

Data Sheet for Joysticks

Finger Joystick

Series 829



- Exceptional quality of mechanics and sensors
- For demanding applications
- 1 axis, spring return or friction clutch (with or without detent)
- 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

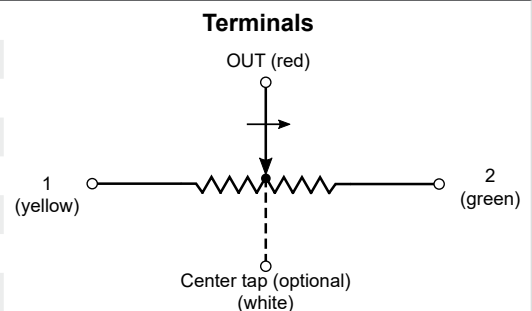
The joystick series 829 meets the highest quality standards. It shows its strengths in demanding applications with one axis, where durability and reliability are paramount. The solid mechanical construction and the resulting high-quality feel convey a safe operating feeling and enable the user to precisely control machines. The configuration options of the 829 series are diverse and allow adaptation to all conceivable applications.

Technical Data Joystick

| | |
|------------------------------|--|
| Angle of movement | $\pm 20^\circ$ from center |
| Operating force | 1 to 2.5 N (1 to 5.5 N with rubber boot) |
| Return to center accuracy | $\pm 1^\circ$ |
| Operating temperature | -20°C to $+60^\circ\text{C}$ |
| Vibration (MIL-STD-202F-204) | 10 to 55 Hz 98 m/s ² |
| Shock (MIL-STD-202F-213) | 294 m/s ² |
| Lifetime | typ. 2 million cycles |
| Weight | ca. 100 g |
| Protection grade | IP65 with rubber boot (handles without button), IP40 with rubber boot for handle 6 |

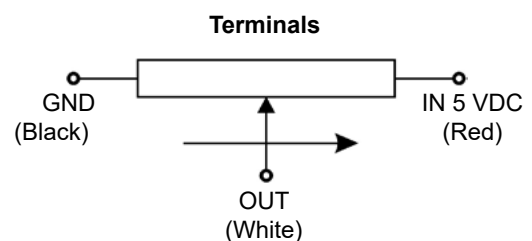
Technical Data Potentiometer Type K

| | |
|--|-------------------------------------|
| Technology | Conductive plastic; bearing |
| Nominal total resistance | 10 kOhm |
| 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 (short-time) |
| Termination | Lead wires 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 to 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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Please contact us for information regarding stock articles, delivery times and minimum order quantities.

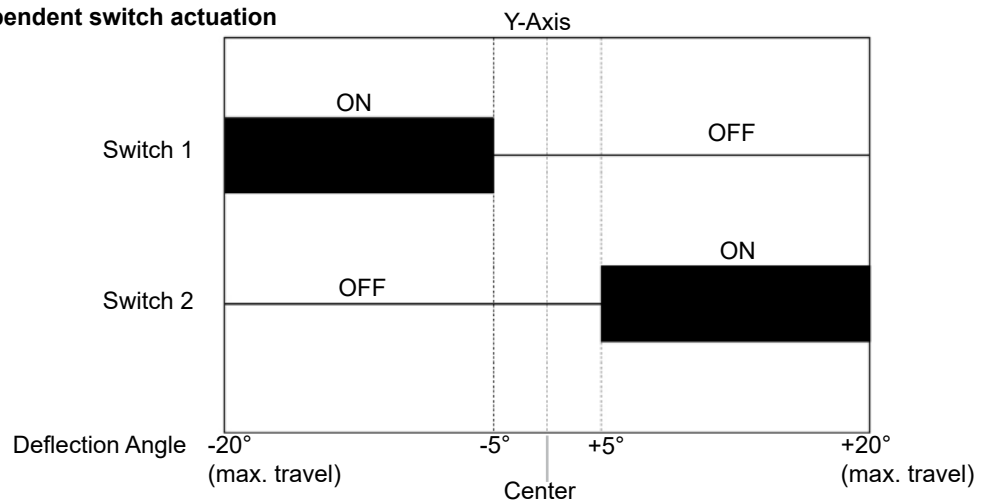
Order Code

| Description | Selection: standard= black/bold , possible options= <i>grey/italics</i> | | | | | | | |
|--|--|----------|--|----------|--|----------|----------|--|
| Series | 829 | | | | | | | |
| Axes: 1 Axis | 1 | | | | | | | |
| Sealing: Rubber boot <i>Square dress panel (no sealing)</i> | | 5 | | | | | | |
| | | <i>8</i> | | | | | | |
| Return mechanism: Spring return <i>Friction clutch with centre detent</i> <i>Friction clutch (no detents)</i> <i>Spring return to negative limit (-Y position)</i> | | | | 1 | | | | |
| | | | | <i>5</i> | | | | |
| | | | | <i>6</i> | | | | |
| | | | | <i>8</i> | | | | |
| Handles: <i>Cylinder</i> Ball tip <i>Flat</i> <i>Cylinder, with pushbutton (IP40 above panel)</i> | | | | | | <i>2</i> | | |
| | | | | | | 3 | | |
| | | | | | | <i>F</i> | | |
| | | | | | | <i>6</i> | | |
| Mounting plate: none <i>With mounting plate</i> | | | | | | | 1 | |
| | | | | | | | <i>4</i> | |
| Sensors: Potentiometer type K <i>Hall sensor type H (single output)</i> <i>Hall sensor type H, dual parallel output</i> <i>Hall sensor type H, dual crossed output</i> <i>Hall sensor type H2442, current loop 4..20 mA, supply 24 VDC ⁽¹⁾</i> | | | | | | | | K <i>H</i> <i>HP</i> <i>HX</i> <i>H2442</i> |
| Micro switches: none <i>Center detect switch</i> <i>2 micro switches, ON @ ±5°</i> | | | | | | | | 0 <i>1</i> <i>2</i> |
| Additional options: <i>Custom resistance values potentiometer (1k, 5k)</i> <i>Center tap (for potentiometers)</i> | | | | | | | | <i>RxK</i> <i>CT</i> |

⁽¹⁾The output must be connected with a load resistance of 500 Ohm

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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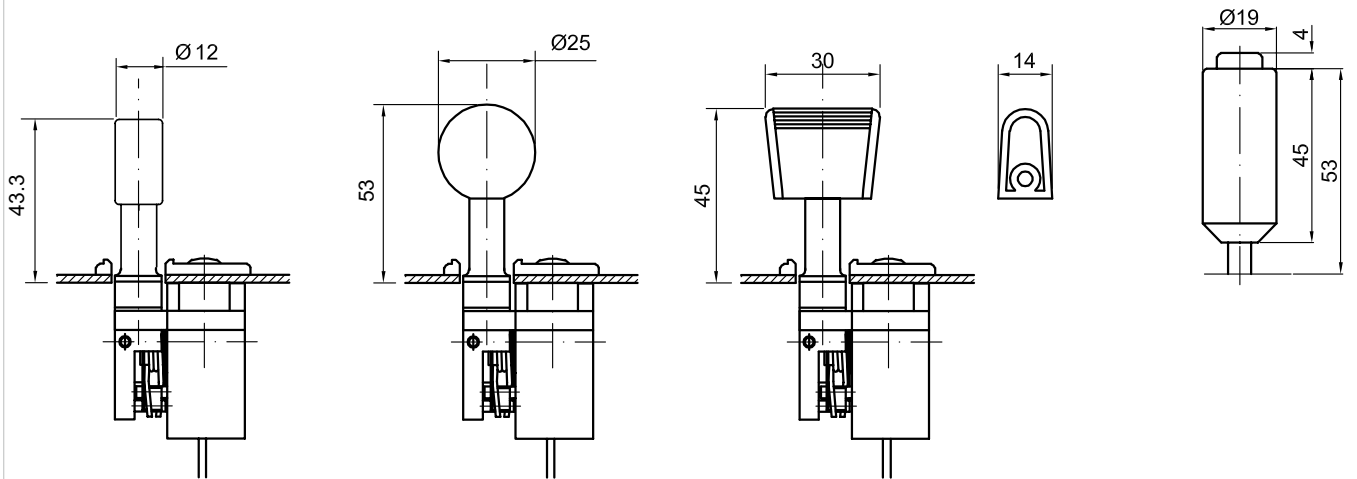
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Technical data Hall sensor option H2442

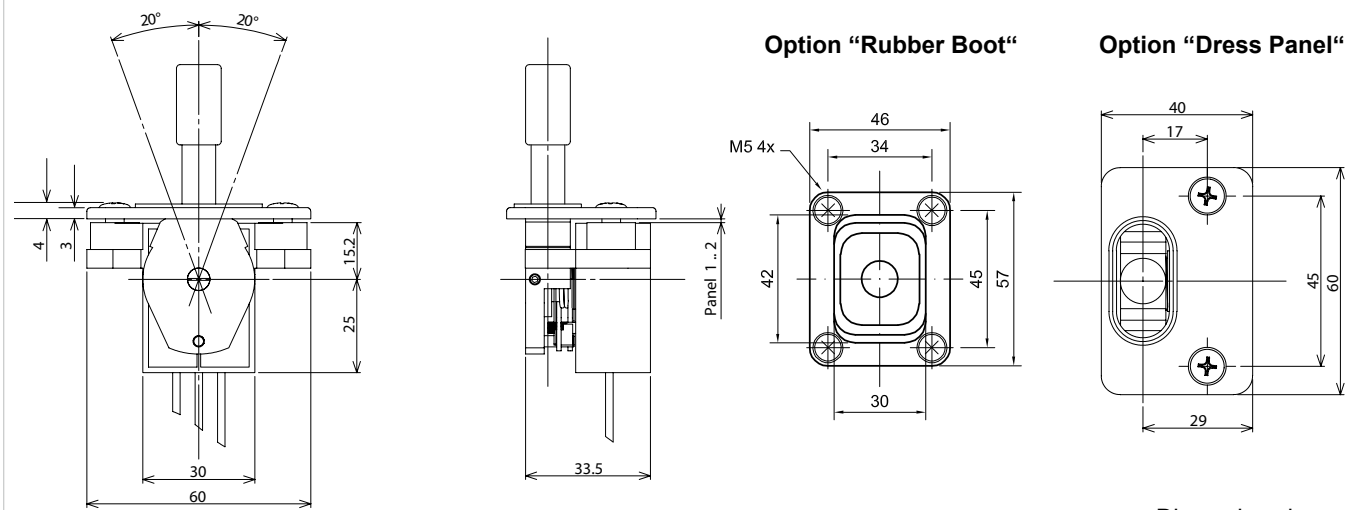
| | |
|-----------------------|---|
| Supply voltage | 24 ±0.5 V |
| Output signal | 4 to 20 mA |
| Load resistance | ≤ 500 Ohm |
| Independent linearity | ±3% |
| Insulation voltage | ±8 kV (contact), ±16 kV (air) (IEC 61000-4-2) |
| Insulation resistance | > 1000 MOhm at 500 VDC |

Handle Versions



Dimensions in mm

Drawing

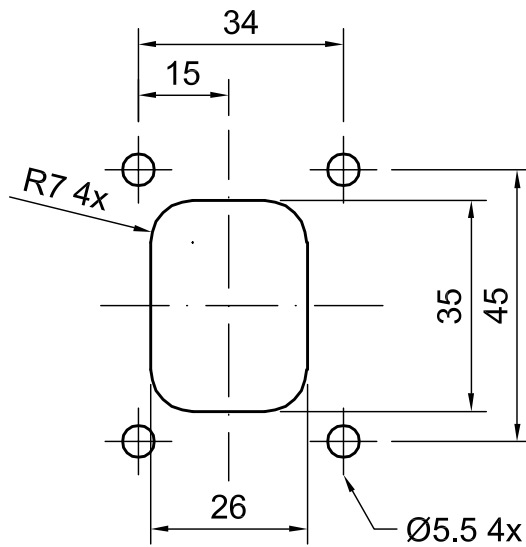


Dimensions in mm

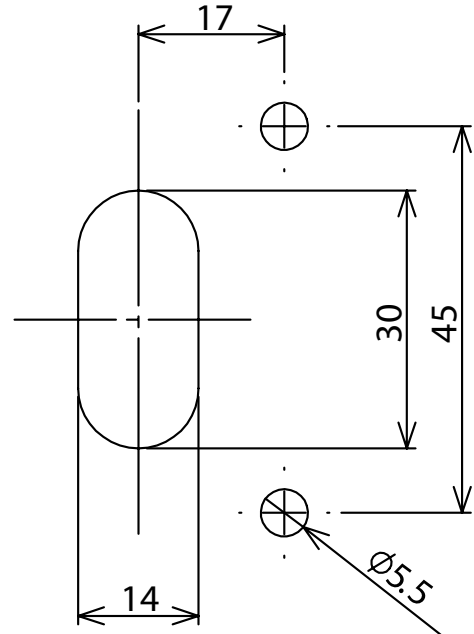
Mounting Options

PANEL CUT-OUT

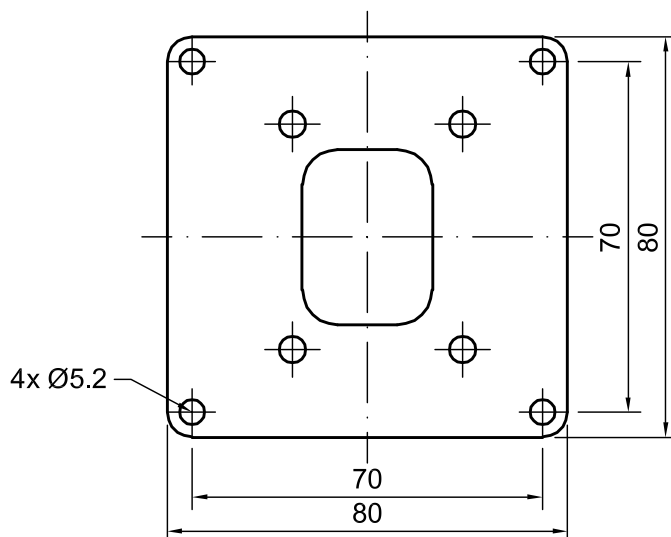
Option "Rubber Boot"



Option "Dress Panel"



Option "Mounting Plate"



Dimensions in mm