

Data Sheet for Joysticks

Hand Joystick

Serie 871



- 2 Axes (additional axes can be realized with e.g. rockers)
- Multifunction Handle for individual configurations with push-buttons, rockers, Deadman switches and Thumb joysticks
- Expected life up to 5 million cycles

Based on robust structures, joysticks of the 871 series are well suited for applications in harsh environments.

Robust design: Failsafety in most demanding applications.

Individualized design: Specific placement of further components (thumb joysticks, rockers, switches, etc.) on top of and underside the cobra-like head.

Ergonomic design: Fatigue-proof operation and optimized accessibility of additional functions.

Technical Data Joystick

| | |
|--------------------------------------|---|
| Sensor | Hall Sensor |
| Supply Voltage | 5 VDC ±0,5 VDC transient free |
| Output Voltage | 0,5..4,5 V (redundant signals available) |
| Independent Linearity Tolerance | ±3% full scale |
| Load Resistance | > 10 kOhm |
| Insulation Resistance | Over 1000 MOhm at 500 VDC |
| Dielectric Strength | 1 minute at 500 VAC |
| EMV Durability | 100 V/m (80 MHz ~ 1 GHz 1kHz sine-wave 80% AM modulation) |
| ESD Durability | ±8 kV Contact / ±15 kV Aerial Discharge |
| Mechanical Life Expectancy | 5 million cycles |
| Mech. Angle of Movement | ±20° (±2,5°) from center |
| Operation Force X- & Y-Axis / Z-Axis | 3 - 4,5 N / 10 - 25mN*m (rockers) |
| Vibration | 10~55Hz 98m/s ² |
| Shock | 294m/s ² (30G) |
| Operating Temperature | -20°C..+60°C |

Wire colors Joystick^(*)

| Function | Color | Function | Color | Function | Color |
|----------------------|-------|---------------|-------|---------------------------|-------|
| Ground X & Y | Black | Signal X-Axis | White | Signal X-Axis Dual Output | Brown |
| Supply Voltage X & Y | Red | Signal Y-Axis | Blue | Signal Y-Axis Dual Output | Black |
| | | Signal Z1 | White | Signal Z1 Dual Output | Blue |
| | | Signal Z2 | Blue | Signal Z2 Dual Output | |

(*) Each product comes with individually labeled wires, please compare prior to installation.

Lead wires AWG27, length ca. 300mm.

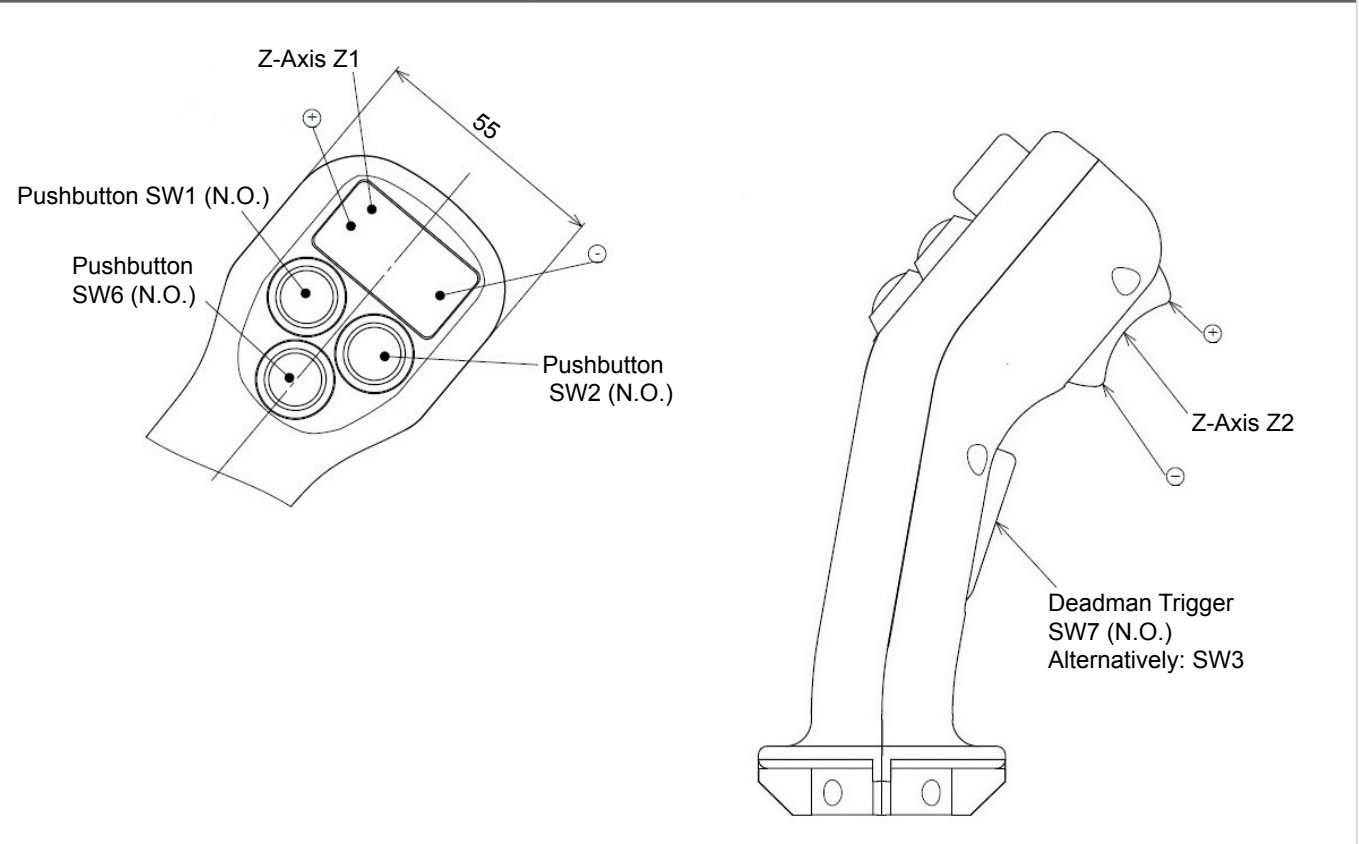
Please contact us for specific connector and cable length requirements.

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Configuration (Example)



Technical Data Pushbuttons & Trigger

Pushbuttons SW1, SW2, SW3, SW6

| | |
|---------------------------|---------------------------|
| Operating Characteristics | Momentary (Normally Open) |
| Rating | 100mA, 50VDC |
| Dielectric Strength | 1 minute at 1000 VAC |
| Insulation Resistance | Over 1000 MOhm at 500 VDC |
| Expected Life | 500.000 operations |

Trigger SW7

| | |
|---------------------------|---------------------------|
| Operating Characteristics | Momentary (Normally Open) |
| Rating | 100mA, 12VDC |
| Dielectric Strength | 1 minute at 500 VAC |
| Insulation Resistance | Over 100 MOhm at 500 VDC |
| Expected Life | 300.000 operations |



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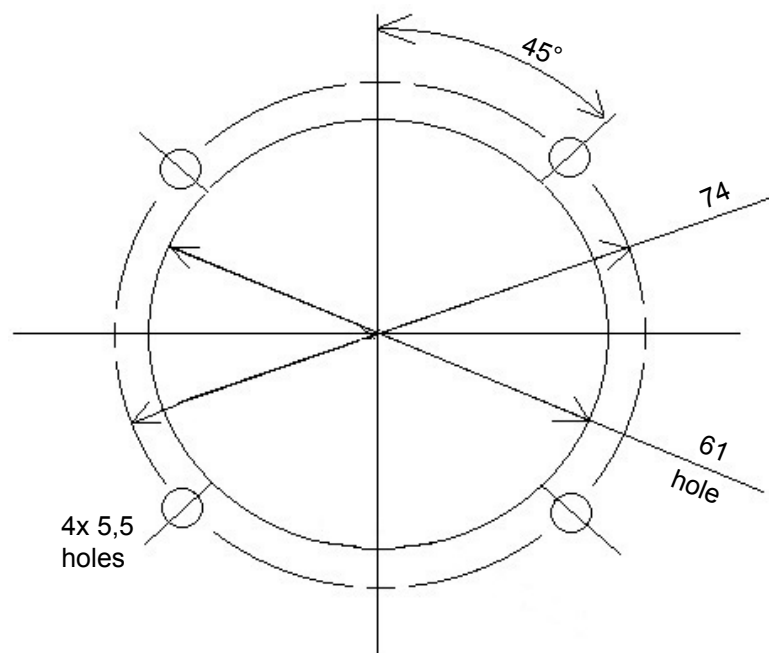
Order Code

| | | | | | | | | |
|---|-----|---|---|---|---|---|---|---|
| Series | 871 | | | | | | | |
| Axes | | | | | | | | |
| 2 Axes | | 2 | | | | | | |
| 3 Axes, with Rocker Z1 | | 3 | | | | | | |
| 3 Axes, with Rocker Z2 | | 4 | | | | | | |
| 4 Axes, with Rockers Z1 + Z2 | | 6 | | | | | | |
| Rubber Boot | | | 5 | | | | | |
| Spring Return to Center Position | | | | 1 | | | | |
| Handles | | | | | | | | |
| Cobra | | | | | 1 | | | |
| Cobra with Deadman Trigger SW7 | | | | | 2 | | | |
| Cobra with Pushbutton SW3 | | | | | 3 | | | |
| Limiters | | | | | | | | |
| Square | | | | | | Q | | |
| Output Signals | | | | | | | | |
| 0,5..4,5 V, Single Output | | | | | | | 2 | |
| 0,5..4,5 V, Dual Output parallel | | | | | | | P | |
| 0,5..4,5 V, Dual Output inverse | | | | | | | X | |
| Pushbuttons | | | | | | | | |
| None | | | | | | | | 0 |
| 1 Pushbutton SW6 | | | | | | | | 1 |
| 2 Pushbuttons SW1, SW2 | | | | | | | | 2 |
| 3 Pushbuttons SW6, SW1, SW2 | | | | | | | | 3 |

For customer-specific projects there are far more possibilities for individual configurations than shown with this order code table. We kindly ask you to contact us to discuss the best solution for your needs.

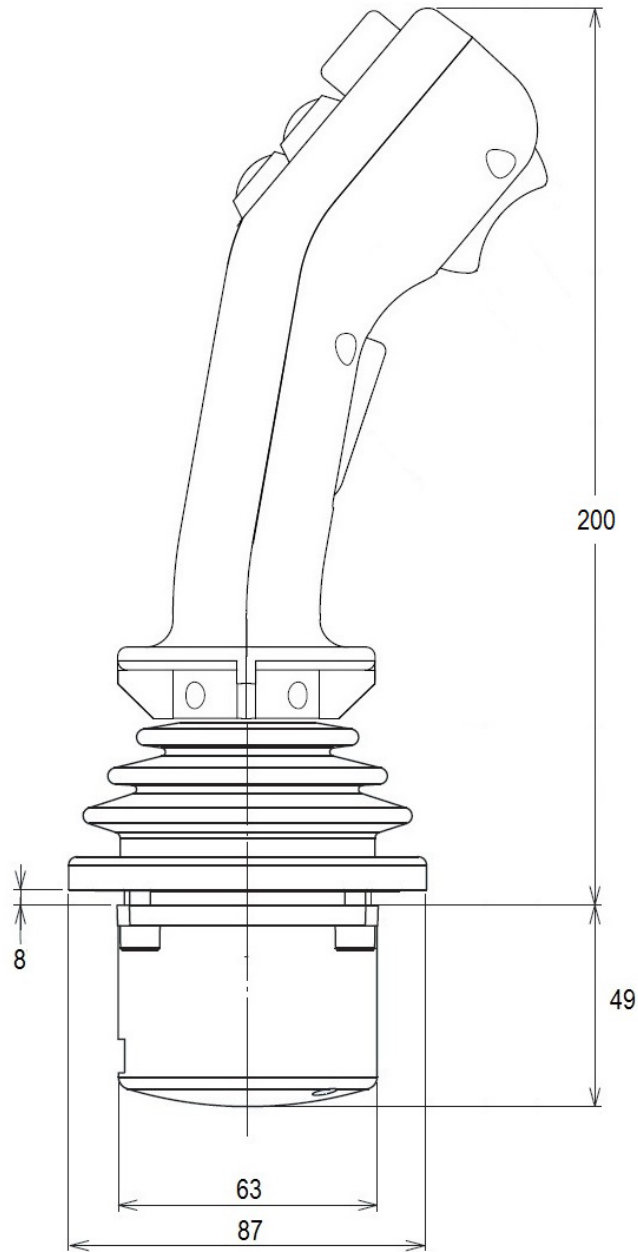
Panel Cut-Outs

Drop-In Installation



Dimensions in mm.

Technical Drawing



Dimensions in mm.