

Data Sheet for Joysticks

Finger Joystick

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Series TRY22



- Outstanding quality of mechanics and sensors
- Contact-less, wear-free Hall sensor technology
- Safety due to redundant Hall sensors (optional)
- Protection IP65
- Available as a 2- or 3-axis variant, with or without a button
- Easy to install thanks to plug connection
- Custom version with see-saw rocker rocker available as alternative to rotatable handle

The TRY22 finger joystick series achieves a top level in terms of quality of mechanics, materials and processing. The joysticks are therefore a guarantee for success in demanding applications where quality, durability and reliability are paramount. The high-quality feel conveys a safe operating feeling and enables the user to precisely control movements in several dimensions. The joystick comes with 3rd axis and sealing IP65 as standard.

Electrical Data Joystick

Sensors	Hall-Effect
Supply Voltage	5 VDC \pm 0,5 VDC transient free
Output Voltage	0,5..4,5 VDC, redundant signal output available
Supply Current	typ. 15 mA per sensor
Signal at center position	2,50 \pm 0,15 V
Output Impedance	10 kOhm
Max. output current allowed	2 mA / Axis
Resolution	Infinite
Expected Electrical Life	typ. 1.000.000 h
Independent Linearity Tolerance	\pm 150 mV

Mechanical and Environmental Data Joystick

Expected Life	5.000.000 (X-/Y-Axis), 3.000.000 (Z-Axis) cycles
Mechanical Angle of Rotation x-, y-Axes	\pm 20° from center
Mechanical Angle of Rotation z-Axis	\pm 30° from center
Operating Force X-Y-Axis	1..4 N
Operating Momentum Z-Axis	40..80 mNm
Return-to-center Tolerance	\pm 5% (center)
Maximum Applied Force x-y-Axis	200 N
Maximum Applied Force z-Axis	0,5 Nm
Mounting	Drop-in
Operating Temperature	-20°C..+60°C
EMC Immunity Level	100 V/m (80 MHz..1 GHz)
ESD	\pm 8 kV contact discharge / \pm 15 kV air discharge
Vibration	10..55 Hz, 98 m/s ²
Shock	294 m/s ²

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Please contact us for information regarding stock availability, delivery times and minimum order quantities.

Order Description

Description	Selection: standard= black/bold , possible options= <i>grey/italics</i>						
Series	TRY22						
Axes: <i>2 axes</i>		2					
3 axes		3					
Sealing: Rubber boot			5				
Return Mechanism: Spring return				1			
Handles Handle „1“ for 2 or 3 axes (handle can be rotated), no pushbutton, IP65 <i>Handle „2“ for 2 or 3 axes (handle can be rotated), 1 pushbutton, IP65</i> <i>Handle „3“ for 3 Axes, with see-saw rocker, no pushbutton, IP40</i>					1 <i>2</i> <i>3</i>		
Limiter: Square						3	
Output Signals: 0,5..4,5 V (rail to rail)							1
Output Options: Single output <i>Dual output parallel</i> <i>Dual output inverse</i>							- <i>1</i> <i>2</i>

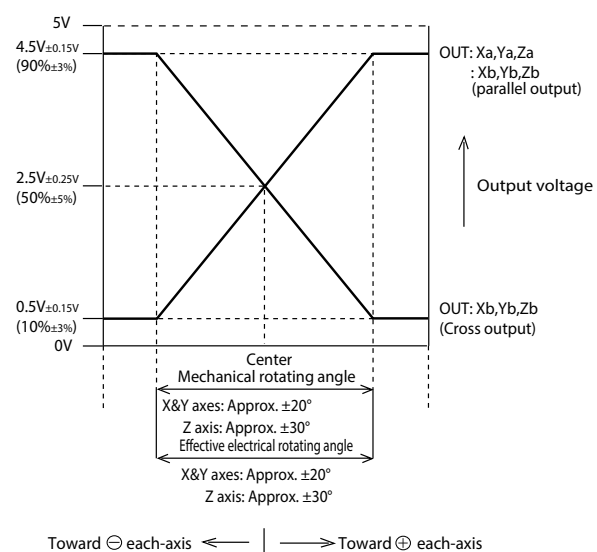
For higher quantities or on-going demand, additional options are available

- Customer-specific cables
- Stronger or weaker spring return
- Handles with different/additional input elements

Wiring

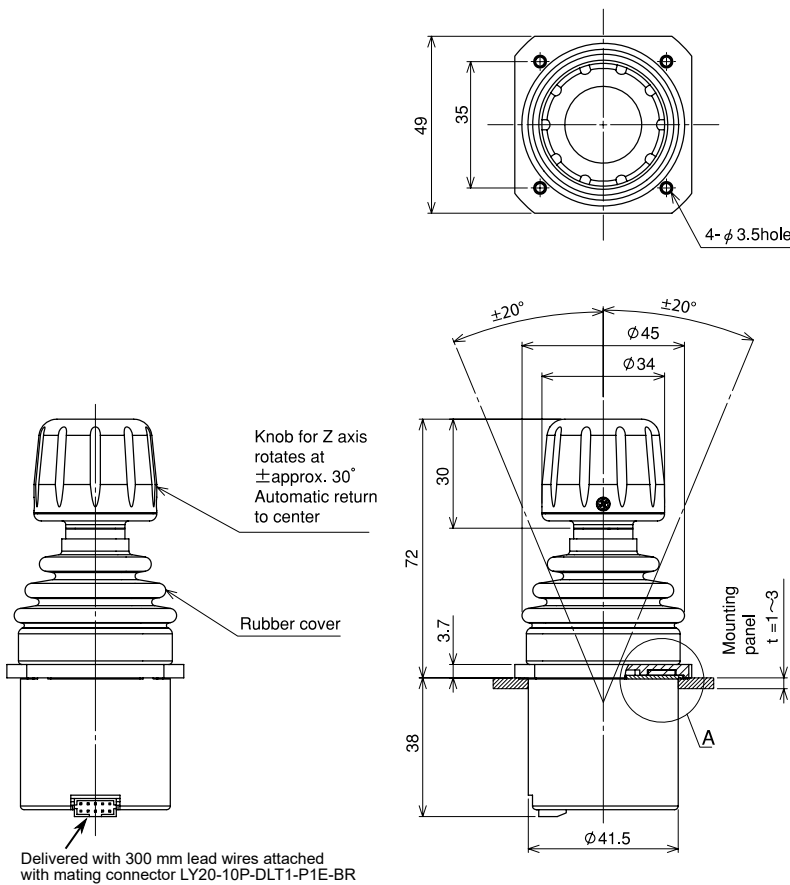
Pin	Function	Colour
1	Pushbutton Common	black
2	Pushbutton	white
3	GND	grey
4	Z-Axis Dual Output	violet
5	Z-Axis	blue
6	Y-Axis Dual Output	green
7	Y-Axis	yellow
8	X-Axis Dual Output	orange
9	X-Axis	red
10	+5 VDC	brown

Joysticks are supplied with AWG24 lead wires, length ca. 300 mm, connected to the joystick with mating connector LY20-10P-DLT1-P1E

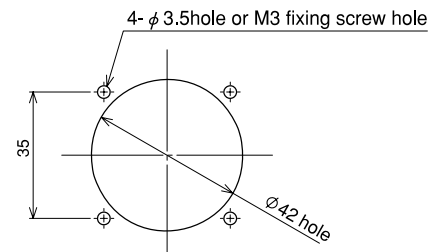


Drawings

Handle 1

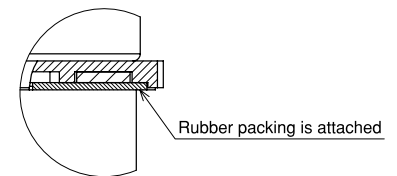


Panel arrangements

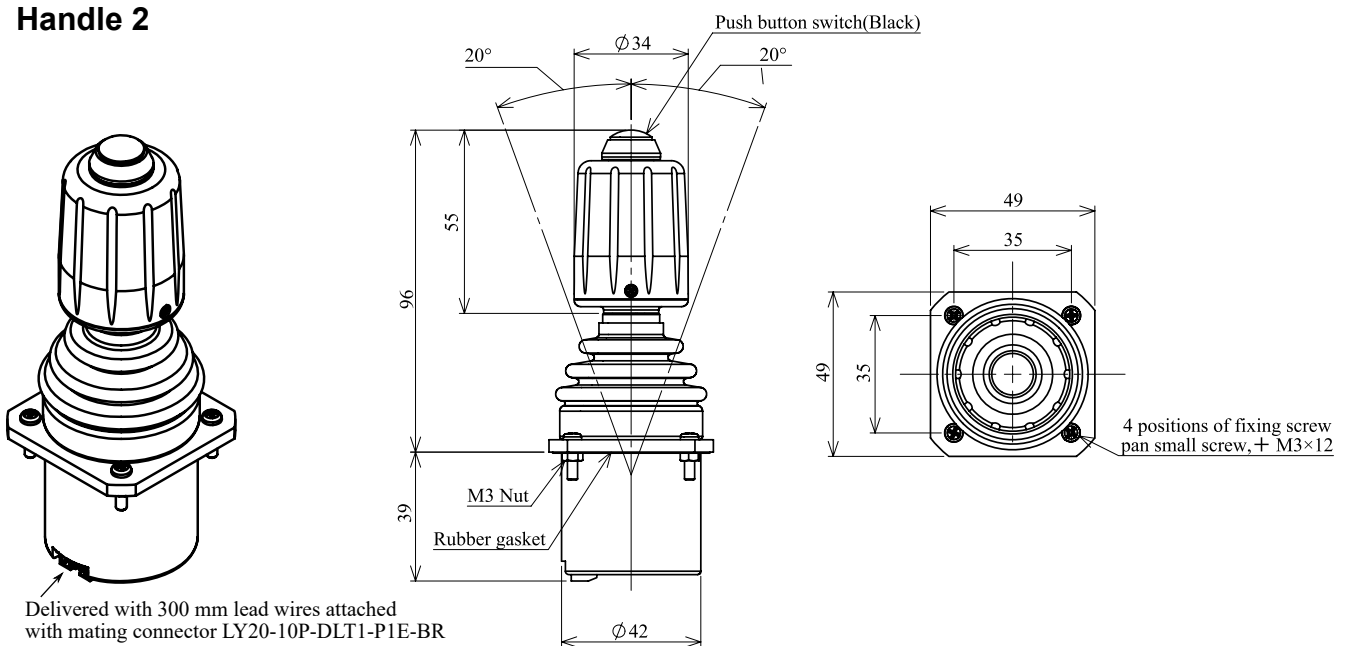


Note: 4 pcs. of mounting screws(M3X12) are attached.

Detailed cross-section diagram in the area A



Handle 2



All dimensions in mm

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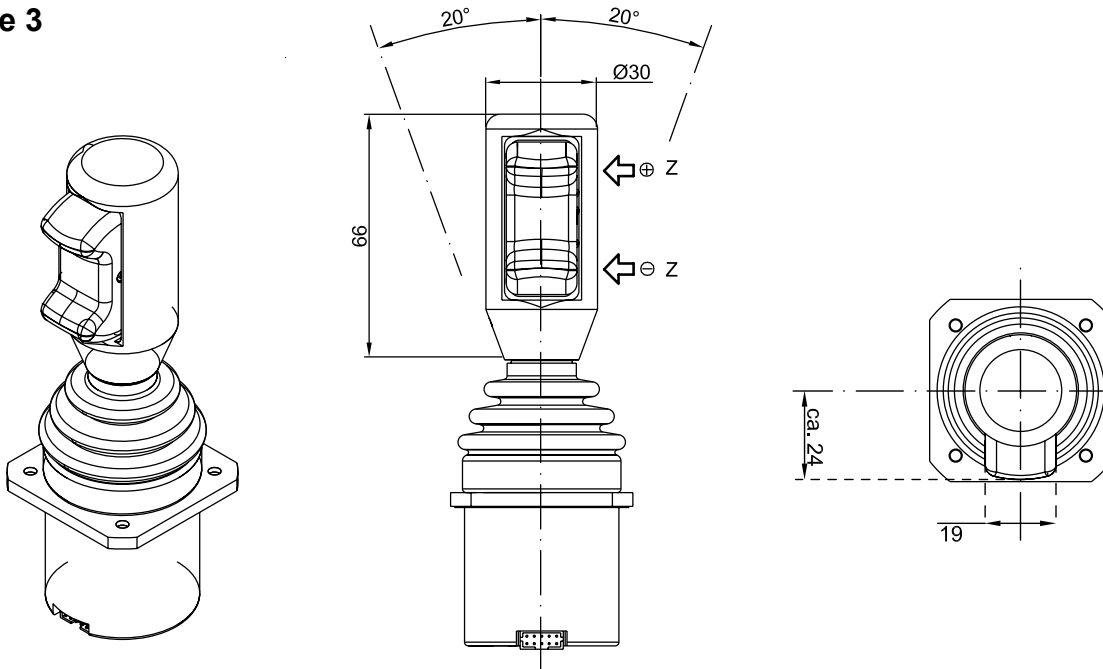
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Drawings

Handle 3



Technical data pushbuttons of handle 2

Operating Characteristics	ON when pushed (momentary)
Insulation Resistance	> 1.000 MOhm at 500 VDC
Expected Life	approx. 500.000 operations
Rating	50 VDC / 0,1 A
Dielectric Strength	1 minute at 1.000 VAC

Technical data see-saw rocker of handle 3

Current Consumption	7 mA (14 mA with dual output)
Min. Impedance	10 kOhm (>100 kOhm recommended)
Independent Linearity Tolerance	±3 % full scale
Return to Center Accuracy	±3 %
Expected Life	ca. 5.000.000 cycles
Protection Grade (electronics only)	IP65

All dimensions in mm