

Specifications / flange type Torque Transducer by Optical Transformer method

KT52536-2

1/4

☆ Composition apparatus

- 1) Torque Transducer Model : TMHFB-□NM
- 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)	500NM	1KNM
Performance		
Rated capacity (R. C.)	±500 N·m	±1 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	15000 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 3.0 kg
	Stator part	Approx 2.8 kg

☆ Machine characteristics (Rotor part)

Model (Capacity indicated)	500NM	1KNM
Response Frequency (kHz)	1 kHz	
Inertia moment (kg·cm ²)	97.30	97.50
Torsion rigidity (kN·m/rad)	834.8	1715
Torsion peculiar pitch (kHz)	4.255	5.556
Bending peculiar pitch (Radial direction) (kHz)	6.452	7.692
Bending peculiar pitch (Thrust direction) (kHz)	5.000	5.556
Twist angle at R.C. (°)	0.034	0.033
Accuracy safe bending lo (N)	750	1500
Accuracy safe thrust load (N)	650	1300

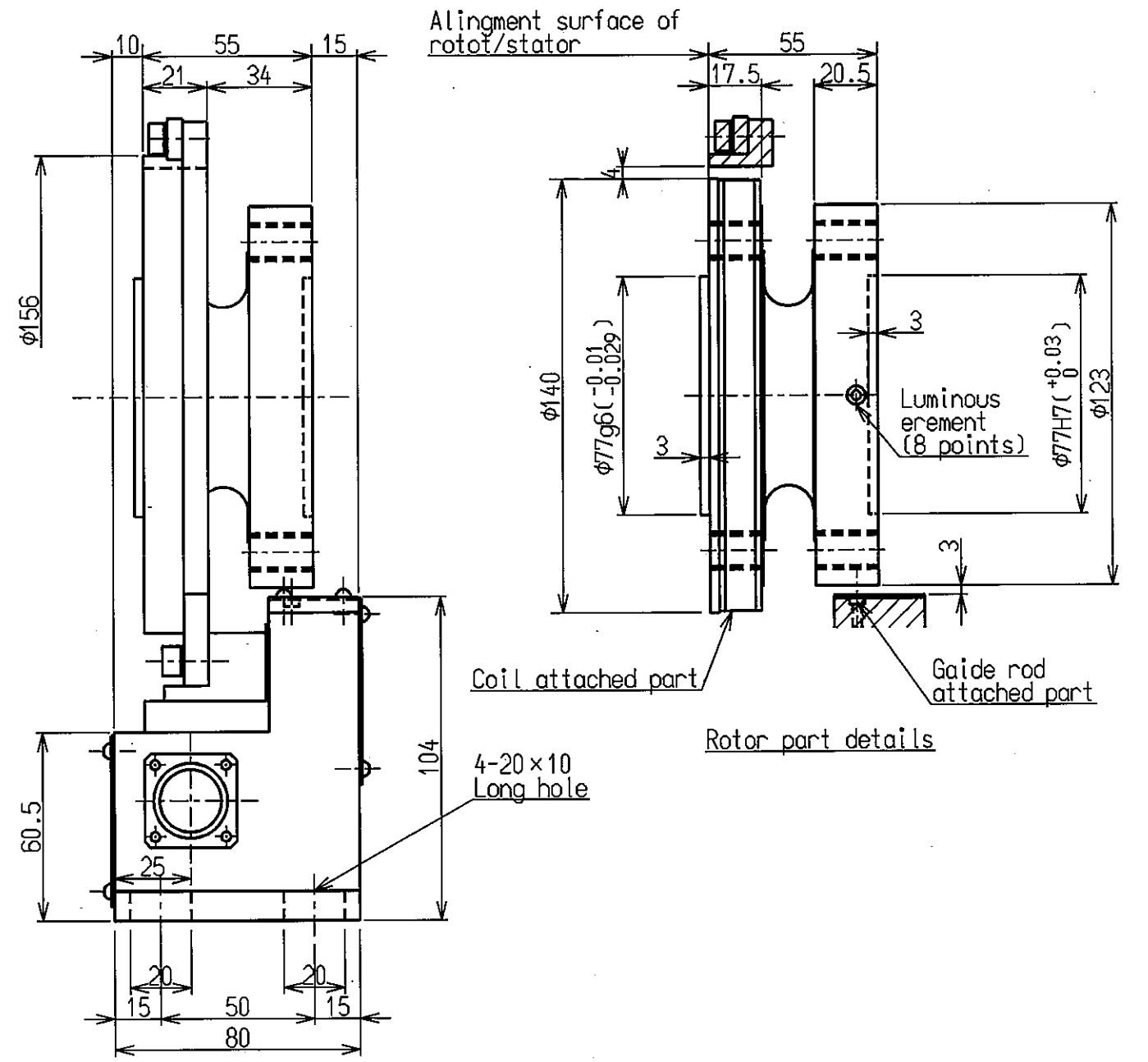
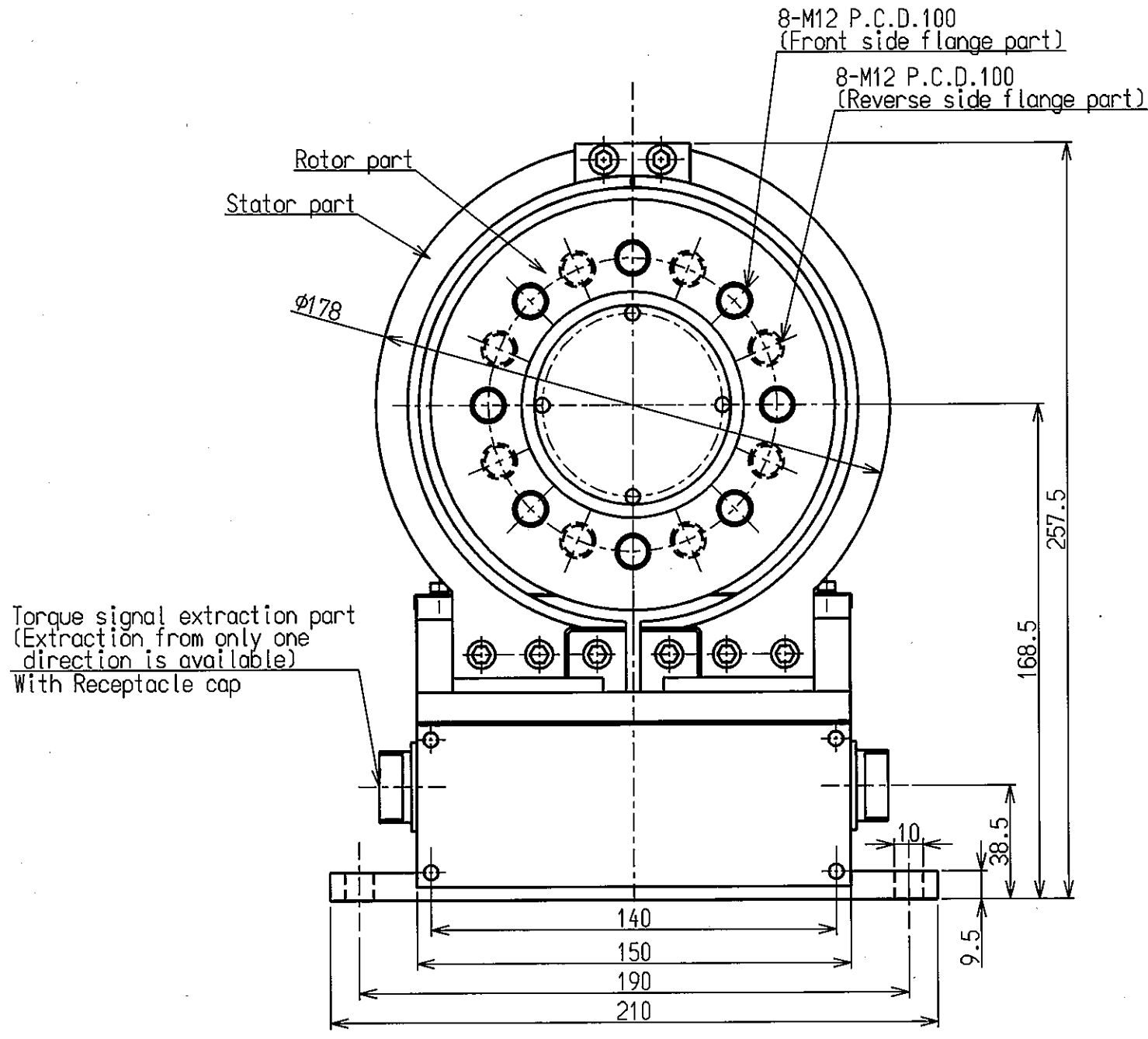
- Accuracy safety bending/thrust load is load value (actual measurement) which generate output error 0.1% R.O.
- Accuracy safety bending load is the result of loading at position 200mm from flange edge.
- All are the guarantee value over static load.

						Date	2008. 3. 19		
						Approved	Checked	Drawn	
						<i>F. IBE</i>	<i>F. IBE</i>	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

A
B
C

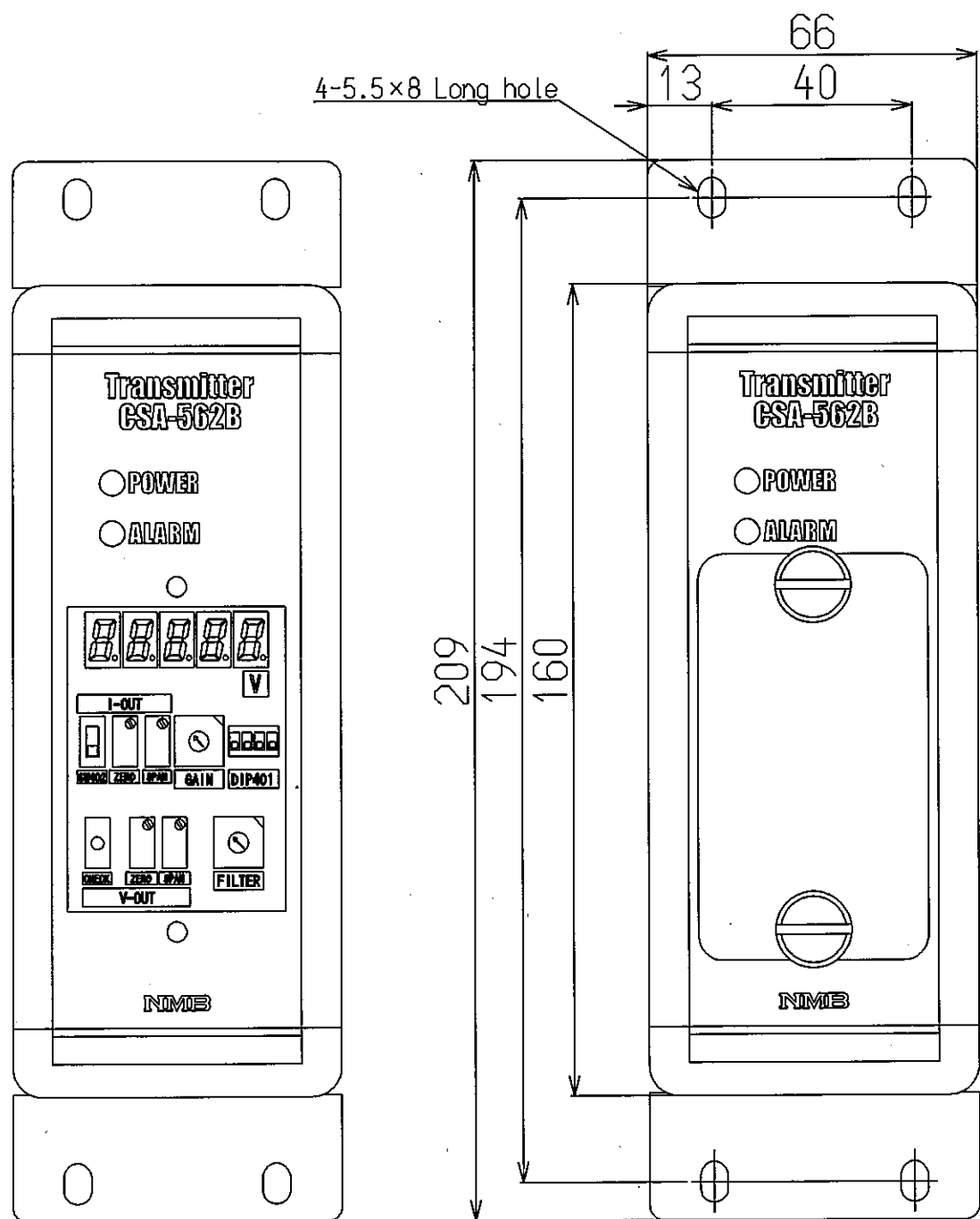


ミネベア株式会社 MINEBEA CO.,LTD. 計測機器事業部					単位 UNIT mm 尺度 SCALE 1/2	材質 MATERIAL 表面粗さ SURF.ROUGH.	作成日 DATE 2008.3.19 品名 DESCRIPTION OUTLINE(TM)
					公差 TOL 寸法 L 公差 $L \le 4 \pm 0.1$ <math>4 < L \le 16 \pm 0.2</math> <math>16 < L \le 63 \pm 0.3</math> <math>63 < L \le 250 \pm 0.5</math> <math>250 < L \le 1000 \pm 0.8</math> 角度 DEG ± 0.5	熱処理 HEAT TREAT. 表面処理 FINISH	品番 PART NO.(MODEL NO.) 葉番 SHEET TMHFB-500NM~1KNM 3 / 4 図番 DRAWING NO. 改訂 REV. KT52536-2 -
行号 MARK 日付 DATE 変更事項 REASON ECN NO. 担当 ENGINEER 承認 APPROVED	APPROVED CHECKED DRAWN YAMAMOTO						

A

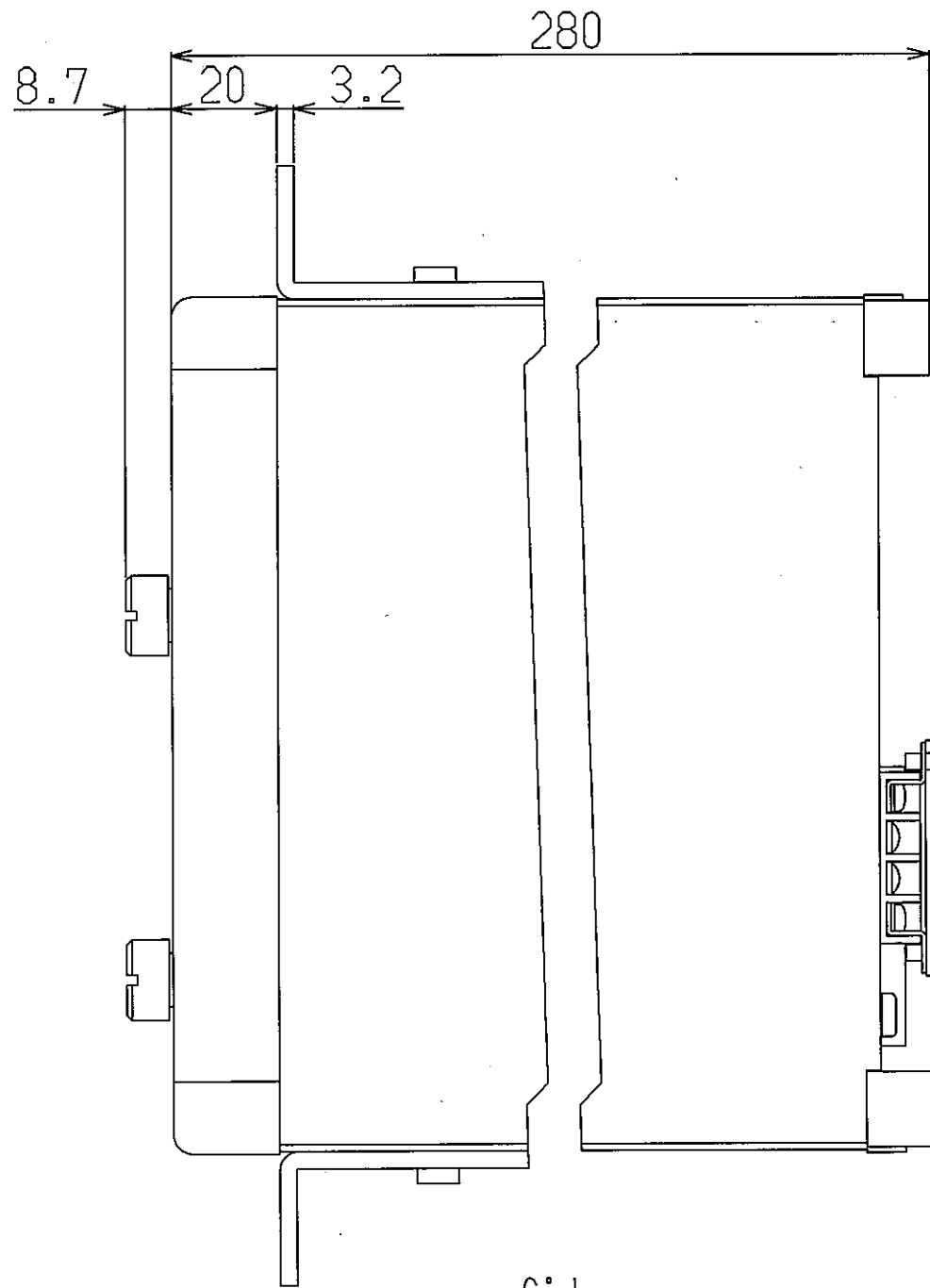
B

C

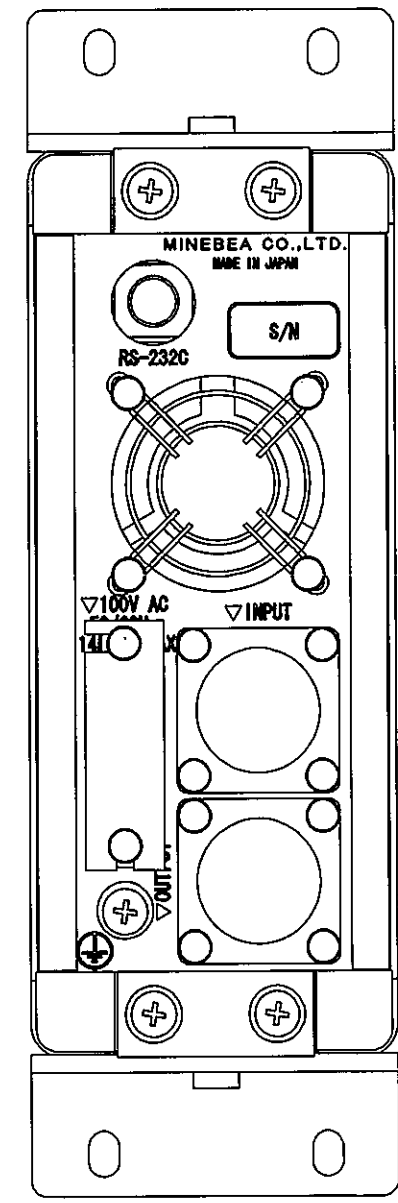


Adjustment part

Front
(The reference sample of silk)



Side



公布
K
S
T
F

ミネベア株式会社 MINEBEA CO.,LTD. 計測機器事業部					単位 UNIT mm 尺度 SCALE 3/4	材質 MATERIAL 表面粗さ SURF.ROUGH. 熱処理 HEAT TREAT. 表面処理 FINISH	作成日 DATE 2008.3.19 品名 DESCRIPTION OUTLINE (AMP)
					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	品番 PART NO.(MODEL NO.) CSA-562B 図番 DRAWING NO. KT52536-2	葉番 SHEET 4 / 4 改訂 REV. -
符号 MARK 日付 DATE 変更事項 REASON ECN NO. 担当 ENGINEER 承認 APPROVED	APPROVED CHECKED DRAWN YAMAMOTO						