

# SIAKIAYO

Your Expert for Automation

SIAKIAYO SEIKI CO.,LTD.

## ROTARY ENCODER (Incremental)

NOE Series



NOE - Outer dia. 25 mm



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- Optical incremental encoder with zero index function
- Built-in Constant-Voltage circuit assures a wide range of operating voltage from 5 to 30VDC
- Offers resolution as high as 6000 pulses/revolution
- Voltage, Open Collector, Complementary and Line Driver output available
- Extra high performance and reliability

### Ordering Codes

NOE -

Resolution:		
60	100	200
360	400	500
600	800	1000

Output Phase:
B : A, B
Z : A, B, Z
U : A, $\bar{A}$ , B, $\bar{B}$
V : A, $\bar{A}$ , B, $\bar{B}$ , Z, $\bar{Z}$

Output Form:
V : Voltage
C : Open Collector
F : Complementary
L : Line Driver

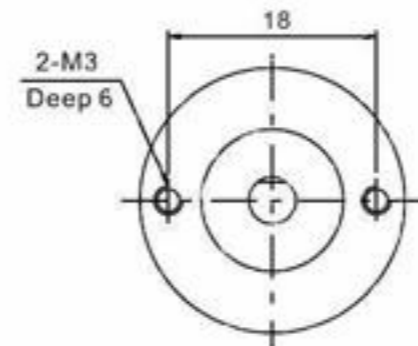
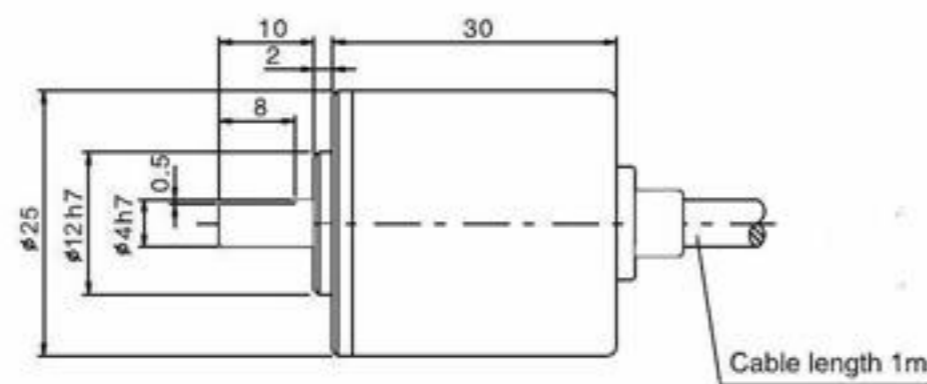


## Specifications

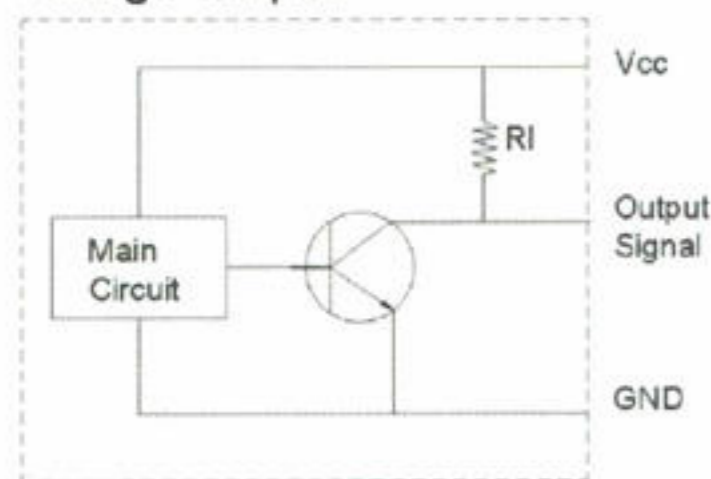
Model		NOE			
<b>ELECTRICAL</b>	<b>Resolution</b>	60 ~ 1000 P/R			
	<b>Power Supply</b>	5~30VDC ±5% ( Line Driver: 5V ±5% )			
	<b>Current Consumption</b>	60mA max. ( Line Driver: 150mA max. )			
	<b>Output Phase</b>	A, B, Z ( Line Driver: A, $\bar{A}$ , B, $\bar{B}$ , Z, $\bar{Z}$ )			
	<b>Output Capacity</b>	Open Collector	0.5VDC max., 30mA max.		
		Voltage	V <sub>H</sub> : 70% of V <sub>cc</sub> min.	V <sub>L</sub> : 1VDC max.	30mA max.
		Line Driver	V <sub>H</sub> : 2.5V <sub>cc</sub> min.	V <sub>L</sub> : 0.5VDC max.	20mA max.
		Complementary	V <sub>H</sub> : 70% of V <sub>cc</sub> min.	V <sub>L</sub> : 1VDC max.	30mA max.
	<b>Max. Response Frequency</b>	100 kHz			
	<b>Rise and fall times of output</b>	Open Collector	1 μs max. (load resistor: 1kΩ max., cable length 1m max.)		
Voltage		1 μs max. (load resistor: 1kΩ max., cable length 1m max.)			
Line Driver		0.1 μs max. (load resistor: 1kΩ max., cable length 1m max.)			
Complementary		1 μs max. (load resistor: 1kΩ max., cable length 1m max.)			
<b>Insulation Resistance</b>	20MΩ min. (at DC100V) between carry parts and case				
<b>Dielection Strength</b>	500VAC, 50/60Hz for 1 minute between carry parts and case				
<b>MECHANICAL</b>	<b>Starting Torque</b>	12.0 x 10 <sup>-4</sup> N • m			
	<b>Max. Rotating Speed</b>	6000 RPM			
	<b>Max. Shaft Load</b>	Radial	10N max.		
		Axial	5 N max.		
	<b>Weight</b>	Approx. 100g (cable length: 1m)			
<b>Cable</b>	1m, 4P(AWG26) shield cable				
<b>ENVIRONMENTAL</b>	<b>Ambient Temperature</b>	Operating: -10°C ~ +70°C (with no icing) 1000 m/s Storage: -20°C ~ +80°C (with no icing)			
	<b>Ambient Humidity</b>	Operating: 30% ~ 85% RH (with no condensation) Storage: 35% ~ 85% RH (with no condensation)			
	<b>Vibration Resistance</b>	100 m/s <sup>2</sup> , 10 ... 200Hz			
	<b>Shock Resistance</b>	1000 m/s <sup>2</sup> , 6ms			
	<b>Protection</b>	IP 50			

## Connection Table

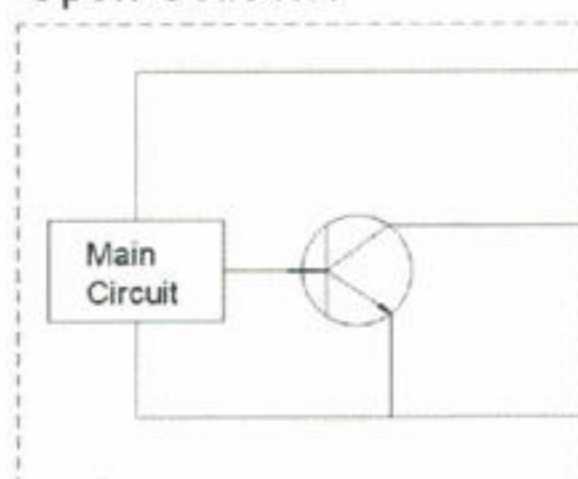
Lead Wire	Voltage, Open Collector, Complementary	Line Driver
Vcc	Red	Red
0V	Black	Black
A	Green	Green
$\bar{A}$	—	Blue
B	White	White
$\bar{B}$	—	Gray
Z	Yellow	Yellow
$\bar{Z}$	—	Orange
Shield	—	—



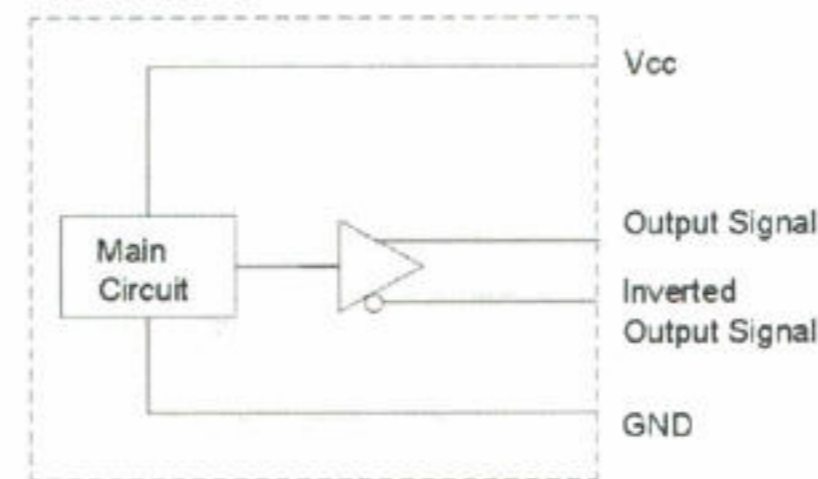
Voltage Output



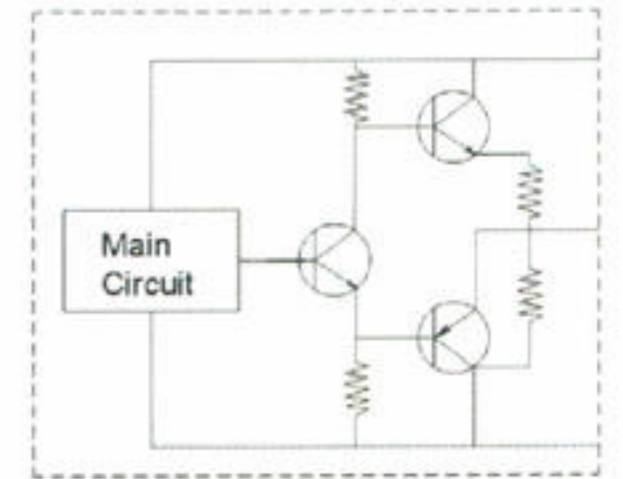
Open Collector



Line Driver



Complementary



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