

Specifications / flange type Torque Transducer by Optical Transformer method

KT52537-2

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)	2KNM	3KNM
Performance		
Rated capacity (R. C.)	±2 kN·m	±3 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	10000 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 5.2 kg
	Stator part	Approx 3.0 kg

☆ Machine characteristics (Rotor part)

Model (Capacity indicated)	2KNM	3KNM
Response Frequency (kHz)	1 kHz	
Inertia moment (kg·cm ²)	238.5	238.8
Torsion rigidity (kN·m/rad)	3430	5145
Torsion peculiar pitch (kHz)	4.348	4.651
Bending peculiar pitch (Radial direction) (kHz)	6.897	7.143
Bending peculiar pitch (Thrust direction) (kHz)	3.846	4.000
Twist angle at R.C. (°)	0.032	0.031
Accuracy safe bending lo (N)	3000	4500
Accuracy safe thrust load (N)	2600	3900

- 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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Mark	Date	Reason/ECN.no.	Approved	Checked	Drawn				Y.YAMAMOTO

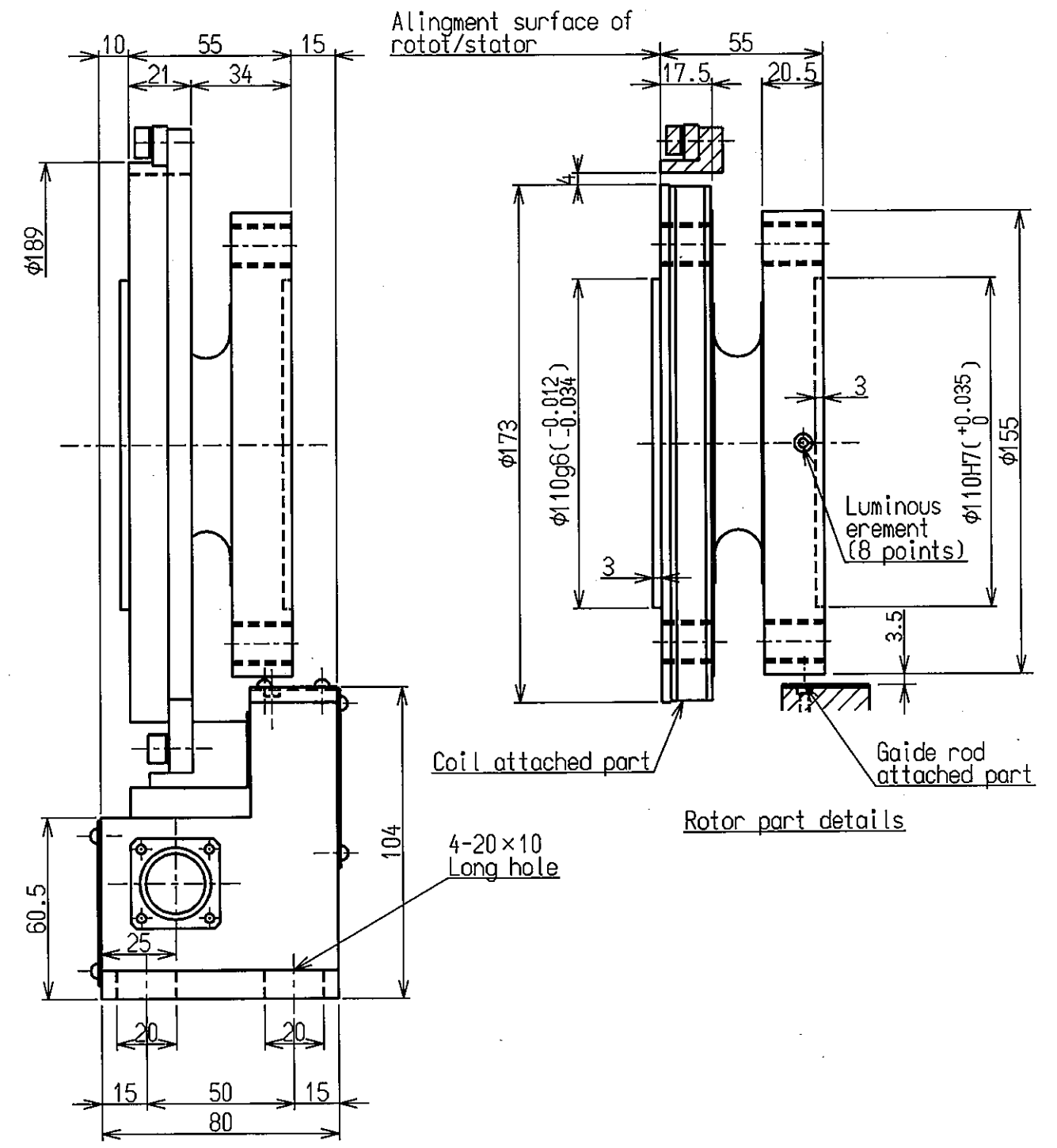
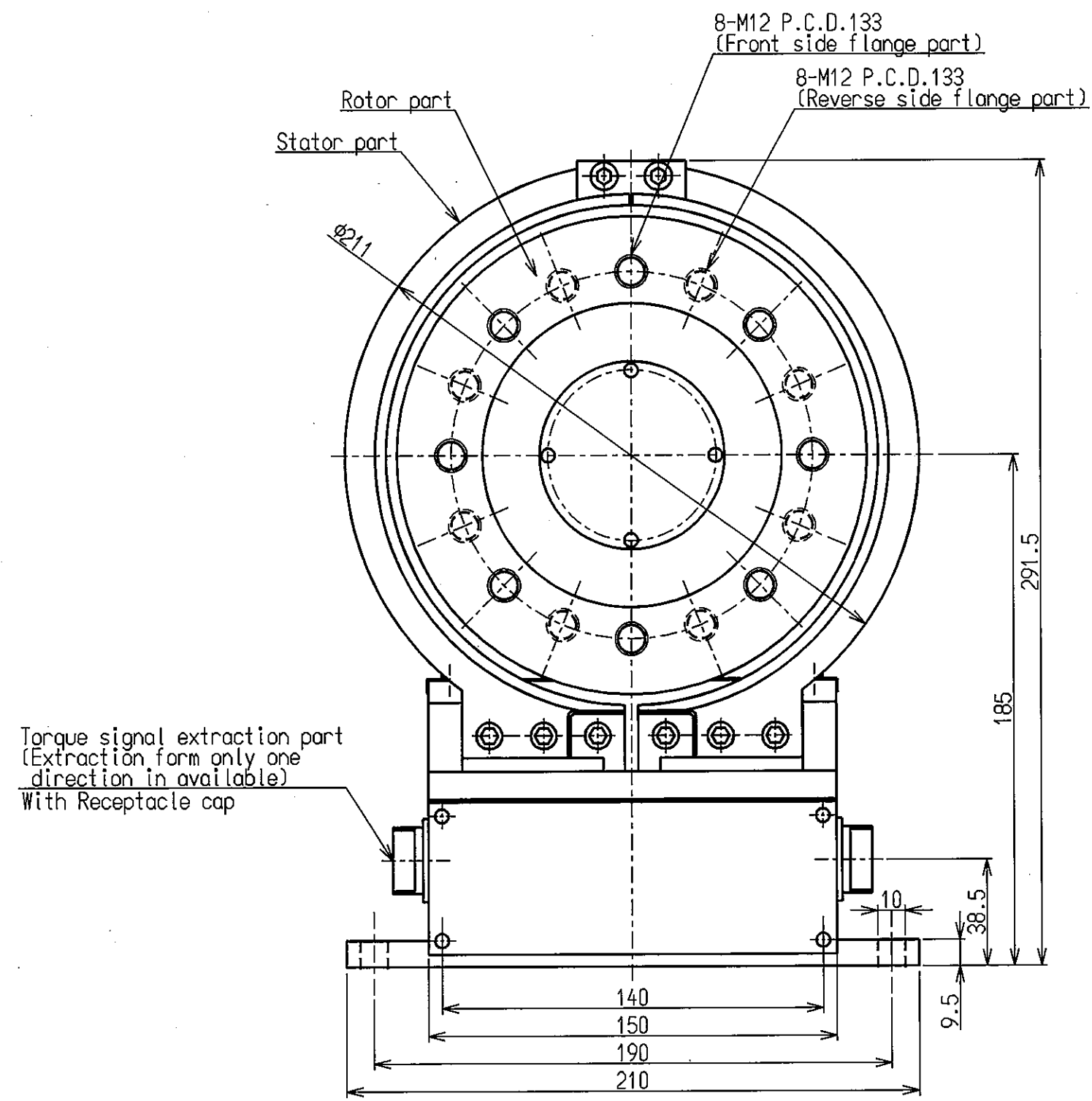
★ Spec. of transmitter

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

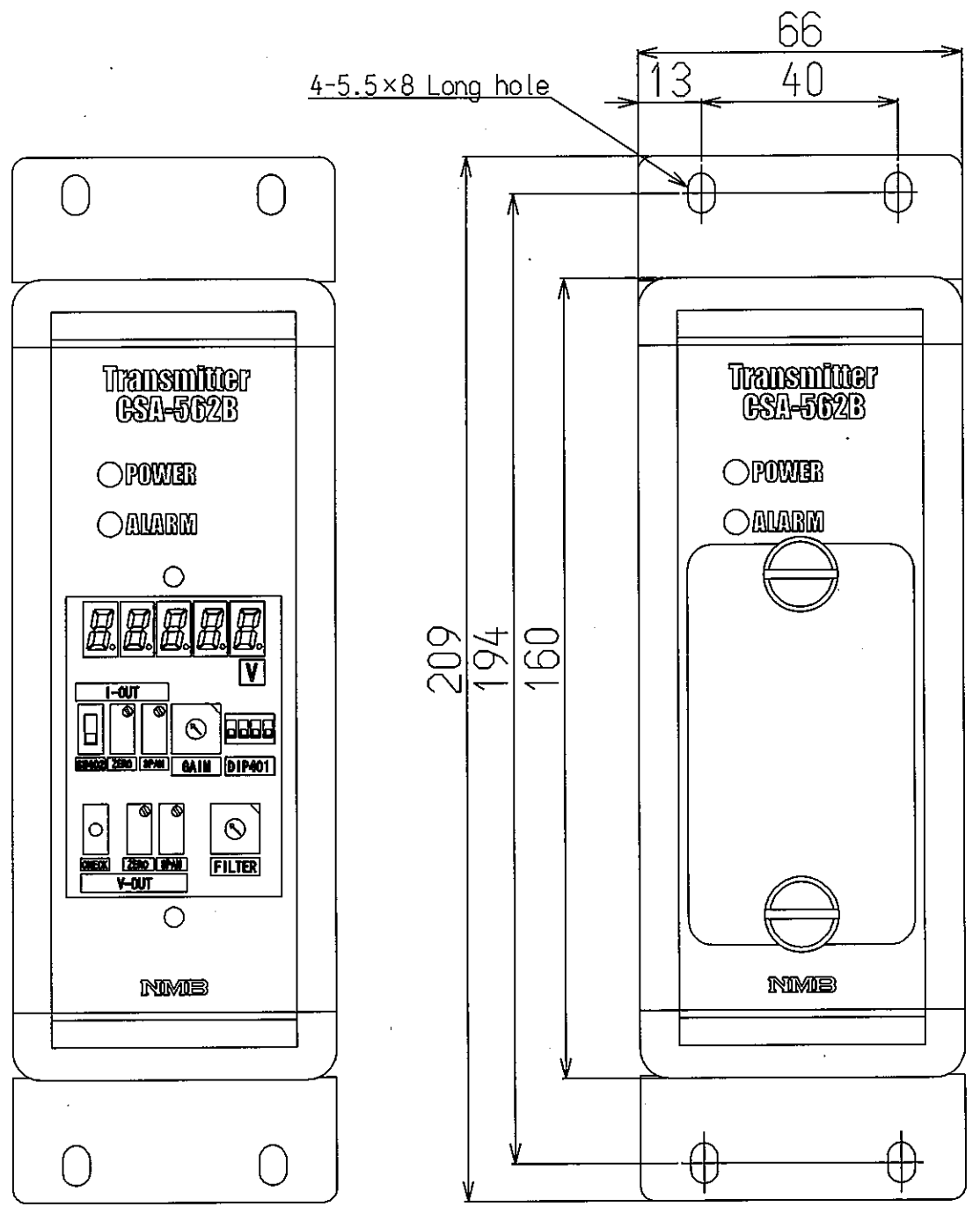
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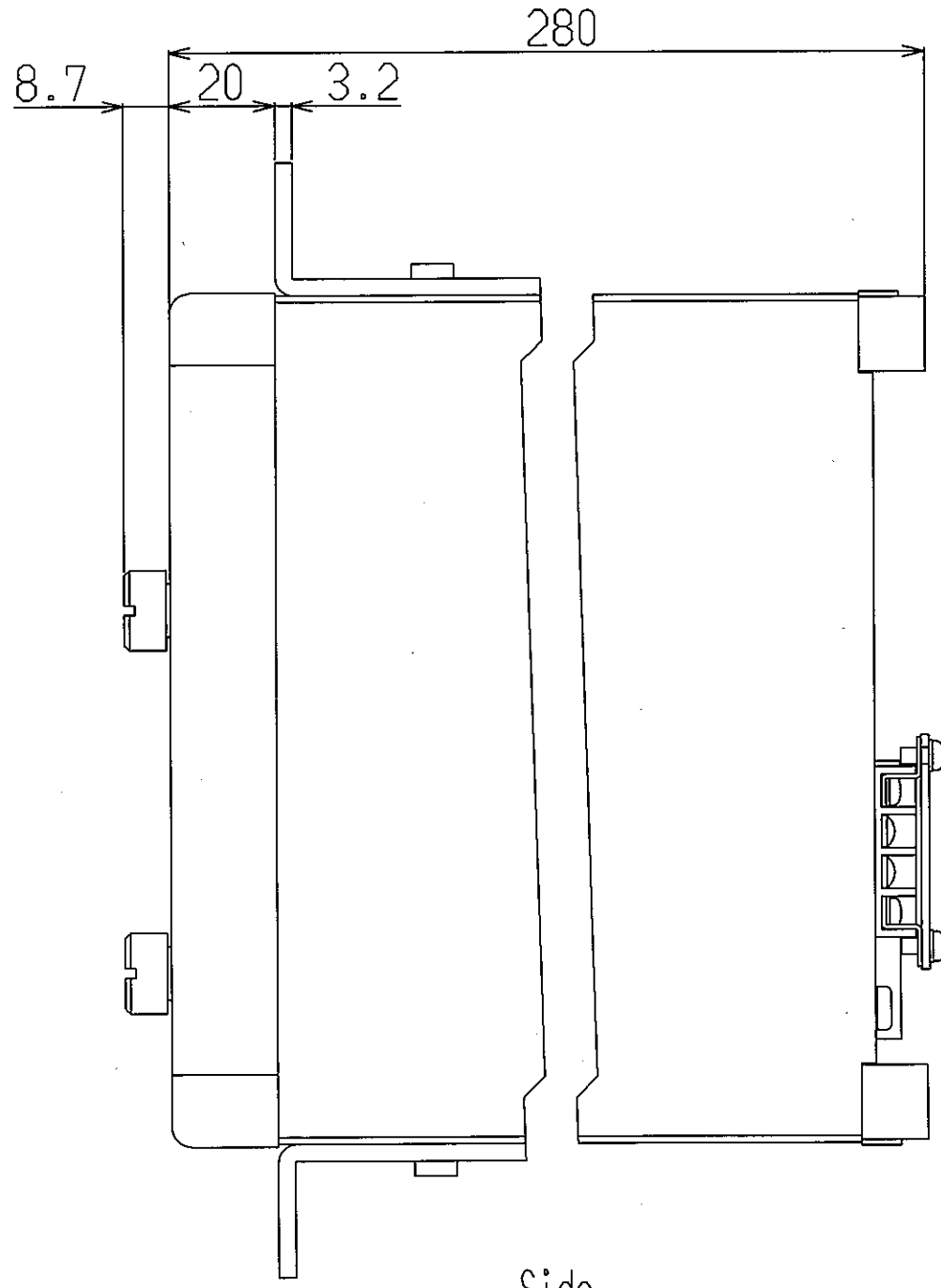
ミネベア株式会社 MINEBEA CO.,LTD. 計測機器事業部					単位 UNIT mm 尺度 SCALE 1/2	材質 MATERIAL 表面粗さ SURF.ROUGH.	作成日 DATE 2008.3.19 品名 DESCRIPTION OUTLINE(TM)
					一般公差 TOL 寸法 L 公差 <L≤4 ±0.1 4<L≤16 ±0.2 16<L≤63 ±0.3 63<L≤250 ±0.5 250<L≤1000 ±0.8 角度 DEG ±0.5	熱処理 HEAT TREAT. 表面処理 FINISH	品番 PART NO.(MODEL NO.) TMHFB-2KNM~3KNM 図番 DRAWING NO. KT52537-2
行号 MARK 日付 DATE 変更事項 REASON ECN NO.	担当 ENGINEER 承認 APPROVED	承認 APPROVED 検査 CHECKED 描画 DRAWN	YAMAMOTO	承認 APPROVED 検査 CHECKED 描画 DRAWN	承認 APPROVED 検査 CHECKED 描画 DRAWN	承認 APPROVED 検査 CHECKED 描画 DRAWN	承認 APPROVED 検査 CHECKED 描画 DRAWN

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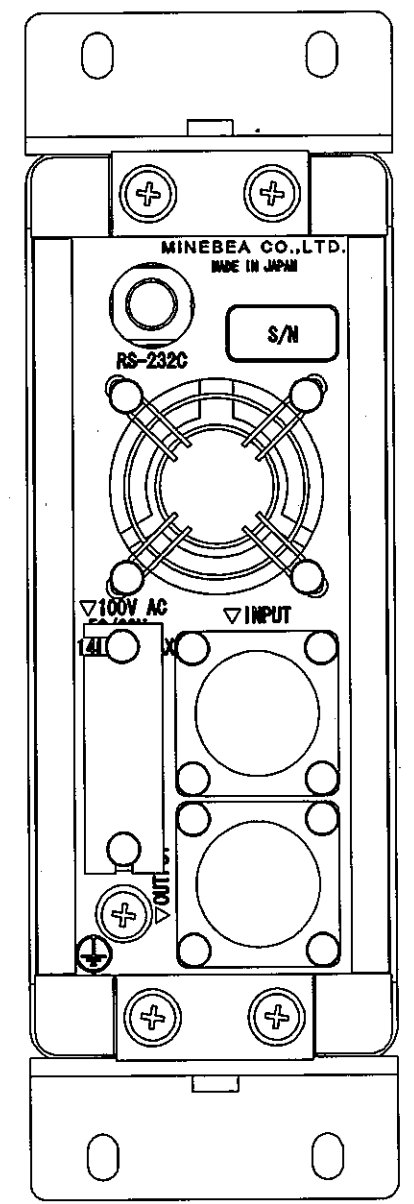


Adjustment part

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		作成日 DATE 2008.3.19		
					一般公差 TOL		表面粗さ SURF.ROUGH.		熱処理 HEAT TREAT.		品名 DESCRIPTION OUTLINE (AMP)
符号 MARK		日付 DATE		変更事項 REASON		ECN NO.		担当 ENGINEER		承認 APPROVED	
APPROVED		CHECKED		DRAWN		YAMAMOTO		品番 PART NO.(MODEL NO.) CSA-562B		葉番 SHEET 4 / 4	
角度 DEG		公差		表面処理 FINISH		図番 DRAWING NO. KT52537-2		改訂 REV.		-	