

# 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】<br>CAC-169B-30M (30m) 【Option】 |
| 3) Exclusive transmitter  | Model : CSA-562B 【Option】   |

★ Accessories : Calibration certificate

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

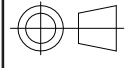
★ Spec. of torque transducer

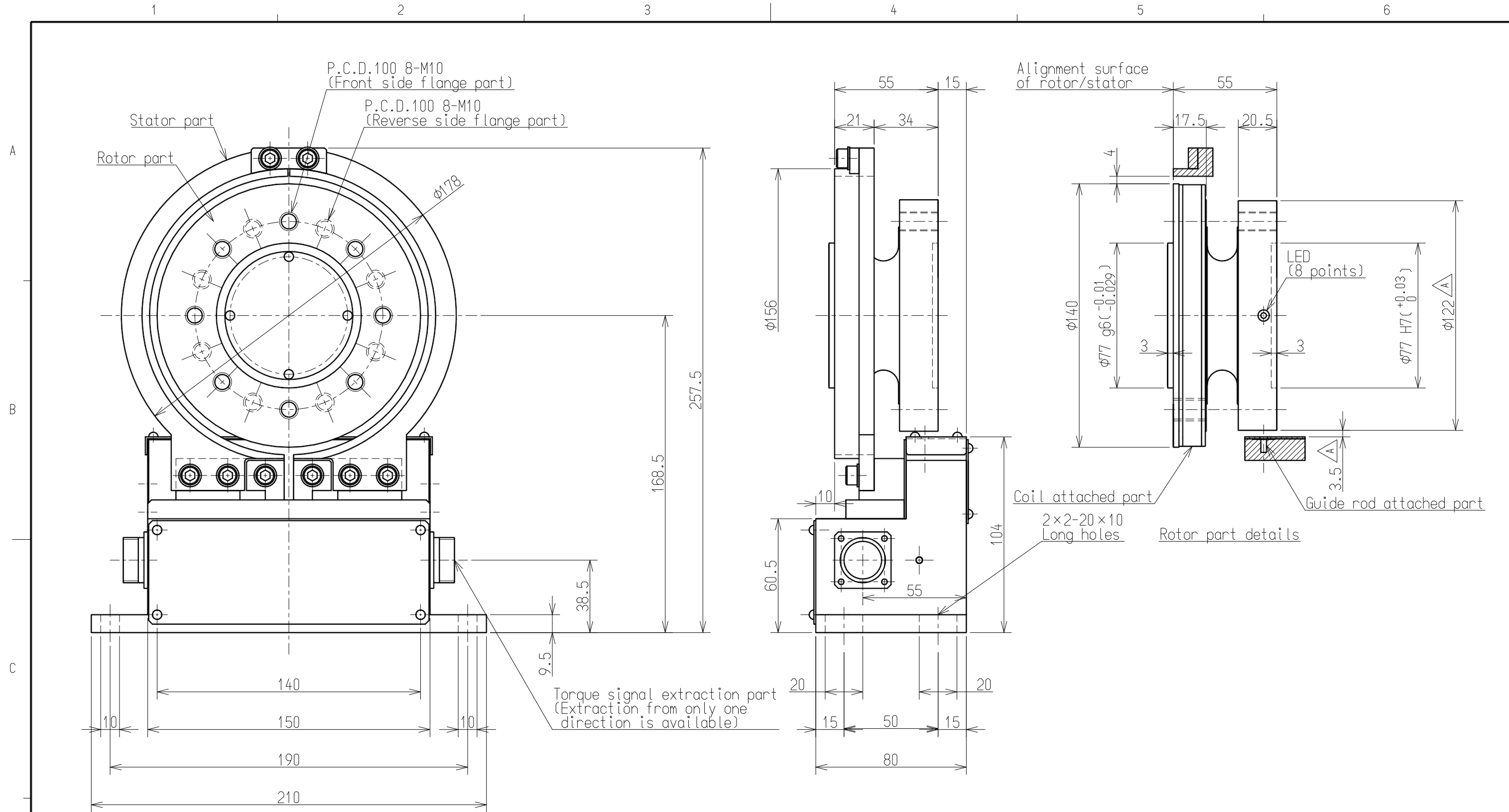
Model(Capacity indicated)	100NM	200NM
Performance		
Rated capacity(R.C.)	±100N・m	±200N・m
Safe overload	240 %R.C.	
Ultimate overload	400 %R.C.	
Rated output(R.O.)	±10 V	
Accuracy of detected value (include Nonlinearity,Hysteresis,Repeatability)	±0.05 %R.O.	
Temperature		
Safe temperature range	-10 ℃ to 60 ℃	
Temperature effect on zero balance	0.05 %R.O./10℃	
Temperature effect on output	0.05 %LOAD/10℃	
Characteristics on rotation		
Maximum number of rotation	15,000 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 <sup>7</sup> times with rated load	
Mass	Rotor part	3.0 kg
	Stator part	2.8 kg

★ Machine characteristics(Rotor part)

Model(Capacity indicated)	100NM	200NM
Response Frequency [kHz]	1	
Inertia moment [kg・cm <sup>2</sup> ]	96.94	96.96
Torsion rigidity [kN・m/rad]	90.32	188.1
Torsion peculiar pitch [kHz]	1.883	2.183
Bending peculiar pitch(Radial direction) [kHz]	1.645	1.667
Bending peculiar pitch(Thrust direction) [kHz]	1.481	1.715
Twist angle at R.C. [°]	0.063	0.061
Accuracy safe bending load [N]	150	300
Accuracy safe thrust load [N]	130	260

- 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.

			<b>ミネベアミツミ株式会社</b> MinebeaMitsumi Inc.		 単位 UNIT mm 尺度 SCALE Free	材質 MATERIAL	作成日 DATE 2019.12.18	
			<b>センシングデバイス事業部</b> Sensing Device Business Unit			表面粗さ SURF.ROUGH.	<b>OUTLINE</b>	
					一般公差 TOL	熱処理 HEAT TREAT.		
A	2019/12/18	FN19-0608			<L≤6	-	TMHFB-100NM,200NM	1 / 2
-	2016/03/31	NEW			6<L≤30	-		
符号 MARK	日付 DATE	変更事項 REASON	ECN NO.		30<L≤120	表面処理 FINISH	図番 DRAWING NO.	改訂 REV.
					120<L≤400	-	KT54155-2	A
					400<L≤1000	-		
					角度 DEG	-		



<b>ミネベアミツミ株式会社</b> MinebeaMitsumi Inc. センシングデバイス事業部 Sensing Device Business Unit	作成日 DATE	2019.12.18
	品名 DESCRIPTION	OUTLINE
	型式 MODEL NAME	TMHFB-100NM, 200NM
	図番 DRAWING NO.	KT54155-2
	葉番 SHEET	2 / 2
	改訂 REV.	A