

MKF-PJS03 series

Mate Industrial Joystick, Potentiometer/Hall, Single axis, Panel Mounted



APPLICATION

Typically used in cranes, loaders, excavators, forklifts, tractors, harvesters and aerial work platforms.

DESCRIPTION

- Rugged components designed for the construction environment
- Potentiometer tracks for angular-detecting
- Friction held and spring return for choice
- Center-lock is a mechanical option
- Providing optional grips with different shapes
- The number and position of the switches are customized designed
- PWM output drives proportional solenoid valve
- Depending on the proportional solenoid valve to set starting current, maximum current and PWM frequency
- CAN output is an option

Electrical data

Potentiometer	
Power supply	<36Vdc
Resistance	200Ω, 1KΩ
Electrical angle	±18°
Center voltage	48%~52%Vdc (of Power supply)
Center tap angle	±2.5°
On-load voltage (max)	32Vdc
Power dissipation	2W (200Ω), 0.5W (1KΩ)
Directional switch	
Load capacity	10A@30Vdc (Resistance load)
Breakout angle	± 5°
Contact resistance	<200Ω
Digital Proportional Amplifier Driver	
Power supply	9~36Vdc
Output Driving Current PWM	PWM Maximum Current 3A
PWM Frequency	100HZ~1000HZ
Minimum Current	0~0.4A
Maximum Current	0.4~3A
Microswitch	
Load capacity	10A@30Vdc (Resistance load)
Expecting life	30 million times (Mechanical) 200 thousand times (Electrical)
Insulation resistance	>100MΩ
Breakout angle	±3°~ 5°

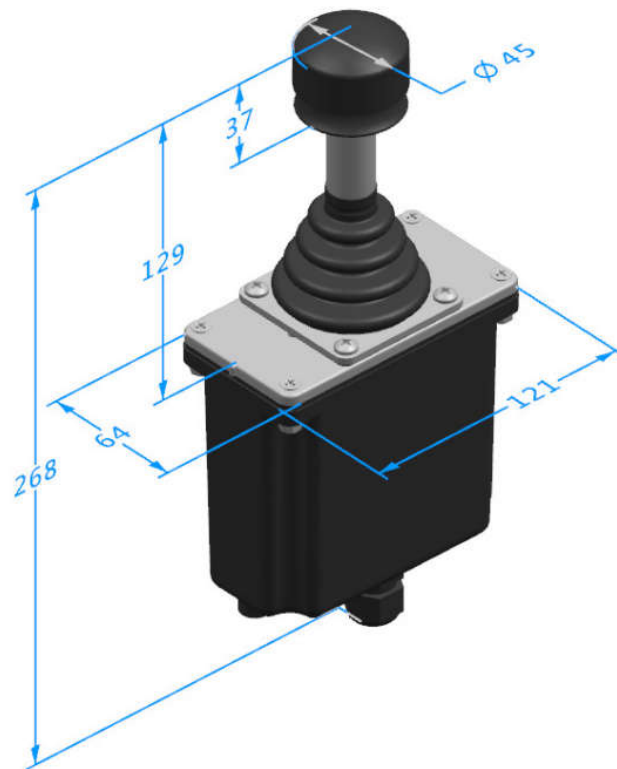
Mechanical features

Travel angle	±20°
Operating type	Spring return,Friction held
Breakout force	5N
Operating force(max)	11N
Maximum allowable force	>300N
Expecting life	>2 million cycles (Potentiometer)
Weight	475g (Without handle)

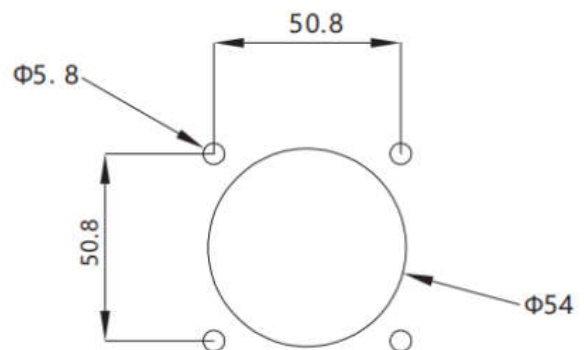
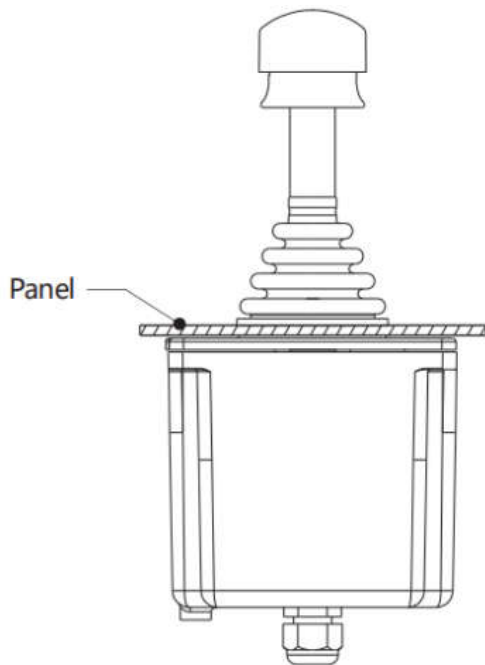
Environmental data

Operating Temperature	-30°C~+70°C
Storage Temperature	-40°C~+85°C
Protection level	IP65 (Above the flange)

Dimensions

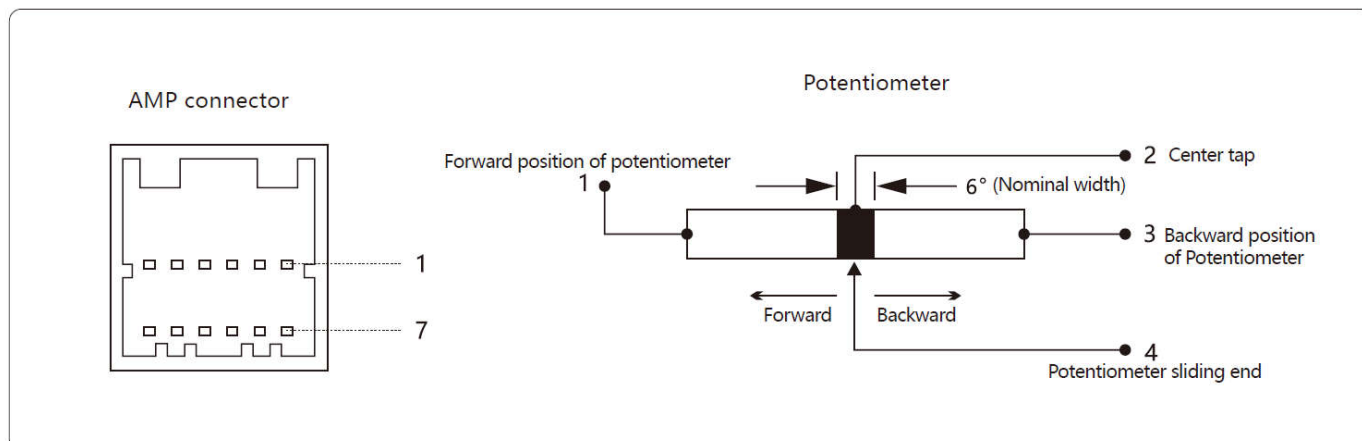


Product installation



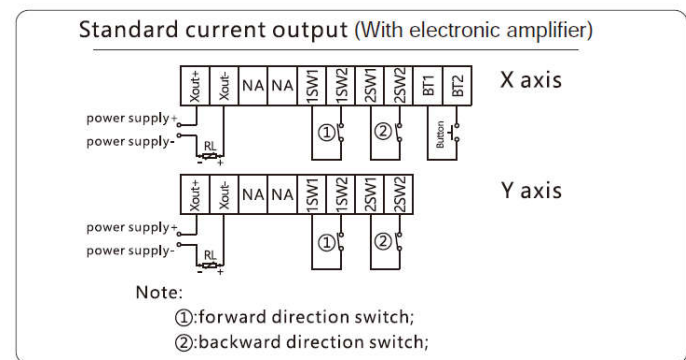
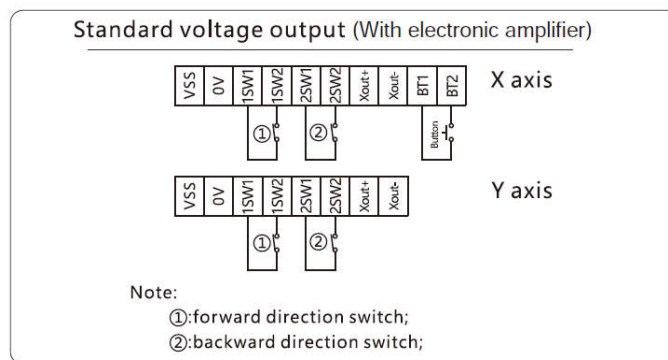
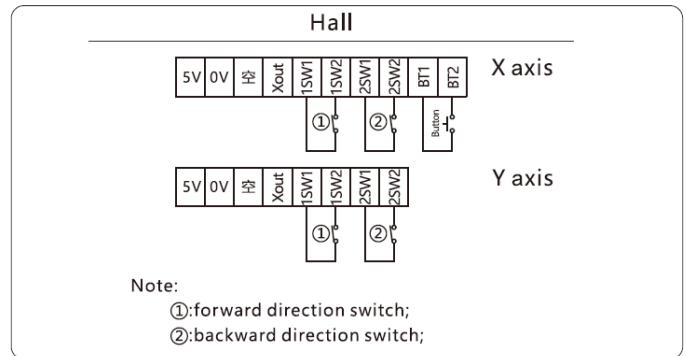
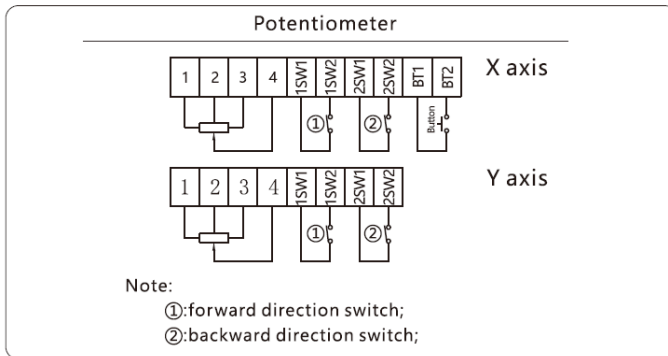
Mounting

Electrical Connections



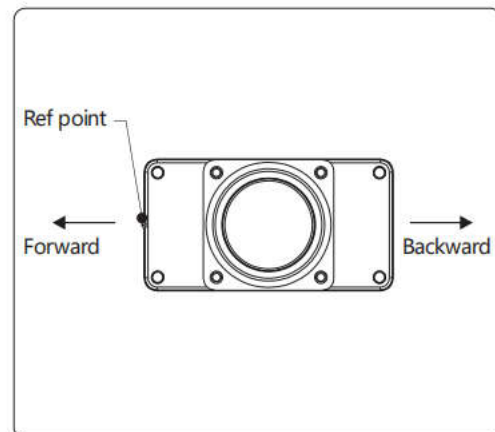
Pin	Pontentiometer	Hall
1	Potentiometer forward terminal	+5VDC
2	Potentiometer center tap Single direction(N/A)	NA
3	Potentiometer Backward Terminal	0V
4	Pontentiometer wiper	Output
5	Directional switch forward(N.O) Start position switch of single direction(N.O)	Forward Directional switch (N.O) Start position switch of single direction (N.O)
6	Forward switch common terminal Common terminal of start position	Forward switch common terminal Common terminal of start position
7	Backward directional switch (N.O) Single direction(N/A)	Backward directional switch (N.O) Single direction(N/A)
8	Backward directional common terminal Single direction(N/A)	Backward directional common terminal Single direction(N/A)
9	Rocker left directional(N.O)	Rocker left directional(N.O)
10	Handle of top switch common terminal	Handle of top switch common terminal
11	Rocker right direction (N.O)	Rocker right direction (N.O)
12	Deadman switch	Deadman switch

Connector

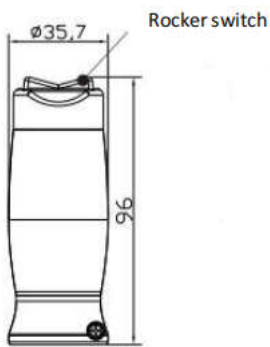


Electrical Connections

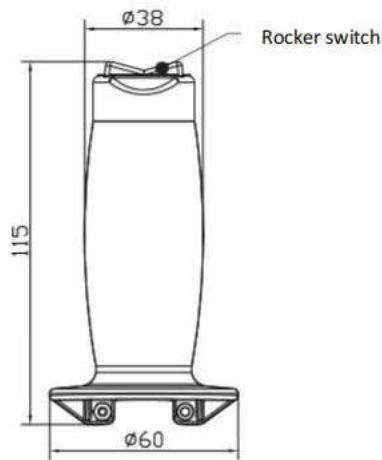
Pin	Hall	Pontentiometer
1	Potentiometer forward terminal	9-36VDC (VCC)
2	Potentiometer center tap	GND
3	Potentiometer Backward terminal	Forward drive output
4	Potentiometer sliding end	Backward drive output
5	Center switch common port	Drive output common port
6	Center switch (N.O.) Forward	Switch common port
7	switch (N.O.)	Center switch (N.O.)
8	Backward switch (N.O.)	Forward switch (N.O.)
9		Backward switch (N.O.)



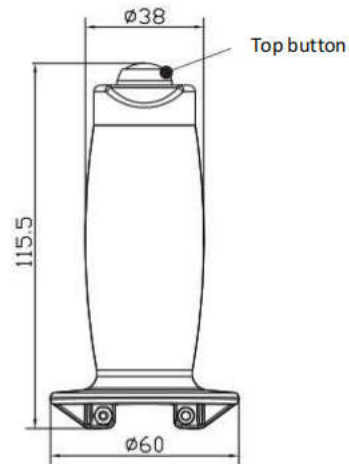
Handle Optional



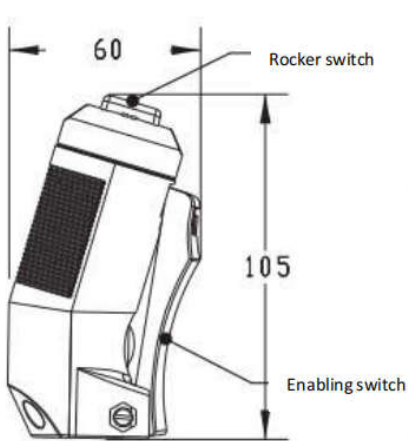
MHBR



MHDR



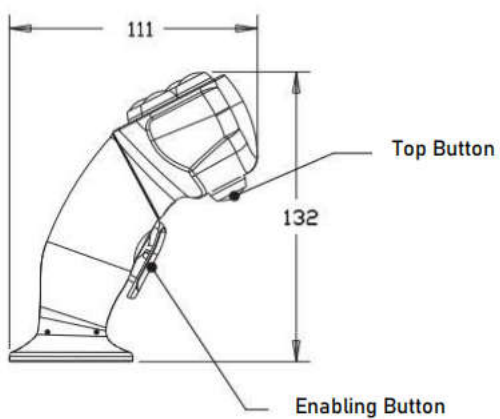
MHDS



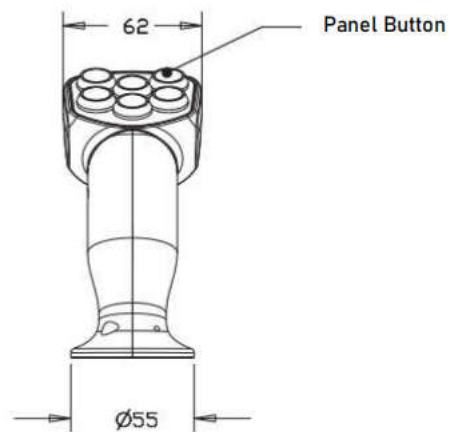
MKGDN with enabling switch, No rocker switch

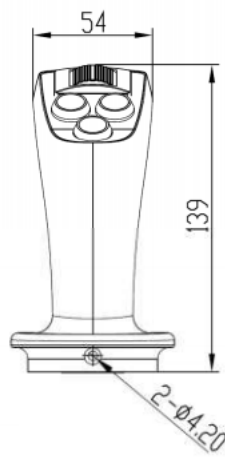
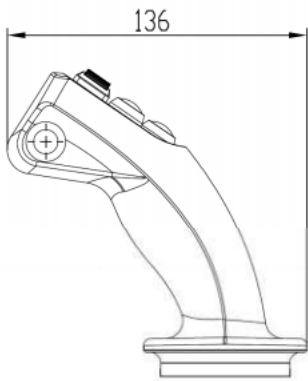


MKGDR with enabling switch, with rocker switch

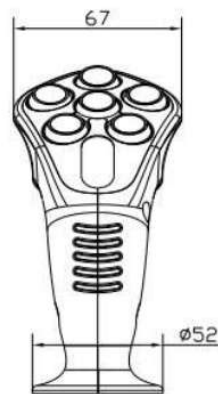
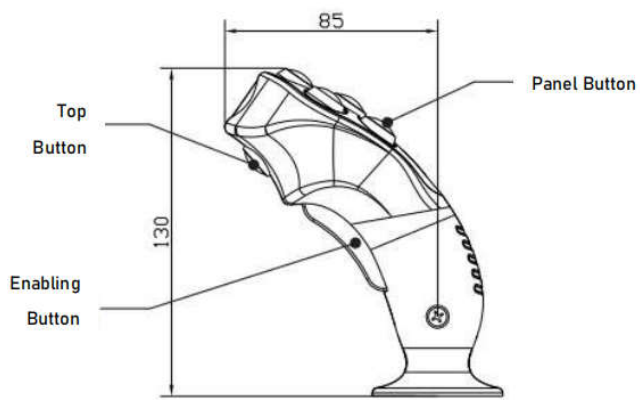


MSS





MSP



MSA