

# Data Sheet for Joysticks

## Finger Joystick

Series 829



- Exceptional quality of mechanics and sensors
- For demanding applications
- 1 Axis, Spring Return or Friction Clutch
- Optional with Hall sensors or Potentiometer
- Resting position of handle in center position, at negative max. deflection or at any angle using a friction clutch

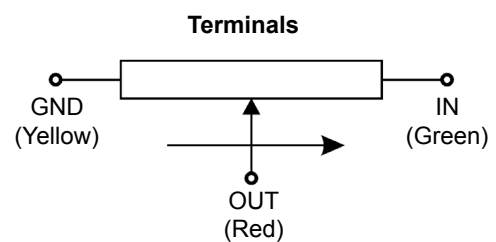
The joystick series 829 fulfils the highest demands on quality. It shows its strengths at challenging applications with one axis, where no compromises are made when it comes to endurance and reliability. The solid mechanical construction and resulting high-quality haptic mediates a safe feel for the exact control of machines. For the 829 series, several options are available: Rubber boot, handles, resistance value of potentiometers, additional switches.

### Technical Data Joystick

Angle of Movement	$\pm 20^\circ$ from center
Operating Force	1.. 2,5 N (1 .. 5,5 N with Rubber Boot)
Return to Center Accuracy	$\pm 1^\circ$
Operating Temperature	$-20^\circ\text{C} \dots +60^\circ\text{C}$
Vibration (MIL-STD-202F-204)	10..55 Hz 98 m/s <sup>2</sup>
Shock (MIL-STD-202F-213)	294 m/s <sup>2</sup>
Lifetime	typ. 2 million cycles
Weight	ca. 100 g
Protection Grade	IP65

### Technical Data Potentiometer Type K

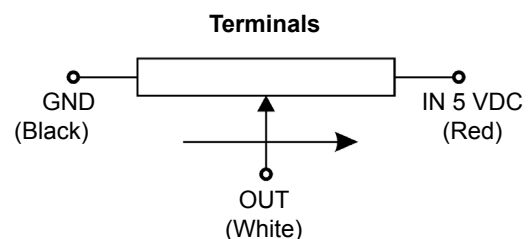
Technology	Conductive Plastic; Bearing
Nominal Total Resistance	10 k Ohm
Resistance Tolerance	$\pm 20\%$
Independent Linearity	$\pm 5\%$ full-scale
Power Rating @ 40°C	0,1 W
Effective Electrical Angle of Rotation	40°
Lifetime	typ. 2 million cycles
max. Wiper Current	1 mA



Wire AWG20, Length ca. 300 mm

### Technical Data Hall Sensor Type H

Technology	Hall sensor
Supply Voltage	5 VDC $\pm 10\%$
Power Consumption	ca. 6 mA
Output Voltage	0,5 V.. 4,5 V
Independent Linearity	$\pm 3\%$ full-scale
Load Resistance	> 100k Ohm
Temperature Drift Output	< $\pm 2,5\%$ Uout full-scale
Temperature Drift Center Position	< 0,5% Uout full-scale
Insulation Resistance	> 100 MOhm @ 250 VAC
Lifetime	typ. 5 million cycles



Wire AWG20, Length ca. 300 mm

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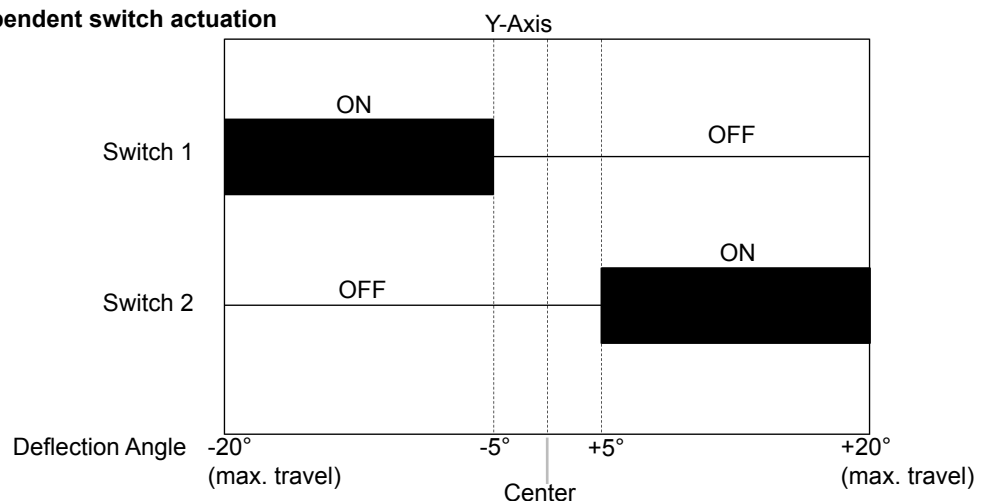
## Order Code

<b>Series</b>	829								
<b>1 Axis</b>		1							
<b>Rubber Boot</b>			5						
<b>Square Dress Panel</b>			8						
<b>Spring Return</b>				1					
<b>Friction Clutch</b>				6					
<b>Handles:</b>									
<b>Cylinder</b>					2				
<b>Ball Tip</b>					3				
<b>Flat</b>					F				
Cylinder, with Pushbutton (*)					6 (*)				
<b>Mounting Plate:</b>									
<b>none</b>						1			
With Mounting Plate (*)						4 (*)			
<b>Sensors:</b>									
<b>Potentiometer Type K</b>							K		
<b>Hall Sensor Type H</b>							H		
<b>Micro Switches:</b>									
<b>none</b>								0	
Center Detect Switch (*)								1 (*)	
2 Micro Switches, ON @ ±5° (*)								2 (*)	
<b>Additional Options:</b>									
Resistance Values Potentiometer (1k, 5k) (*)									RxK (*)
Center Tap (Potentiometer) (*)									CT (*)

(\*) upon request

## SCHEME of deflection-dependent switch actuation

e.g. "Switches ON @ ±5° "



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

For example:

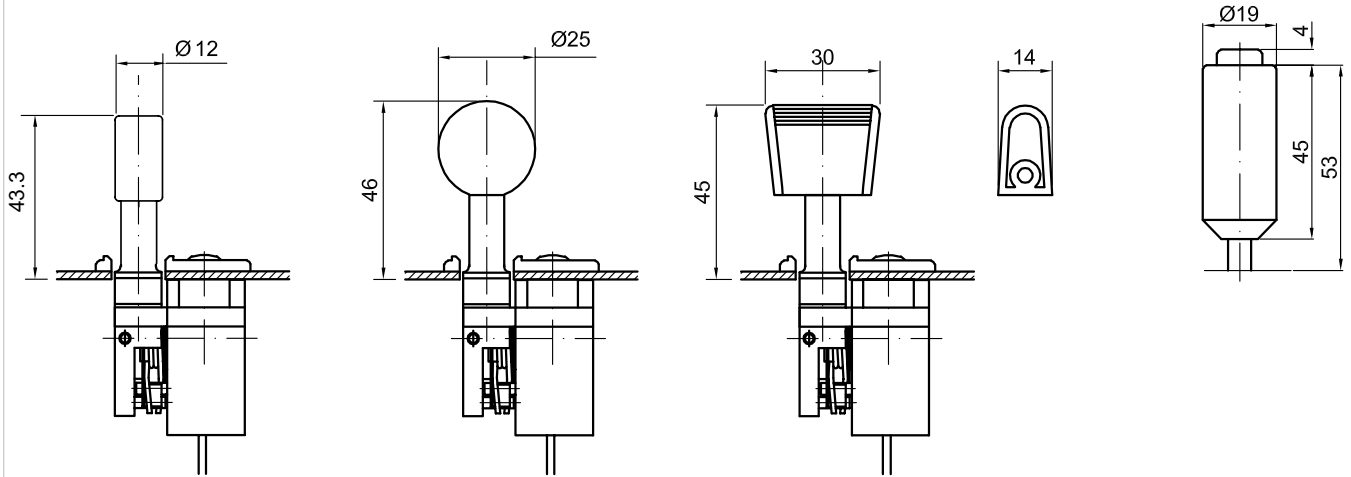
- Specific switch configurations
- Customer-specific cable

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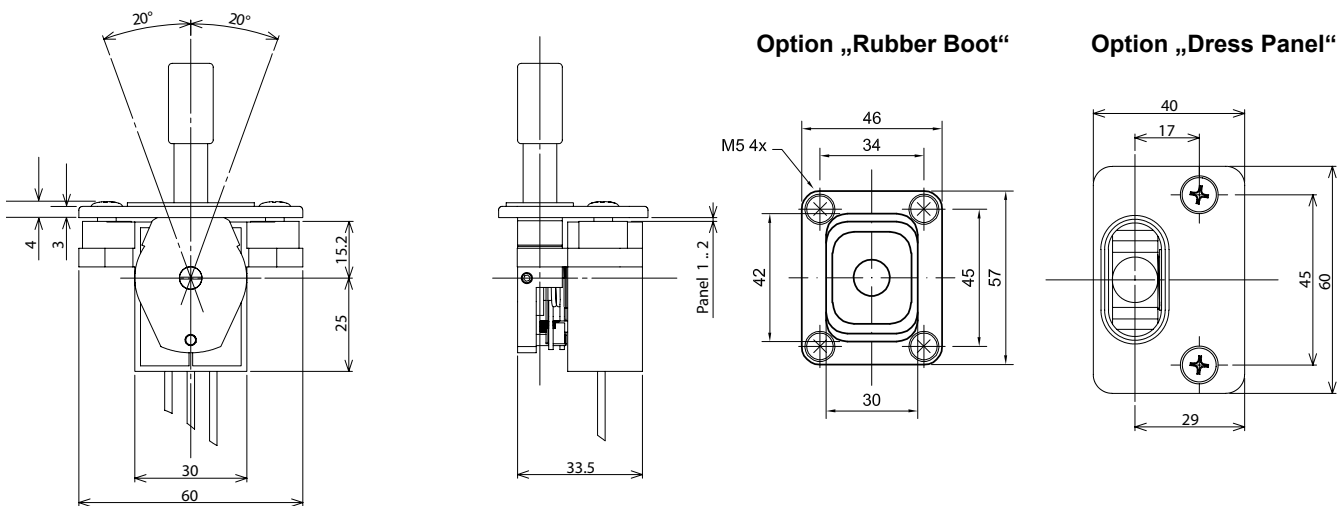
Series 829

## Handle Versions



Dimensions in mm

## Technical Drawing

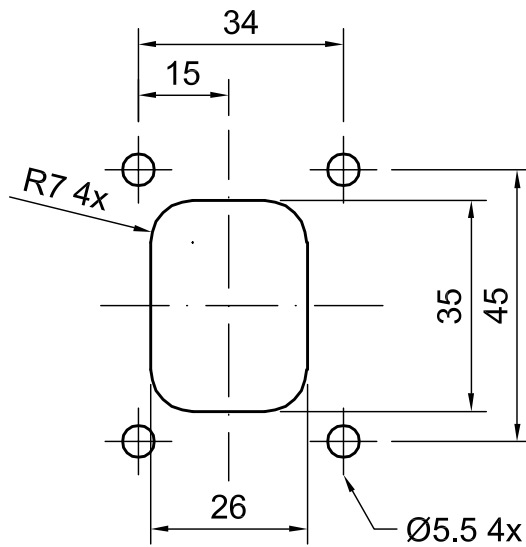


Dimensions in mm

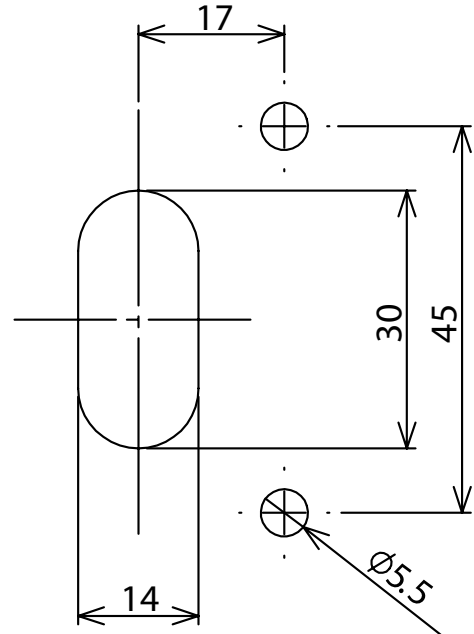
## Mounting Options

### PANEL CUT-OUT

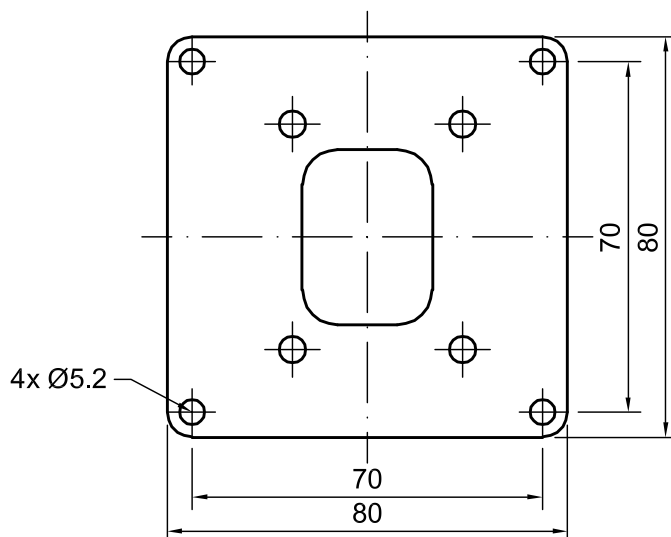
Option „Rubber Boot“



Option „Dress Panel“



Option „Mounting Plate“



Dimensions in mm