

Specifications

Flange type Torque Transducer by Optical Transformer method

- ★ Composition apparatus
- | | |
|---------------------------|--|
| 1) Torque Transducer | Model : TMHFB- □ NM |
| 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

Model(Capacity indicated)	2KNM	3KNM
Performance		
Rated capacity(R.C.)	±2kN·m	±3kN·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 °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	10,000 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 ⁷ times with rated load	
Mass	Rotor part	5.2 kg
	Stator part	3.0 kg

★ Machine characteristics(Rotor part)

Model(Capacity indicated)	2KNM	3KNM
Response Frequency [kHz]	1	
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 load [N]	3000	4500
Accuracy safe thrust load [N]	2600	3900

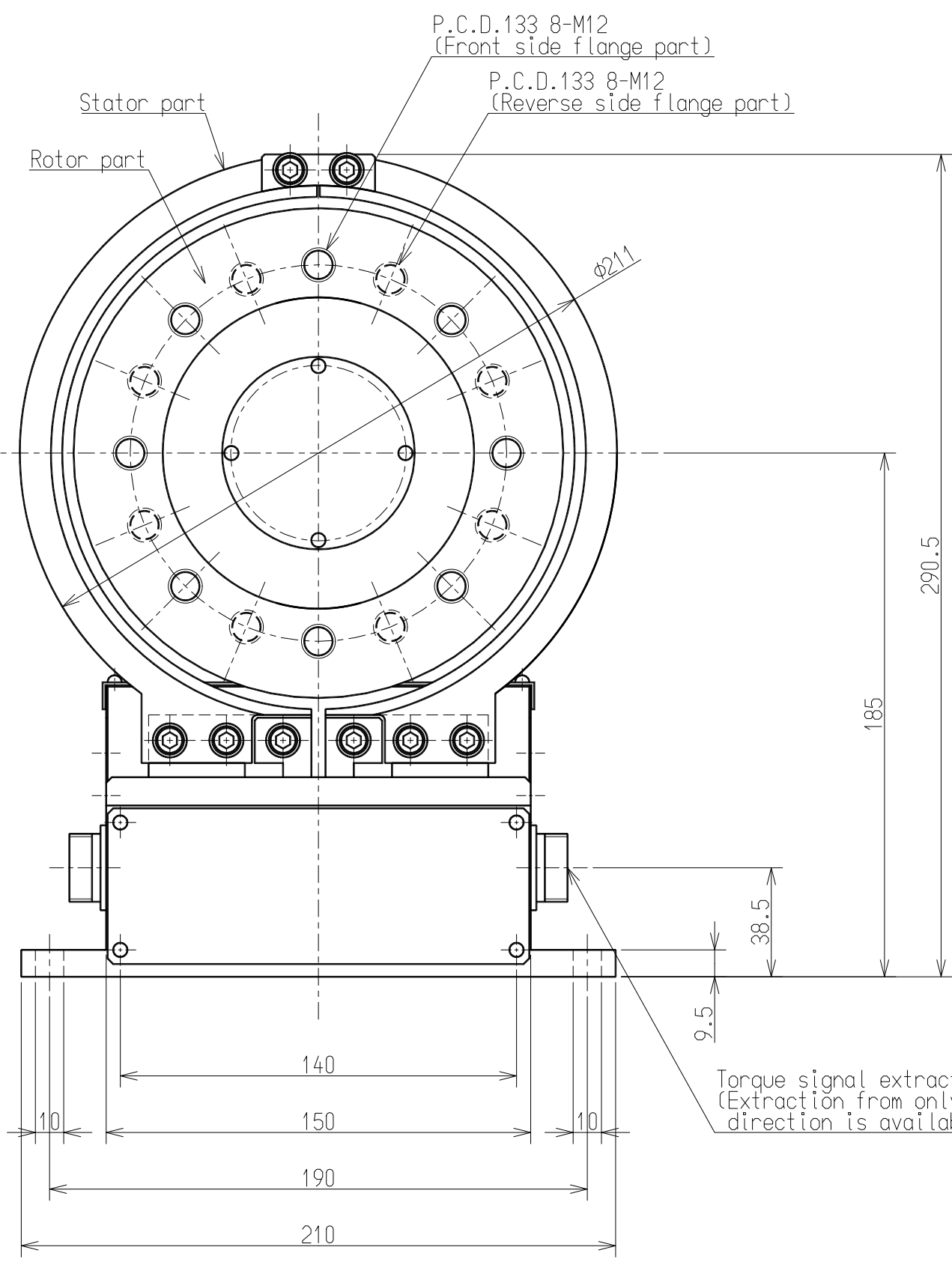
- Accuracy safety bending/thrust load is load value(actual measurment) which generate output error 0.1%R.O.
- Accuracy safety bending load is the result of loading at position 200mm from flange edge.
- All are the guarantee value over static load.

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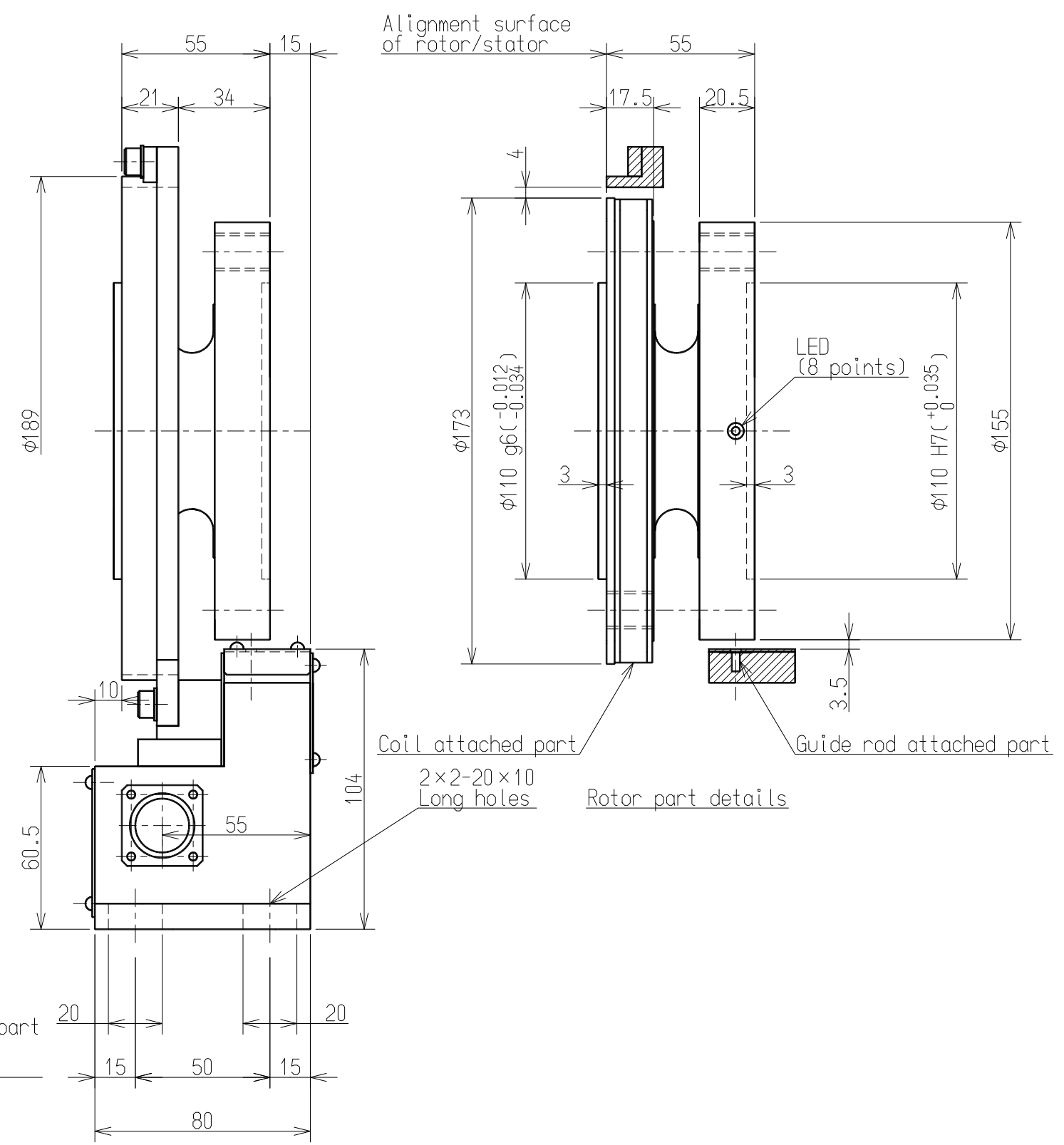
			ミネベア株式会社 MINEBEA CO.,LTD.		単位 UNIT mm		材質 MATERIAL -		作成日 DATE 2014.10.02		
			計測機器事業部		尺度 SCALE Free		表面粗さ SURF.ROUGH. -		品名 DESCRIPTION OUTLINE		
A	2014.10.02	KN14-0427			一般公差 —		熱処理 HEAT TREAT. -		品番 PART NO.(MODEL NO.) TMHFB-2,3KNM		葉番 SHEET 1 / 2
-	2008.03.19	NEW					表面処理 FINISH -		図番 DRAWING NO. KT52537-2		改訂 REV. A
符号 MARK	日付 DATE	変更事項 REASON	ECN NO.		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				

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Torque signal extraction part
(Extraction from only one direction is available)



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ミネベア株式会社 MINEBEA CO.,LTD. 計測機器事業部 MEASURING COMPONENTS BUSINESS UNIT	作成日 DATE 2014.10.02	品名 DESCRIPTION
	OUTLINE	
	品番 PART NO.(MODEL NO.) TMHFB-2,3KNM	葉番 SHEET 2 / 2
	図番 DRAWING NO. KT52537-2	改訂 REV. A