



İMAJ TEKNİK
ELEKTRİK ELEKTRONİK MALZ. SAN. VE TİC. LTD. ŞTİ.

SmartAbs®

APPLICATION

- For Small Wattage Motors
- Robots

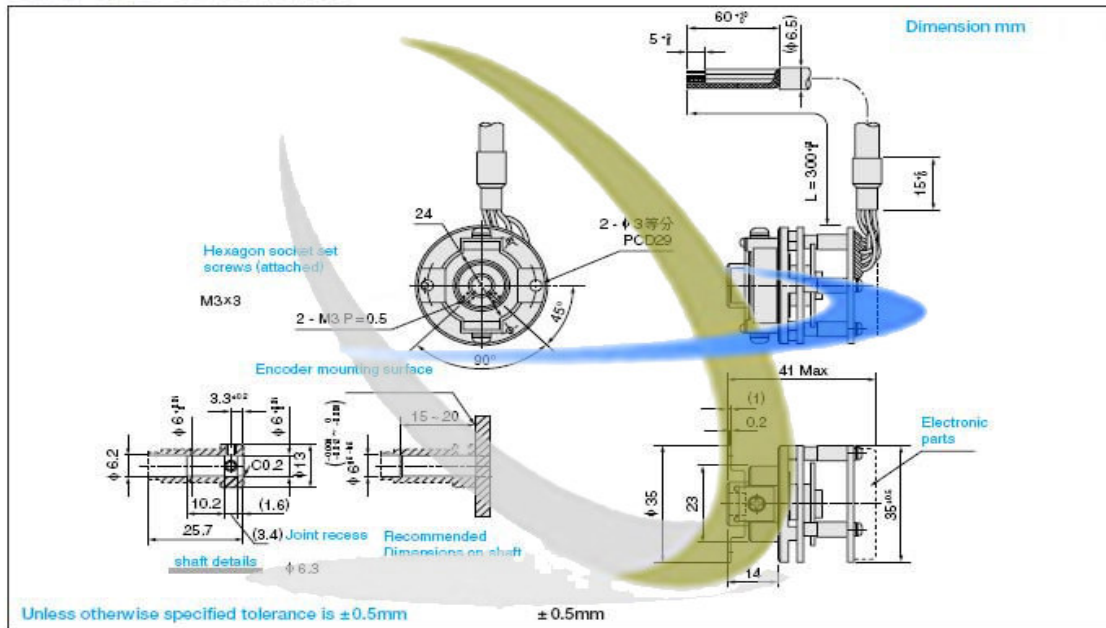
FEATURES

- Small Size
- Serial Data Transmission
- 11bit/1Turn, Multi-Turn, 13 bit.
- Fail-Check Operation
- Built-in capacitor makes it possible to work during power failure

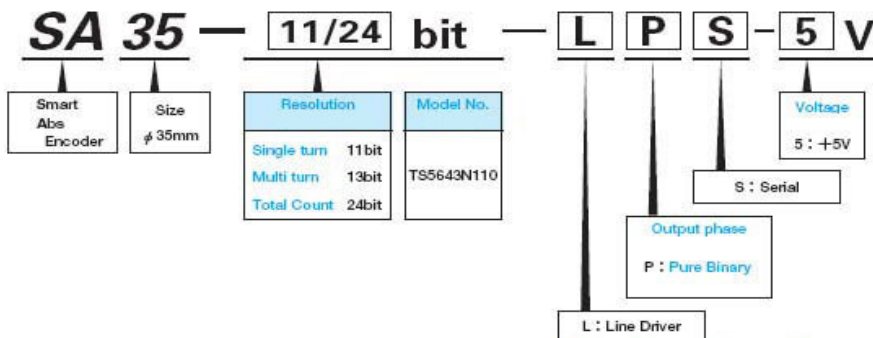


TS5643 N110

SA35 Series



• DESIGNATE THE NAME OF FUNCTION WHEN ORDERING



○ For special cases, please consult us.



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SPECIFICATIONS

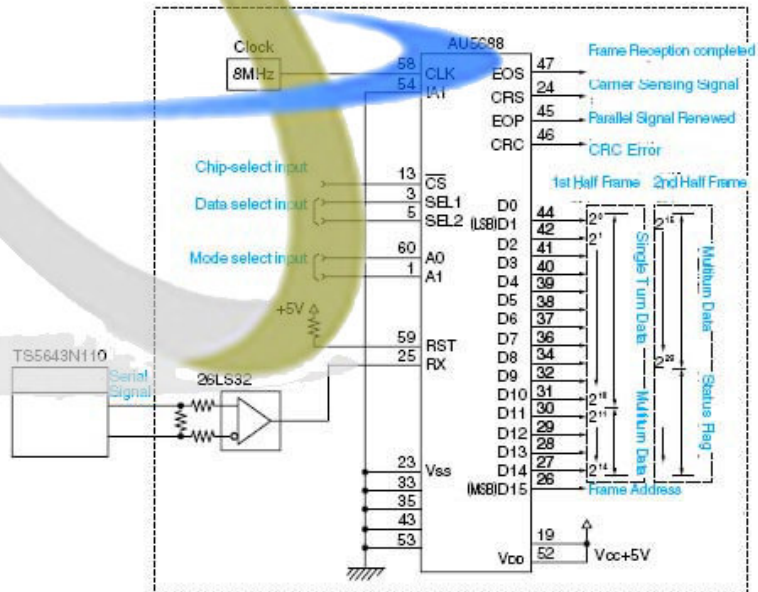
Electrical Spec.		Mechanical Spec.	
Resolution	Absolute Signal	11bit/turn and 13bit/8,192 turns (total 24bit)	
	Incremental Signal	2,048C/T, 2-Phase output 1C/T, Zch.	
Output Phase		Pure Binary Code	
Supply Voltage		DC +5V ±5%	
Consumption Current		150mA Battery Operation : 100µA Max	
Output Form	Line Driver	Source Current	20mA Max
		Sink Current	20mA Max
Max Response Frequency		Absolute Signal	170kHz
Serial Data Transfer Cycle		Incremental Signal	170kHz
Data Code		Manchester code	
Starting Torque		5.9x10 ⁻⁸ N · m Max (60gf · cm)	
Moment of Inertia		1.0x10 ⁻⁶ kg · m ² Typ (10g · cm ²)	
Maximum Rotation Speed		5,000min ⁻¹ (5,000rpm) (Mechanical Spec.) Max	
Mounting Tolerances		Radial Play	0.05mm TIR Max
		Axial End Play	0.2mm Max
		Shaft inclination	0.1° Max
Operating Temp. Range		-10~+85°C	
Storage Temp. Range		-20~+90°C	
Protective Construction		Not Enclosed	
Vibration		98m/s ² (10G) (5 - 2,000Hz) for 2hours 98m/s ² (10G) (5 - 2,000Hz)	
Shock		1,960m/s ² (200G) 11msec, 3times 1,960m/s ² (200G) 11msec,	
Mass		0.3kg Max Without Cable	

- External Battery (VB) recommended. TOSHIBA Lithium Battery ER6V
- Fully absolute data of 11bit shall be output by turning the input shaft by about 1.9° after the power supplied.

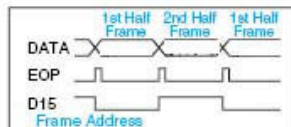
CONNECTION TABLE

SIGNAL	FUNCTION	COLOR
Rx	Serial Data	BRN
Rx		BRN/BLK
A	Incremental Ach	BLU
Ā		BLU/BLK
B	Incremental Bch	GRN
B̄		GRN/BLK
Z	Incremental Zch	YEL
Z̄		YEL/BLK
Vcc	DC+5V	RED
GND	0V	WHT/BLK
VB	Battery	WHT
GND	0V	BLK
RST	Reset	GRY
CASE GND	Case Ground	GRY/BLK
Shield	Shield	Shield

SYSTEM CONNECTION

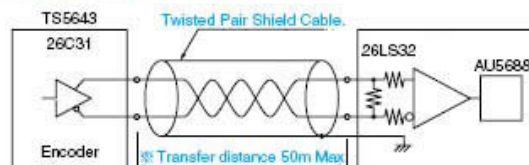


DATA OUTPUT SEQUENCE



CIRCUIT AT OUTPUT STAGE (EXAMPLE)

Line Driver Output



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İmaj Teknik Elektrik Elektronik San. ve Tic. Ltd. Şti.
EMEKYEMEZ MAH. TUTSAK SOK. NO: 16/13-14-15
KARAKOY/İSTANBUL
TURKEY

Telefon : +90 212 235 9535 / 36
 Fax : +90 212 235 9537

www.imajteknik.com
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