

Motortronics®

ROTARY ENCODERS

FA-CODER®



OIH35

SmartAbs®



INCREMENTAL

APPLICATION

- Robots
- X&Y Tables
- Machine Tools

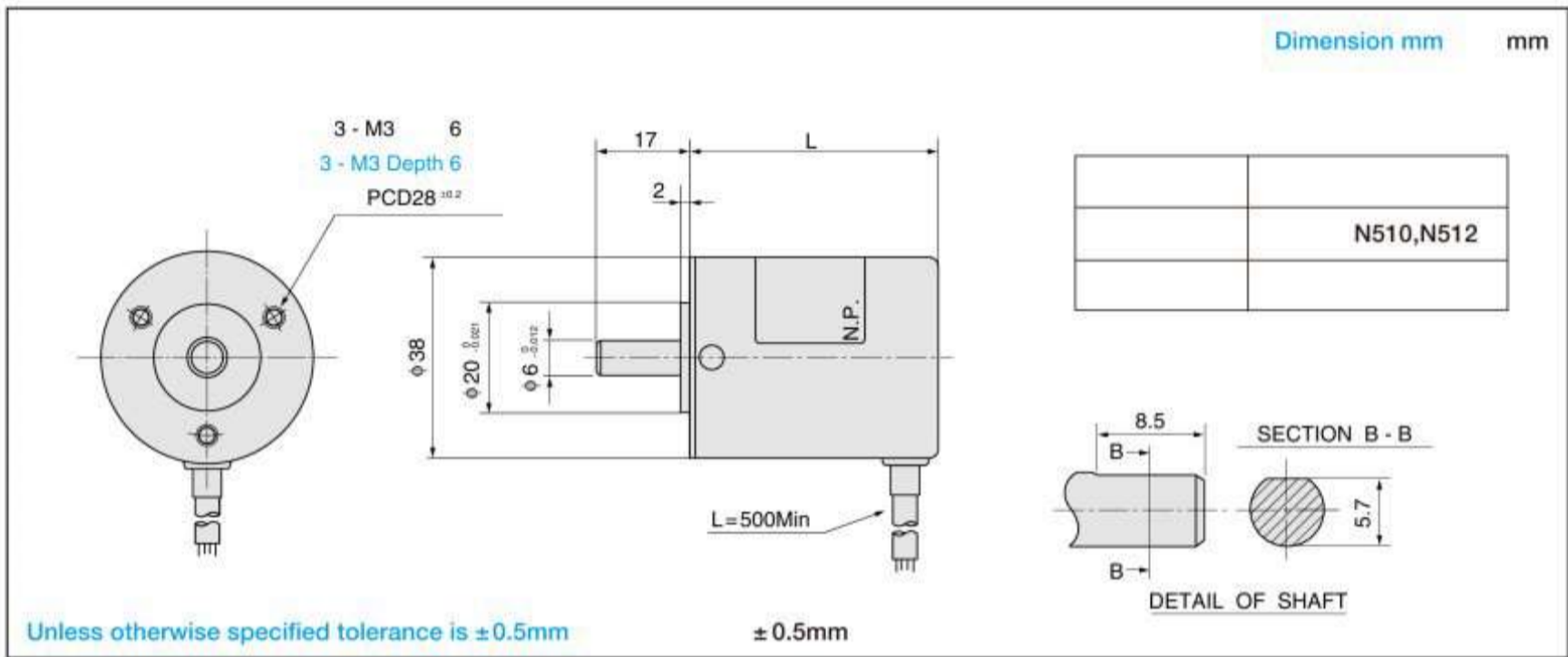
FEATURES

- Superior Noise Characteristics
- Available up to high-level resolution
- Rigid Bearing



TS5300

OIS38Series



DESIGNATE THE NAME OF FUNCTION WHEN ORDERING

OIS 38 - **C/T** - **3** - **V**

Optical
Incremental
Shaft
Encoder

Size
38mm

Resolution	C/T	Model No.
100		TS5300
200		TS5301
300		TS5302
360		TS5303
400		TS5320
500		TS5304
600		TS5305
900		TS5306
1,000		TS5307
1,024		TS5308
1,200		TS5309
1,800		TS5311
2,000		TS5312
2,048		TS5313
2,500		TS5314

Voltage

5 +5V
12 +5 +12V

Output phase

3 A, B, Z phase

Output form

C Open Collector
L Line Driver

STANDARD ITEM

Description	Size	Resolution	Output form	Output Phase	Voltage	N-number N
OIS	38	<input type="text"/> C/T	C	3	+5V +12V	N510
			L	3	+5V	N512

For special cases, please consult us.

SPECIFICATIONS

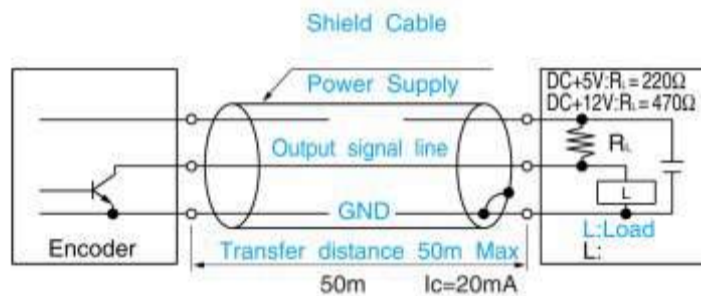
Electrical Spec.	
Resolution	100 2,000 C/T
Supply Voltage	DC + 5V ± 5%
Consumption Current	100mA Max
Output Form	Open Collector
	2SC1815 Maximum Allowable Output Voltage 40V Maximum Allowable Sink Current 30mA
Maximum Response Frequency	80kHz
Rise time, Fall time	

Mechanical Spec.		
Starting Torque	$2.9 \times 10^{-3} \text{ N} \cdot \text{m}$ 30gf · cm Max	
Moment of Inertia	$2.0 \times 10^{-6} \text{ kg} \cdot \text{m}^2$ 20g · cm ² Max	
Maximum Rotating Speed	$5,000 \text{ min}^{-1}$ 5,000rpm	
Allowable Shaft Load	Radial	21.6N 2.2kgf Max
	Axial	12.7N 1.3kgf Max
Operating Temp. Range	0 +60°C	
Storage Temp. Range	-20 +85°C	
Protective Construction	IP = 50	
Vibration	49 m/s^2 5G	
Shock	490 m/s^2 50G	
Mass	0.2kg Max	

INCREMENTAL

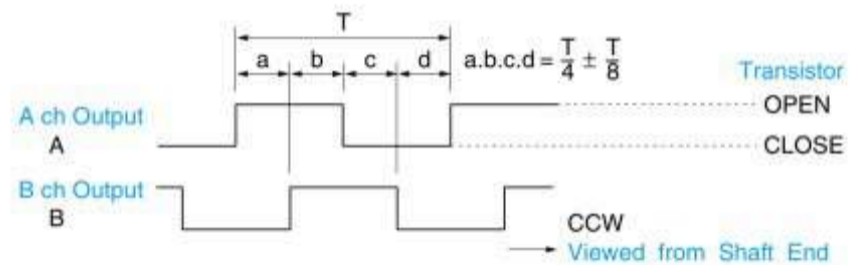
CIRCUIT AT OUTPUT STAGE (EXAMPLE)

Open Collector Output



Note that transfer distance depends much on ambient condition.

OUTPUT PHASE SHIFT



Note For open collector output, above voltage wave form shall be obtained by loading a R_L shown in the left figure.

R_L

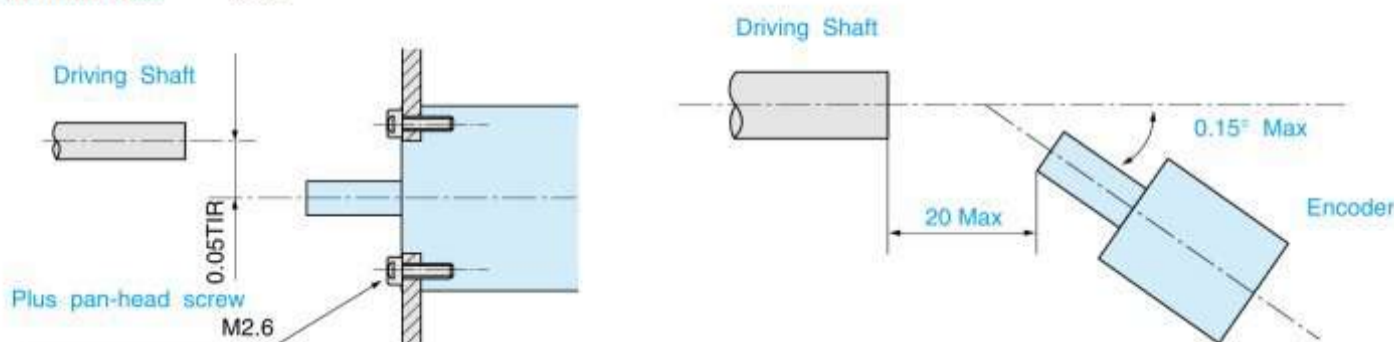
CONNECTION TABLE

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

ATTACHING WAY (EXAMPLE)

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

Dimension mm 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.

