

Data Sheet for Joysticks

Finger Joystick

Series 826



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

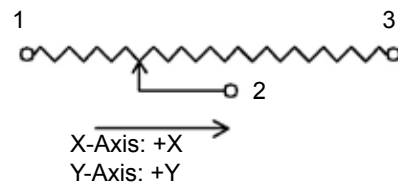
Optional configurations: Pushbutton on top of handle, center detent, external trim, up to 6 micro switches, adjustable friction clutch.

Technical Data Joystick

Angle of Movement X+Y Axis	$\pm 30^\circ \dots \pm 35^\circ$
Return to Center Accuracy X+Y Axis	$\pm 1^\circ$
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	IP65 (above panel)
Operating Temperature	$-20^\circ\text{C} \dots +65^\circ\text{C}$
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	$\pm 15\%$
Independent Linearity	$\pm 3\%$
Power Rating @ 40°C	0,15 W
Effective Electrical Angle of Rotation	60°
max. Wiper Current	1 mA



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Technical Data Encoder SP6

Bearing	Sleeve Bearing	Resolution	540 Imp. / no reference impulse
Housing/Thread	Polycarbonate/Brass	Supply Voltage	5 VDC
Axis	Stainless Steel	Current Consumption	typ. 17 mA, max. 40 mA
Impulse Disc	Metal, etched	Output	Quadrature; channels A, B
Permanent RPM	max. 100 min. ⁻¹	Electronic	TTL compatib., fan-out=2 (3,2mA)
Torque (@ 20°C)	max 0,5 Ncm	Limit Frequency	100 kHz
Operating/Storage Temperature	-25°C .. +100°C	Lifetime	LED 100000 h
Humidity	90% non-condensing		
Vibration, 5 Hz bis 2 kHz	20 G		
Shock	5 G, 11 ms		

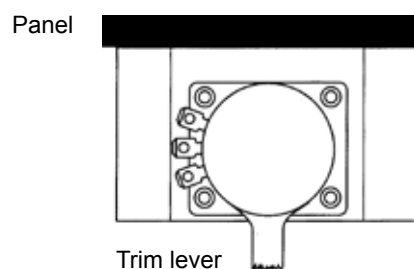
Pushbutton & Micro Switches

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° and -10° 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.)	125 VAC / 6 A	125 VAC / 5 A	30 VDC / 100mA
Lifetime (typ.)	25000	200000	100000

Trim Option „3“

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



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Order Code

Series	826									
Axes										
1 Axis (*)		1 (*)								
2 Axes		2								
2 Axes with Pushbutton		3								
1 Axis with Pushbutton		6 (*)								
Rubber Boot			5							
Spring Return				1						
no Spring Return				2 (*)						
Friction Clutch, with Detent in Center Position				5 (*)						
Friction Clutch, w/o Detent				6 (*)						
Handle versions										
Ball-Tip, Ø25 mm					3					
Cylindrical handle, with Pushbutton, Ø30 mm					6					
Conkave handle, Ø32 mm					4 (*)					
w/o Trim						1				
External Trim						3 (*)				
Potentiometer Type F							4			
Optoelectr. Encoder SP6							8 (*)			
Limiter										
Round								0		
Single-axis Y (*)								8 (*)		
X-/Y-Axis „+“ (*)								9 (*)		
Micro Switches										
none									0	
Center Detect X-/Y-Axis									1	
Switches ON @ ±3°, X-/Y-Axis									4 (*)	
Switches ON @ ±3°, Center Detect, X-/Y-Axis									5 (*)	
Switches ON @ ±5°, Y-Axis									6 (*)	
Switches ON @ ±5°, Center Detect, X-/Y-Axis									7 (*)	
Additional Options										
Mounting Plate										M (*)
Potentiometer with Center Tap										CT (*)

Bold print = Standard options

(*) upon request

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

For example:

- Combinations of micro switches
- Customer-specific cable

For technical advice, projects, samples, questions about pricing, delivery times and availability please contact us

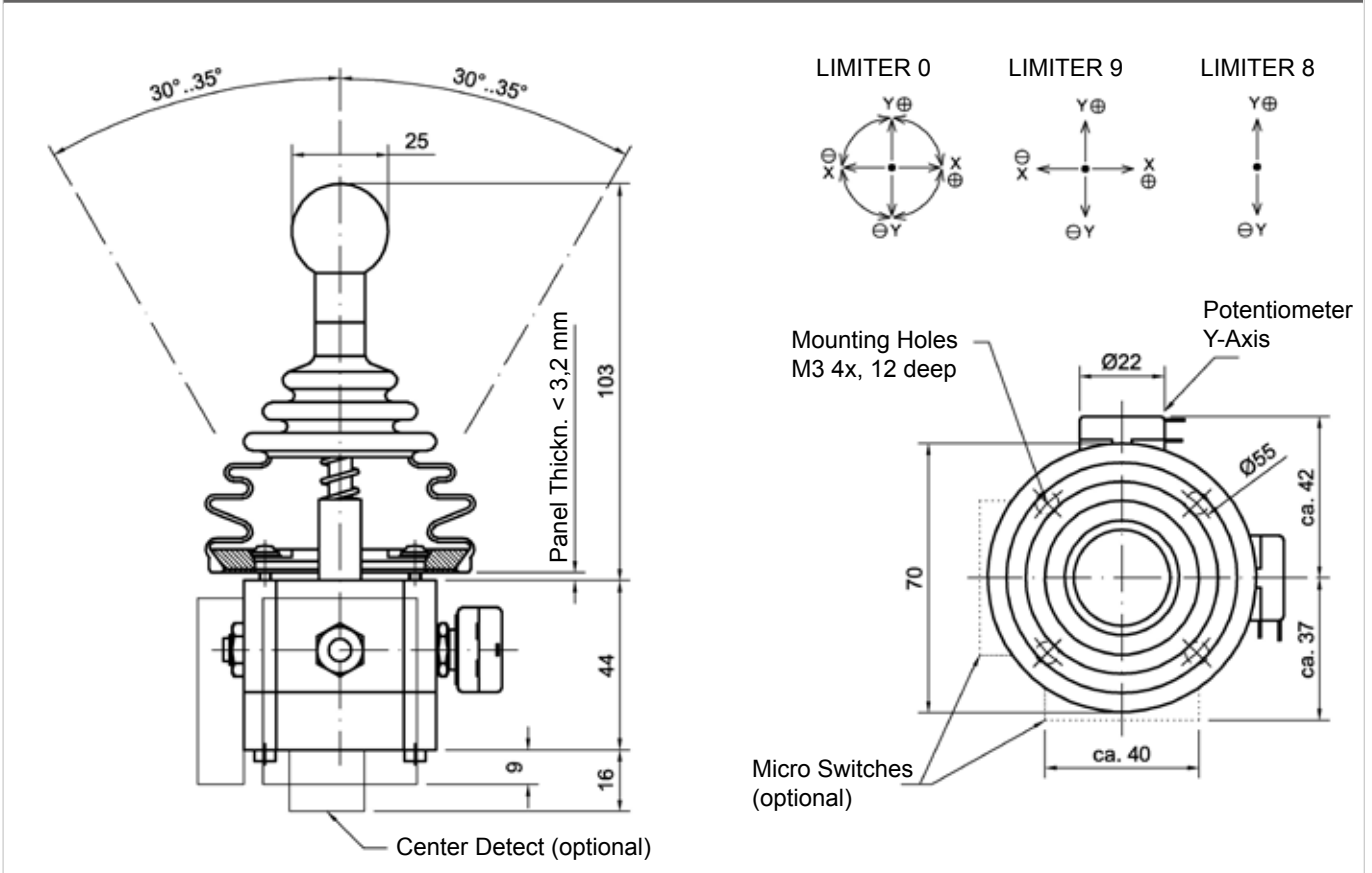
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Technical Drawing



Dimensions in mm

Installation

