

# Data Sheet for Joysticks

## Finger Joystick

## Series 826



- 1 to 2 Axes
- Potentiometers outside of housing
- Protection Grade IP65

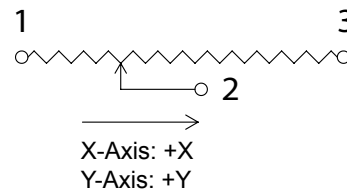
Optional configurations: Pushbutton on top of handle, center detent, external trim, up to 6 micro switches, adjustable friction clutch.

### Technical Data Joystick

Angle of Movement X+Y Axis	±30°.. ±35°
Return to Center Accuracy X+Y Axis	±1°
Operating Force X+Y Axis	3 .. 15 N
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	IP54 (above panel), other upon request
Operating Temperature	-20°C .. +65°C
Weight	ca. 350 g
Panel Thickness	max. 3,2 mm

### Technical Data Potentiometer Type F

Technology	Conductive plastic
Nominal Total Resistance	10 kOhm
Resistance Tolerance	±15%
Independent Linearity	±3%
Power Rating @ 40°C	0,15 W
Effective Electrical Angle of Rotation	60°
max. Wiper Current	1 mA



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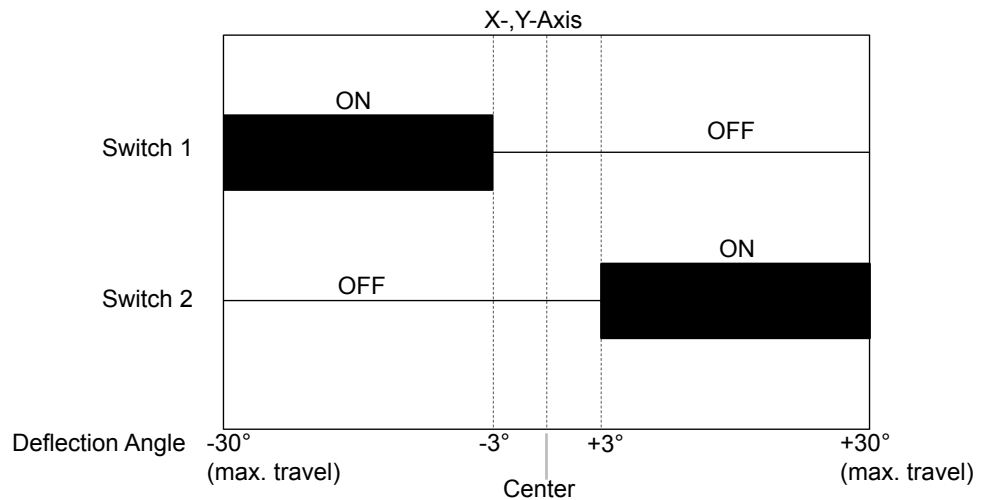
## Pushbutton & Micro Switches

The joystick series 826 offers the option to integrate micro switches for deflection-dependent switch actuation. Three different angles per axis can be defined, e.g. one switch to detect the center position of the joystick handle plus one switch at  $+10^\circ$  and  $-10^\circ$  each. Due to the large number of different combination we cannot give a complete list of Order Codes. We recommend to contact us personally to identify the optimal solution for your needs.

Technical Data	Pushbutton (handle)	Micro Switch	Center Detect
Voltage / Current (max.)	50 VAC / 6 A	50 VAC / 5 A	30 VDC / 100mA
Lifetime (typ.)	25000	200000	100000

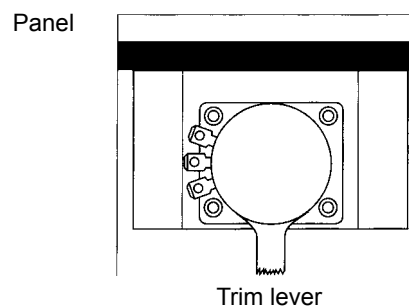
### SCHEME (Standard) of deflection-dependent switch actuation

e.g. "Switches ON @  $\pm 3^\circ$ , X-/Y-Axis" (many other combinations can be realized).



## Trim Option „3“

Using the Trim function, potentiometers can repeatedly be adjusted („trimmed“) to an individual „0“ position.



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## Order Code

<b>Series</b>	<b>826</b>								
<b>Axes:</b>									
1 Axis (*)		1 (*)							
<b>2 Axes</b>		<b>2</b>							
<b>2 Axes with Pushbutton</b>		<b>3</b>							
1 Axis with Pushbutton		6 (*)							
<b>Rubber Boot</b>			<b>5</b>						
<b>Spring Return</b>				<b>1</b>					
no Spring Return				2 (*)					
Friction Clutch, with Detent in Center Position				5 (*)					
Friction Clutch, w/o Detent				6 (*)					
<b>Handle versions:</b>									
<b>Ball-Tip, Ø25 mm</b>					<b>3</b>				
<b>Cylindrical handle, with Pushbutton, Ø30 mm</b>					<b>6</b>				
Concave handle, Ø32 mm					4 (*)				
<b>w/o Trim</b>						<b>1</b>			
External Trim						3 (*)			
<b>Potentiometer Type F</b>							<b>4</b>		
<b>Limiters:</b>									
<b>Round</b>								<b>0</b>	
Single-axis Y (*)								8 (*)	
X-/Y-Axis „+“ (*)								9 (*)	
<b>Micro Switches:</b>									
none									<b>0</b>
Center Detect X-/Y-Axis									<b>1</b>
Switches ON @ ±3°, X-/Y-Axis									<b>4 (*)</b>
Switches ON @ ±3°, Center Detect, X-/Y-Axis									<b>5 (*)</b>
Switches ON @ ±5°, 1 or 2 Axis									<b>6 (*)</b>
Switches ON @ ±5°, Center Detect, X-/Y-Axis									<b>7 (*)</b>
<b>Additional Options:</b>									
Mounting Plate									<b>M (*)</b>
Potentiometer with Center Tap									<b>CT (*)</b>

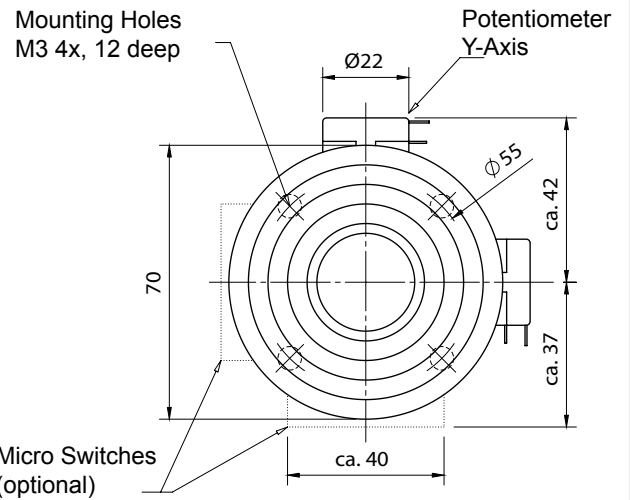
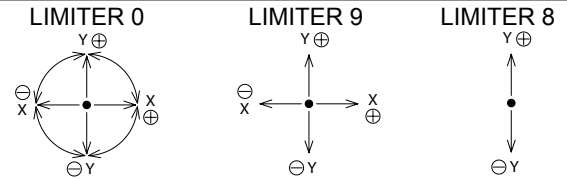
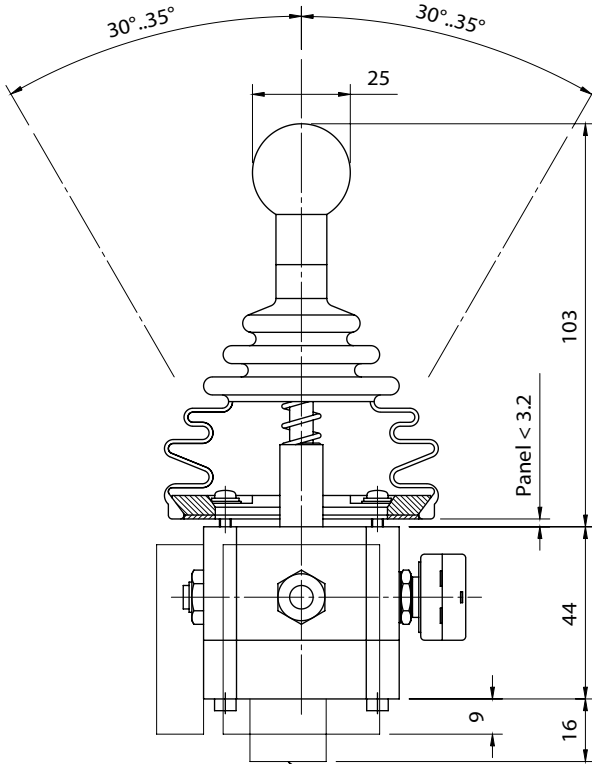
(\*) upon request

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

For example:

- Combinations of micro switches
- Customer-specific cable

### Technical Drawing

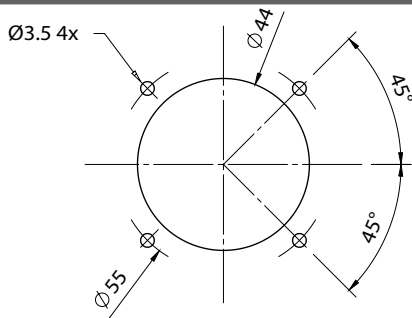


Center Detect (optional) - in the presence of handle "6" two microswitches will be attached to the housing instead of a single center detecting switch.

Dimensions in mm

### Installation

PANEL CUT-OUT  
(Standard)



PANEL CUT-OUT  
HANDLE 6

