

Motortronics®

ROTARY ENCODERS

FA-CODER®



OIH35

SmartAbs®



ABSOLUTE

APPLICATION

- Measuring Equipment
- Machine Tools
- Robots

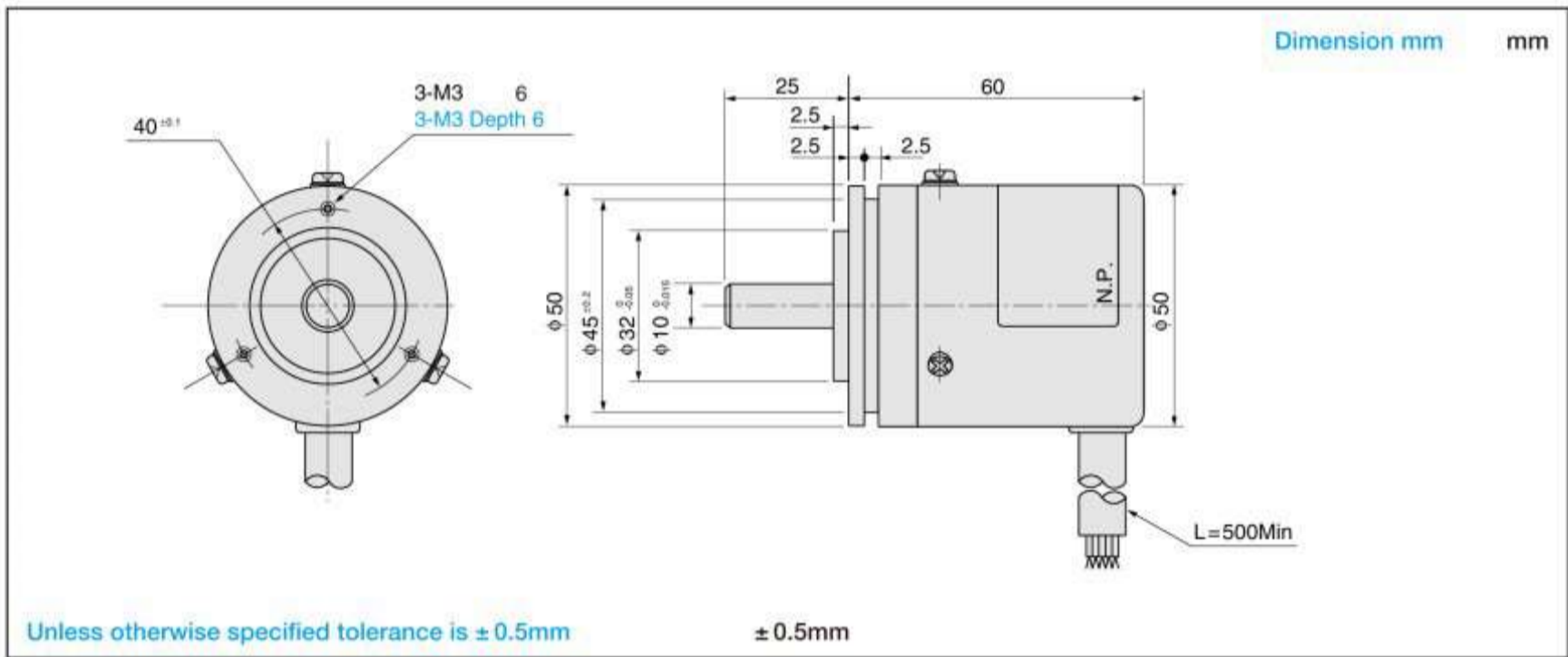
FEATURES

- Small and Light weight
- Rigid Bearing
- Low Cost

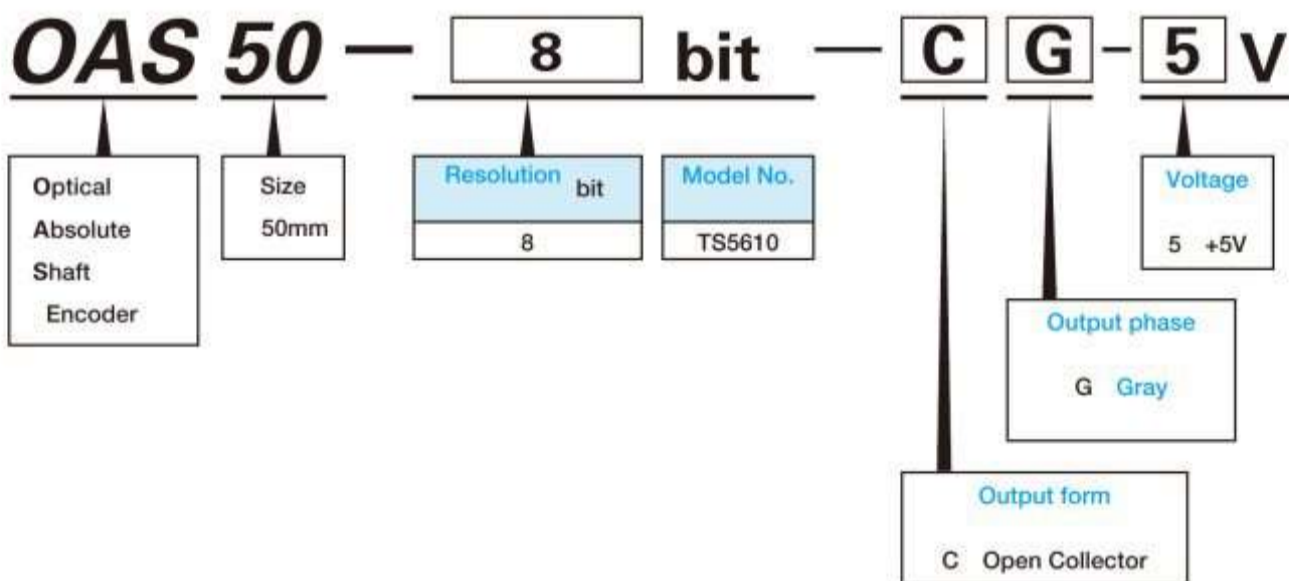


TS5610

OAS50 Series



DESIGNATE THE NAME OF FUNCTION WHEN ORDERING



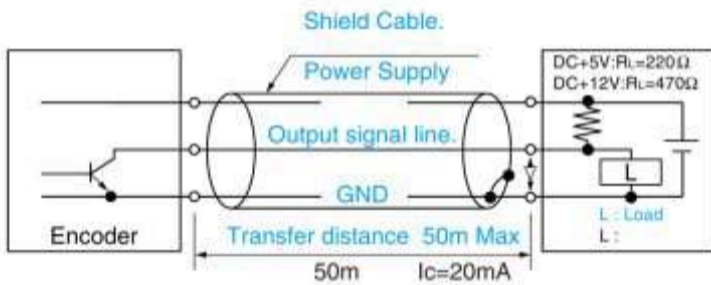
SPECIFICATIONS

Electrical Spec.	
Resolution	8 bit
Output Phase	Gray Code
Supply Voltage	DC + 5V ± 5%
Consumption Current	120mA Max
Output Form	TD62503F Maximum Allowable Output Voltage 24V Maximum Allowable Sink Current 80mA
	Open Collector
Maximum Response Frequency	10kHz
Rise time, Fall time	

Mechanical Spec.		
Starting Torque	$9.8 \times 10^{-2} \text{ N} \cdot \text{m}$ 1kgf · cm Max	
Moment of Inertia	$3.0 \times 10^{-6} \text{ kg} \cdot \text{m}^2$ 30g · cm ² Max	
Maximum Rotating Speed	$3,000 \text{ min}^{-1}$ 3,000rpm	
Allowable Shaft Load	Radial	98N 10kgf Max
	Axial	49N 5kgf Max
Operating Temp. Range	-10 +70°C	
Storage Temp. Range	-20 +85°C	
Protective Construction	IP = 50	
Vibration	49 m/s^2 5G	
Shock	490 m/s^2 50G	
Mass	0.5kg Max	

CIRCUIT AT OUTPUT STAGE (EXAMPLE)

Open Collector Output



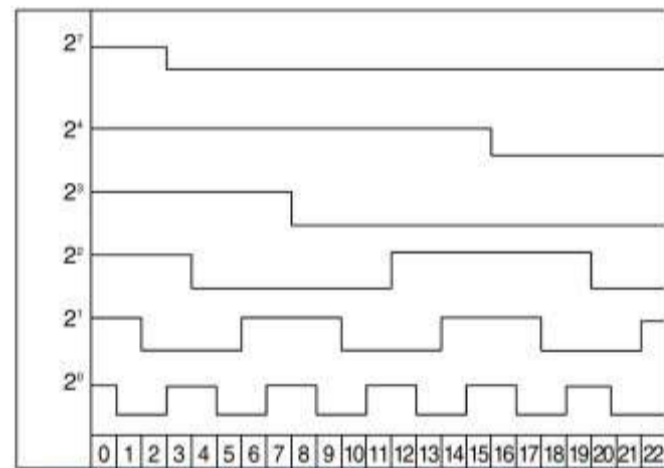
Note that transfer distance depends much on ambient condition.

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

OUTPUT PHASE SHIFT

Gray Code

→ CCW Viewed from Shaft End



The logic shall be negative and above figures shall show voltage wave-forms

CONNECTION TABLE

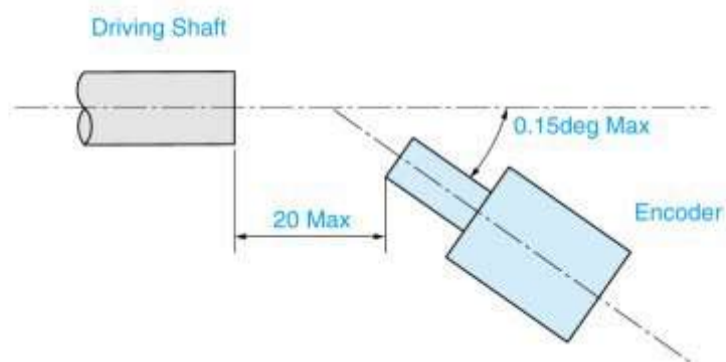
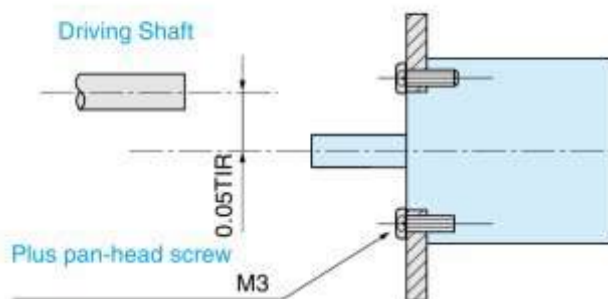
Confirm the function for output signals listed on the output signal table.

Lead color	Function	Lead color	Function	Lead color	Function
BROWN	ST Digit MSB 2	GREEN	TH Digit 2	BLACK	GND
RED	ND Digit 2	BLUE	TH Digit 2	WHITE	DC+5V
ORANGE	RD Digit 2	VIOLET	TH Digit 2		
YELLOW	TH Digit 2	GRAY	TH Digit LSB 2		

ATTACHING WAY (EXAMPLE)

Note that attaching alignment can be changed by the couplings when coupled to the driving shaft.

Dimension mm



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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.

