

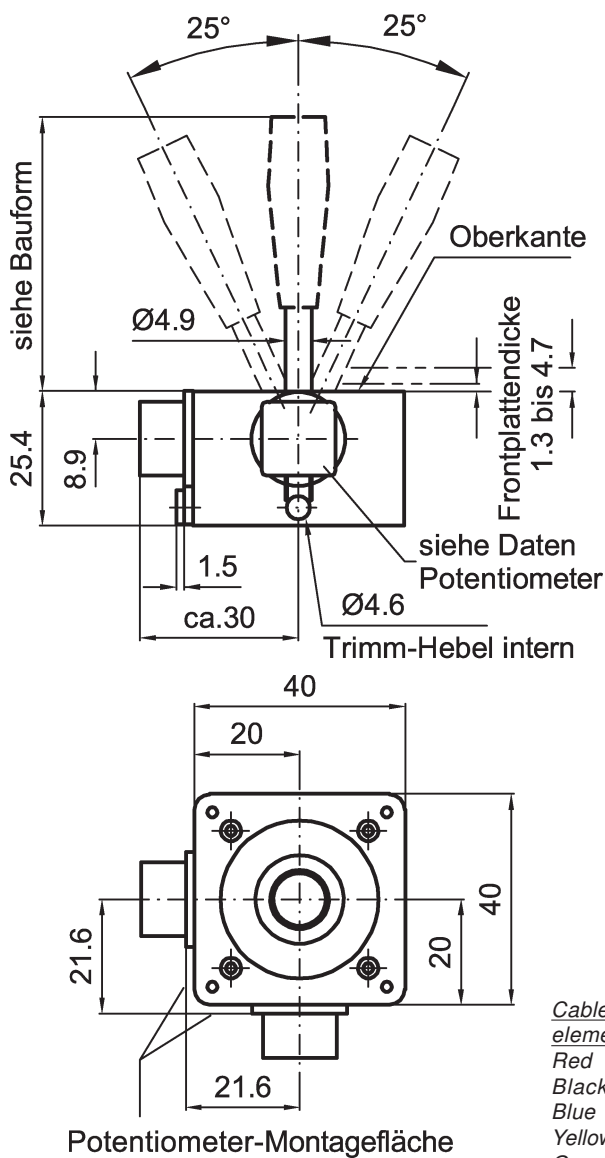
812 - Miniature Joystick

- 1-,2- or 3- Axes
- various handle versions
- spring return to center position
- optional contactless hall-sensor elements
- smallest dimensions
- applications: medical engineering, monitoring cameras, etc.

The type 812 is available with a lot of various handles
That small Joystick is an ideal solution for control systems with 1, 2 and 3 axes.



Dimensions



Mounting Bezels

Type 1
round,
structured,
shared



Type 2
square,
structured,
only for
versions
without
button



Type 3
square,
shared,
Snap On,
only for
versions
without
button



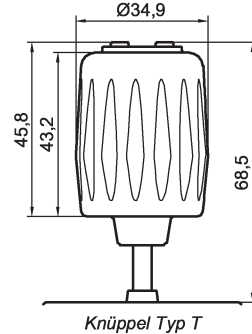
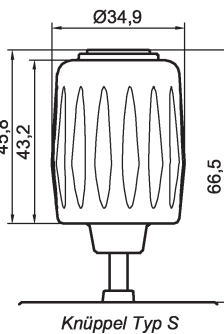
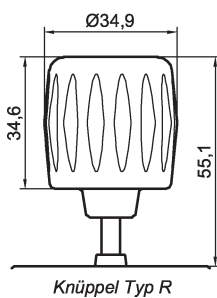
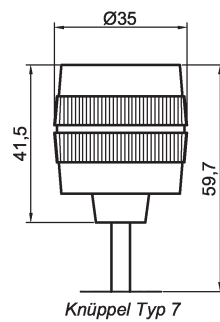
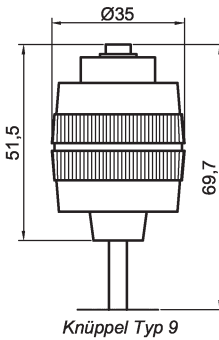
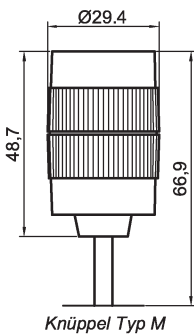
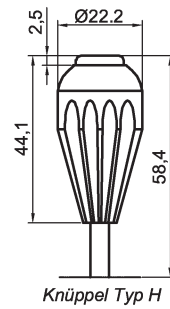
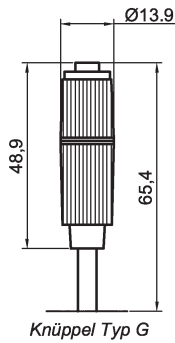
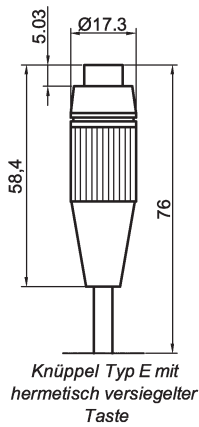
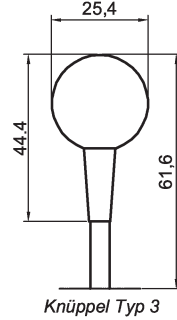
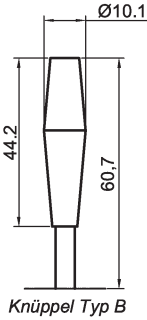
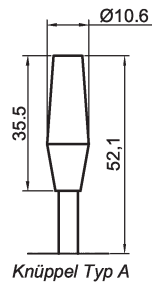
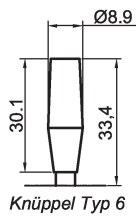
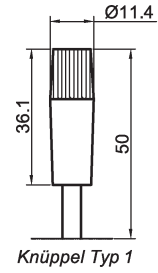
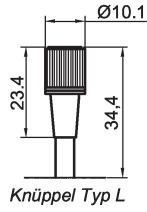
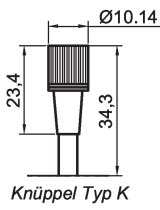
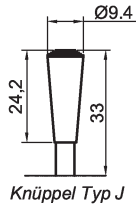
Type 5
rubber boot



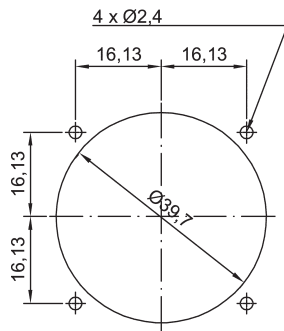
Cable Option Hall-sensor elements:

Red	+5VDC
Black	Ground
Blue	Signal X-Axis
Yellow	Signal Y-Axis
Green	Signal Z-Axis

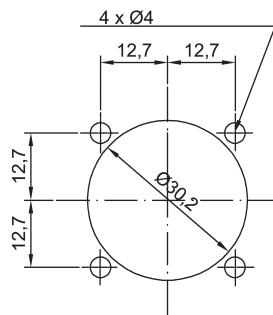
Handle versions:



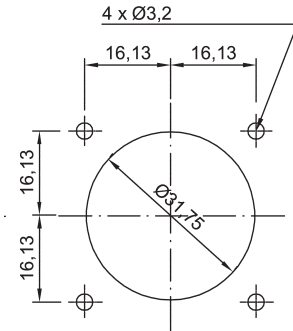
Drilling and mounting drawings



Version for bezel type 1 and 5



Version for bezel type 2



Version for bezel type 3

Technical Data

Deflection X-, Y- axis	±25°
Deflection Z- axis	±45°
Reset accuracy	±2%
Weight	ca. 92 g
Panel thickness	1,3..4,7 mm
Operating force	< 60 nM
Life expectancy (movements)	typically 5 millions

Potentiometer Data	Type F	Type R	Type S
Technology of resistance element	Conductive plastic		
Resistance values [kOhm]	5	5	5
Resistance tolerance [%]	±10	±10	±15
Linearity tolerance [%FS]	±5	±1	±1,5
Operating temperature range [°C]	-55..+120	-65..+125	-50..+125
Power at 70 °C [W]	0,5	1	0,1
Electrical angle [°]	265	50	50 ±6
Bearing	sleeve bearing	sleeve bearing	sleeve bearing
Max. life expectancy (movements)	approx. 1 mio	app. 10 mio	app. 5 mio
Max. wiper current [mA]	1	1	1
Max. operating temperature DC [V]	50	70,7	22,3

Button Data	Current [mA]	Voltage [V]	Life expectancy	Colour
Handle E	(braking capacity 0,1 Watt)		5 million	red or black
Handle G	50	24 (DC)	1 million	red or black
Handle H	500	12 (DC)	5 million	black
Handle 9	500	12 (DC)	5 million	black or white



Option Hall Sensorelement

Supply voltage	5 V
Power consumption 2-axes	4,8..11 mA
Power consumption 3-axes (all handle vers.)	7,2..16,5 mA
Resolution	infinite
Center voltage	2,5 V (±25 mV)
Electrical life expectancy (MTBF)	1 million h
Linearity tolerance	± 2 %FS
Operating temperature	-25..+85°C
Storage temperature	-55..+165°C

Options and Order Descriptions

	Series	Funktion	Bezel	Reset Device	Handle	Trim	Sensor element
Joystick potentiometric	812						
1 Axis		1					
2 Axes (X,Y)		2					
2 Axes (X,Y) and push button		3					
3 Axes		4					
3 Axes and push button							
Round struct.-splitted (FM*)			1				
Square-struct. (RM**) only 2 axes without button			2				
Square-shared, snap on (FM*) only 2 axes without button			3				
Rubber boot (FM*)			5				
With spring return				1			
Without spring return				2			
With spring return 50% reinforced spring				7			
With spring return 75% reinforced spring				8			
With spring return 100% reinforced spring				9			
Handle only 2 axes without push button					J		
Handle only 2 axes without push button					K		
Handle only 2 axes without push button					L		
Handle only 2 axes without push button					1		
Handle only 2 axes without push button					A		
Handle only 2 axes without push button					B		
Handle only 2 axes without push button					6		
Handle only 2 axes without push button					3		
Handle for 2 axes with hermetically sealed button					E		
Handle for 2 axes with push button					G		
Handle for 2 axes with push button					H		
Handle for 3 axes with push button					7		
Handle for 3 axes without push button					M		
Handle für 3 axes with push button					9		
Handle für 3 axes without push button					R		
Handle für 3 axes with push button					S		
Handle für 3 axes with 2 push buttons					T		
Internal Trim / hall sensor output						1 / 0	
Poti type F X+Y+Z axis							F
Poti type R X+Y axis, Z- axis Poti type F							R
Poti type S X+Y axis, Z- axis Poti type F							S
Hall sensor output 0..5V							K1
Hall sensor output 0,5..4,5V							K2
Hall sensor output 0,25..4,75V							K3
Hall sensor output 2..3V							K4
Hall sensor output 1..4V							K5

Special versions (please ask for more options)

* = FM = front mounting; ** = RM = rear mounting; other resistance values (5 kohm, 10kohm);

**** = Mean Time Between Failures

The herewith stated data can not describe the product character or property due to the various applications specialities.