

**IMAJ TEKNİK**  
ELEKTRİK ELEKTRONİK MALZ. SAN. VE TİC. LTD. ŞTİ.

# SmartAbs®

## APPLICATION

- Large Wattage Motors
- Robots
- Machine Tools
- Injection Machines

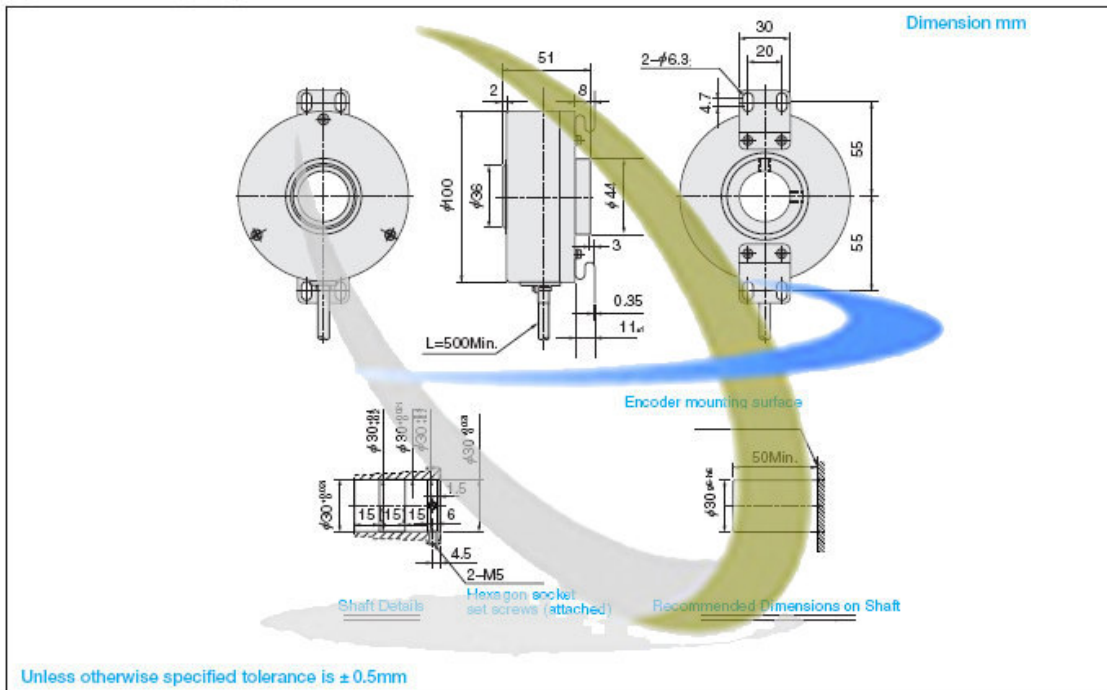
## FEATURES

- Full Absolute Signal Output
- 17bit/Tum, 16bit Tums (At 3,000rpm Max)
- Bi-direction Serial Communication Type(NRZ)
- Fail-Check Operation
- Even during power outage, Multi-Tum data are backed up by external battery and built-in capacitor

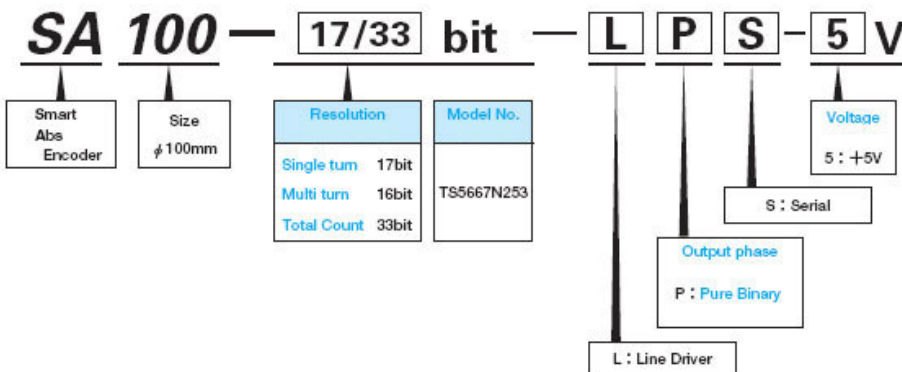


TS5667N253

# SA 100



## • DESIGNATE THE NAME OF FUNCTION WHEN ORDERING



© For special cases, please consult us.

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## SPECIFICATIONS

Electrical Spec.			Mechanical Spec.		
Resolution	Absolute Signal	17bit/tum and 16bit multitums Total 33bit	Starting Torque	$90 \times 10^{-8} \text{ N} \cdot \text{m}$ (820gf · cm) Max	
	Output Phase	Pure Binary Code	Moment of Inertia	$150 \times 10^{-6} \text{ kg} \cdot \text{m}^2$ Typ	
Supply Voltage	DC +5V ± 5%		Maximum Rotating Speed	$3,000 \text{ min}^{-1}$ / Mechanical Spec. } Max (3,000rpm)	
Consumption Current	(Typ) Normal Operation 70mA (Typ) Battery Operation 100µA		Mounting Tolerances	Radial Play	0.05mm TIR Max
Output Form	Line Driver	ADM485 or compatible / 20mA ADM 485 20mA		Axial End Play	0.1mm Max
				Shaft Inclination	0.1° Max
Maximum Rotating Speed	3,000 min <sup>-1</sup> Max (3,000rpm)		Operating Temp. Range	-10~+85°C	
Serial Data Transfer Cycle	35µs ~ 63µs (Note) Including time for a request. Time depends on the ID Codes. 2.5Mbit/sec Start-Stop communication		Storage Temp. Range	-20~+90°C	
Data Code	Base Band NRZ (B-direction)		Protective Construction	IP = 40	
E <sup>2</sup> PROM Accessible Address	8bit X0-79 Address		Vibration	49m/s <sup>2</sup> (5G) (5 - 2,000Hz) for 2hours/axis 49m/s <sup>2</sup> (5G) (5 - 2,000Hz)	
			Shock	1,960m/s <sup>2</sup> (200G) 11msec, 3times/direction 1,960m/s <sup>2</sup> (200G) 11msec,	
			Mass	1.2kg Max Without Cable	

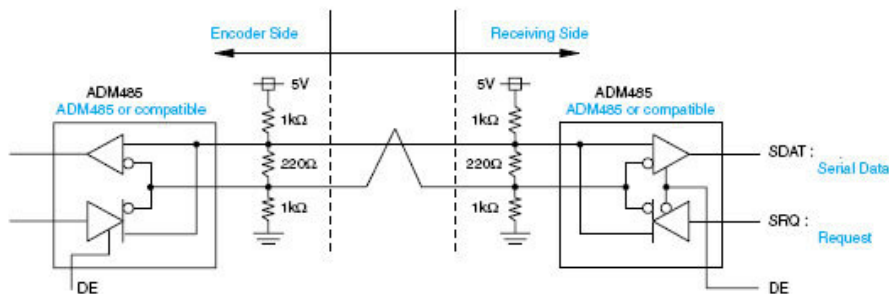
●External Battery (VB) recommended:TOSHIBA Lithium Battery ER6V

## CONNECTION TABLE

Lead Wire	Function	Remark
Red	Vcc	Main Power DC +5V ± 5%
Black	GND	---
Brown	VB	Battery (Notset)
Brown/Black	GND	---
Blue	SD	Serial Data
Blue/Black	SD	
Gray	CASE GND	---

Notice 1 : Battery Power is necessary during Power Outage.

## RECEIVING AND TRANSMITTING INTERFACE



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