

Motortronics®

ROTARY ENCODERS

FA-CODER®



OIH35

SmartAbs®



INCREMENTAL

APPLICATION

Machine Tools,
Spindle motor

FEATURES

Strong resistance against vibrations

High speed response

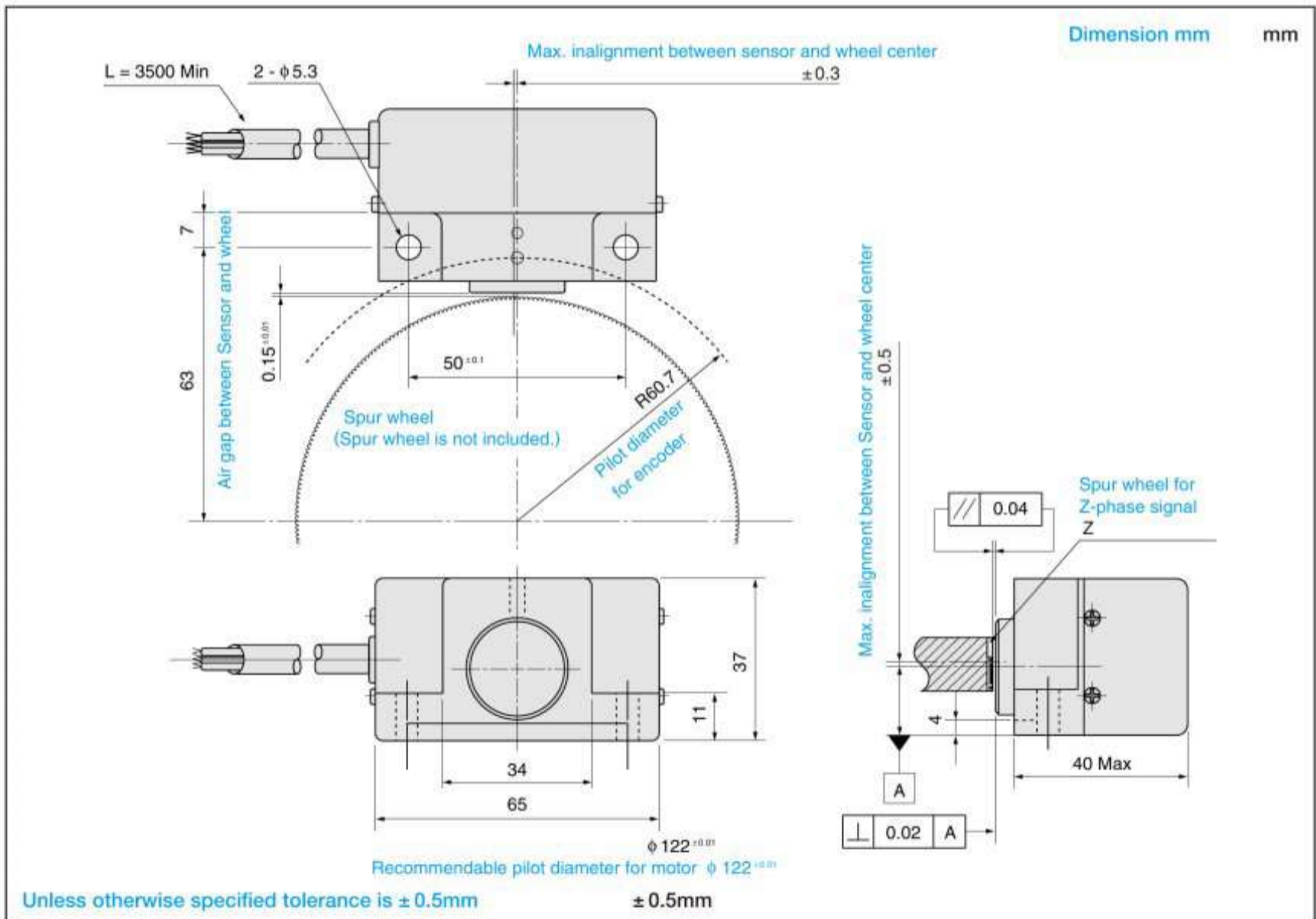
Output of pulses 4 times of spur teeth Gear Module 0.4



TS5270

MIB0.4

Sine wave signal output is also available
30,000min⁻¹ or more is possible depending on resolution



DESIGNATE THE NAME OF FUNCTION WHEN ORDERING

MIB0.4 - **C/T** - **L** **3** - **5** **V**

Magnetic
Incremental
Built-in
Encoder

Resolution	C/T	Model No.
1,024		TS5270N15
No. of teeth	256	

Module of Spur wheel
0.4

Output phase	Voltage
3 A, B, Z phase	5 +5V

Output form
L Line Driver

For special cases, please consult us.

SPECIFICATIONS

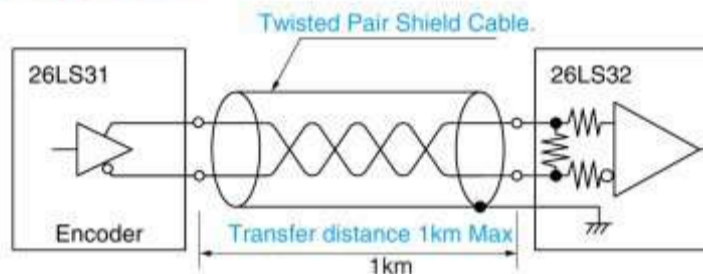
Electrical Spec.	
Resolution	1,024 C/T No. of teeth 256
Supply Voltage	DC+5V ^{+5%} _{-10%}
Consumption Current	300mA
Output Form	26LS31
	Line Driver Source Current 20mA Max Sink Current 20mA Max
Maximum Response Frequency	200kHz
Rise time, Fall time	

Mechanical Spec.	
Air gap between Sensor & wheel	0.15 ± 0.01mm
Radial Inalignment btwn Sensor & wheel	± 0.3mm
Axial Inalignment btwn Sensor & wheel	± 0.5mm
Operating Temp. Range	-10 +80°C
Storage Temp. Range	-20 +100°C
Protective Construction	IP = 50
Vibration	Full Amplitude 1.5mm 0.5Hr 5 500Hz
Shock	294m/s ² 30G 3 axes 6directions. 10 times each 11m sec 3 6 10
Mass	0.5kg Max

INCREMENTAL

CIRCUIT AT OUTPUT STAGE (EXAMPLE)

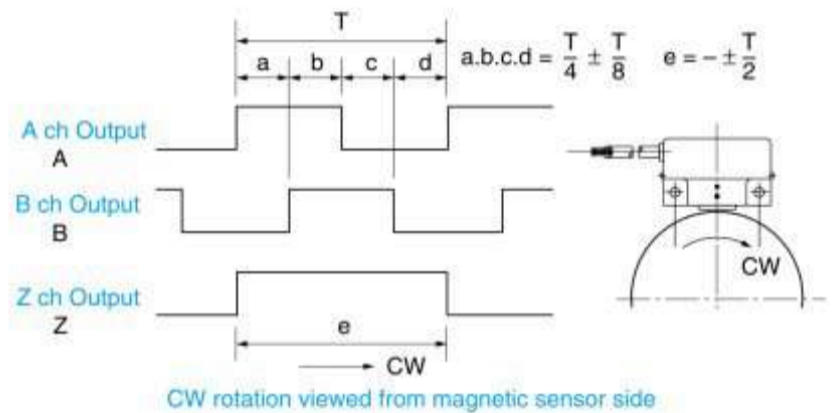
Line Driver Output



Note that transfer distance depends much on ambient condition.

Use transmission cable after verifying effects of impedance characteristics, etc.

OUTPUT PHASE SHIFT



CONNECTION TABLE

Lead color	Function
RED	DC+5V
BLACK	GND
BLUE	A ch Output
BLUE BLACK	A ch Output
GREEN	B ch Output
GREEN BLACK	B ch Output
YELLOW	Z ch Output
YELLOW BLACK	Z ch Output
Shield	Case GND

SPUR WHEEL (Separate Sale)

Model No.	No. of Teeth	Outer Dia.	Inner Dia.
MU1528N45	256	φ 103.2 ± 0.02	φ 45 ^{+0.011} ₀
MU1528N50	256	φ 103.2 ± 0.02	φ 50 ^{+0.011} ₀

SPUR WHEEL SPECIFICATION

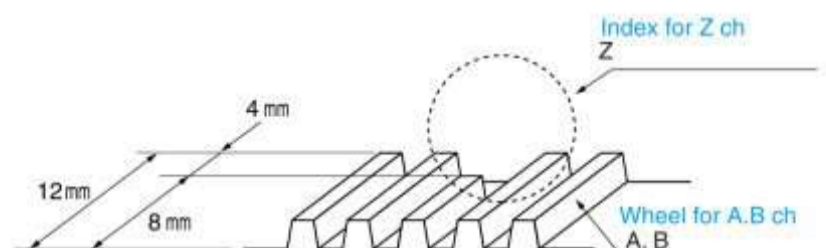
Spur wheel of A-Bch Signals

No. of Teeth	256
Module	0.4
Pressure Angle	20°
Accuracy	JGMA3 4
Tooth Thickness	8mm
Outer Dia.runout against Inner dia.	0.02TIR Max

Spur wheel of Zch Signals

No. of Teeth	1
Module	0.4
Pressure Angle	20°
Tooth Thickness	4mm

Placement of Zch wheel vs Ach Bch wheel



ROTARY ENCODERS

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Digital techniques in business industry have been greatly advanced. Among these, necessity for converting analog like rotating value, shaft angle position, etc. to digital has been increased as measurement for physical value and automation for control system are advanced. Encoders, at present, have been widely used for factory automations, measurements, office automation devices, medical equipment, aviations and universal fields.

Various kinds of encoders (FA-CODER® as trade mark) from small to high resolution are available to meet all of the requirements. High performance encoders supported by these high disk producing techniques are available.

