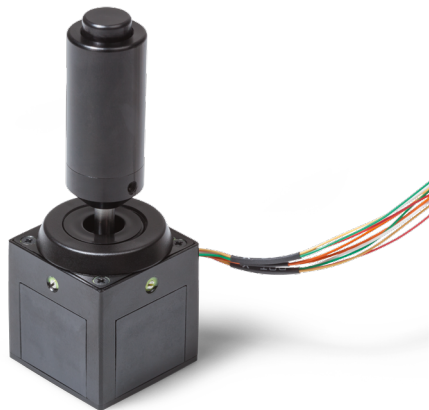


Data Sheet for Joysticks

Finger Joystick

Series 828



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

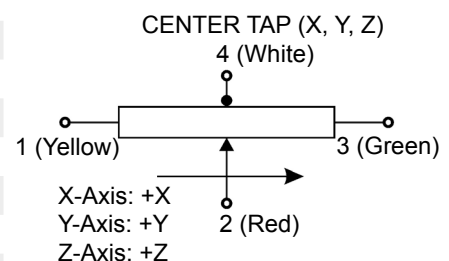
The 828 series satisfies highest demands on the joystick mechanism and the precision of the sensors, both combined into small dimensions

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, w/ 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:

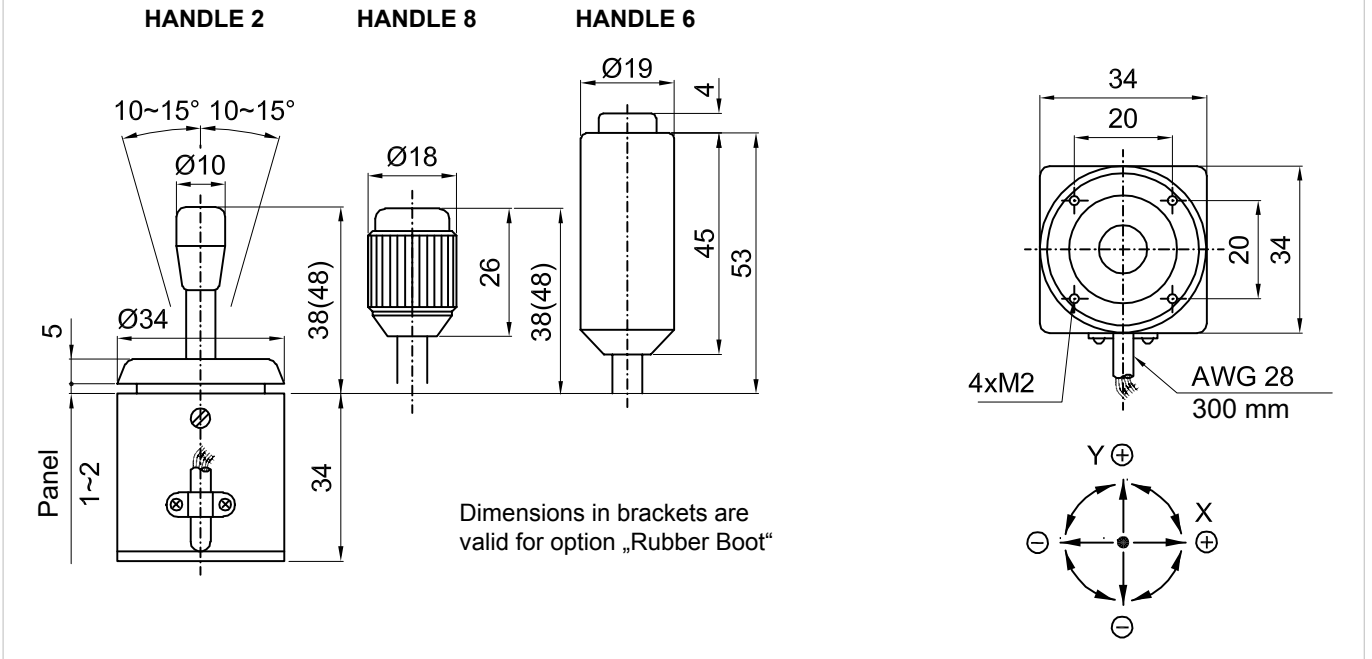
- Customer-specific cable
- Further Nominal Total Resistances

Data Sheet for Joysticks

Finger Joystick

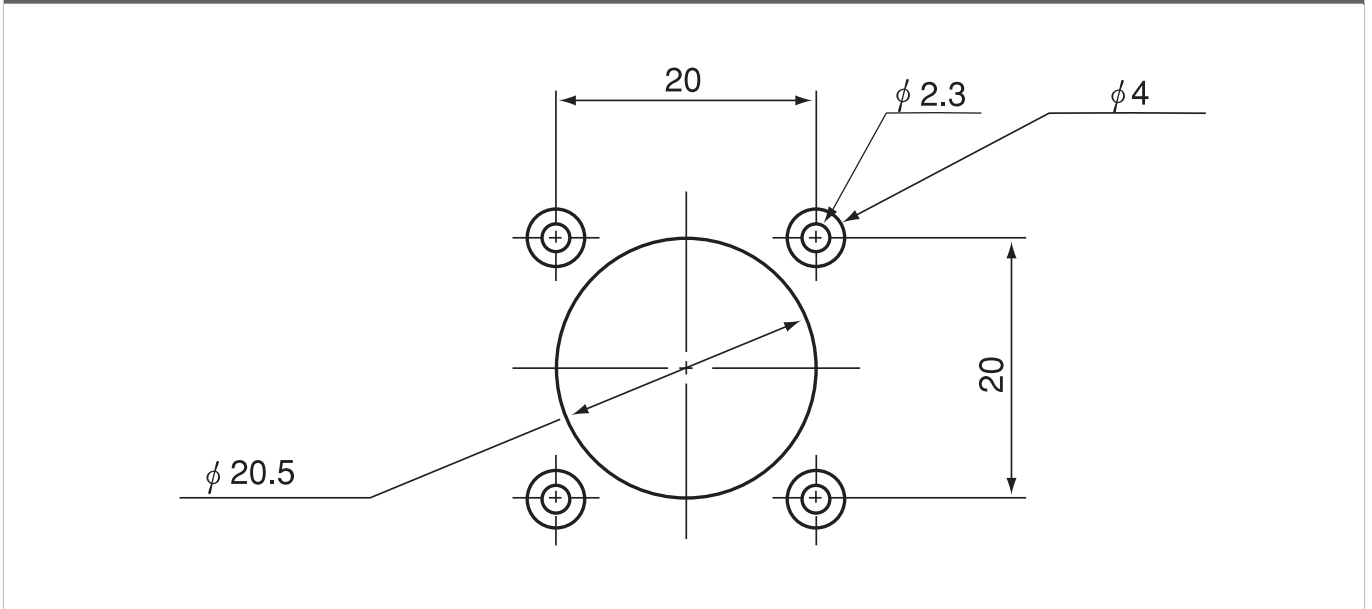
Series 828

Technical Drawing



Dimensions in mm

Installation



Dimensions in mm