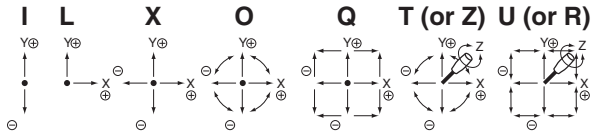
H50JA

New Product

Potentiometer with a hall effect IC type resistive element

Nomenclature

S means special mechanical specifications not applicable to our standard.
H means hall effect IC type potentiometer(HSM18E) incorporated type.
50 means approx. size of base housing in mm.
J means joystick controller.
Kind of types
A means 1- or 2- dimensional coordinate and also means hall effect IC type. potentiometers are mounted outside housing case.
K means square shape.
Mechanism
X means 1-dimensional coordinate.
Y means 2-dimensional coordinate.
Available directions of lever operation as below illustration
Standard version:
O : Omni-directional 360˚operating type.
Special version:
I : I figure (Y) directional operating type.
L : L figure(+Y, +X only) directional operating type.
X : Cross direction(+) of X and Y operating type.
Q : Square-directional 360˚operating angle.
Z : In addition to 360-omni-directional operation, 3-dimensional coordinate operation is possible by rotating knob.
R : In addition to "Q operation", 3-dimensional coordinate operation is possible by rotating knob.
S : Special directions of lever operation other than above mentioned types.



S	H	50	J	A	K	-	Y	O	-	2	0	R2	G	-	00000

Number of potentiometers to be incorporated
0···no potentiometer incorporated. **1**···1 potentiometer incorporated.
2···2 potentiometers incorporated.
Number of switches to be incorporated
0···no switch incorporated. **1**···1 switch incorporated. **2**···2 switches incorporated.
3···3 switches incorporated. **4**···4 switches incorporated.
5···5 switches incorporated. **6**···6 and over 6 switches incorporated.
9···9 Other switches to your special request.
With spring return device:
R1: with spring return device for 1-dimensional coordinate.
R2: with spring return device for 2-dimensional coordinate.
Mounting accessories:
G : with dust proof rubber cover.
P : with sub-panel for mounting.
Special part number:
In case we produce customized product, we add 4-digit or 5-digit branch number.

This joystick controller offers longer operation life, vibration resistance, high reliability and safety.

H50JAK-YO-20R2
(Standard 2-dimensional coordinate type)

STANDARD SPECIFICATIONS

● Mechanical performance

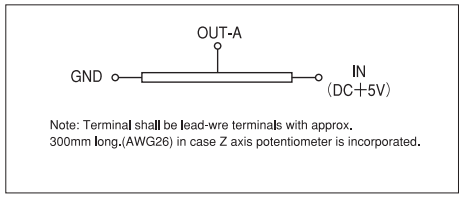
Controlling range of operating lever: 2-dimensional coordinate type.
Omni-directionally approx.±18˚～±22˚operation from center position.
Operating force: With spring return device with directive feeling.
X and Y directions: Approx.0.8～1.5N(80～150gf)
Operating temperature range: −20℃～+65℃
Vibration: 10～55Hz 98m/s²
Shock: 294m/s²
Mechanical life expectancy: Approx.10,000,000 operations.
Mass: 2-dimensional coordinate type: Approx.280g

● Electrical performance

Hall effect IC type potentiometer(SHSM18E) mounted
- Applied voltage: 5V±10% D.C.
- Effective output: Approx.0.5V～4.5V
- Electrical rotating angle: Approx. ±18˚
- Independent linearity tolerance: ±3%
- Load resistance: over 10KΩ

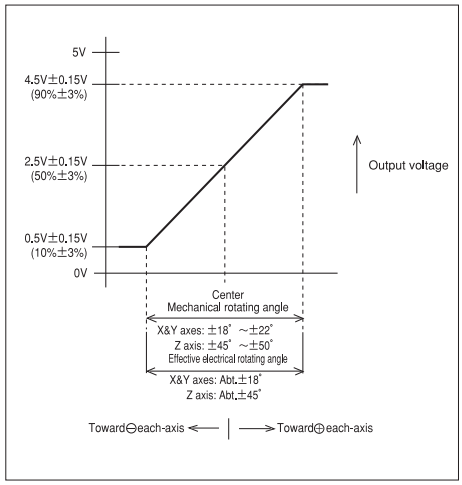
Resolution: Infinitesimal
Dielectric strength: 1 minute at 250V.A.C.
Insulation resistance: Over 100MΩ at 250V.D.C.
EMS durability: 100V/m(80MHz～1GHz 1KHz sine-wave 80%AM modulation)
ESD durability: ±8KV contact ±15KV aerial discharge 10 times at 1second interval, single discharge.

● Terminal Connection Diagram



Note: Terminal shall be lead-wre terminals with approx. 300mm long.(AWG26) in case Z axis potentiometer is incorporated.

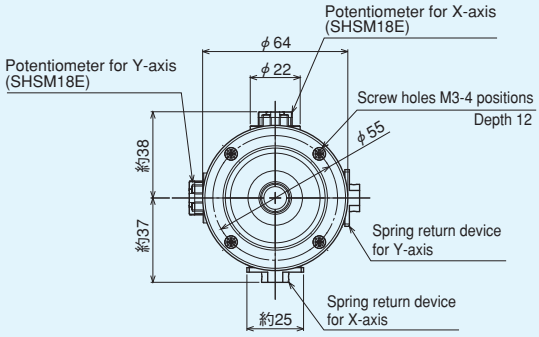
● Output Characteristic

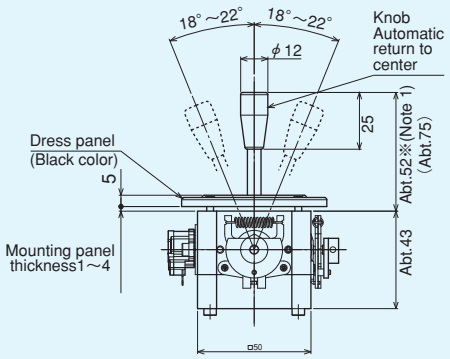


● Special Specifications Available

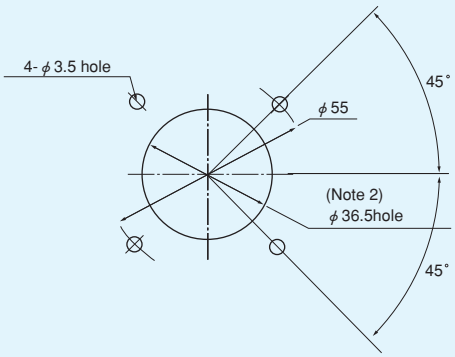
Please see page 47, a table of “Standard and Special Specifications Available".
Regarding kind of output characteristic, dual cross output or dual parallel output instead of single output is also available.

Standard Dimensions





■ Panel Arrangements



Note 1: In case a dust-proof rubber cover is mounted, the shape of dress panel shall change. ＊Numeral in parentheses shows that of with a dust-proof rubber cover.
Note 2: In case of a dust-proof rubber cover is mounted, it is ϕ44 hole.
Note 3: 4 pcs. of mounting screws(M3X14) are attached.

(Unit : mm)