

SE084 Series



- Through Hollow Shaft - Diameter Ø6 ~ Ø10 mm. Accept OEM diameter
- Inversion of polarity protection.
- 3 Years Warranty.

◆ ORDERING INFORMATION

SE084 - <u> </u> <u> </u> <u> </u> <u> </u> - <u> </u> <u> </u> - <u> </u> <u> </u> <u> </u> # <u> </u>			Model Available		
1	Resolution (PPR)	1024 – 1024			
2	Shaft Diameter (mm)	06 – Ø6 08 – Ø8 10 – Ø10			
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	Supply Voltage	Output	Phase
			5V	Voltage	A/B: 2V, A/B/Z: 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)			

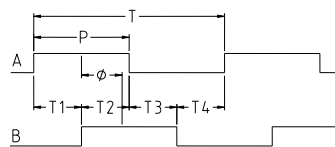
◆ TECHNICAL DATA

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			Δ∅
Protection		<ul style="list-style-type: none"> ● Reverse polarity protection ● Outputs Short-circuit protection 			
MECHANICAL					
Shaft Diameter	mm	∅6 ~ ∅10			
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



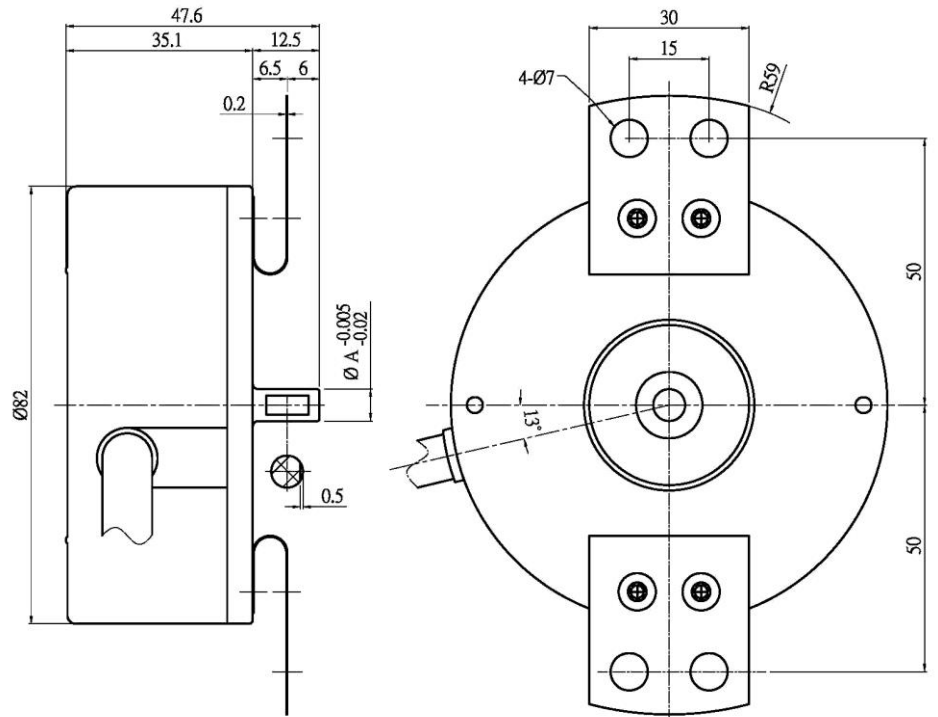
Rotation Direction: Clockwise (CW) - Viewed from the Fixed Side Axis of the Encoder

FIG.2

◆ DIMENSION

- SE084 Shaft Diameter: $\varnothing 6\sim\varnothing 12$ mm

A (Shaft DIA.)	6	8	10
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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	Vcc	Gnd	A	B
A/B Phase, Open Collector	Vcc	Gnd	A	B
A/B Phase, Voltage	Vcc	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	Vcc	Gnd	A	B	Z	-	-	-
A/B Phase, Line Driver	Vcc	Gnd	A	B	-	\bar{A}	\bar{B}	-
A/B/Z Phase, Line Driver	Vcc	Gnd	A	B	Z	\bar{A}	\bar{B}	\bar{Z}