



Multi-Functional Joystick

S191

Product Features

- Ergonomic design
- Single-axis operation with spring return
- Robust joystick for harsh environments
- Equipped with 10A @ 30Vdc micro-switches with independent switch outputs
- Various handle top options available

Application Markets

- Drives proportional valves and directional valves to achieve electro-hydraulic control functions
- Rotary drilling rigs, aerial fire trucks, cranes, shield machines, and other electrical and electro-hydraulic control systems



Technical Specifications

Mechanical Parameters	
Tilting Angle	$\pm 25^{\circ}$
Operating Force	10~20N (Spring Return)
Limit Force	300N
Service Life	Potentiometer Type: Over 2 million cycles Hall Effect Type: Over 5 million cycles
Weight (Base Only)	380g
Pivot Distance: 93 mm	

Electrical Parameters



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**Analog / Hall Voltage Type**

Supply Voltage	5.0 ± 0.5Vdc
Supply Current	<12mA per channel
Center Voltage	2.5±0.15V
Output Linear Error	±3%
Max Overvoltage	30Vdc
Max Reverse Voltage	-15Vdc
Load Resistance	>10KΩ
Insulation Resistance	>1000MΩ

Analog / Potentiometer Type

Supply Voltage	9 ~ 36Vdc
Total Resistance	10 KΩ
Center Dead Band Angle	±3°
Max Power	0.2W

Microswitch

Configuration	Up to 4 micro-switches
Actuation Angle	3° ~ 5°
Load Capacity	10A@30Vdc (Resistive Load)
Service Life	1 million cycles
Insulation Resistance	≥100 MΩ (at 500 Vdc).

Environmental Parameters

Operating Temperature	-30°C ~ +70°C
Storage Temperature	-40°C ~ +85°C
Protection Rating	IP65 (Above mounting panel)



**Product Model Coding Rule**

Model No.	D191-①-②-③-④-⑤-⑥-⑦
① Limit	
SS	Single-axis operation along Y-axis, spring return
② Spring Force	
L	6N initial force, 20N full deflection force
③ Mounting Pane	
00	Mounting hole spacing 57.8 / 66mm (default with two sets of mounting holes)
56	Mounting hole spacing 56×56 mm
61	Mounting hole spacing 61×61 mm
④ Handle Top	
M	Spherical top, palm operation
L	Mechanical lift-lock top, center position lock
TN	Tapered top, no top button
TB	Tapered top with top button
M1B6	Curved top with enable switch and top rocker
M1N6	Curved top with enable switch and one top button (self-locking button optional)
M2B6	Straight rod top, no enable switch, with top rocker
PQM1	Custom straight rod top with enable switch and top rocker switch
KHM1	Multi-function top — please contact our sales team for integrated functions
KHM2	Compact multi-function top — please contact our sales team for integrated functions
⑤ Output Type	





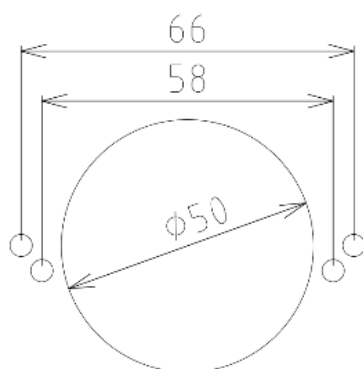
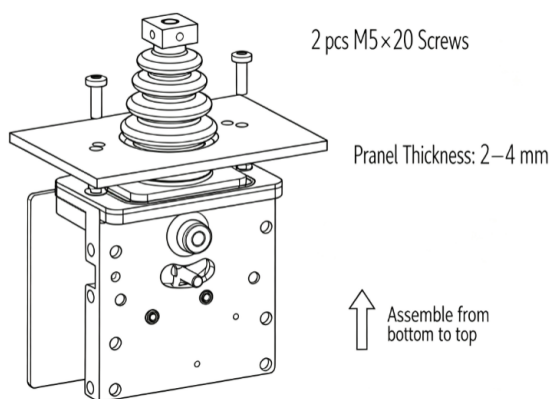
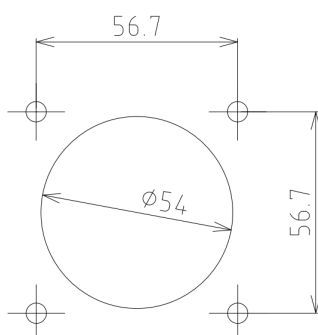
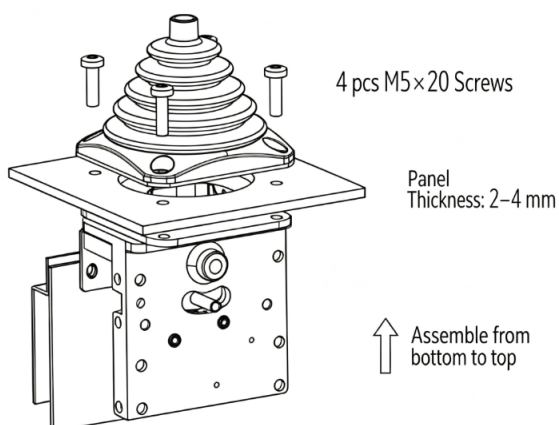
P2	Potentiometer type, supply voltage <36Vdc, 2KΩ 3-pin potentiometer
P5	Potentiometer type, supply voltage <36Vdc, 5KΩ 3-pin potentiometer
P10	Potentiometer type, supply voltage <36Vdc, 10KΩ 3-pin potentiometer
P10C	Potentiometer type, supply voltage <36Vdc, 10KΩ 4-pin potentiometer with center tap
I08	Converter circuit, supply voltage 18-32Vdc, 800-0-800mA adjustable current output
I20	Converter circuit, supply voltage 24Vdc, 20-4-20mA adjustable current output
U05	Converter circuit, supply voltage 18-32Vdc, 5-0-5Vdc adjustable voltage output
U10	Converter circuit, supply voltage 18-32Vdc, 10-0-10Vdc adjustable voltage output
S09	Custom converter circuit, supply voltage 18-32Vdc, 12Vdc signal in two forward/reverse positions
NA	No analog output
	*For custom output requirements, please contact our sales team.
⑥ Direction Microswitch	
N	No micro-switch
S1	One micro-switch at center position (hold)
S2	One micro-switch each for forward and reverse directions
S3	Three micro-switches total — center hold + forward + reverse
⑦ Cable Exit	
L	Direct cable exit (cable spec: AWG24, exit length 500mm) Custom connectors available — please consult our sales team
T	Terminal block exit





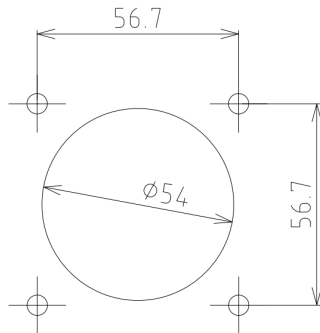
Mounting Panel



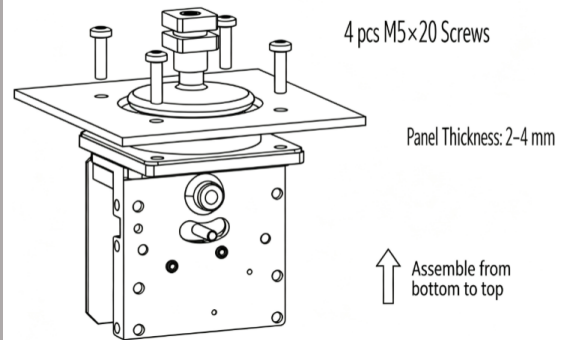
**00-Hole spacing 57.8mm / 66mm****Installation Diagram****56-Hole spacing 56.7x56.7mm****Installation Diagram**



61-Hole spacing 61×61mm

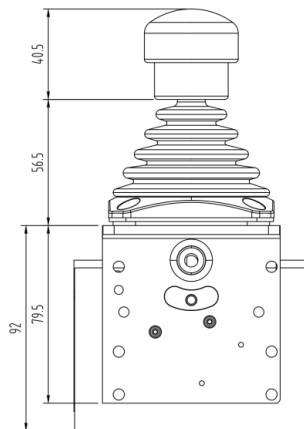


Installation Diagram

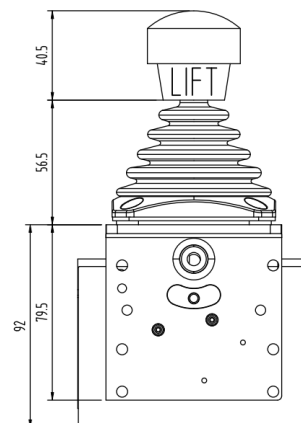


Handle Top Options

M Top

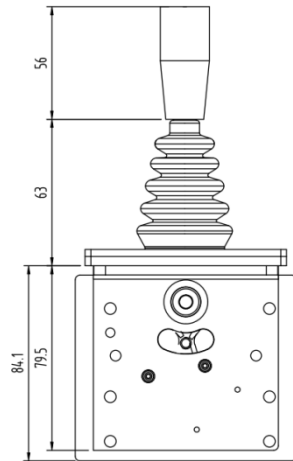


L Top

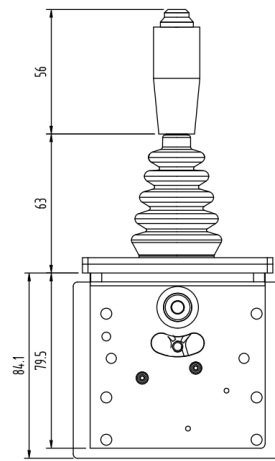




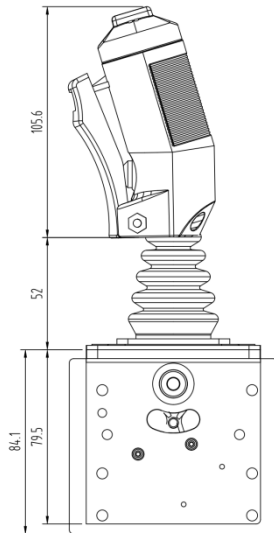
TN Top



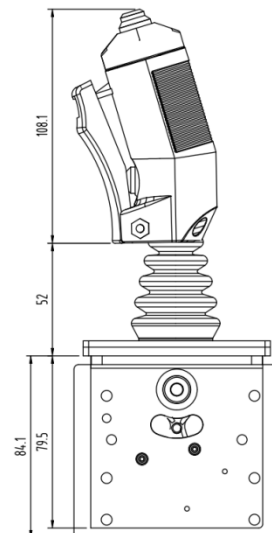
TB Top



M1B6 Top

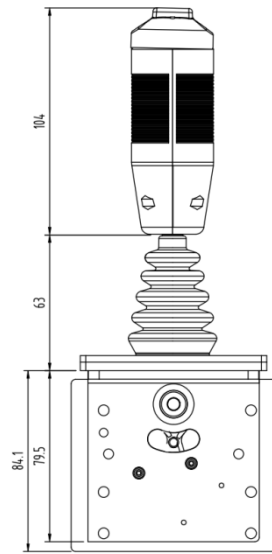


M1N6 Top

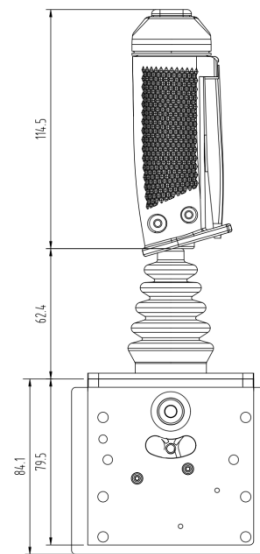




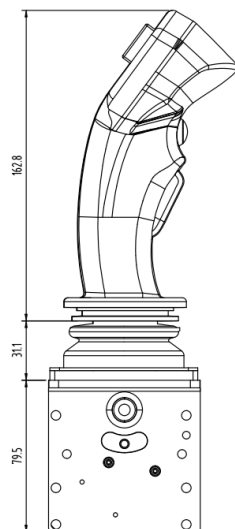
M2B6 Top



PQM1 Top



KHM1 Top



KHM2 Top

