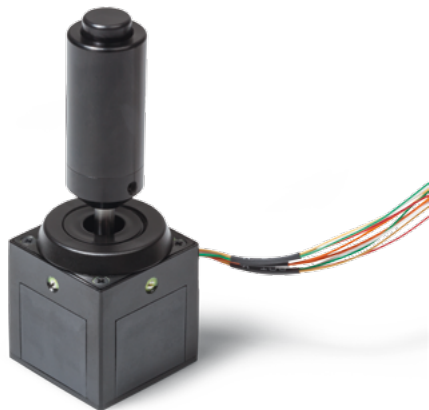


Data Sheet for Joysticks

Finger Joystick

Series 828



- 1 to 3 Axes
- Small dimensions with high durability
- Small deflection angles of handle

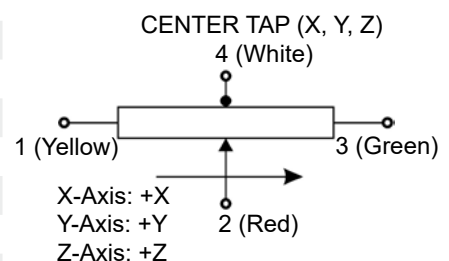
The 828 series satisfies highest demands on the joystick mechanism and the precision of the sensors, both combined into small dimensions

Technical Data Joystick

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	$\pm 1^\circ$
Operating Force X+Y Axis	0.8 to 2 N
Operating Force Z-Axis	15 to 60 mNm
Lifetime	typ. 5 million cycles
Vibration 10 bis 55 Hz, 1 min.	10 G (MIL-STD-202F-204)
Shock	30 G (MIL-STD-202F-213)
Protection Grade	IP40 (IP54 with Rubber Boot, 2 Axes)
Operating Temperature	-20 °C to +65 °C
Weight	ca. 100 g (2 Axes), ca. 150 g (3 Axes)
Panel Thickness	1 to 2 mm
Length of Wires	300 mm, AWG28 (X-/Y-Axis), AWG27 (Z-Axis)

Technical Data Potentiometer

	Type F (X- & Y-Axis)	Type D (Z-Axis)
Technology	Conductive Plastic	Conductive Plastic
Nominal Total Resistance	10 kOhm	10 kOhm
Resistance Tolerance	$\pm 15\%$	$\pm 15\%$
Independent Linearity	$\pm 3\%$	$\pm 3\%$
Power Rating @ 70°C	0.1 W	0.04 W
Effective Electrical Angle of Rotation	20°	60°
Max. Wiper Current	1 mA	1 mA



Data Sheet for Joysticks

Finger Joystick

Series 828

Order Code

Series	828						
Axes							
1 Axis (*)		1 (*)					
2 Axes		2					
2 Axes with Pushbutton		3					
3 Axes (*)		4 (*)					
Rubber Boot			5				
Round Dress Panel			6				
Spring Return				1			
Handles							
Handle concave, 1-2 Axes, w/o Pushbutton					2		
Handle cylindrical, 1-2 Axes, with Pushbutton					6		
Handle, 3 Axes, w/o Pushbutton (*)					8 (*)		
No Trim						1	
Potentiometer Type I (X & Y), Type H (Z)							9
Limiters							
Round							0
Single-axis Y (*)							8 (*)
X-/Y-Axis „+“ (*)							9 (*)

(*) upon request

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

For example:

- Customer-specific cable
- Further Nominal Total Resistances

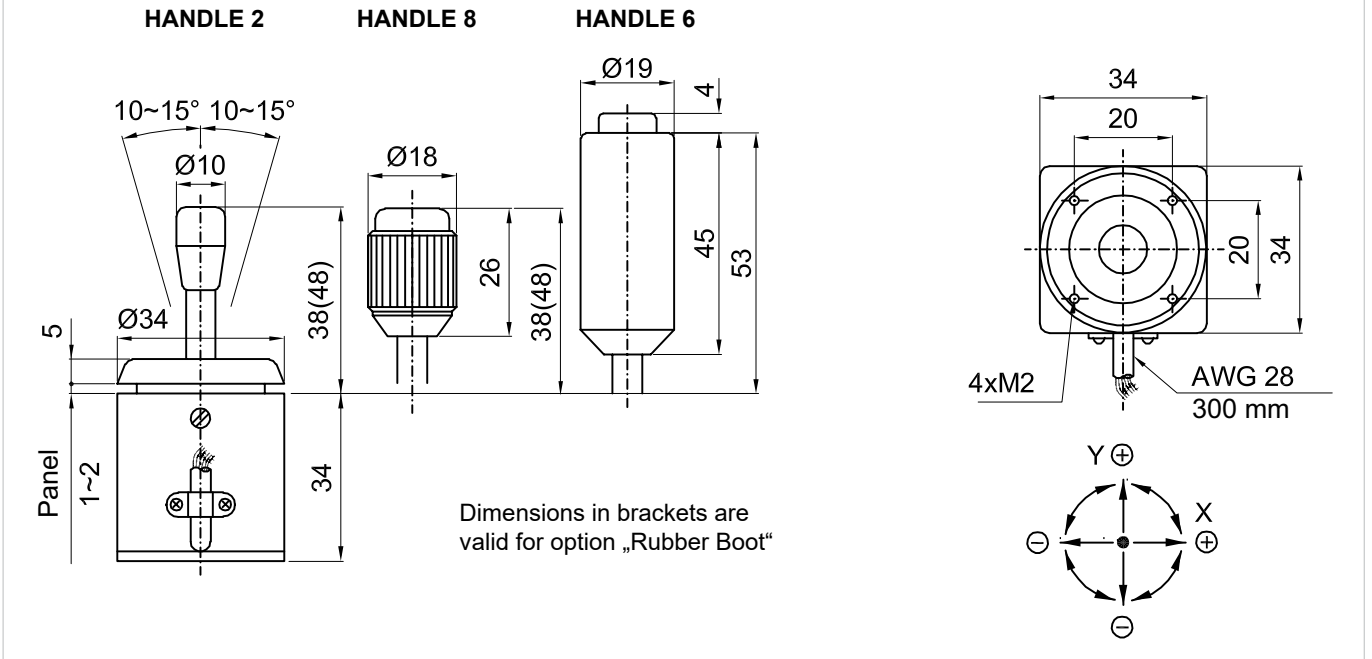
Data Sheet for Joysticks



Finger Joystick

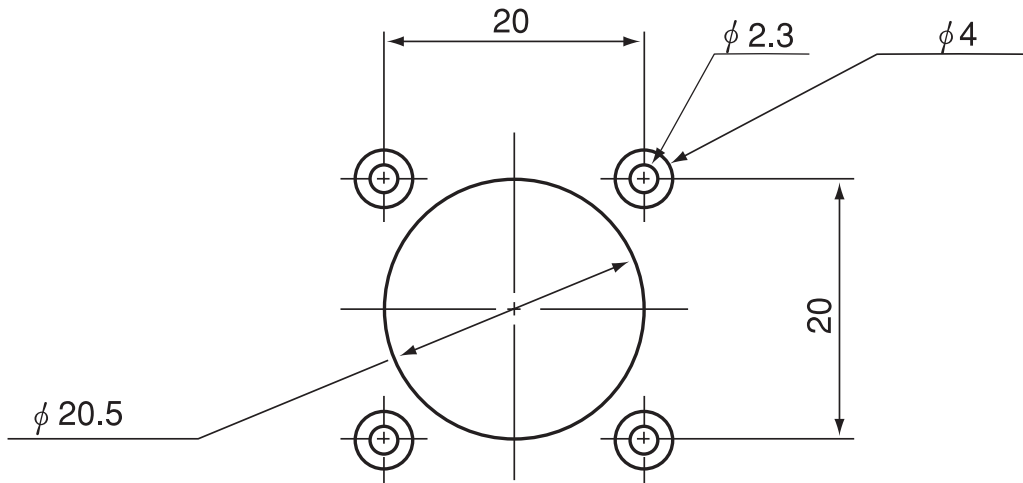
Series 828

Technical Drawing



Dimensions in mm

Installation



Dimensions in mm