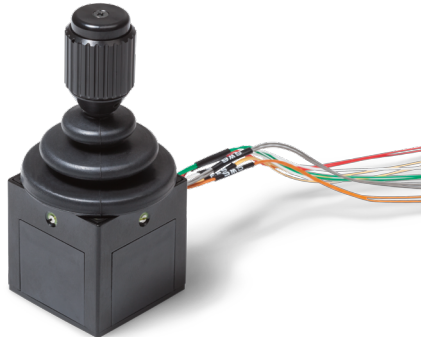


Data Sheet for Joysticks

Miniature Switchstick

Series 821



- 1 to 3 Axes
- Available with up to 6 micro switches
- High durability

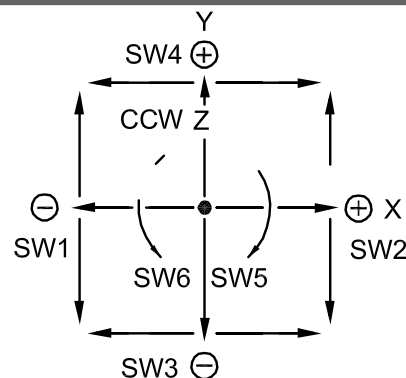
The 821 series is your choice for robust, at the same time precise switching while requiring little space.

Technical Data

Angle of Movement X-, Y-Axis	$\pm 10^\circ \dots \pm 15^\circ$
Angle of Movement Z-Axis	$\pm 30^\circ \dots \pm 35^\circ$
Return to Center Accuracy X+Y Axis	$\pm 2^\circ$
Operating Force X+Y Axis	0,8..2 N
Operating Force Z-Axis	15..60 mNm
Power Rating X+Y Axis	50 mA at 24 V DC
Power Rating Z-Axis	100 mA at 24 V DC
Lifetime	typ. 1 million cycles
Vibration (10 to 55Hz)	98 m/s ²
Shock	294 m/s ²
Protection Grade	IP 40; (IP54 with rubber boot above panel; X+Y Axis versions only)
Operating temperature range	-20°C..+65°C
Weight	ca. 80 g (2 Axes) resp. ca. 100 g (3 Axes)
Panel Thickness	1..2 mm
Length of Wires	300 mm, AWG28

Wiring

Color	Micro Switch
2x Green	SW1 (ON at 10° into -X)
2x White	SW2 (ON at 10° into +X)
2x Yellow	SW3 (ON at 10° into -Y)
2x Red	SW4 (ON at 10° into +Y)
2x Orange	SW5 (ON at 30° CW)
2x Grey	SW6 (ON at 30° CCW)



Data Sheet for Joysticks

Miniature Switchstick

Series 821

Order Code

Series	821						
Axes:							
1 Axis (*)		1 (*)					
2 Axes		2					
2 Axis with Pushbutton (*)		3 (*)					
3 Axes		4					
Rubber Boot			5				
Circular dress panel, threaded flange (*)			6 (*)				
Spring Return				1			
Without Spring Return (applies only to Z-Axis) (*)				2 (*)			
Handles:							
Handle concave					2		
Handle cylindrical, with Pushbutton (*)					6 (*)		
Handle for 3 Axes					8		
No Trimm						1	
Micro Switches:							
2 Switches (1 Axis) (*)							2 (*)
4 Switches (2 Axes X & Y)							4
6 Switches (3 Axes X & Y & Z)							6

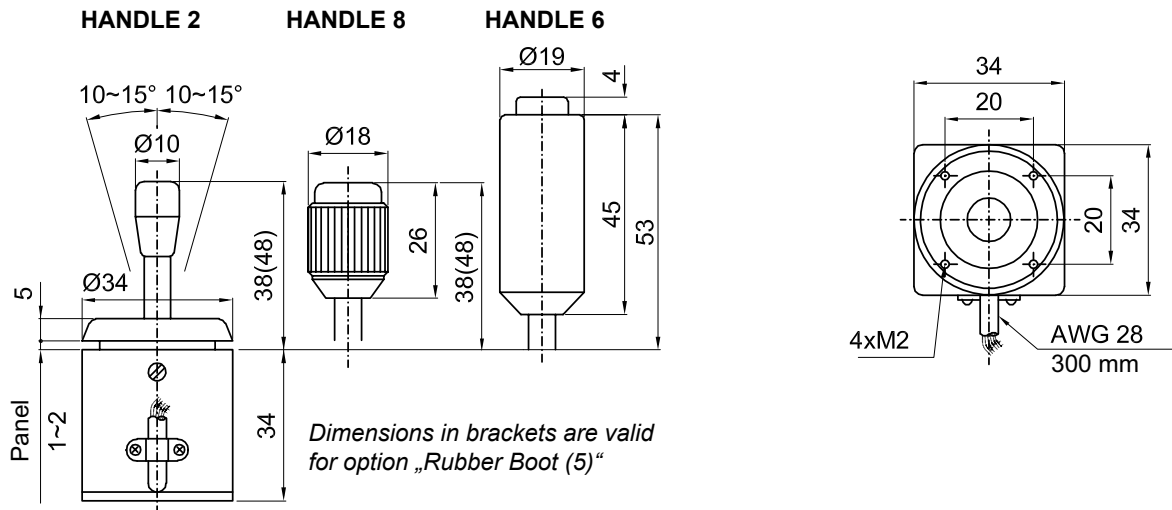
(*) upon request

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

For example:

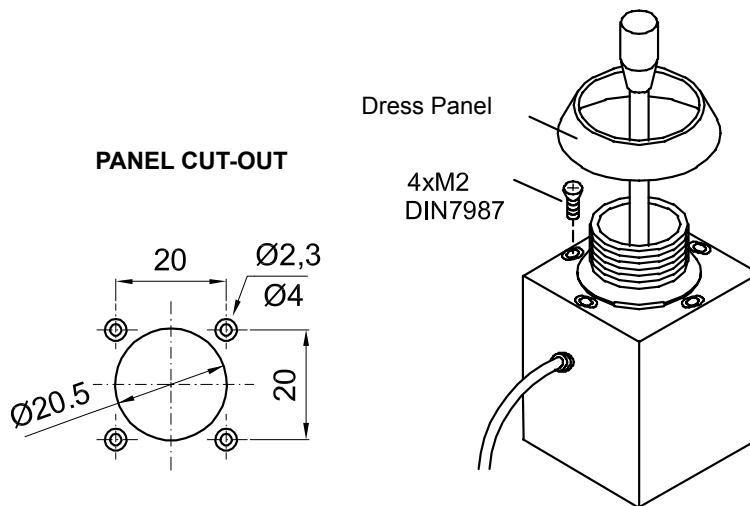
- Customer-specific cable

Technical Drawing



Dimensions in mm

Installation



Dimensions in mm