

TRY 20 - Miniature Finger-Joystick

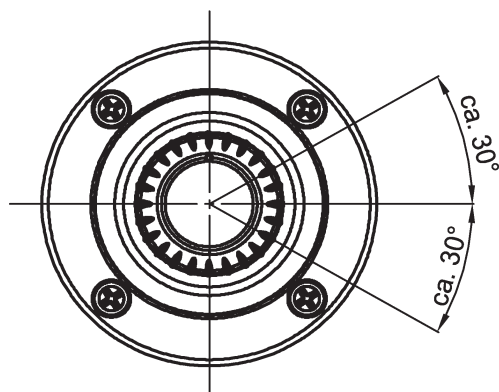
- 2 or 3 axes with contactless hall sensor elements
- Protection grade IP 40 / IP54 with rubber boot
- Low installation depth
- Ideal for controlling of wheel chairs, electric vehicles and many other drives with servo motors.

The new designed TRY20 with contactless sensor elements is characterised by its compact dimensions at a 3-axes version. The sensor elements are optional available in a redundant version at each axis.

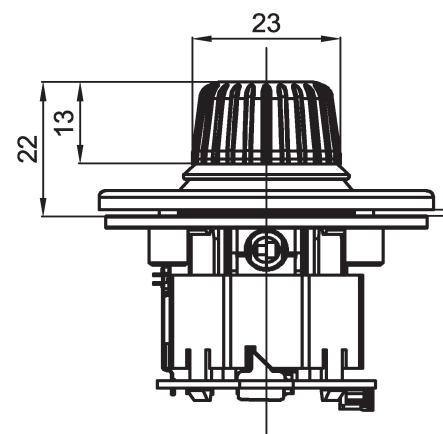
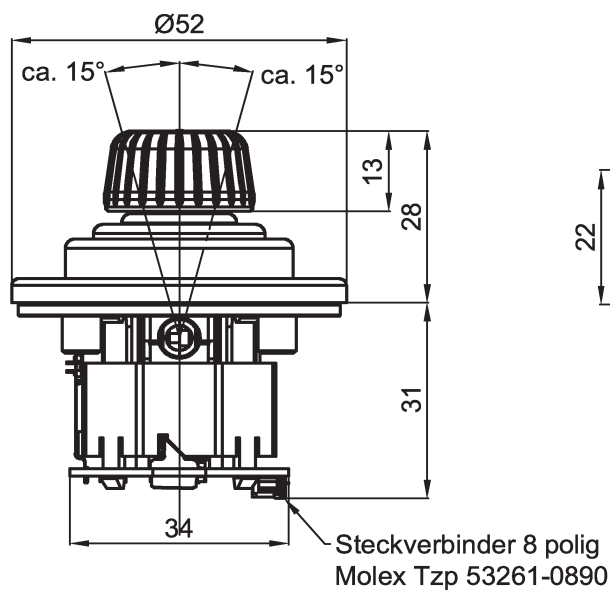
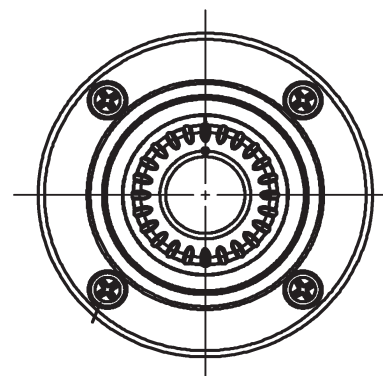


Drawing

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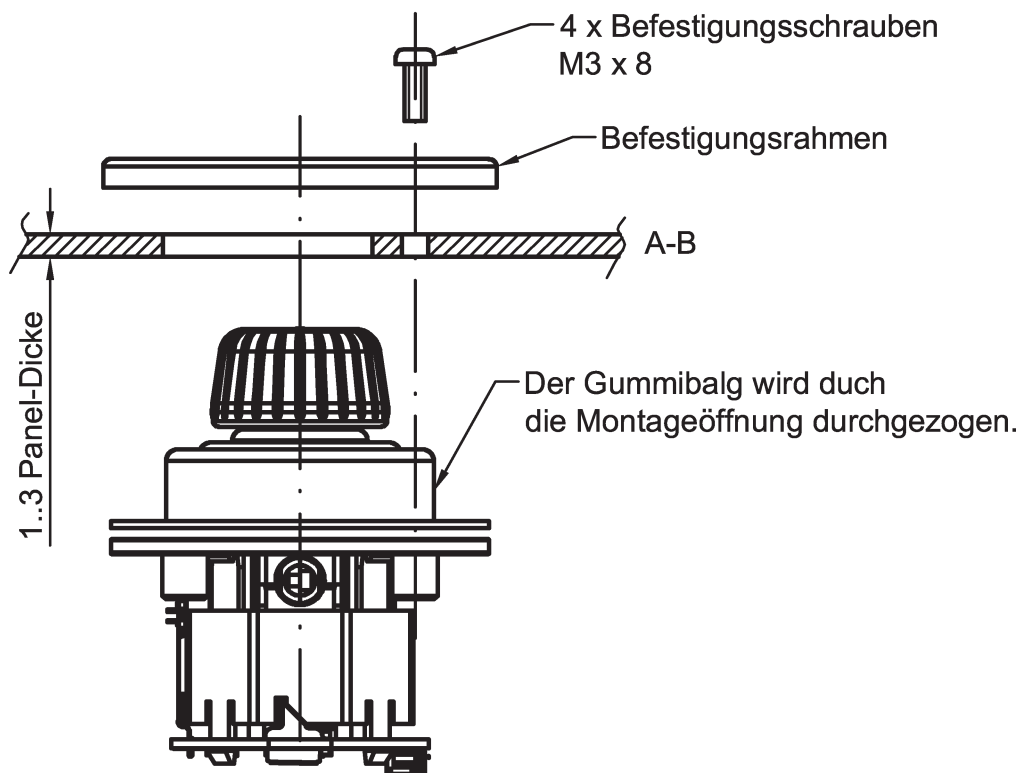
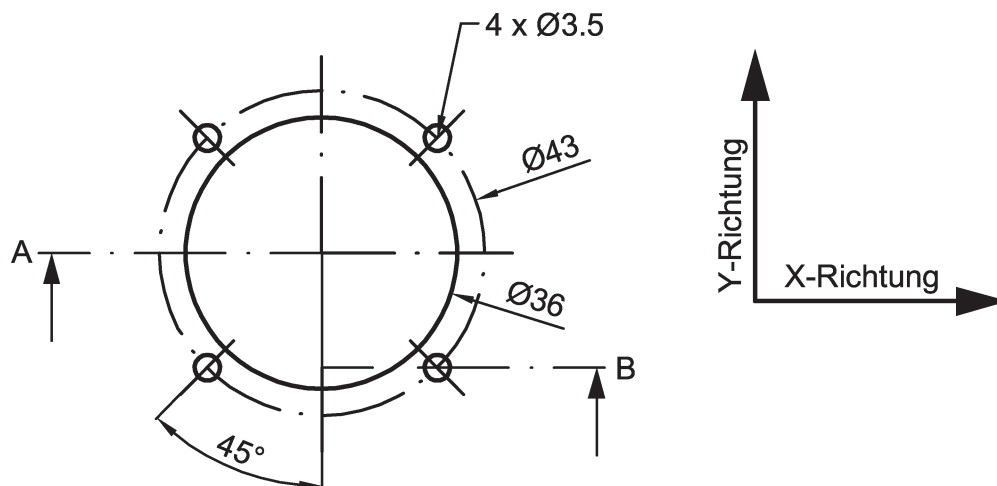
Cable



- 8: GND (black)
- 7: Z-Axis Sig. B (white)
- 6: Z-Axis Sig. A (white)
- 5: Y-Axis Sig. B (white)
- 4: Y-Axis Sig. A (white)
- 3: X-Axis Sig. B (white)
- 2: X-Axis Sig. A (white)
- 1: +Supply (red)

Wire (length approx. 300mm, 28 AWG) with connector (MOLEX 53261-0871) are included in delivery.

Drilling and Mounting



Technical Data

Mechanical Data

Dimensions	see drawing page 1
Power consumption X-Y axis	1,5 N (center) 3 (deflection)
Power consumption Z axis	15 mN (center) 30 (deflection))
Max. X-Y handle load	50 N (static load at the handle)
Max. Z handle load	0,5 N (stopper limit)
Deflection X-Y / Z	$\pm 15^\circ$ / ca. $\pm 30^\circ$ ($\pm 2,5$ für X-Y-Z)
Mech. life expectancy	ca. 1 Mio ^{#1} MTBF
Vibration	10..55 Hz, 98 m/s ² (10G) ^{#2}
Shock	294m/s ² (30G) ^{#3}
Housing	high strength glas-fiber reinforced nylon
Protection grade	IP40 (IP54 with optional rubber boot) from the top
Weight	approx. 42 g with wire and rubber boot, without packaging

#1: Test conditions: Handle motion in each direction von -deflection to +deflection at a speed of 60 movements/minute, at normal ambient temperature

#2: acc. MIL-STD-202F-204

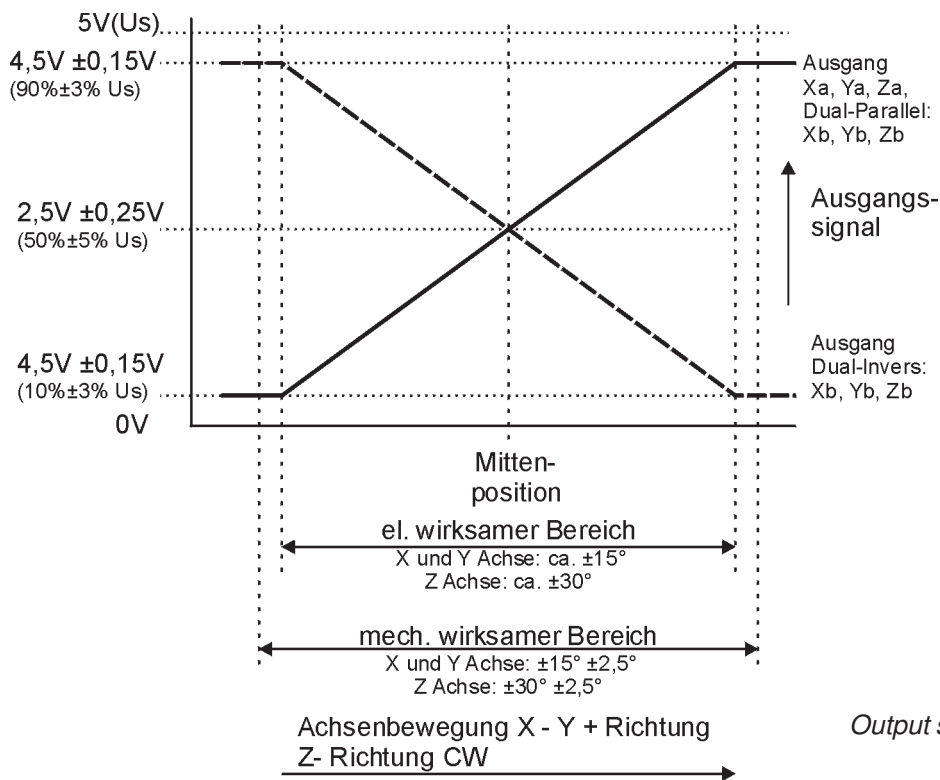
#3: acc. MIL-STD-202F-213

Electrical Data

Supply voltage	5V $\pm 10\%$
Output voltage	10V 90% U_{Supply} (output Option 1) 5..95% U_{Supply} (output Option 2) 0..100% U_{Supply} (output Option 3)
Center voltage	2,5V $\pm 25mV$ (50% U_{Supply} $\pm 5\%$)
Output linearity	3% (independ. linearity relating to max. output signal)
Power consumption	approx. 6 mA (per axis and signal)
Load resistance	> 10 kOhm (>100k recommended)
Resolution	infinite
Temperature drift max. signal	< 2,5% ^{#4}
Temperature drift center pos.	< 1,0% ^{#4}
Insulation resistance	> 100 MOhm at 250VAC
Dielectric strength	1 minute at 250VAC
EMC	10V/m (80MHz..1GHz 1kHz 80% AM, IEC/EN61000-4-3)
ESD	IEC/EN61000-4-2, 5kV
Operating temperature	-20°C .. +60°C
Storage temperature	-20°C .. +65°C

#4: (relating to max. output signal, for the total temperature range of the application)

Output Signal



Options and Order Descriptions

	Series	Axes	Bezal	Reset device	Handles	Limiter plates	Output	Output options
Joystick with hall-effect sensors	TRY20							
2 axes		2						
3 axes		3						
Without rubber boot			0					
Rubber boot			5					
With spring return				1				
Handle conical					1			
Limiter plate round						3		
Output 10..90% U_{Supply}							1	
Output 5..95% U_{Supply}							2	
Output 0..100% U_{Supply}							3	
Output single								0
Output dual-parallel								1
Output single & inverse								2

The herewith stated data can not describe the product character or property due to the various applications specialities.