Smartsyn®

HOLLOW SHAFT RESOLVERS

SIZE		21	
Model No.		TS2641N11E64	TS2651N111E78
Type		BRX	BRT
Primary		R1-R2	S1-S3, S2-S4
Input Voltage/Frequency		7Vrms 10kHz	3.5Vrms 4kHz
Transformation Ratio		0.5 ± 5%	0.3 ± 5%
Electrical Error		±10′ Max.	±10′ Max.
Null Voltage		20mVrms Max.	——
Phase Shift		−5° Nom.	——
Impedance	Z_{RO}	190Ω	51+j90Ω
	Z_{RS}	——	44+j76Ω
	Z_{SO}	300Ω	102+j150Ω
	Z_{SS}	270Ω	——
Operating Temperature		−10 ~ +100°C	−10 ~ +150°C
Max. Operating Speed		83.3s⁻¹	133.3s⁻¹
Mass		0.3kg	0.305kg
Output Type		Normal	$E_{R1-R2}=K(-E_{S1-S2} \sin\theta - E_{S2-S4}\cos\theta)$

OUTLINE

(DIMENSION : mm)

SIZE 21   TS2641N11E64, TS2651N111E78

DETAIL OF SPRING PLATE

SPRING PLATE

2 − M3∠90°

TUBE (NOTE)
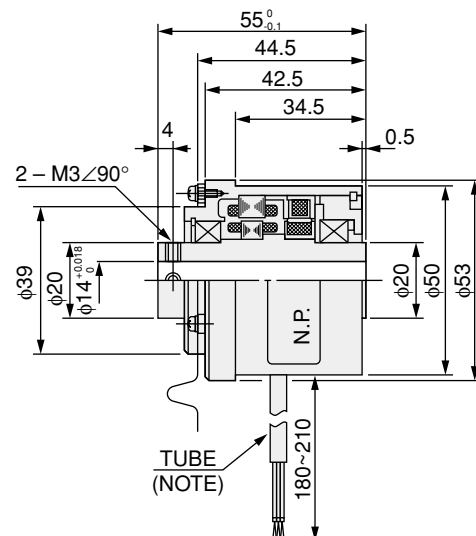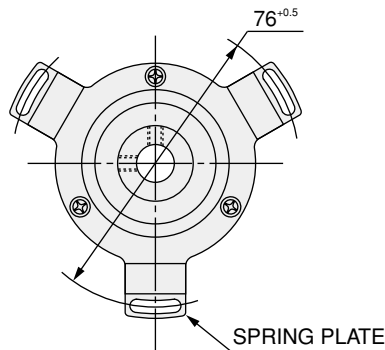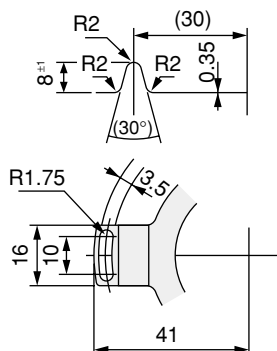
NOTE   TS2641N11E64   : WITHOUT TUBE
          TS2651N111E78 : WITH TUBE

APPLICATION NOTES

■The supply voltage is a rated value, and a resolver can accept a voltage from 3V to approx. 1.2 times as high as the rating. However, the supply frequency should only be altered within ±5% lest it should affect the accuracy. Electrical parameters largely vary as the frequency varies as shown on the right.

■When a noise source is in vicinity, or when signal transfer distance is long, twisted/shielded pair cables should be used. When a noise still exists on the signals, they should be received by a differential amplifier.

■In BRX resolver, the two output voltages should be connected to the same amount of loads each other, or the voltages will get disproportionate, thus affect the accuracy.

■When an intense magnetic field surrounds a resolver, it may not work properly with its magnetic flux affected.

■When a resolver is used in a high humidity as close to 100% Rh for a long time, waterproof structure should be considered lest its insulation materials should deteriorate.

■All resolvers in the catalog are 1× (2 poles) resolvers. For winding modifications to other speeds, please consult us.

EXAMPLE OF
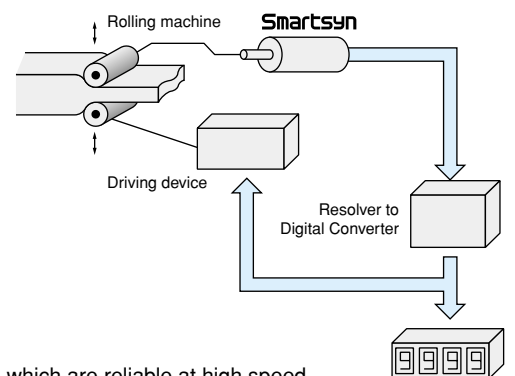FREQUENCY CHARACTERISTICS

Model No. TS2640N321E64
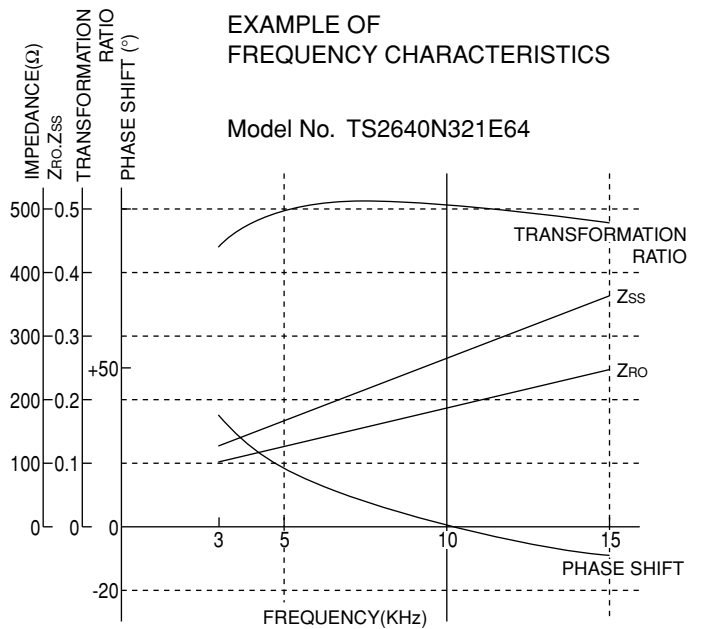
APPLICATIONS

• For Driving Robot Hand and Body.
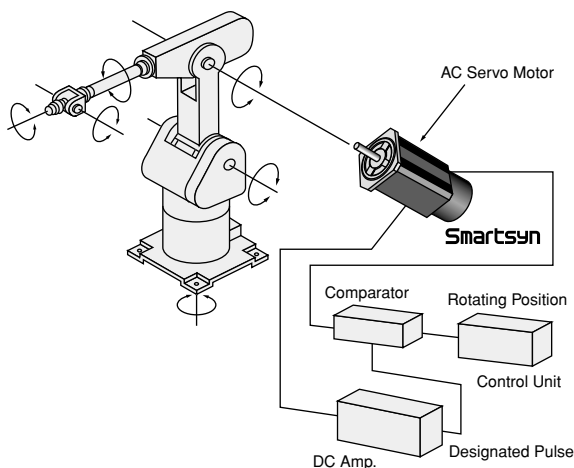
• Applicable to the roller positioning control of rolling mills.

• Smartsyn resolvers which are reliable at high speed are suitable for numerical control systems.