

SE081 Series



- Through Hollow Shaft - Diameter Ø8 ~ Ø22 mm. Accept OEM diameter
- NSK / NACHI made in Japan bearing with heavy axial and radial direction load.
- Inversion of polarity protection.
- 3 Years Warranty.

◆ ORDERING INFORMATION

SE081 - <u>□□□□</u> - <u>□□</u> - <u>□□□</u> # <u>□</u>			Model Available																									
			1 2 3 4 5 6																									
1	Resolution (PPR)	1024 – 1024																										
2	Shaft Diameter (mm)	08 – Ø8 10 – Ø10 14 – Ø14 15 – Ø15 16 – Ø16 18 – Ø18 20 – Ø20 22 – Ø22																										
3	Output Phase	2 – A/B Phase 3 – A/B/Z Phase																										
4	Output Circuit Page 4	L – Line Driver, Input/Out - 5V/5V M – Line Driver, Input/Out - 12V/5V O – Open Collector P – Push-Pull V – Voltage	<table border="1"> <thead> <tr> <th rowspan="2">Supply Voltage</th> <th rowspan="2">Output</th> <th colspan="2">Phase</th> </tr> <tr> <th>A/B</th> <th>A/B/Z</th> </tr> </thead> <tbody> <tr> <td rowspan="2">5V</td> <td>Voltage</td> <td>2V</td> <td>3V</td> </tr> <tr> <td>Line driver</td> <td>2L</td> <td>3L</td> </tr> <tr> <td rowspan="3">7~24V</td> <td>Open Collector</td> <td>2O</td> <td></td> </tr> <tr> <td>Push-Pull</td> <td>2P</td> <td>3P</td> </tr> <tr> <td>Line driver</td> <td>2M</td> <td>3M</td> </tr> </tbody> </table>			Supply Voltage	Output	Phase		A/B	A/B/Z	5V	Voltage	2V	3V	Line driver	2L	3L	7~24V	Open Collector	2O		Push-Pull	2P	3P	Line driver	2M	3M
Supply Voltage	Output	Phase																										
		A/B	A/B/Z																									
5V	Voltage	2V	3V																									
	Line driver	2L	3L																									
7~24V	Open Collector	2O																										
	Push-Pull	2P	3P																									
	Line driver	2M	3M																									
5	Shield Cable Length	空 – 0.5M (Standard) E – 7.0M + Y-type terminal 4mm																										
6	Accessory shrapnel	0 –Option 0 (Standard)																										

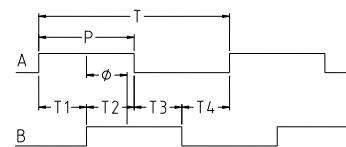
◆ TECHNICAL DATA

Parameter	Unit	Specification			Symbol
ELECTRICAL					
Output circuits		Push-Pull	Open Collector	Line Driver	
Voltage	V	DC7~24V ±10%	DC7~24V ±10%	DC5V / DC7~24V ±5%	V _{CC}
High Level Output Voltage	V	V _{CC} - 2.5 Min	V _{CC} - 0.5 Min	2.5 Min	V _H
Low Level Output Voltage	V	1.5 Max	0.6 Max	1.0 Max	V _L
Rise Time (10% → 90%)	* μsec	0.5 Max	2 Max	0.2 Max	T _r
Fall Time (90% → 10%)	* μsec	0.5 Max	2 Max	0.2 Max	T _f
Input Current – No Load	mA	45 Max.	45 Max.	100 Max.	
Output Current per Channel	mA	50 Max.			
Resolution	PPR	1024			
Max. Frequency Response:	kHz	50			
Output Waveforms		Square Waves			
Pulse Width Error	**	P = T/2±T/10			ΔP
Logic State Width Error	**	T ₁ =T ₂ =T ₃ =T ₄ = T/4±T/8			ΔS
Phase Error	**	T=T ₀ ± 0.05T ₀			ΔØ
Protection		<ul style="list-style-type: none"> ● Reverse polarity protection ● Outputs Short-circuit protection 			
MECHANICAL					
Shaft Diameter	mm	Ø8 ~ Ø22			
Moment of inertia	Kg-cm ²	1			
Shaft load - Radial Direction	Kg	2 Max.			
Shaft load - Axial Direction	Kg	1 Max.			
Speed	rpm	2500 Max.			
Starting Torque at 25 °C	kg-cm	1.0 Max.			
Angular acceleration	rad/s ²	10 ⁴ Max.			
Shaft axial end play	mm	0.05 Max.			
Shaft runout (TIR)	mm	0.05 Max.			
Shaft perpendicularity (TIR)	mm	0.05 Max.			
Bearing Life		40000 hr - 1800rpm, 25°C			
Net weight	kg	0.7			
Gross weight	kg	1			
ENVIRONMENT					
Operating Temperature	°C	-10 ~ +70			
Storage Temperature	°C	-20 ~ +80			
Relative Humidity		95% Max. without condensation			
Shock	***	50G 11ms - 3 times each in X,Y,Z directions			
Vibration	****	10~55Hz 1.5mm(P-P) each in X,Y,Z directions for 2 hrs			
Protection		IP44			

*: See FIG.1
 **: See FIG.2
 ***: According to JIS-C5026
 ****: According to JIS-C5025



FIG.1



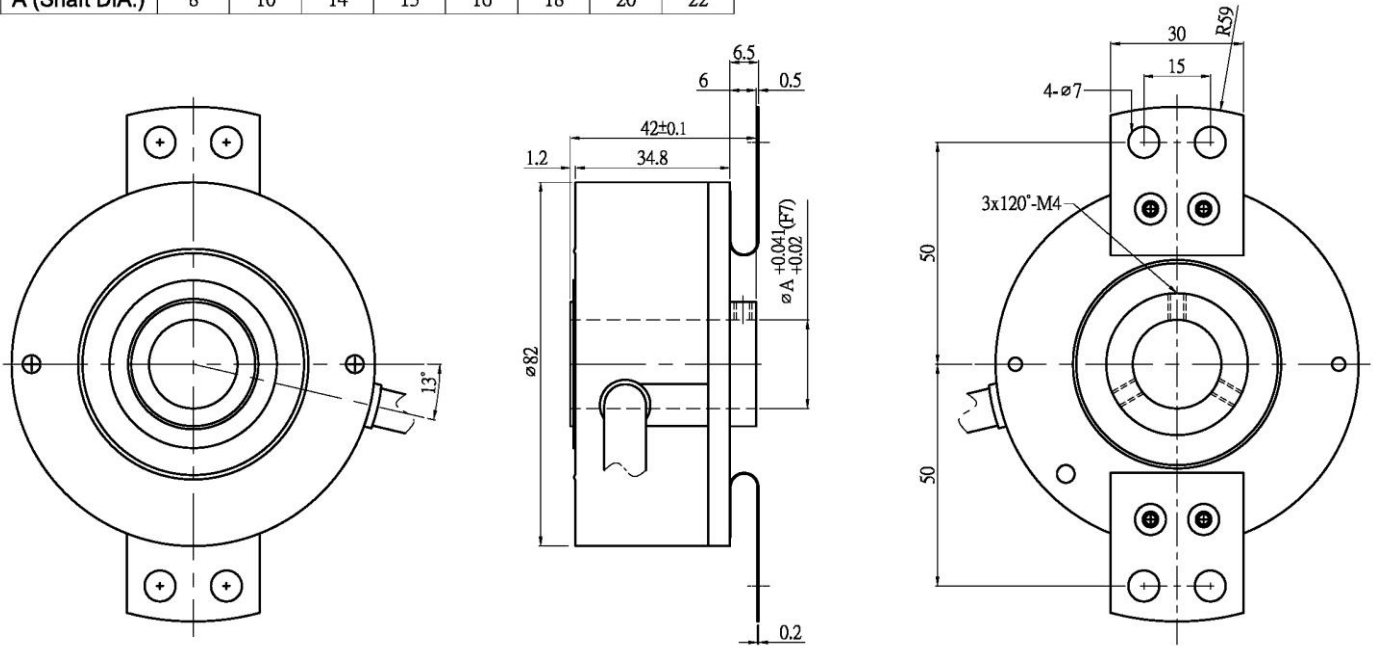
Rotation Direction: Clockwise (CW) - Viewed from the Fixed Side Axis of the Encoder

FIG.2

◆ DIMENSION

- SE08 Shaft Diameter: $\varnothing 14\sim\varnothing 22$ mm

A (Shaft DIA.)	8	10	14	15	16	18	20	22
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◆ **OUTPUT CIRCUIT**

Output	Push-Pull	Line Driver	Voltage	Open Collector
Circuit				

◆ **CONNECTION**

- **2P / 2O/ 2V** – Shield Cable, 4C*22AWG, O.D.: Ø 6mm

Output Circuit	Red	Black	Green	Blue
A/B Phase, Push-Pull	V _{CC}	Gnd	A	B
A/B Phase, Open Collector	V _{CC}	Gnd	A	B
A/B Phase, Voltage	V _{CC}	Gnd	A	B

- **2L / 2M / 3P / 3L / 3M** – Shield Cable, 8C*26AWG, O.D.: Ø 6mm

Output Circuit	Red	Black	Green	Blue	Brown	Yellow	Orange	White
A/B/Z Phase, Push-Pull	V _{CC}	Gnd	A	B	Z	-	-	-
A/B Phase, Line Driver	V _{CC}	Gnd	A	B	-	\bar{A}	\bar{B}	-
A/B/Z Phase, Line Driver	V _{CC}	Gnd	A	B	Z	\bar{A}	\bar{B}	\bar{Z}

Product



Accessory

Coupling:

Shaft Diameter 6-6mm

Model: SEC-H0606

