

Specifications / flange type Torque Transducer by Optical Transformer method

KT52540-2

1/4

☆ Composition apparatus

- 1) Torque Transducer Model : TMOFB-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 load	(N)	6500

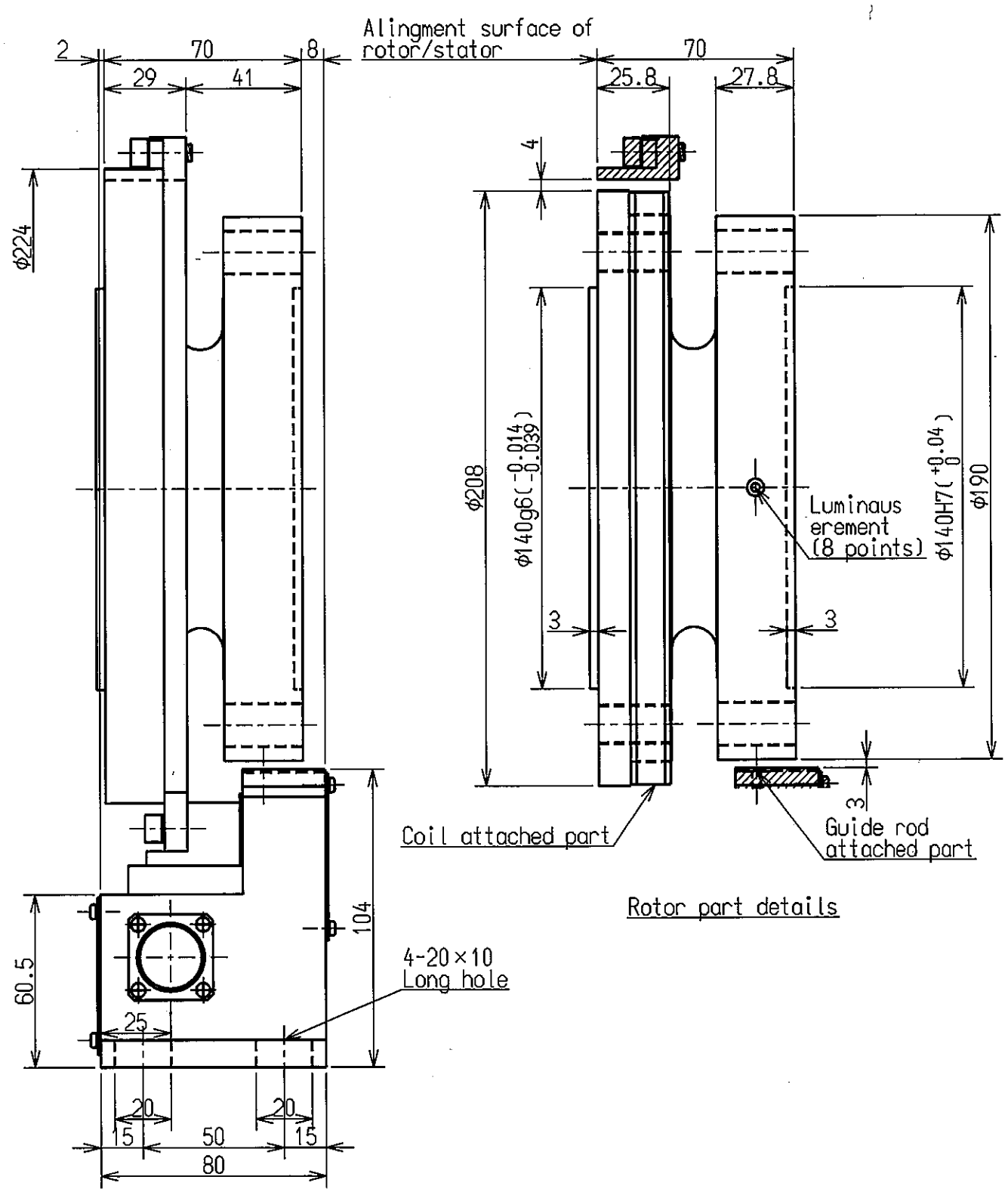
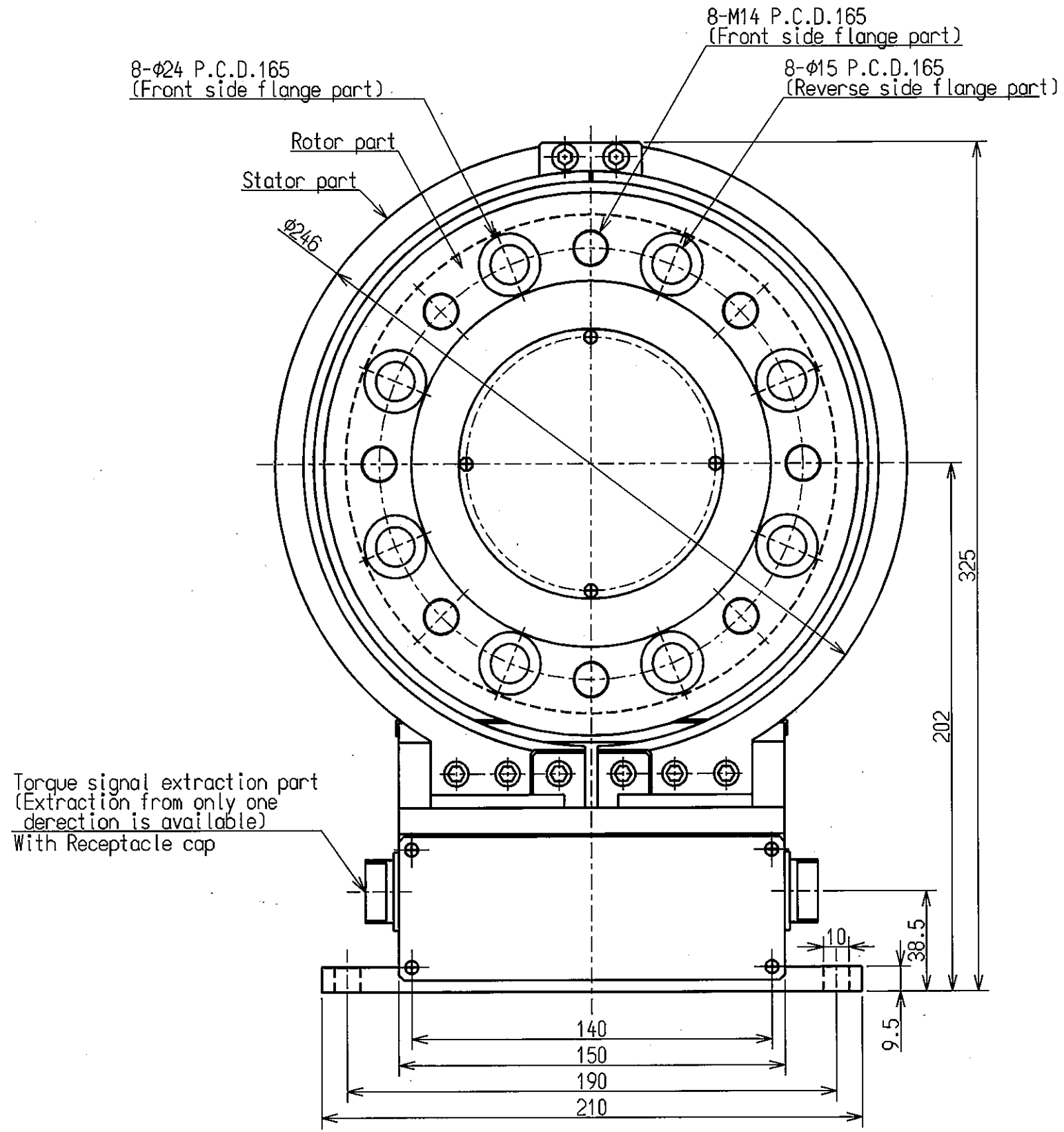
- Accuracy safety bending/thrust load is load value (actual measurement) which generate output error 0.1% R.O.
- Accuracy safety bending load is the result of loading at position 200mm from flange edge.
- All are the guarantee value over static load.

						Date 2008. 3. 19		
						Approved	Checked	Drawn
						F. ITO	F. ITO	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

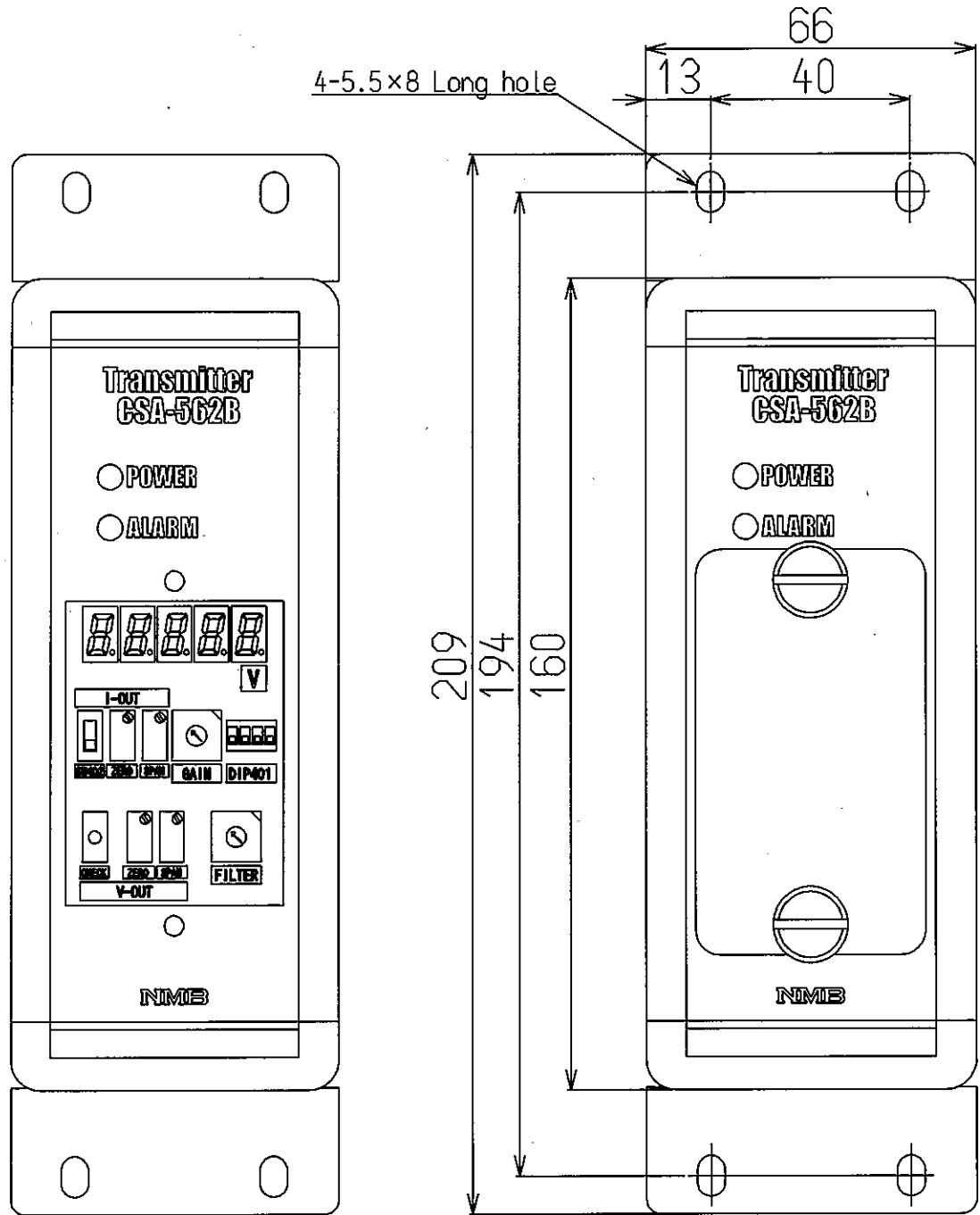


三菱電機株式会社 MINEBEA CO.,LTD. 計測機器事業部					単位 UNIT mm 尺度 SCALE 1/2		材質 MATERIAL 表面粗さ SURF.ROUGH.		作成日 DATE 2008.3.19 品名 DESCRIPTION OUTLINE(TM)		
					公差 TOL 寸法 L 公差 <L≤4 ±0.1 4<L≤16 ±0.2 16<L≤63 ±0.3 63<L≤250 ±0.5 250<L≤1000 ±0.8 角度 DEG ±0.5		熱処理 HEAT TREAT. 表面処理 FINISH		品番 PART NO.(MODEL NO.) 葉番 SHEET TMOFB-5KNM 3/4		図番 DRAWING NO. 改訂 REV. KT52540-2 -
行号 MARK	日付 DATE	変更事項 REASON	ECN NO.	担当 ENGINEER	承認 APPROVED	承認 APPROVED 確認 CHECKED 描画 DRAWN YAMAMOTO					

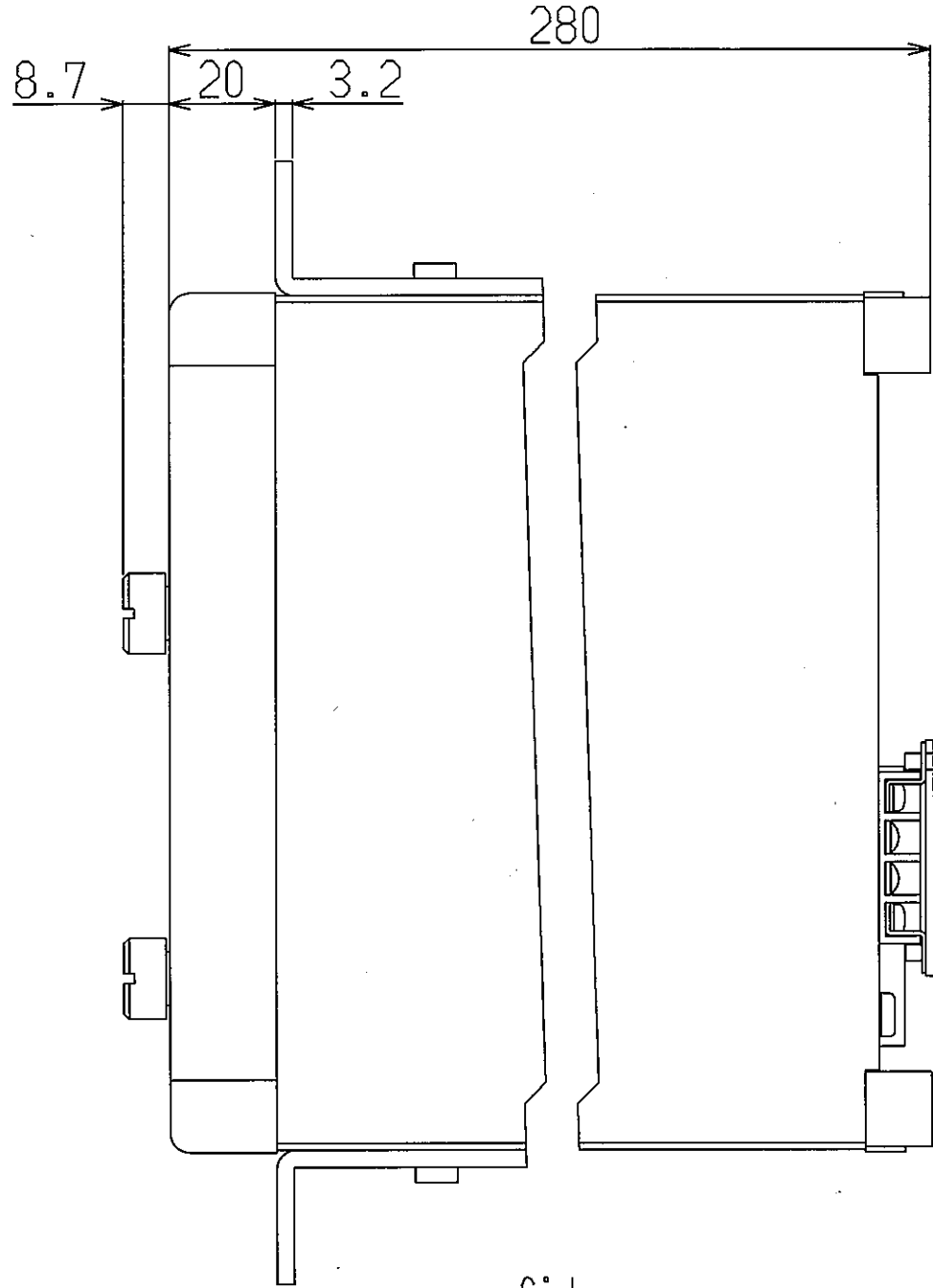
A

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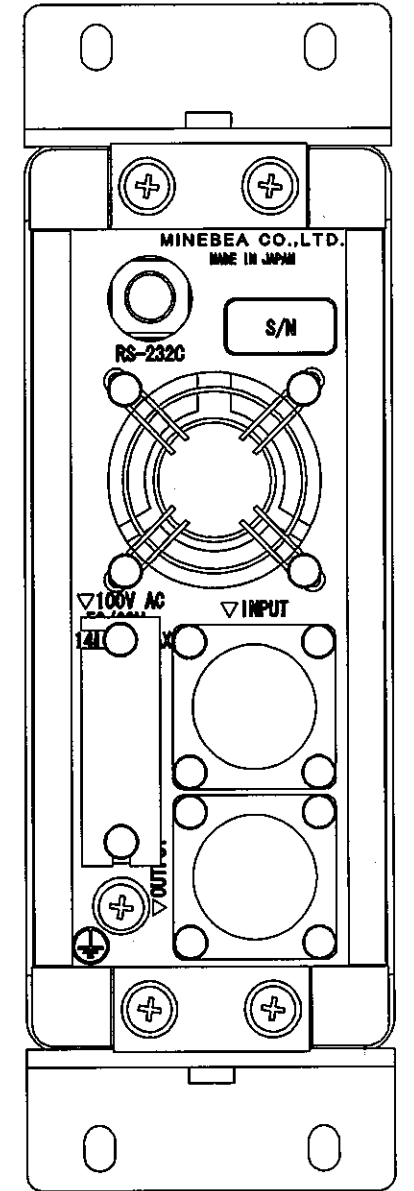
C



Adjustment part



Side



Front
(The reference sample of silk)

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		作成日 DATE 2008.3.19		
						表面粗さ SURF.ROUGH.		品名 DESCRIPTION		
APPROVED CHECKED DRAWN YAMAMOTO					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.) 乘番 SHEET		
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								OUTLINE (AMP)		-