

# TORQUE TRANSDUCER TYPE TMNR-500NM, 1KNM

## SPECIFICATIONS

Rated capacity(R.C.) : 500 N·m, 1 kN·m  
 Safe overload : 120 %R.C.  
 Max. Safe overload : 200 %R.C.  
 Rated output(R.O.) : 1.6 mV/V±0.32 mV/V  
 (in case of combine CSA-561)  
 Accuracy : 0.5 %R.O.  
 (Include Non-linearity, Hysteresis and Repeatability)  
 Recommended excitation : 2 V AC  
 Insulation resistance : 500 MΩ or more  
 (Bridge-body)  
 Surrounding temperature range : 0 °C to 40 °C  
 (because heat generation of Bearings.)  
 Safe temperature range : 0 °C to 90 °C  
 Temperature effect on zero balance: 0.2 %R.O./10°C  
 Temperature effect on output : 0.2 %LOAD/10°C  
 Max. revolution : 8000 r.p.m.

Rotation effect : 0.3 %R.O.  
 on zero balance  
 Generation of heat : 40 °C or under/Max.revolution  
 caused by rotation  
 IP class : IP40  
 Rotation finder gear : S45C,60tooth  
 (build in) 1.25module,tooth width 10mm  
 Rotor weight : approx. 4.3 kg  
 Total weight : approx. 7.5 kg

### ATTACHMENT

Cable : φ10 4core shield 5m  
 △ Connector:1108-12A10-7M10.0  
 PRC03-12A10-7M10.5  
 Key : S45C,2pcs

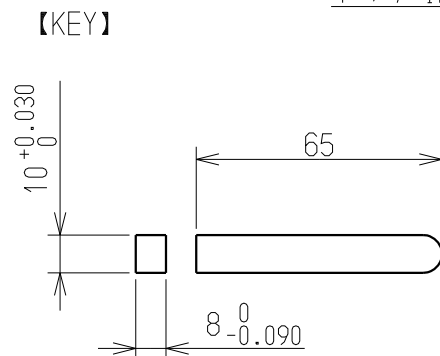
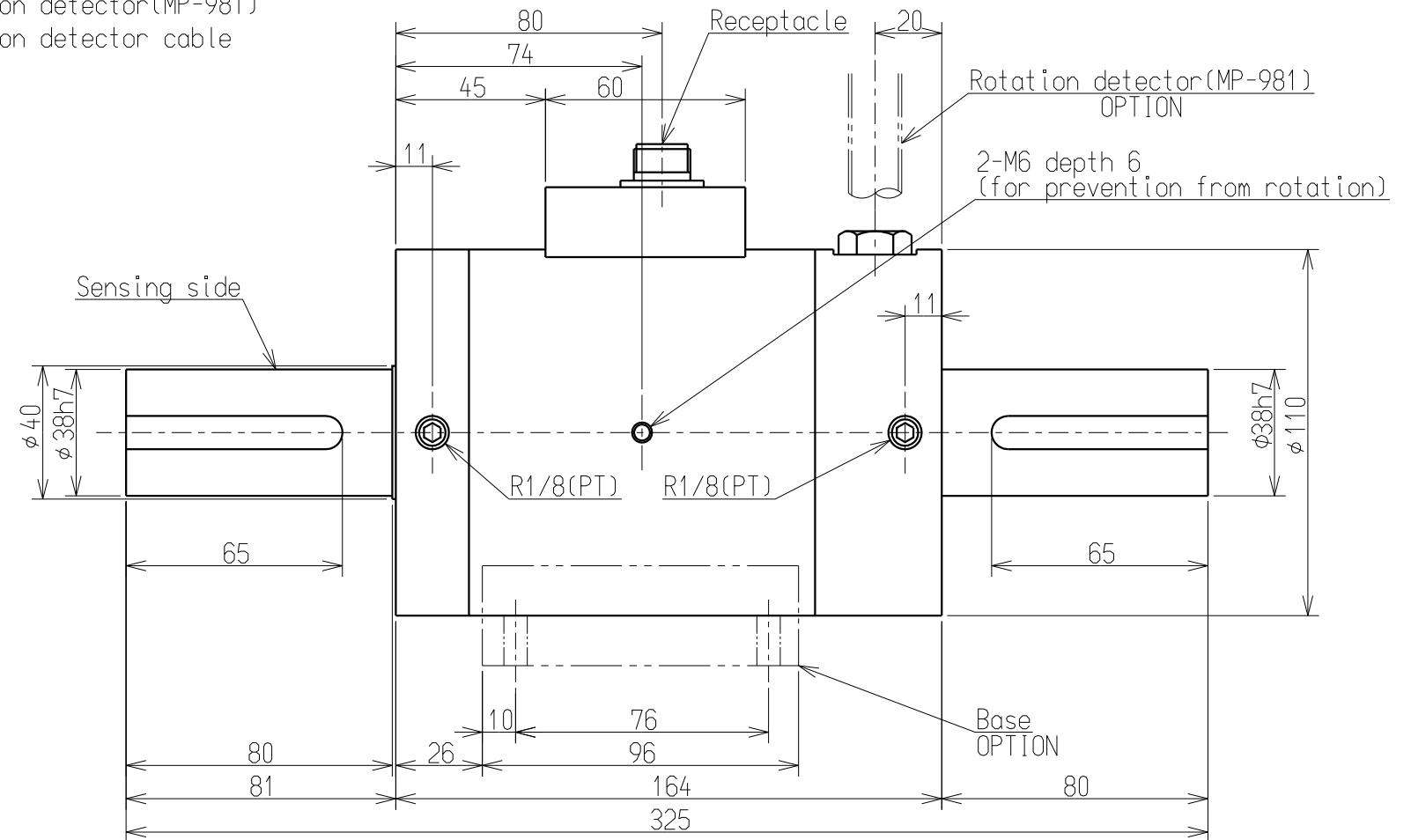
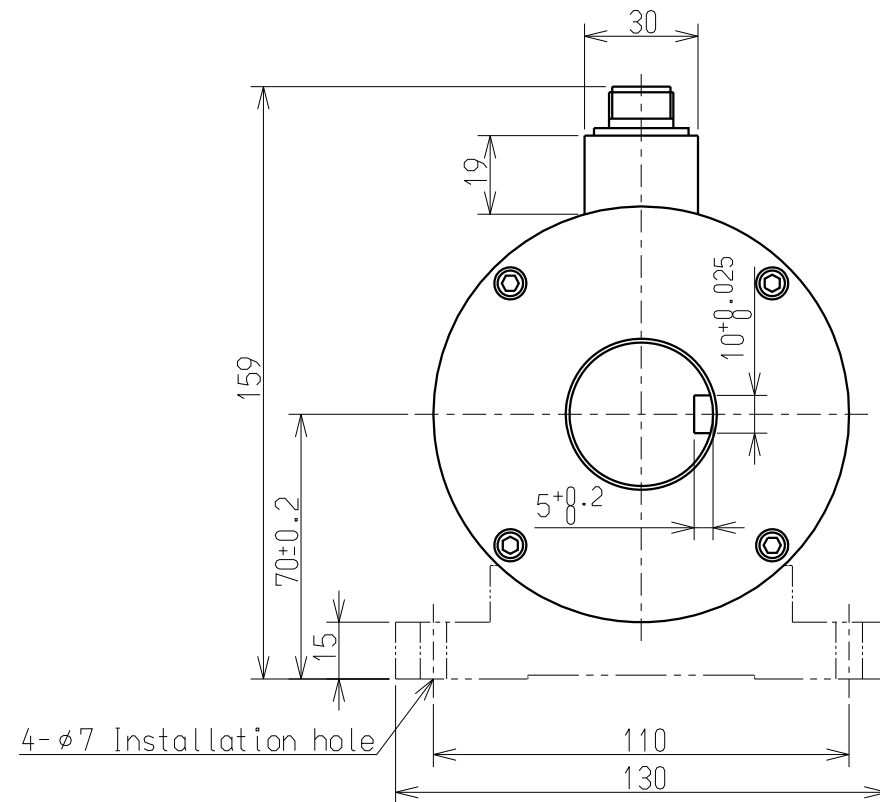
### OPTION

Base(NRBS-2)  
 Rotation detector(MP-981)  
 Rotation detector cable

Model(Capacity indicated)	500NM	1KNM
Rotor inertia (kg·cm <sup>2</sup> )	16.38	16.48
Rotor GD2 (kg·cm <sup>2</sup> )	65.51	65.90
Torsional stiffness (kN·m/rad)	48.90	63.98
Torsion peculiar pitch (kHz)	3.3	3.8
Twist angle at R.C. (°)	0.575	0.878
Safe radial load (N)	49.03	98.07
Safe radial load(Static) (N)	490.3	980.7
Safe thrust load (N)	294.2	294.2
Bearing	6008ZZ	6008ZZ

### 【NOTES】

Safe radial load:  
 Above data is at maximum speed.  
 Safe radial load(static):  
 Above data is direct loading by static test.



					<b>ミネベアミツミ株式会社</b> MinebeoMitsumi Inc. <b>センシングデバイス事業部</b> Sensing Device Business Unit			単位 UNIT mm 尺度 SCALE Free	材質 MATERIAL - 表面粗さ SURF.ROUGH. - 熱処理 HEAT TREAT. - 表面処理 FINISH -	作成日 DATE 2023/01/30 品名 DESCRIPTION <b>OUTLINE</b> 型式 MODEL NAME TMNR-500NM,1KNM 図番 DRAWING NO. KT53907-2	葉番 SHEET 1 / 1 改訂 REV. A
A	2023.01.30	FN23-0011			APPROVED	CHECKED	DRAWN	DIMENSION L TOL <L≤6 ±0.1 6<L≤30 ±0.2 30<L≤120 ±0.3 120<L≤400 ±0.5 400<L≤1000 ±0.8 角度 DEG ±0.5			
-	2015.02.10	NEW									
行号 MARK	日付 DATE	変更事項 REASON	ECN NO.	担当 ENGINEER	承認 APPROVED						