange type Torque Transducer by Optical Transformer method

KT52538-2

1/4

☆ Composition apparatus

- 1) Torque Transducer Model : TMHFB-5KNM
- 2) Exclusive signal cable Model : CAC-169A-*M (selectable from 10m,20m,30m)
- 3) Exclusive transmitter Model : CSA-562B

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

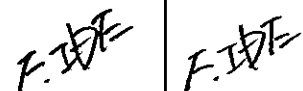
☆ Spec. of torque transducer

Model (Capacity indicated)		5KNM
Performance		
Rated capacity (R. C.)		±5 kN·m
Safe overload		240 %R.C.
Ultimate overload		400 %R.C.
Rated output (R. O.)		±10 V
Accuracy of detected value		±0.05 %R.O.
Temperature		
Temperature range, safe		-10 °C to 60 °C
Temperature effect on zero balance		0.05 %R.O./10 °C
Temperature effect on output		0.05 %LOAD/10 °C
Characteristics on rotation		
Maximum number of rotation		6000 rpm
Zero point shift by rotation (noise)		0.5 %R.O.p-p (WB=1kHz)
Others		
Class of protection		IP54
Material		Rotor: Alloy steel Stator: Aluminum alloy
Durability		10 ⁷ times at R.C.
Weight	Rotor part	Approx 10.0 kg
	Stator part	Approx 3.5 kg

☆ Machine characteristics (Rotor part)

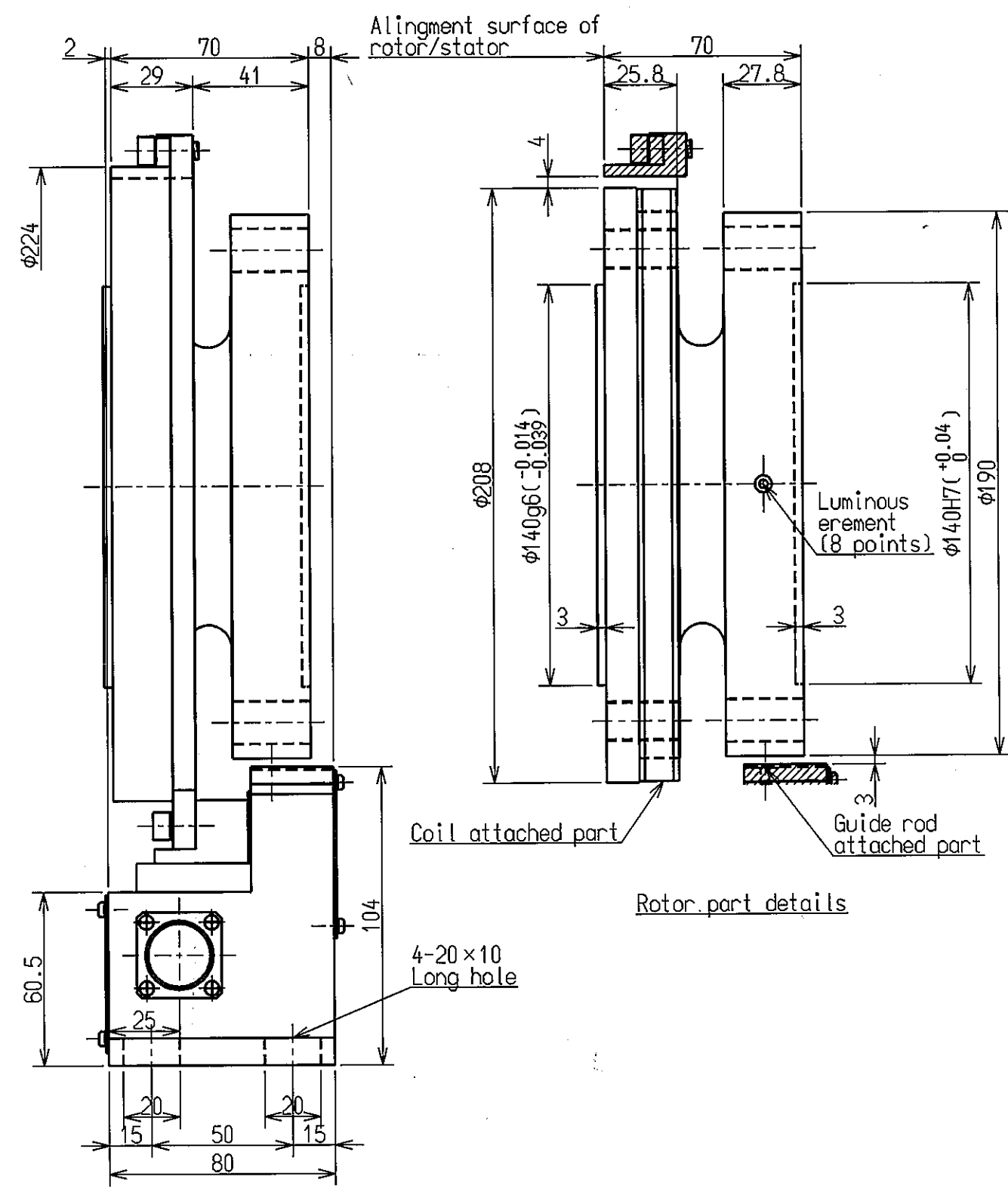
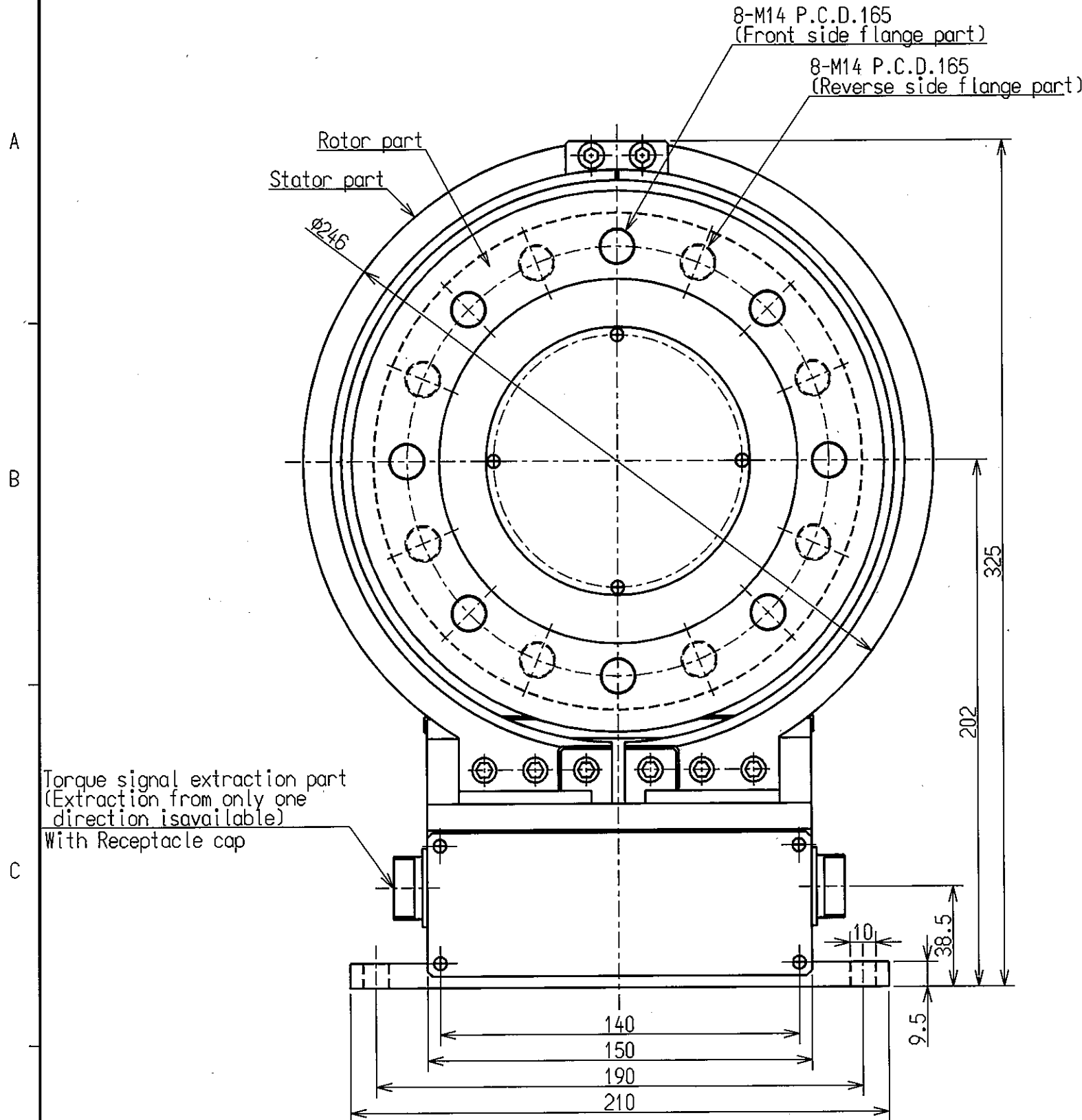
Model (Capacity indicated)		5KNM
Response Frequency	(kHz)	1 kHz
Inertia moment	(kg·cm ²)	641.8
Torsion rigidity	(kN·m/rad)	8577
Torsion peculiar pitch	(kHz)	4.237
Bending peculiar pitch (Radial direction)	(kHz)	6.173
Bending peculiar pitch (Thrust direction)	(kHz)	3.289
Twist angle at R.C.	(°)	0.030
Accuracy safe bending lo	(N)	7500
Accuracy safe thrust loa	(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.

						Date	2008. 3. 19			
						Approved	Checked	Drawn		
								Y.YAMAMOTO		
Mark	Date	Reason/ECN.no.	Approved	Checked	Drawn					

★ Spec. of transmitter

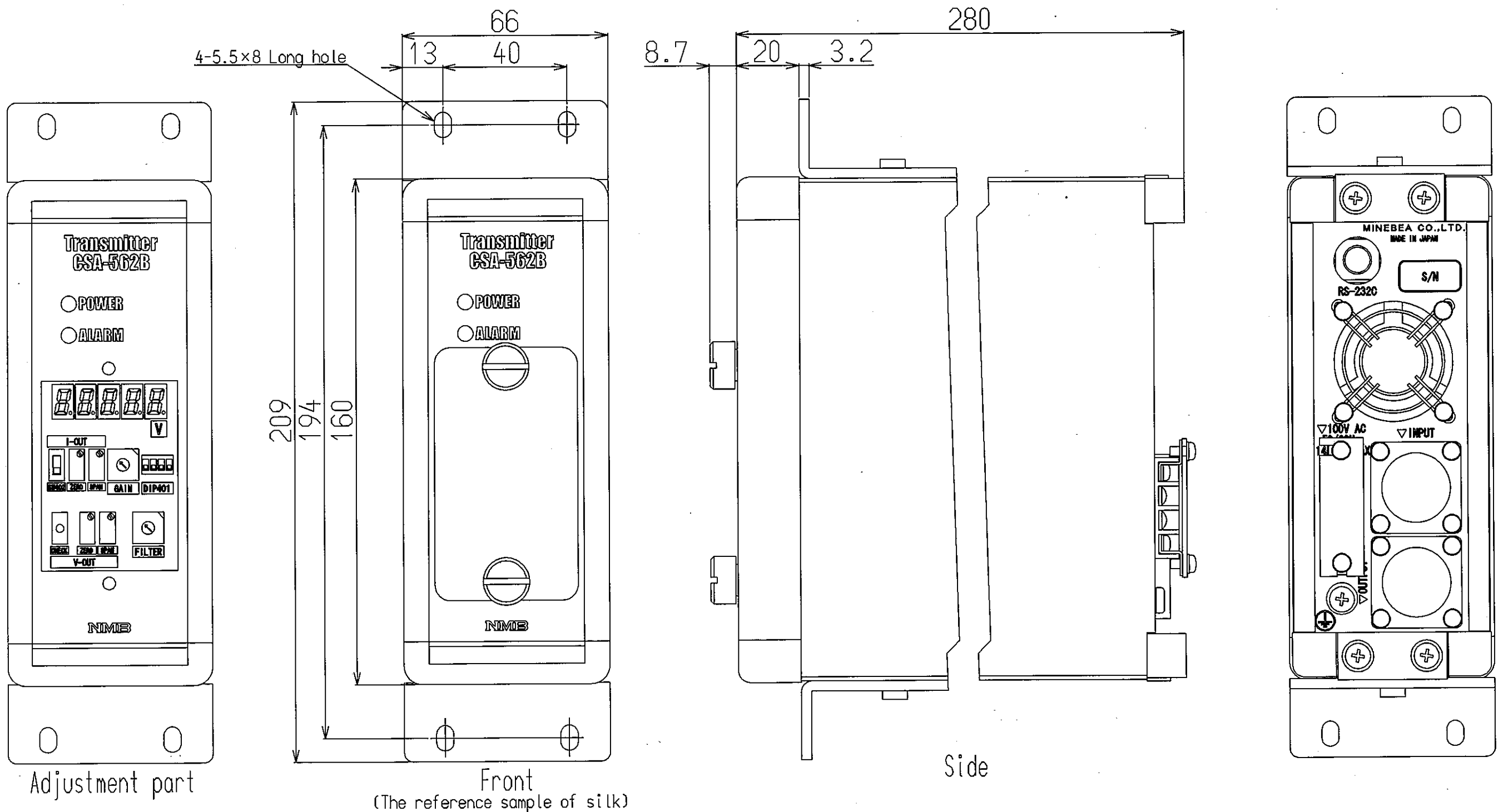
Output load resistance	Resistance load more than 2 k Ω Output capacity load less than 0.1 μ F
Zero point adjustment range	± 15 %R.O.
Non-Linearity	± 0.01 %R.O.
Check	Approx. 80 %R.O.
Frequency response range	DC to 1 kHz (1 Hz, 10 Hz, 30 Hz, 50 Hz, 100 Hz, 300 Hz, 500 Hz, 1 kHz)
Indicator part	Output voltage display 0 to 10.000 Digital indication (Green LED) Sampling Approx.4 times/s
Alarm function	Alarm output when position gap of rotor and stator, and the luminescence part of rotor and stator to become dirty (Photo-coupler output)
Remote function	CHECK
Operating temp.range	0 °C to 40 °C
Temp. characteristics at zero point	± 0.025 %R.O./10°C
Temp. characteristics of span	± 0.025 %R.O./10°C
Operating humidity range	Less than 85 %RH(Dew condensation not to be allowed)
Power supply voltage	AC85 V to AC132 V
Power supply frequency	50/60 Hz
Power consumption	Approx. 100 VA (at AC100 V)
Weight	Approx. 2.5 kg



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ミネベア株式会社 MINEBEA CO.,LTD. 計測機器事業部					単位 UNIT	材質 MATERIAL	作成日 DATE
					mm	SURF.ROUGH.	2008.3.19
公差 TOL 一般 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					尺度 SCALE	熱処理 HEAT TREAT.	品名 DESCRIPTION
					1/2	FINISH	OUTLINE(TM)
APPROVED	CHECKED	DRAWN	品番 PART NO.(MODEL NO.)	葉番 SHEET			
YAMAMOTO			TMOFB-5KNM	3/4			
符号 MARK	日付 DATE	変更事項 REASON	図番 DRAWING NO.	改訂 REV.			
		ECN NO.	KT52538-2	-			
		担当 ENGINEER					
		承認 APPROVED					

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ミネベア株式会社 MINEBEA CO.,LTD. 計測機器事業部					単位 UNIT	材質 MATERIAL	作成日 DATE	2008.3.19
					mm	表面粗さ SURF.ROUGH.	品名 DESCRIPTION	OUTLINE (AMP)
APPROVED CHECKED DRAWN YAMMOTO					尺度 SCALE	熱処理 HEAT TREAT.	品番 PART NO. (MODEL NO.)	葉番 SHEET
					3/4		CSA-562B	4 / 4
符号 MARK	日付 DATE	変更事項 REASON	ECN NO.	担当 ENGINEER	承認 APPROVED	表面処理 FINISH	図番 DRAWING NO.	改訂 REV.
							KT5253-2	-
					公差 TOL	角度 DEG		
					<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		