



Feature

1. Outline dimension is totally compatible with traditional joystick potentiometer.
2. Electric life can achieve more than 2 million cycles.
3. Fully self-owned intellectual property right of Hall effect sensor IC.
4. Dual linear voltage signal output
5. (Optional) Lever has auto return function
6. No contact noise
7. Push switch with operation life of 500K actuations.
8. Highest cost-effective

Non-Contact Joystick Potentiometer

Electrical characteristics

- Output voltage.....0.9V~2.4V@Vdd=3.3VDC
0.9V~4.1V@Vdd=5.0VDC
- Power Rating.....0.02W @ Vdd=3.3V
0.1W @ Vdd=5.5V
- Operation Current.....Typical 3.0x2 mA; Max 20mA
- Contact Noise.....N/A

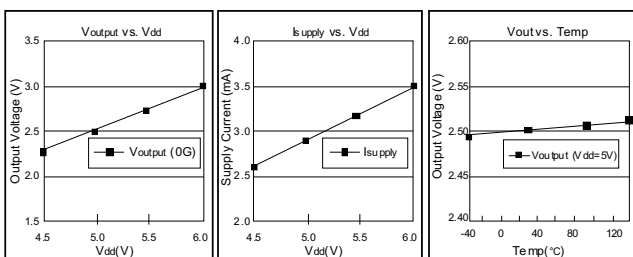
Mechanical characteristics

- Operating Temperature Range.....-30°C ~ +85°C
- Angle of Rotation.....66° +0/-6°
- Control Stick Operation Torque.....150 ± 50 gf.cm

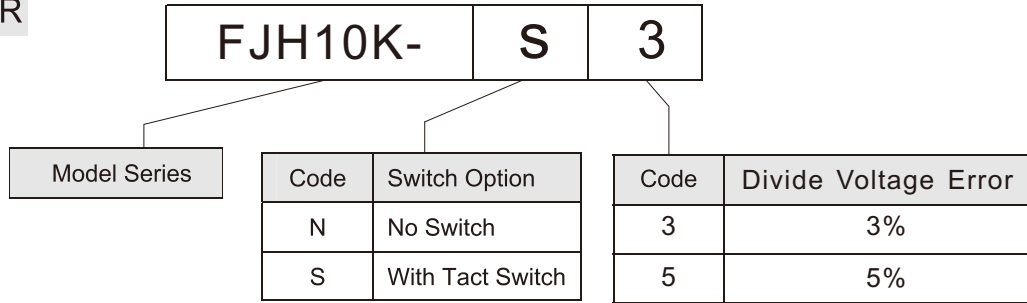
Durability

- Cycle Life.....2 Million Cycle Life Min
- Switch Life.....Standard Life: 500K actuations
Long Life: 1 Million actuations

Performance



HOW TO ORDER



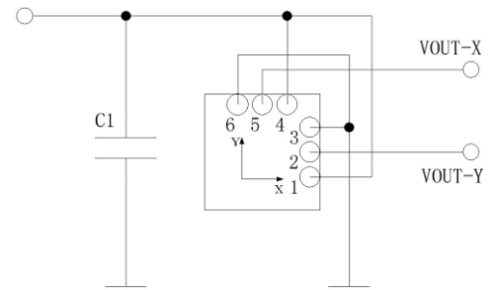
MAGNETIC SENSOR SPECIFICATION

DC Operating Parameters @ Ta=+25°C, Vdd=5V

Parameter	Condition	Min.	Typ.	Max.	Units
Operating Voltage		3.3	5	6.5	V
Supply Current			20		mA
Output Current	Min(Vdd>3V); Typ(Vdd>3V)	1.0	10		mA
Output Voltage	@0 Gauss	2.3	2.5	2.7	V
Output Bandwidth			20		kHz
Output Voltage Span				4.1	V
Magnetic Flux Density (Gauss)		±500	±800		G
Linearity	% of Span		-0.7		
Time Response			3		µs
Sensitivity		1.2		2.1	mV/G

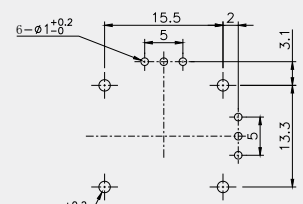
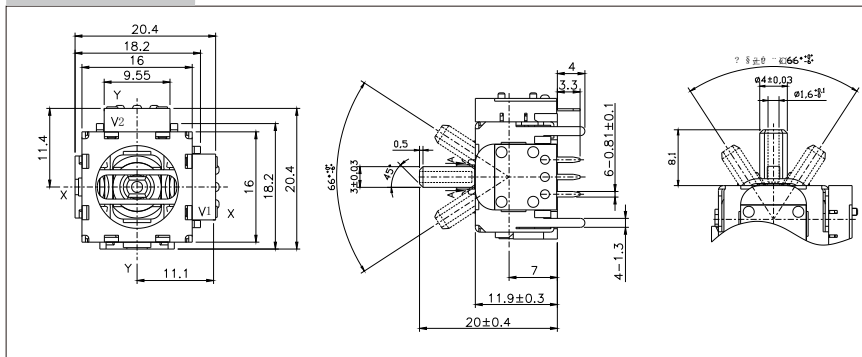
Supply Voltage V_{dd}	-0.5Vdc ~ 8Vdc
Output Current, I_{out}	10mA
Operating Temperature Range	-40°C ~ 85°C
Magnetic Flux Density	No Limited

PINOUT & CONNECTIONS



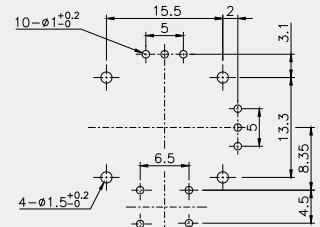
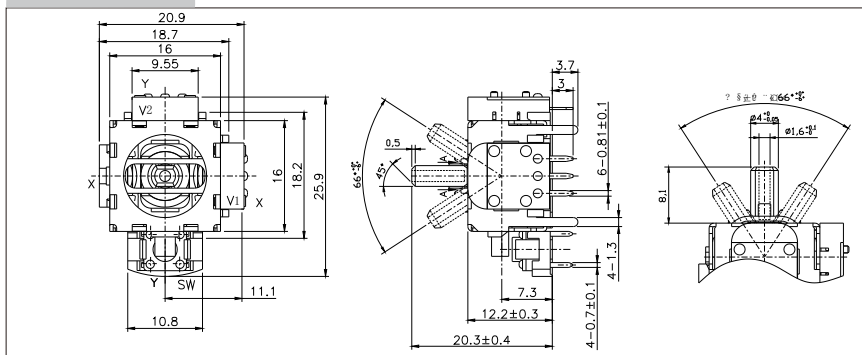
Pin No.	Description	Signal
1	"Y" axis input	Vdd=3.3-5.0VDC
2	"Y" axis output	Vout = 0.9~1.65~2.4V@Vdd=3.3VDC 0.9~2.5~4.1V@Vdd=5.0VDC
3	"Y" axis ground	Ground
4	"X" axis input	Vdd = 3.3-5.0VDC
5	"X" axis output	Vout = 0.9~1.65~2.4V@Vdd=3.3VDC 0.9~2.5~4.1V@Vdd=5.0VDC
6	"X" axis ground	Ground

FJH10K-N Plastic Shaft without Tact Switch, PC Pins



P.C.B Layout Dimension

FJH10K-S Plastic Shaft with Tact Switch, PC Pins



P.C.B Layout Dimension