

Data Sheet for Joysticks

Finger Joystick

Series 812



- Available with Potentiometers or Hall sensors
- Several handle options
- Small size at low installation depth

The 812 series is available with several different handle options. These small joysticks are recommended for tasks with one to three axes, and where space is limited.

Technical Data Joystick

Angle of Movement X-, Y-Axis	56° (±28° from center)
Angle of Movement Z-Axis	90° (±45° from center)
Return to Center Tolerance	±2%
Panel Thickness	1,3..4,7 mm
Break Out- / Operating Force X & Y	0,7 N / 1,3 N
Break Out- / Operating Torque Z	0,022 Nm / 0,040 Nm

Technical Data Hall Sensor

Supply Voltage Vsupply	5 VDC ±10%
Output Voltage at center	Vsupply/2 ±5%
Output Voltages Hall Sensor	0..5 V / 0,5..4,5 V / 0,25..4,75 V
Independent Linearity Tolerance	± 2%
Power Consumption	< 11 mA (2 axes) / < 17 mA (3 axes)
Resolution	Infinite
Mechanical Life	1 Million cycles
Operating Temperature	-25°C..+70°C
Storage Temperature	-40°C..+70°C

Technical Data Potentiometer

		Type P	Type M	Type S	Type R
Electrical Element		Conductive Plastic	Conductive Plastic	Conductive Plastic	Conductive Plastic
Track Resistance	[kOhm]	5	5	5	5
Resistance Tolerance	[%]	±20	±20	±15	±10
Independent Linearity	[%FS]	±1	±5	±1,5	±1
Operating Temperature	[°C]	-10..+85	-10..+85	-50..+125	-65..+125
Power Dissipation	[W]	0,25	0,5	0,1	1
Track Operating Angle	[°]	220 ±5	56 ±5	50 ±6	50
Bearing		Sleeve Bearing	Sleeve Bearing	Sleeve Bearing	Sleeve Bearing
Rotational Life	Million cycles	>1	>1	ca. 5	ca. 10
Max. Current	[mA]	1	1	1	1
Max. Voltage	DC [V]	35	20	20	70

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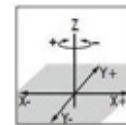
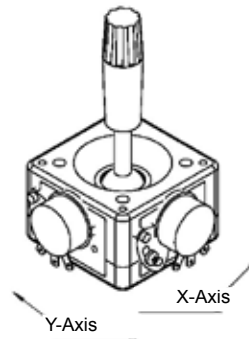
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Technical Data Pushbuttons

	Current [mA]	Voltage [VDC]	Expected Life [number of actuations]	Color Pushbutton Cap
Handle E	(switching power 0,1 Watt)		5 Million	black
Handle G	50	24	1 Million	black
Handle H	500	12	5 Million	black
Handle 9	500	12	5 Million	black

Wiring for Joysticks with Potentiometers

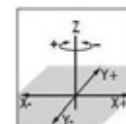
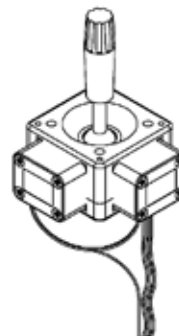
Function	Color
Joysticks with 2 or 3 Axes, 1 Pushbutton	
Pushbutton Common	orange
Switch	orange
Joysticks with 3 Axes, 2 Pushbuttons	
Pushbutton 1/2 Common	green
Pushbutton 1	orange (pb left)
Pushbutton 2	brown (pb right)
Joysticks with 3 Axes, Z Axis	
+Supply	red
Signal Out	white
-Supply / GND	blue



Wires AWG28, length ca. 290 mm, for
 - Joysticks with three axes
 - Joysticks with Pushbuttons Potentiometers w/o wires

Wiring for Joysticks with Hall Sensors

Function	Color
GND	black
+5VDC	red
X-Axis	blue
Y-Axis	yellow
Z-Axis	green
Pushbutton 1/2 Common	white
Pushbutton 1	orange
Pushbutton 2	violet



Wires AWG28,
 Length ca. 210 mm

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Order Description / Options

Series	812						
Axes							
2 Axes		2					
3 Axes		4					
3 Axes with Pushbutton(s)		5					
1 Axis		1 (*)					
1 Axis with Pushbutton(s)		6 (*)					
2 Axes and Pushbutton(s)		3 (*)					
Mounting Bezel							
Split Bezel (Front Mounting)			1				
Rubber Boot (Front Mounting)			5				
Square Bezel (Rear Mounting)			2 (*)				
Square Bezel Snap-On (Front Mounting)			3 (*)				
Spring Return							
Standard Spring Force (50% enforced)				1			
Spring Return 75% enforced Spring				8 (*)			
Spring Return 100% enforced Spring				9 (*)			
Friction Clutch (Potentiometer versions only)				2 (*)			
Handles							
Handle 6				6			
Handle 3				3			
Handle 7 with Z-Axis				7			
Handle 9 with Z-Axis and Pushbutton				9			
Handle B				B (*)			
Handle J				J (*)			
Handle L				L (*)			
Handle 1				1 (*)			
Handle A				A (*)			
Handle K				K (*)			
Handle H with Pushbutton				H (*)			
Handle E with Pushbutton				E (*)			
Handle G with Pushbutton				G (*)			
Handle R with Z-Axis				R (*)			
Handle S with Z-Axis and Pushbutton				S (*)			
Handle T with Z-Axis and 2 Pushbuttons				T (*)			
3 Axes Low Profile, Hall Sensors				O (*)			
3 Axes, Hall Sensors				N (*)			
3 Axes, Hall Sensors, 1 Pushbutton				P (*)			
3 Axes, Hall Sensors, 2 Pushbuttons				Q (*)			
Trimm							
Without (always with Hall Sensors)						0 (*)	
Internal (always with Potentiometers)						1	
Sensors							
Potentiometer P (X-, Y-, Z-Axis)							P
Potentiometer R (X-, Y-Axis / Z-Axis Pot P)							R
Potentiometer M (X-, Y-Axis / Z-Axis Pot P)							M (*)
Potentiometer S (X-, Y-Axis / Z-Axis Pot P)							S (*)
Hall Sensors, Output 0..5,0 V							K1 (*)
Hall Sensors, Output 0,5..4,5 V							K2 (*)
Hall Sensors, Output 0,25..4,75 V							K3 (*)

For joysticks available from stock please see our stock types list: <http://www.megatron.de/en/stocklists/joysticks/lagerliste.html>

Bold print = Standard options

(*) upon request

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For higher quantities or on-going demand, additional options are available

For example:

- Redundant Output Signals (inverted or parallel), Mouse Emulation, Voltage Regulator
- Customer-specific cable

Available options for small quantity orders can be found on our stock types list on

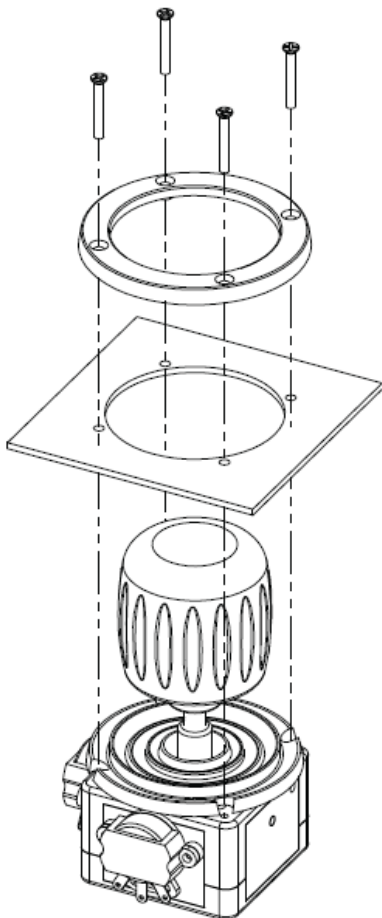
<http://www.megatron.de/en/stocklists/joysticks/lagerliste.html>

In addition, we have an extensive stock of samples for project needs.

For technical advice, projects, samples, questions about pricing, delivery times and availability please contact us

Tel.: +49 89 46094-500
export@megatron.de

Mounting Options / Covers



Split Bezel, Option „1“

- Insert the joystick with bezel from beneath the panel
- Cover ring to be attached from above the panel (see scheme left)
- Cutout diameter required for mounting: 39,70 mm
- Mounting accessories included: Bezel, cover ring, 4 black screws 2-56x1/2in



Rubber Boot, Option „5“

- Insert the joystick with bezel from beneath the panel
- Cover ring to be attached from above the panel (see scheme left)
- Cutout diameter required for mounting: 39,70 mm
- Mounting accessories included: Bezel, cover ring, 4 black screws 2-56x1/2in

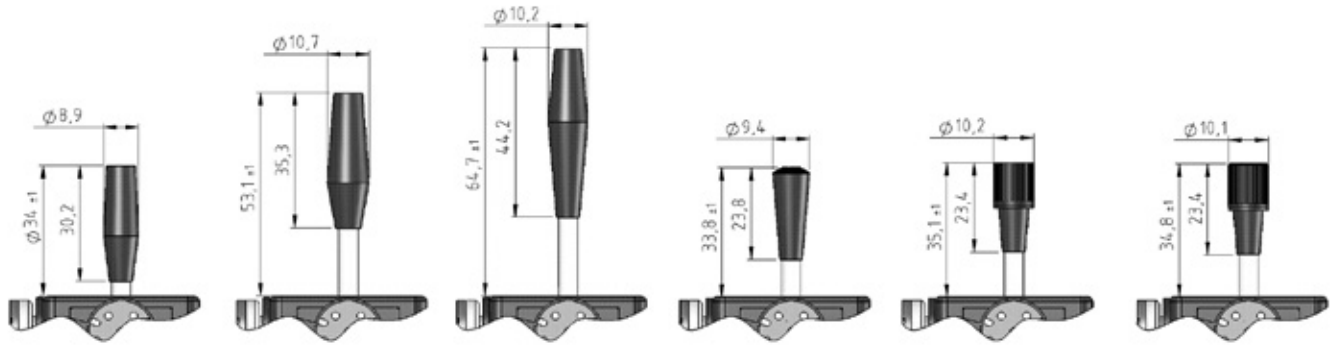


Square Bezel, Option „2“

- Insert the joystick with bezel from beneath the panel
- Cover ring to be attached from above the panel, screws fixed to joystick from beneath the panel
- Cutout diameter required for mounting: 30,20 mm
- Mounting accessories included: Bezel, cover ring, 4 black screws 2-56x1/2in



Handles



Handle „6“

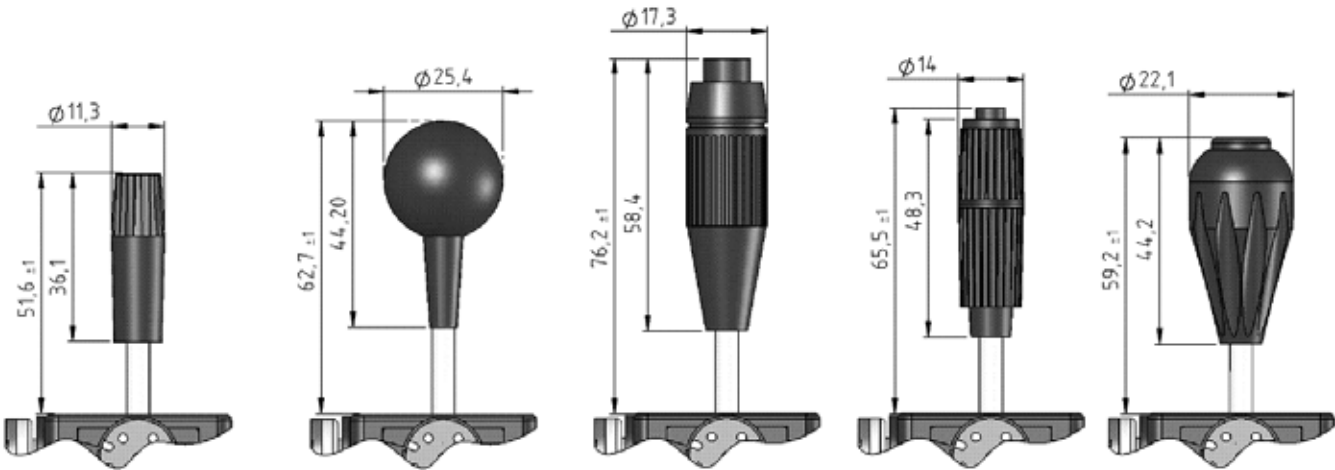
Handle „A“

Handle „B“

Handle „J“

Handle „K“

Handle „L“



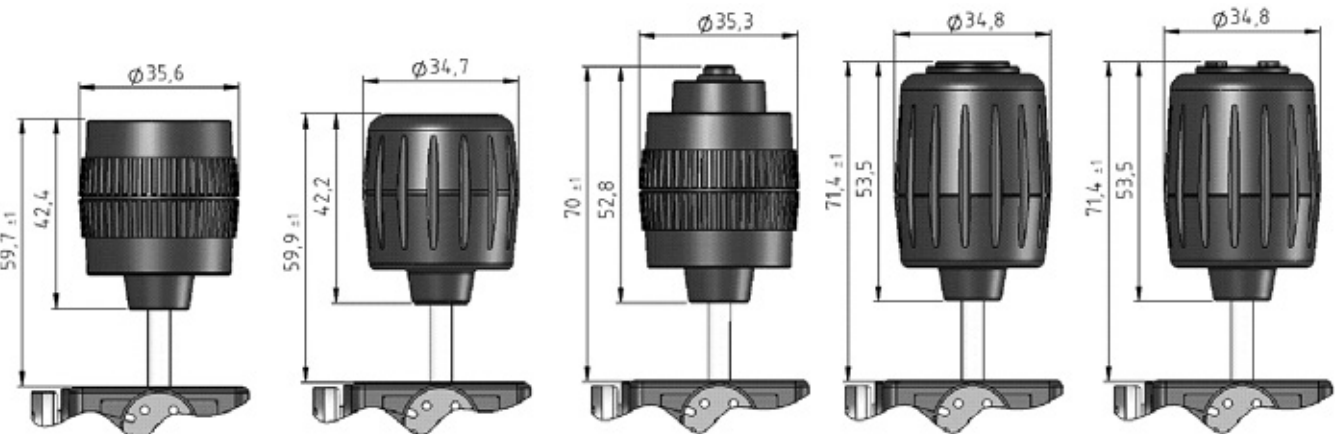
Handle „1“

Handle „3“

Handle „E“

Handle „G“

Handle „H“



Handle „7“

Handle „R“

Handle „9“

Handle „S“

Handle „T“

All Dimensions in mm

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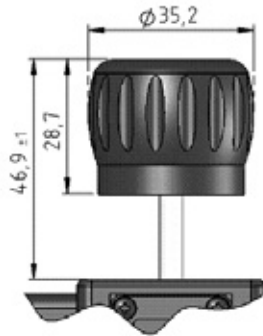
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Handles



Handle „N“



Handle „O“



Handle „P“

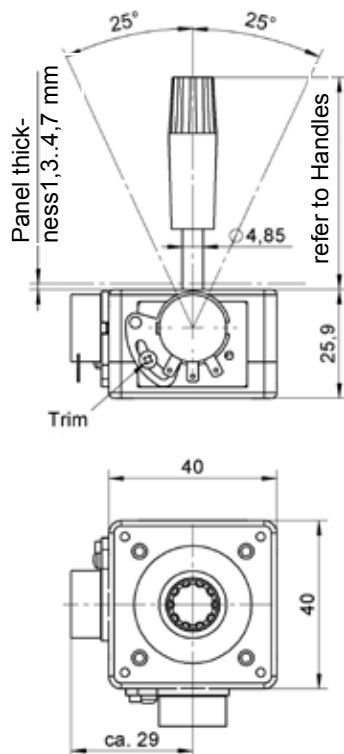


Handle „Q“

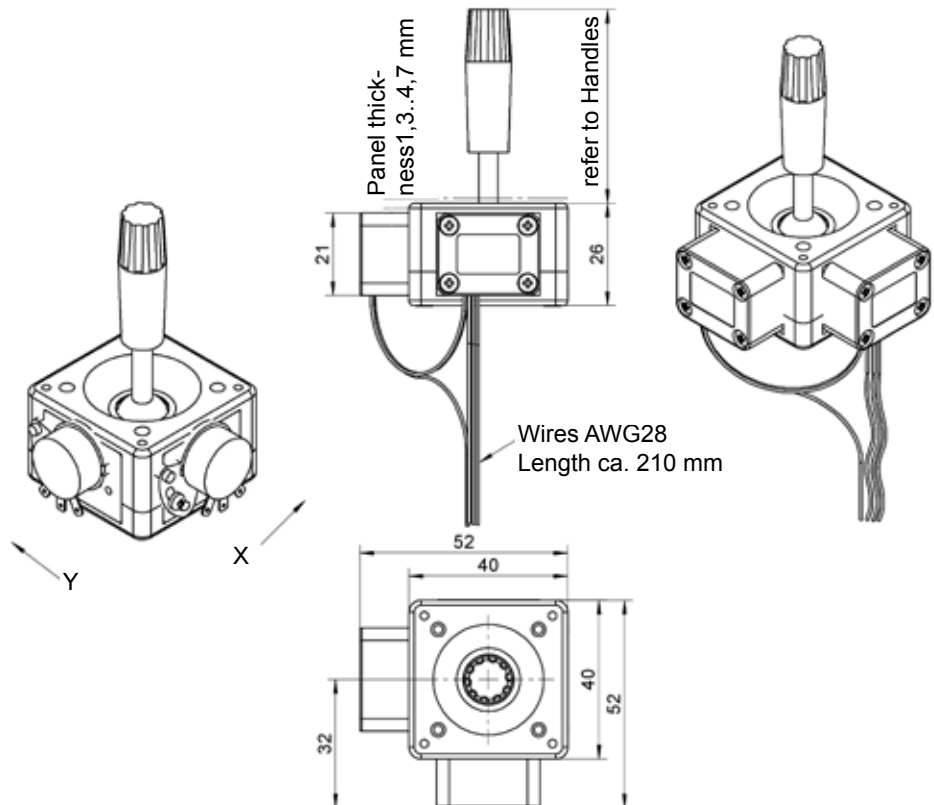
All Dimensions in mm

Dimensions

Version „Potentiometers“



Version „Hall Sensors“



All Dimensions in mm