Single-Turn Absolute Rotary Encoder

Housing Dia.:38,50,58mm; Solid Shaft Dia.:6,8,10mm;
Interface: **SSI**; Resolution: Max.16bits

GSA-S Series

▶Housing Diameter:38,50,58mm;
▶Solid/hollow Shaft Diameter:6,8,10mm;
▶Interface: SSI;
▶Resolution: Single turn max.16bits;
▶Supply Voltage:5v,8-29v;
▶Output Code: Binary, Gray, Gray Excess, BCD;
▶Widely used in various fields of automatic control and measurement system,such as machinery manufacturing, shipping, textile, printing, aviation, military industry Testing machine, elevator, etc.
▶Vibration-resistant, corrosion-resistant, pollution-resistant;

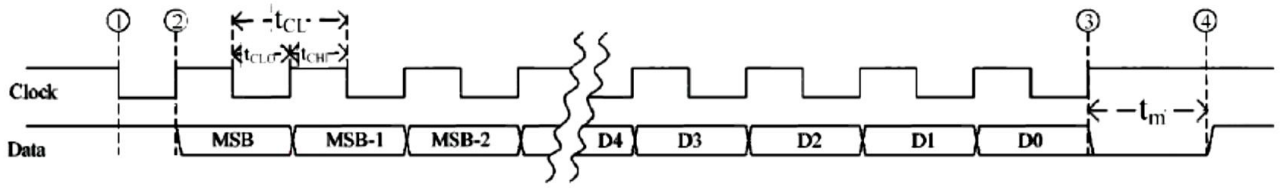
Product characteristics					
Housing Dia.:		38,50,58mm			
Solid Shaft Dia.:		6,8,10mm			
Electrical Data					
Resolution:		Single turn max.16bits			
Interface:		SSI/NPN/PNP open collector, Push pull, Line Driver;			
Output Code:		Binary, Gray, Gray Excess, BCD			
Supply Voltage:		8-29V			
Max. Frequency Response		33Khz~4Mhz			
		Item		**Min**	**Max**
Input Signal	Clock	Voltage	VIH	2.1v	Vcc
			VIL		0.9v
Output Signal	Data	Voltage	VOH	2.0v	Vcc
			VOL		0.5v
		Current	IO		15mA
Mechanical Data					
Start Torque		4 x 10^{-3} N•M			
Max. Shaft Loading		Axial: 5-30N, Radial:10-20N;			
Max. Rotary Speed		5000rpm			
Weight		160-200g			
Environment Data					
Working Temp.		-30~80℃			
Storage Temp.		-40~80℃			
Protection Grade		IP54			

Connection Leading:

Signal	**Vcc**	**GND**	**Clock+**	**Clock-**	**Data+**	**Data-**	**Zero**
Colour	Brown	Blue	White	Gray	Black	Purple	Yellow

Interface

Parameter	**Symbol**	**Min.**	**Typ.**	**Max.**	**Unit**	**Note**
Clock Period	t_{CL}	**0.25**		**2 x t_M**	**μs**	
Clock High	t_{CHL}	**0.1**		**t_M**	**μs**	
Clock Low	t_{CLO}	**0.1**		**t_M**	**μs**	
Monoflop time	t_M	**15**	**19**	**25**	**μs**	

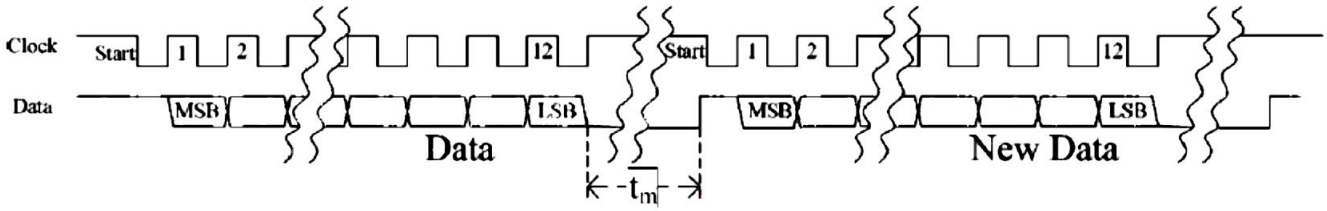


SSI 时序图

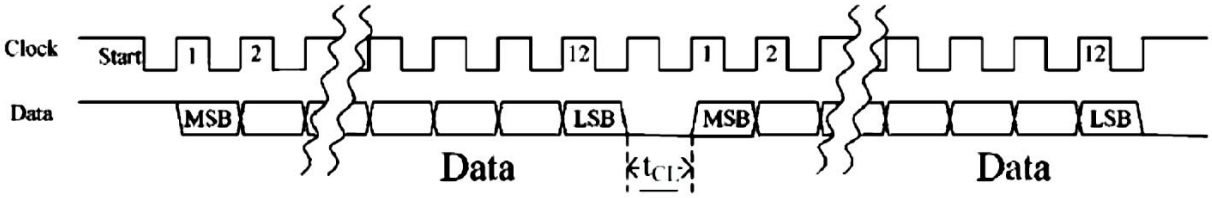
Output Model:

1) Single Data Output Model

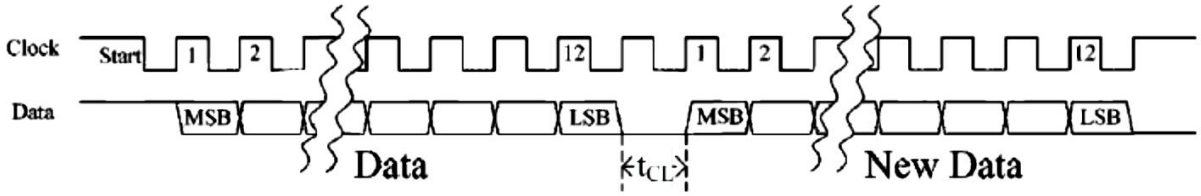
Common Read



Repeat Read

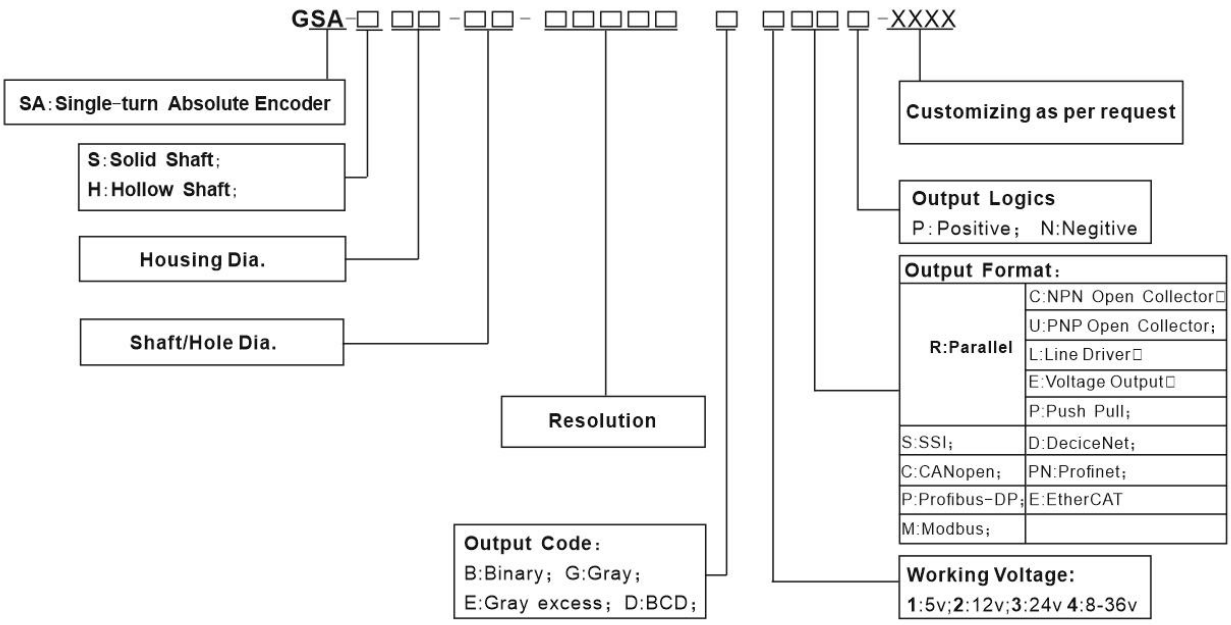


2) Continuous Data Output Model

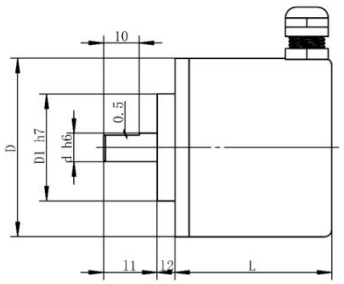


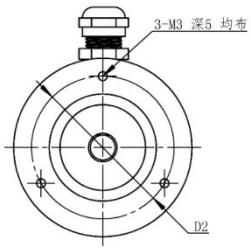
Ordering Code

Single Turn Absolute Encoder



Dimensions





D	38	50	58
d	6	8	10
D1	20	30	36
D2	30	40	48
L	35	35	44
l1	15	15	20
l2	5	5	10

Note:

- **Adopt elastic soft connection shall be applied between encoder shaft and output shaft of user end to avoid damage of encoder shaft system due to serial movement and run out of user shaft.**
- **Please pay attention to the allowable axle load during installation.**
- **Make Sure that the difference Between Axial Degree of encoder shaft and user output shaft shall be no more than 0.20mm, and the deviation angle with axis shall be less than 1.5 °.**
- **Try to avoid knocking and falling collision during installation;**
- **Do not connect the power line and the ground wire in reverse.**
- **The GND wire shall be as thick as possible, generally larger than φ 3.**
- **Output lines of encoder shall not be overlapped with each other to avoid damaging output circuit.**
- **Signal line of encoder shall not be connected to DC power supply or AC current to avoid damaging output circuit.**
- **The motor and other equipment connected to the encoder shall be well grounded without static electricity.**
- **Shielded cable shall be used for wiring.**
- **Before starting the machine, carefully check whether the wiring is correct.**
- **During long-distance transmission, the signal attenuation factor shall be considered, and the output mode with low output impedance and strong anti-interference ability shall be selected.**
- **Avoid using in strong electromagnetic wave environment.**