

# INCREMENTAL

## APPLICATION

● Brushless DC Servo motor control

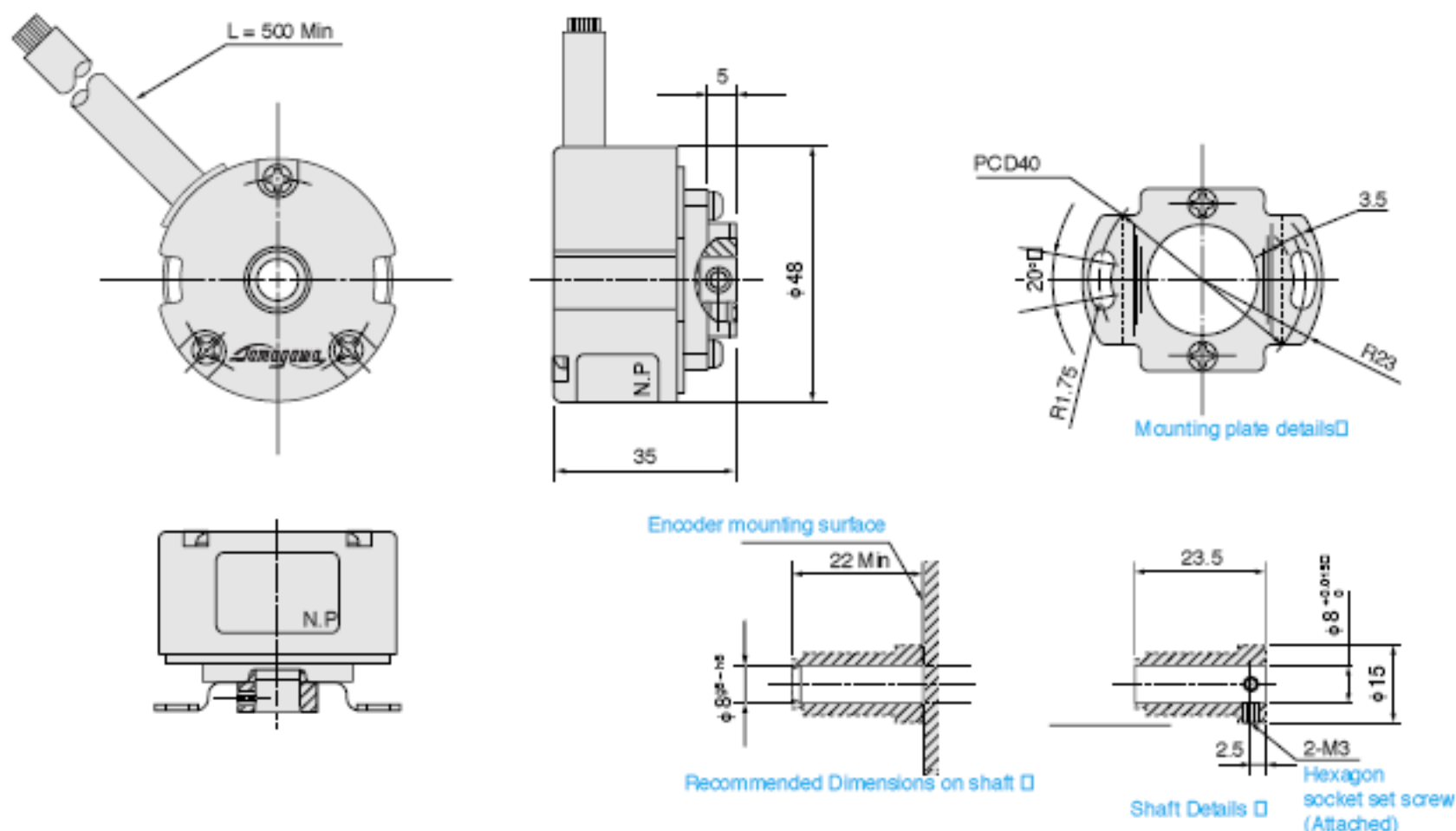
## FEATURES

● Easy to attach



# OIH48Series

Dimension mm



Unless otherwise specified tolerance is  $\pm 0.5\text{mm}$

## ● DESIGNATE THE NAME OF FUNCTION WHEN ORDERING

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

Optical  
Incremental  
Hollow Shaft  
Encoder

Size  
 $\phi 48\text{mm}$

Resolution	Model No.		
	4	6	8
1,000	TS5207		
1,024	TS5208		
2,000	TS5212		
2,048	TS5213		
2,500	TS5214	N500	N510
3,000	TS5231		N530
5,000	TS5217		
6,000	TS5233		

Pole

4 : 4  
6 : 6  
8 : 8

Voltage

5 : +5V

Output phase

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

Output form

L : Line Driver

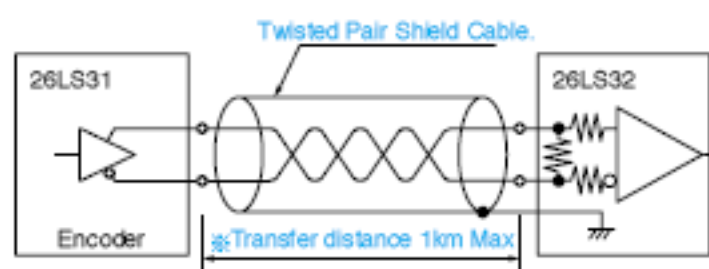
# SPECIFICATIONS

Electrical Spec.	
Resolution	1,000~6,000 C/T
Supply Voltage	DC + 5V ± 5%
Consumption Current	200mA Max
Output Form	<p>Line Driver</p> <p>26LS31</p> <p>Source Current 20mA Max</p> <p>Sink Current 20mA Max</p>
Maximum Response Frequency	200kHz Max
Rise time, Fall time	100nsec Max

Mechanical Spec.	
Starting Torque	$9.8 \times 10^{-3} \text{ N} \cdot \text{m}$ (100gf · cm Max)
Moment of Inertia	$6.5 \times 10^{-6} \text{ kg} \cdot \text{m}^2$ (65g · cm <sup>2</sup> Max)
Maximum Rotating Speed	$6,000 \text{ min}^{-1}$ (6,000rpm)
Mounting Tolerance	<p>Radial Play 0.05mm TIR Max</p> <p>Axial End Play 0.2mm Max</p> <p>Shaft Inclination 0.1° Max</p>
Operating Temp. Range	-20~+85°C
Storage Temp. Range	-25~+85°C
Protective Construction	IP = 40
Vibration	49m/s <sup>2</sup> (5G)
Shock	980m/s <sup>2</sup> (100G)
Mass	0.3kg Max

## CIRCUIT AT OUTPUT STAGE (EXAMPLE)

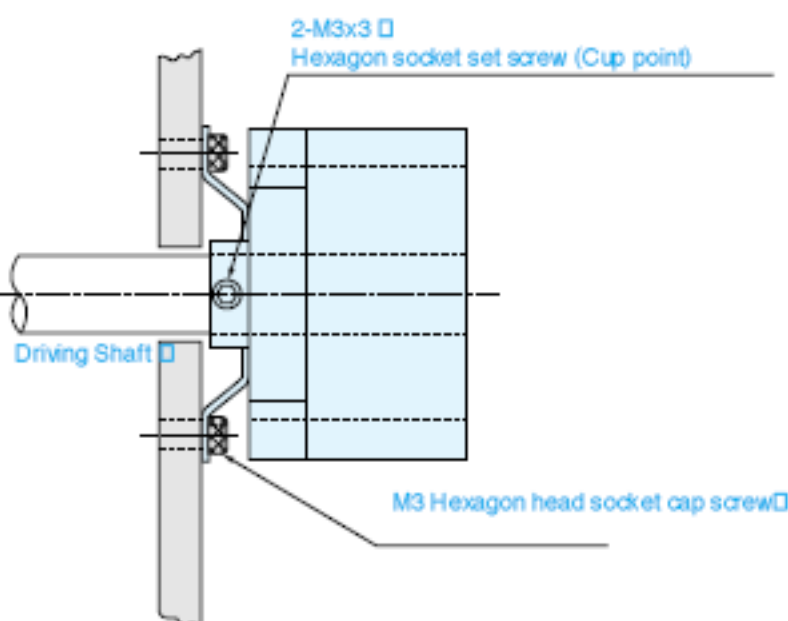
### Line Driver Output



Note that transfer distance depends much on ambient condition.

## ATTACHING WAY (EXAMPLE)

Dimension mm

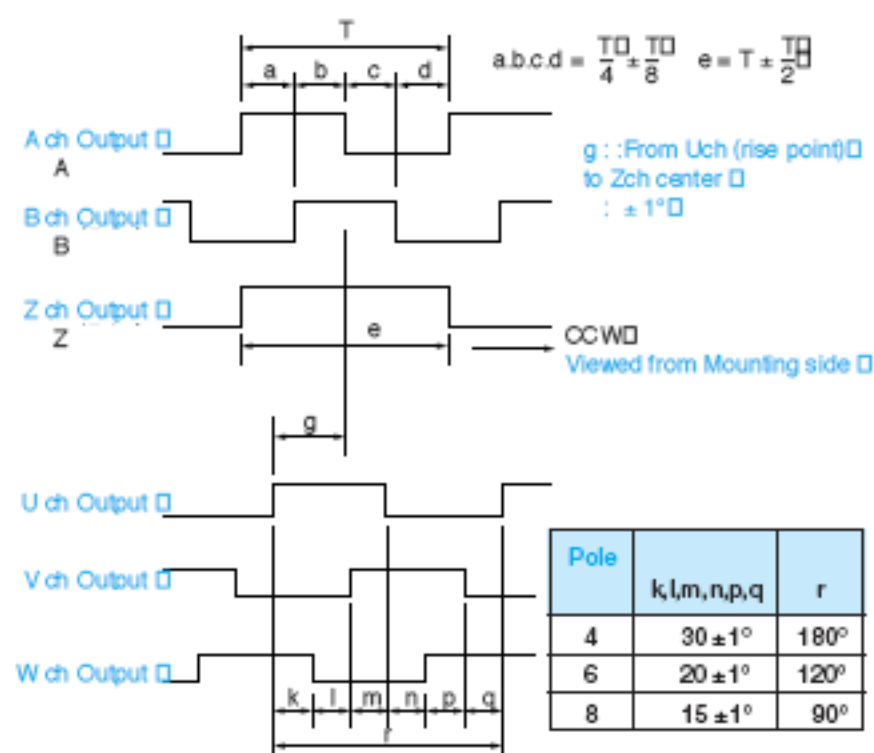


## SPECIAL REQUIREMENTS

For special cases, please consult us.

- Open collector output (5V,12V)
- High resolution 24,000Max.
- Less wiring type

## OUTPUT PHASE SHIFT



## CONNECTION TABLE

Lead color	Line driver Output
RED	DC+5V
BLACK	GND
BLUE	A ch Output
BLUE/BLACK	$\bar{A}$ ch Output
GREEN	B ch Output
GREEN/BLACK	$\bar{B}$ ch Output
YELLOW	Z ch Output
YELLOW/BLACK	$\bar{Z}$ ch Output
BROWN	U ch Output
BROWN/BLACK	$\bar{U}$ ch Output
GRAY	V ch Output
GRAY/BLACK	$\bar{V}$ ch Output
WHITE	W ch Output
WHITE/BLACK	$\bar{W}$ ch Output