

Motortronics®

ROTARY ENCODERS

FA-CODER®



OIH35

SmartAbs®



INCREMENTAL

APPLICATION

Brushless DC Servo motor control

FEATURES

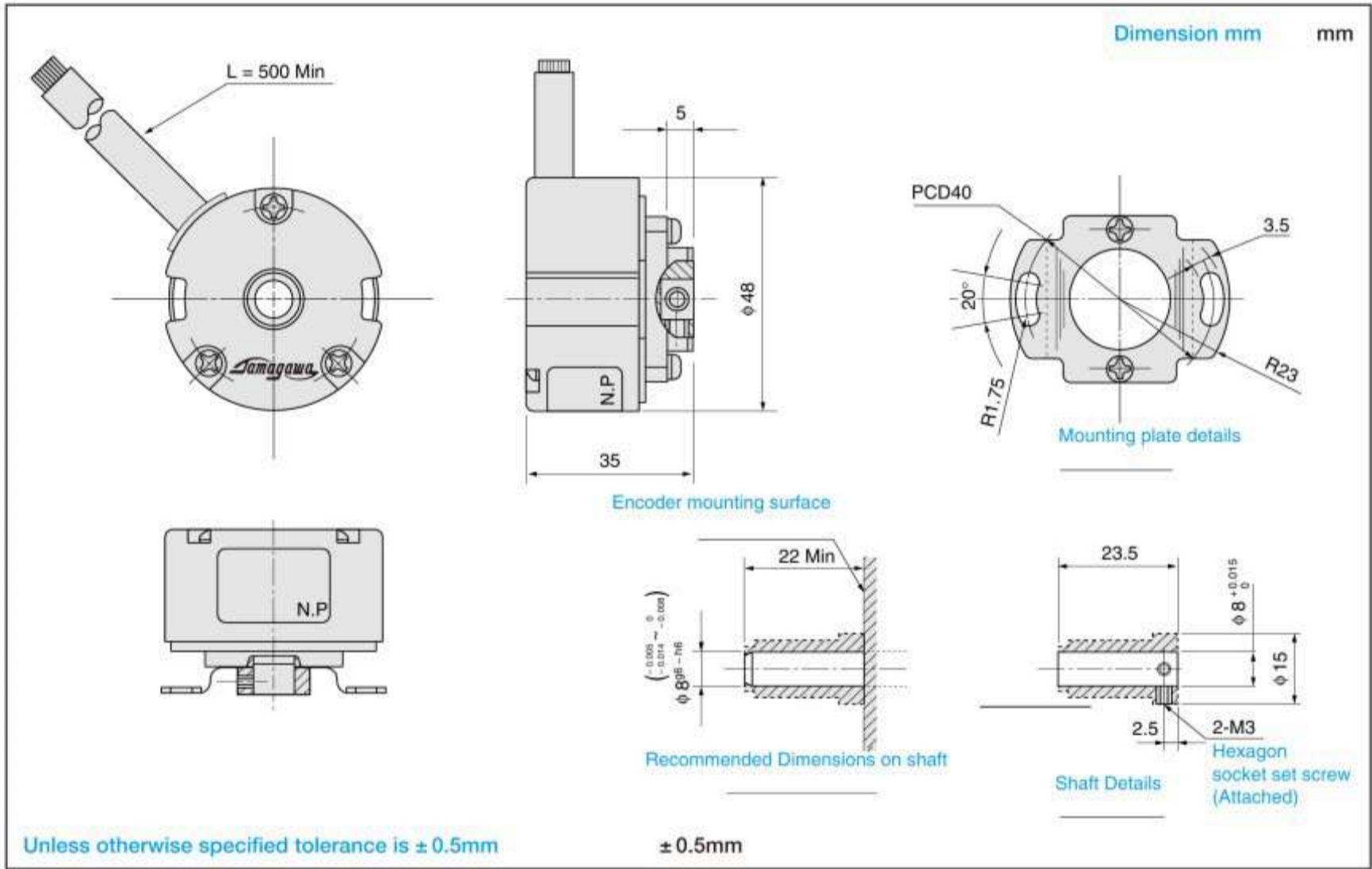
Easy to attach

Hollow shaft Available up to 9.35



TS5200N500

OIH48 Series



DESIGNATE THE NAME OF FUNCTION WHEN ORDERING

OIH 48 - [] **P** [] - **L** **6** - **5** **V**

Optical Incremental Hollow Shaft Encoder

Size 48mm

Resolution C/T	Model No.	TS	N	
		4	6	8
1,000	TS5207			
1,024	TS5208			
2,000	TS5212			
2,048	TS5213			
2,500	TS5214			
3,000	TS5231	N500	N510	N530
4,096	TS5216			
5,000	TS5217			
6,000	TS5233			
8,192 (4,096X2)	TS5246			
10,000 (5,000X2)	TS5236			
12,000 (6,000X2)	TS5232			

X4 is possible, too.

Pole

4 4
6 6
8 8

Voltage

5 +5V

Output phase

6 A, B, Z,
U, V, W

Output form

L Line Driver

SPECIFICATIONS

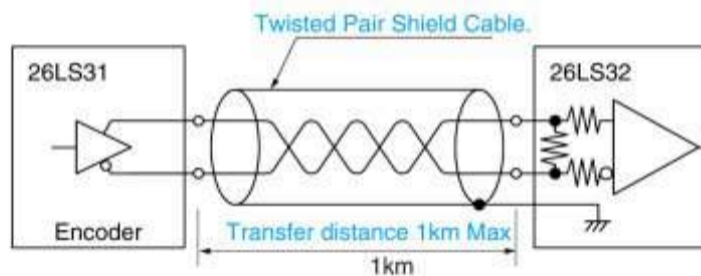
Electrical Spec.	
Resolution	1,000 12,000 C/T
Supply Voltage	DC + 5V ± 5%
Consumption Current	200mA Max
Output Form	26LS31
	Line Driver Source Current 20mA Max Sink Current 20mA Max
Maximum Response Frequency	200kHz Max
Rise time, Fall time	100nsec Max

Mechanical Spec.	
Starting Torque	9.8x10 ⁻³ N · m 100gf · cm Max
Moment of Inertia	6.5x10 ⁻⁶ kg · m ² 65g · cm ² Max
Maximum Rotating Speed	6,000min ⁻¹ 6,000rpm
Mounting Tolerance	Radial Play 0.05mm TIR Max
	Axial End Play 0.2mm Max
	Shaft Inclination 0.1° Max
Operating Temp. Range	-20 +85°C
Storage Temp. Range	-25 +85°C
Protective Construction	IP = 40
Vibration	49m/s ² 5G 2G
Shock	980m/s ² 100G
Mass	0.3kg Max

INCREMENTAL

CIRCUIT AT OUTPUT STAGE (EXAMPLE)

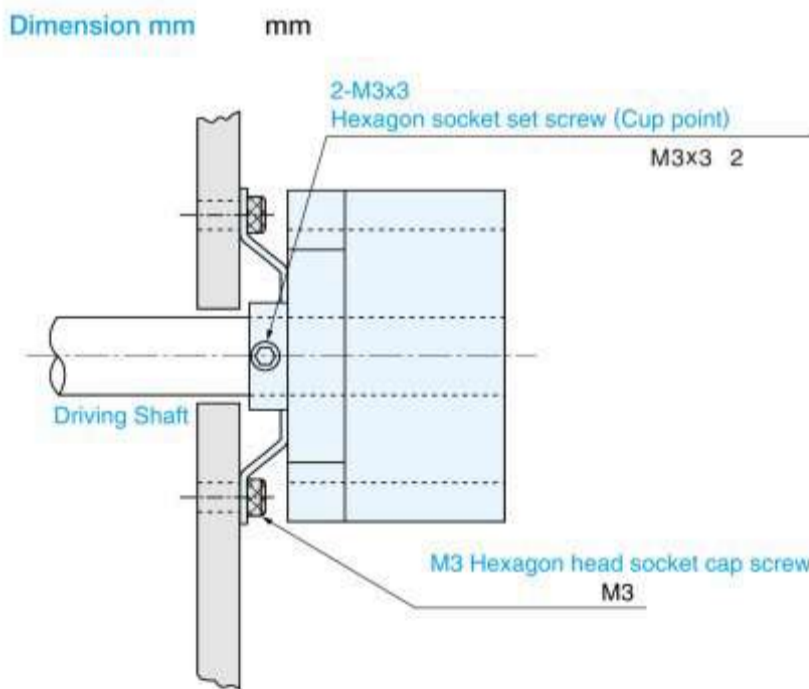
Line Driver Output



Note that transfer distance depends much on ambient condition.

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

ATTACHING WAY (EXAMPLE)

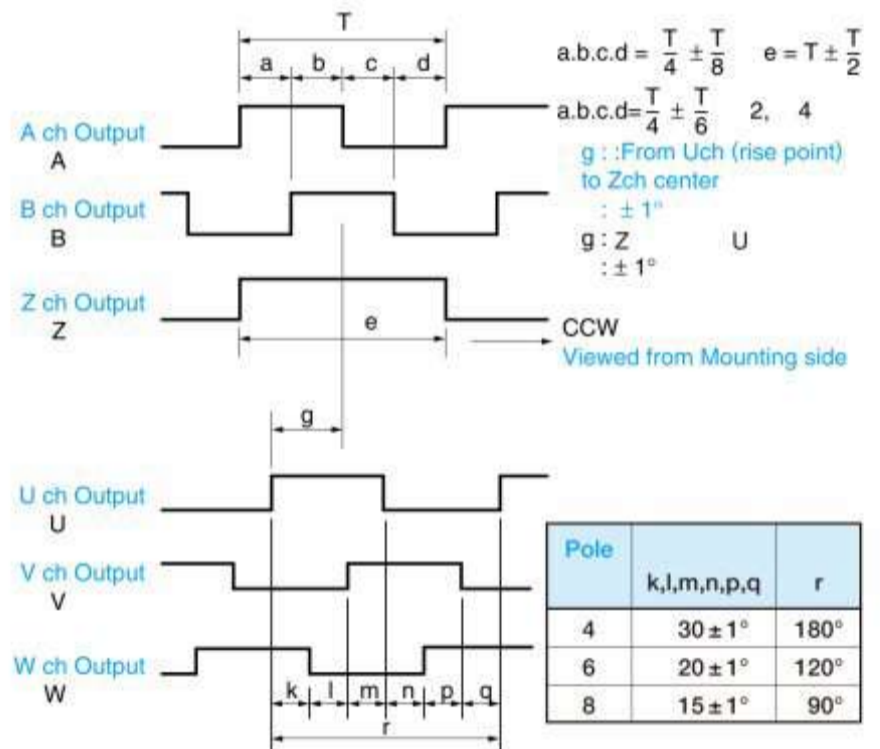


SPECIAL REQUIREMENTS

For special cases, please consult us.

- Open collector output (5V,12V)
- High resolution 24,000Max.
- Less wiring type
- Number of motors pole
- X4 resolution

OUTPUT PHASE SHIFT



CONNECTION TABLE

Lead color	Line driver Output
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
BROWN	U ch Output
BROWN BLACK	U ch Output
GRAY	V ch Output
GRAY BLACK	V ch Output
WHITE	W ch Output
WHITE BLACK	W ch Output

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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.



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