

Data Sheet for Joysticks

Thumb Joystick



- Three axes with contactless Hall sensors
- Low installation depth

The construction of the TRY20 series allows to integrate a complete 3-axes joystick with Hall sensors into a thumb-size joystick. Without accepting losses on its qualification for industrial usage.

Technical Data

Sensor	Hall Effect Sensor
Supply Voltage	5 VDC \pm 0,5 VDC transient free
Independent Linearity Tolerance	\pm 3 % full scale
Return to Center Voltage	\pm 250 mV
Expected Life	1 million cycles
Output Voltages	0..5 V / 0,5..4,5 V / 0,25..4,75 V
Currents	ca. 6 mA per Axis
Impedance	>10 kOhm (>100 kOhm recommended)
Insulation Resistance	>100 MOhm at 250 VAC
Dielectric Strength	1 minute at 250 VAC
Mechanical Angle of Movement X-, Y-Axis	30° (\pm 15° from center)
Mechanical Angle of Movement Z-Axis	60° (\pm 30° from center)
Operating Force X-Y-Axis	1,5 N (from center), max. 50 N
Operating Force Z-Axis	0,15 Nm (from center)
Operating Temperature	-20°C..+60°C
Storage Temperature	-20°C..+65°C
Sealing	IP40 (IP54 with rubber boot) above panel
Vibration	10..55 Hz, 98 m/s ² (10G)
Shock	294 m/s ² (30G)
EMC	50 V/m (80 MHz..1 GHz 1 kHz 80% AM, IEC/EN61000-4-3)
ESD	IEC/EN61000-4-2, 5 kV

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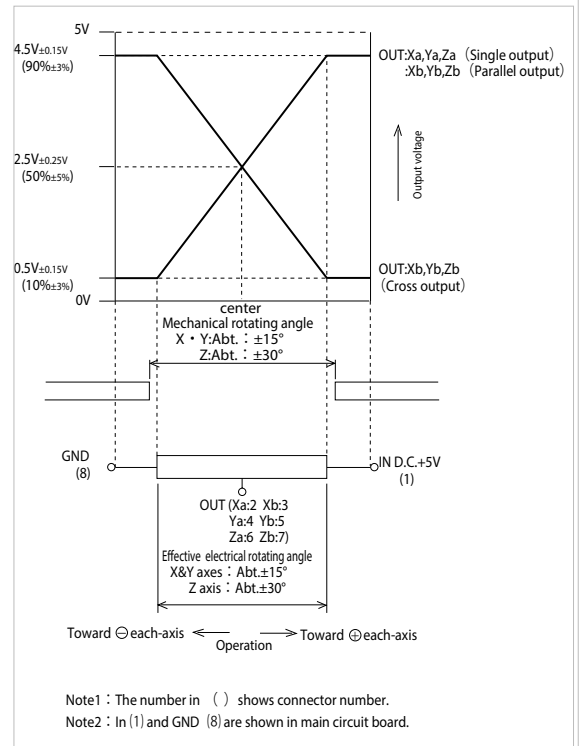
Series TRY20

Wiring



Pin	Function	Color
1	Supply +5 VDC	brown
2	X-Axis	red
3	X-Axis Dual Output	orange
4	Y-Axis	yellow
5	Y-Axis Dual Output	green
6	Z-Axis	blue
7	Z-Axis Dual Output	purple
8	Ground	grey

Wires AWG28, length ca. 300 mm, with connector MOLEX 51021-0800 included



Order Code

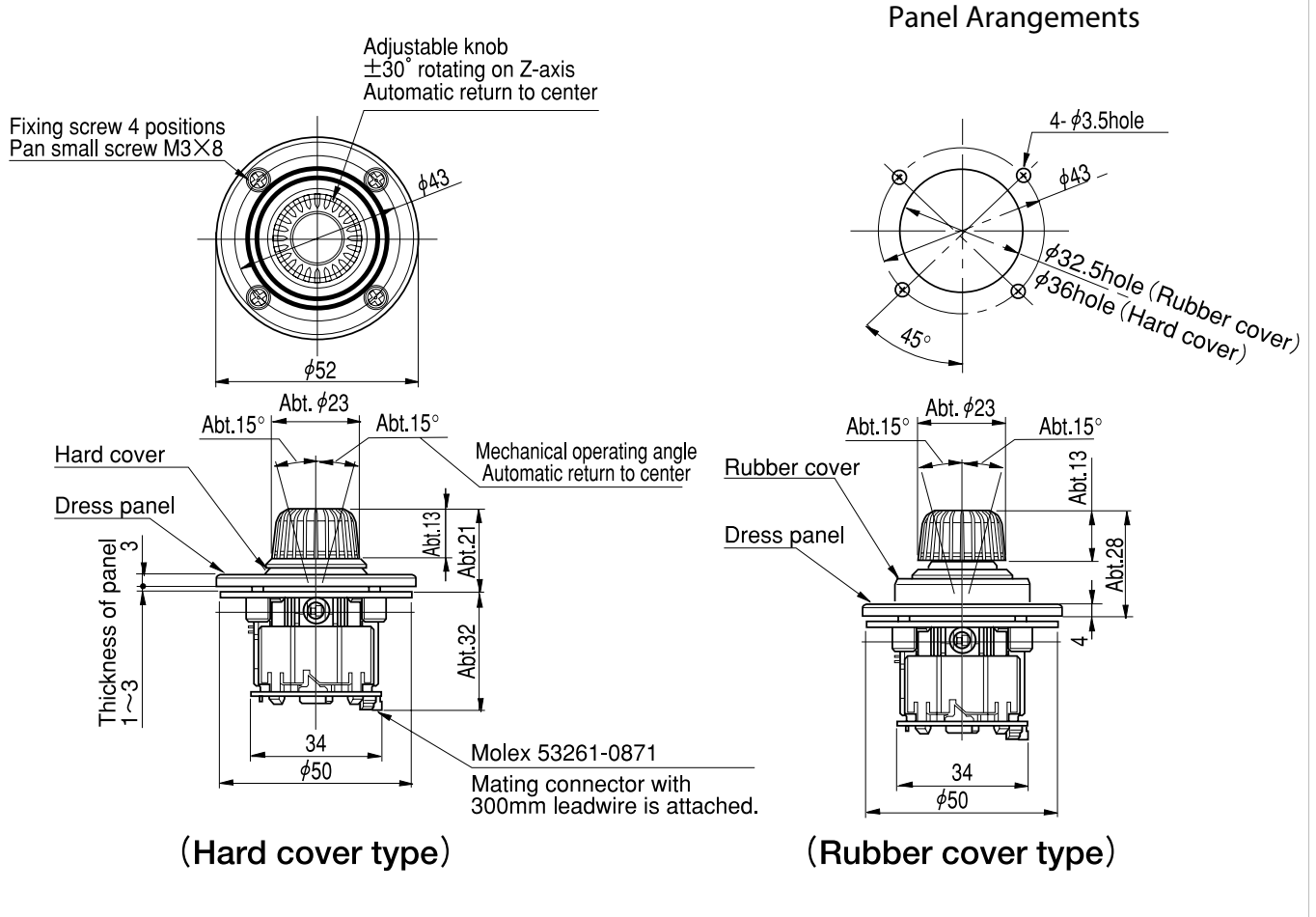
Series	TRY20						
Axes							
2 Axes		2					
3 Axes		3					
Rubber Boot			5				
Hard Cover			0				
Spring Return				1			
Handles					1		
Conical Handle							
Square Limiter						3	
Output Signal							
0,5..4,5 V							1
0,25..4,75 V							2
0..5,0 V (rail to rail)							3
Signal Options							
Single Output Signal							0
Dual Output Signal, parallel signals (*)							1 (*)
Dual Output Signal, inverted signals (*)							2 (*)

(*) upon request

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

- For example:
- Redundant Output Signals (inverted or parallel)
 - Customer-specific cable

Technical Drawings



All Dimensions in mm