

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

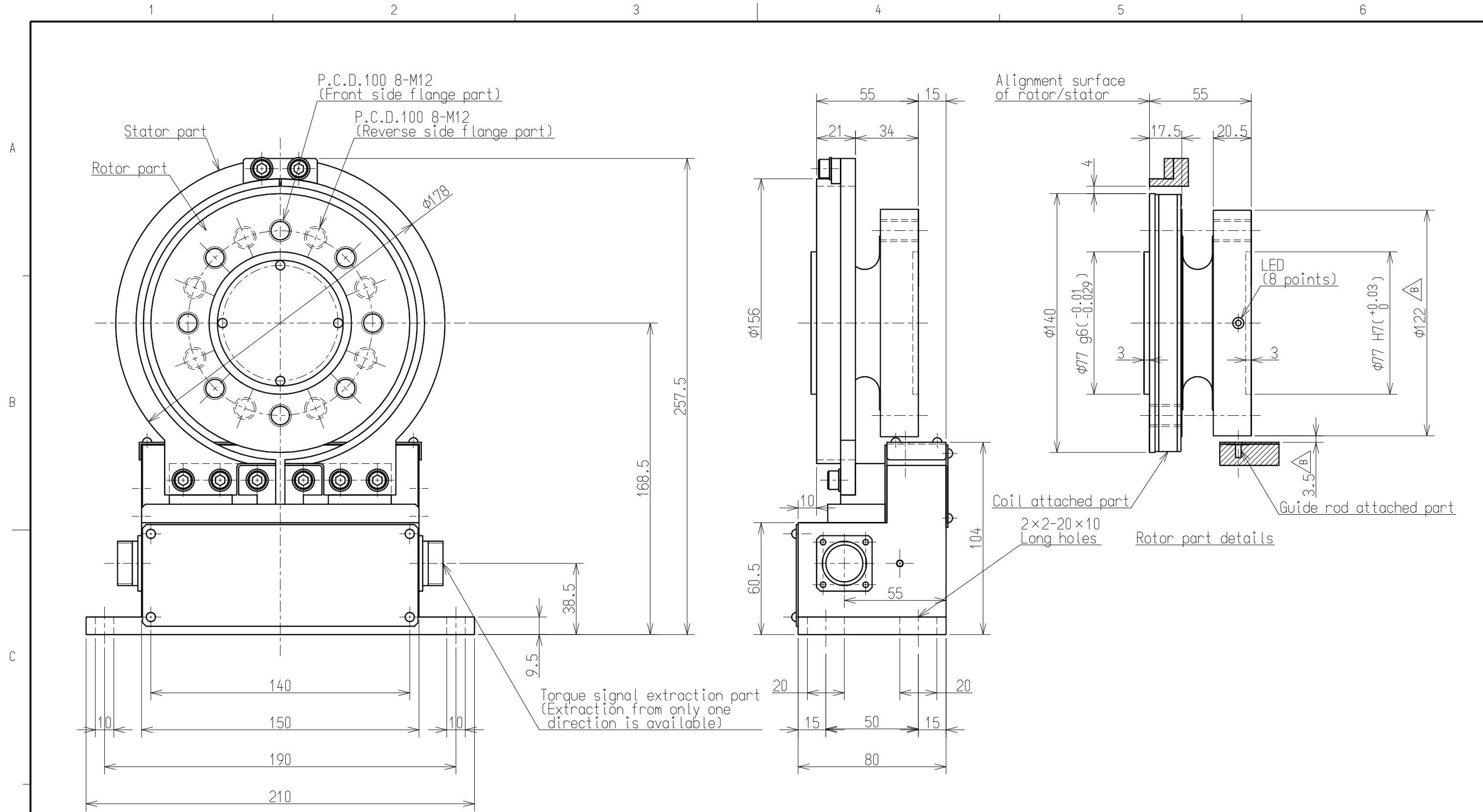
Model(Capacity indicated)	500NM	1KNM
Performance		
Rated capacity(R.C.)	±500N·m	±1kN·m
Safe overload	240 %R.C.	
Ultimate overload	400 %R.C.	
Rated output(R.O.)	±10 V	
Accuracy of detected value (include Nonlinearity,Hysteresis,Repeatability)	±0.05 %R.O.	
Temperature		
Safe temperature range	-10 ℃ to 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 ⁷ times with rated load	
Mass	Rotor part	3.0 kg
	Stator part	2.8 kg

★ Machine characteristics(Rotor part)

Model(Capacity indicated)	500NM	1KNM
Response Frequency [kHz]	1	
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 load [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.

			ミネベアミツミ株式会社 MinebeaMitsumi Inc.			単位 UNIT mm	材質 MATERIAL -	作成日 DATE 2019.12.18		
			センシングデバイス事業部 Sensing Device Business Unit			尺度 SCALE Free	表面粗さ SURF.ROUGH. -	品名 DESCRIPTION OUTLINE		
B	2019/12/18	FN19-0608			一般公差 TOL	DIMENSION L	熱処理 HEAT TREAT. -	型式 MODEL NAME TMHFB-500NM,1KNM	葉番 SHEET 1 / 2	
A	2014/10/02	KN14-0427				<L ≤ 6	±0.1	表面処理 FINISH -	図番 DRAWING NO. KT52536-2	改訂 REV. B
-	2008/03/19	NEW				6 < L ≤ 30	±0.2			
符号 MARK	日付 DATE	変更事項 REASON	ECN NO.			30 < L ≤ 120	±0.3			
						120 < L ≤ 400	±0.5			
						400 < L ≤ 1000	±0.8			
						角度 DEG	±0.5			



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	OUTLINE	
	型式 MODEL NAME	葉番 SHEET
TMHFB-500NM, 1KNM	2 / 2	
図番 DRAWING NO.	改訂 REV.	
KT52536-2	B	