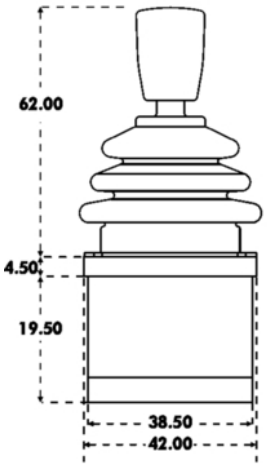
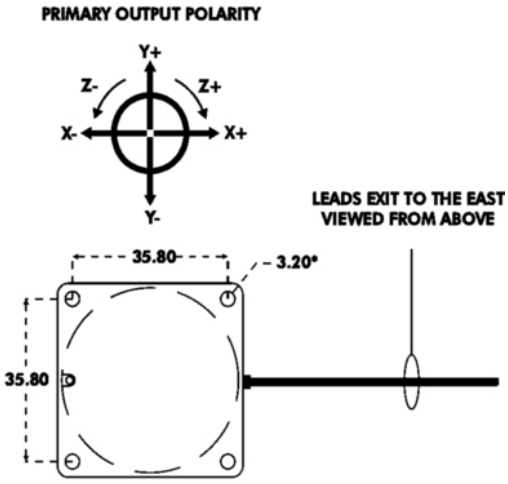
844 - Hall Effect Joystick, next generation

- Up to 3 axes
- Shallow installed depth < 20mm
- 5V or 3,3 V operation
- Analogue or PWM output
- Protection class up to IP65 (above panel)
- Spring return to centre position
- High life cycles
- Various handles, also with push button
- Application: medical devices, PTZ video cameras remote controls, CNC steering units, etc.

Teh 844 series is the very latest generation in high precision contactless joysticks. It also delivers a radically improved mechanism construction, that is specifically designed for increased robustness, strength and performance.

Dimensions





Wiring

Pin	Function	Colour	
1	0V	black	Cable length approx. 150 mm. 7-pole standard connector with 2,5 mm raster. (9-pole at push button in the knob) The connector is compatible to Molex KK series
2	Center Tap	green	
3	Z-Axis	violet	
4	Y-Axis	yellow	
5	X-Axis	blue	
6	+V	red	
7	Center Detect	orange	
8	Button	orange	
9	Button	orange	

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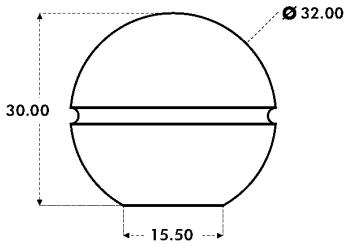
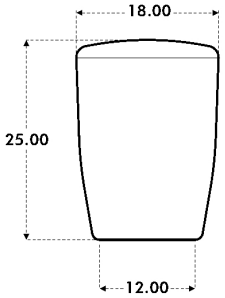
844 - Hall Effect Joystick, next generation

Knob Type A, spheric



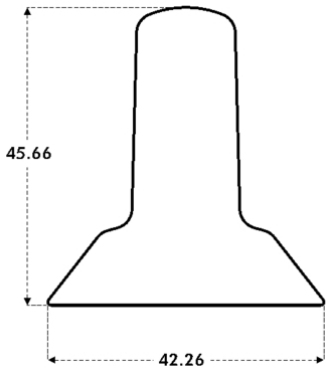
Material:	phenolic resin
Surface:	glossy
Standard colour:	black
Other colours:	on request

Knob Typ C, conic medium



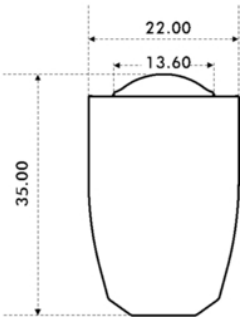
Material:	nylon
Surface:	matt
Standard colour:	black
Other colours:	on request

Knob Type F, cylindric with gaiter protection



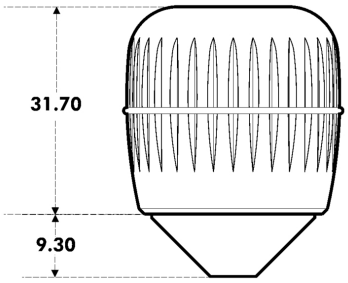
Material:	Nylon
Surface:	matt
Standard colour:	black
Other colours:	on request

Knob Type E, conic with push button



Material:	Aluminium
Surface:	eroded structure
Standard colour:	black
Other colours:	not available

Knob Type I, with Z axis



Material:	Nylon
Surface:	matt
Standard colour:	black
Other colours:	not available

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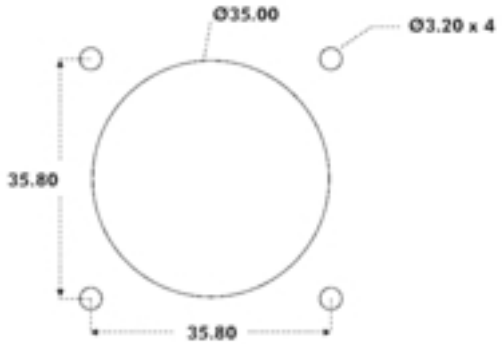
844 - Hall Effect Joystick, next generation

Bezel Option 1, with neoprene gaiter, without cover ring , mounting from bottom

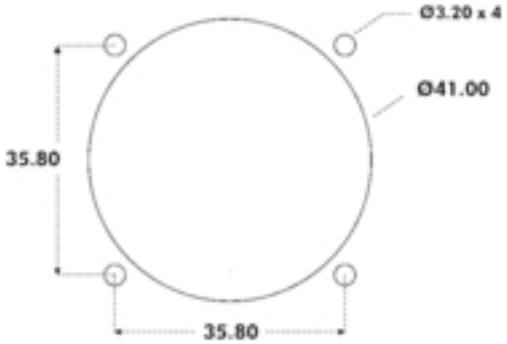
Mounting cut-out:



When mounted this way the panel acts as the bezel and no separate bezel is needed. M3 machine screws are recommended.

Bezel Option 2, with neoprene gaiter, square cover ring, mounting from top

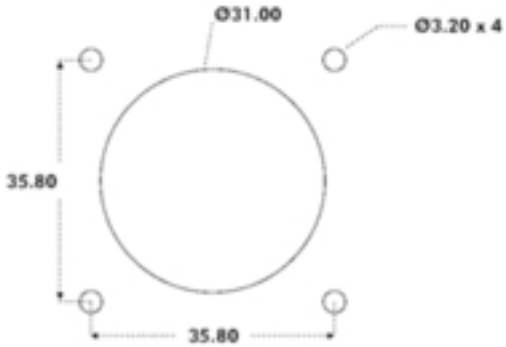
Mounting cut-out:



The joystick is dropped into the panel cut-out. For panel thickness of <3mm, M3 x 16 countersunk machine screws are recommended.

Bezel 3, with neoprene gaiter, with round cover ring, mounting from bottom

Mounting cut-out:



The joystick flange is mounted beneath the panel and the base of the gaiter must be brought through the panel cut-out and held in place with the circular bezel. For panel thicknesses of <3mm, M3 x 16 countersunk machine screws are recommended.

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Note: When sub-panel mounting, great care should be taken not to damage the gaiter, or any of the mechanism under the gaiter. All panel cut-outs should be free from sharp edges and debris that may damage the gaiter.

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844 - Hall Effect Joystick, next generation

Spring return / guided feel
The series 844 can be delivered with a guided feel direction of move. The sensable spring return force is lower in horizontal and vertical direction than at diagonal deflection.

Technical Data	
Output Voltage	±10% .. ±50% x Vsupply
Output at Centre	V / 2 ±5%
Power Supply	5VDC ±0,5V Transient free or 3,3VDC ±0,1V
Center Tap Impedance	1K1
Center Detect Output	with pull up 2K2 at Vsupply, 100nF to 0V
Sensor Type	Hall effect
Current Consumption	< 13mA (2 axes) / < 20mA (3 axes)
Loads	> 10kOhm, 100kOhm recommended
Storage Temperature	-40°C .. +70°C
Operating Temperature	-25°C .. + 70°C
Protection Class	above panel up to IP65
EMC Emissions	EN61000-6-3 CISPR22:2005 class B 30MHz - 11GHz
EMC Immunity	100V/m 80MHz .. 2,7GHz, 1kHz 80% EN61000-4-3 (extended)
ESD	EN61000-4-2 (extended) + 8kV (20 contacts) + ±15kV (20 air discharges)
Vibration	100Hz .. 200 Hz @ 0,13 g2/Hz, total 3,6gRMS (1 h in each axis)
Life Cycles	> 10 Mio 2-axes types / > 5Mio 3-axes types
Actuating force	typ. > 1,3 N (from center position)
Materials	Shaft: stainless steel / Gaiter: neoprene / Further: brass, nylon, ABS
Weight	approx. 100g
Deflection	X/Y max. ±18° / Z-Achse ±25°
Max Load to Mechanism	400 N

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844 - Hall Effect Joystick, next generation

Options and Order Description

	Series	Axes	Bezel	Reset Device	Handles	Limiter Plates	Output	Level
Description	**844**	**x**	**x**	**x**	**x**	**x**	**x**	**x**
Two axes		2						
Three axes		3						
with neoprene gaiter, without cover ring, mounting from bottom			1					
with neoprene gaiter, with square cover ring, mounting from top			2					
with neoprene gaiter, with round cover ring, mounting from bottom			3					
with neoprene gaiter, with round cover ring, mounting from top			4					
With spring return				1				
With spring return and guided feel X and Y axis				2				
Handle type A, spheric					A			
Handle type B, cylindric					B			
Handle type C, conical medium					C			
Handle type E with push button					E			
Handle type F, cylindric with gaiter cover					F			
Handle type I with third axis					I			
X-axis						1		
Y-axis						2		
+-shaped						3		
diamond-shaped						4		
round						5		
square						6		
X-shaped						7		
Standard hall sensor 5VDC							S	
Low voltage hall sensor 3,3VDC							L	(5)
Dual hall sensor 5VDC Parallel							P	
Dual sall sensor 5VDC Inverse							I	
PWM output (Specification on request)							W	(xx)
Integrated USB Interface*							U	-/-
Integrated CanOpen Interface*							C	-/-
Extended supply voltage range							Vx	-/-
±10% x 5VDC (2,5 V ±0,5V)								1
±25% x 5VDC (2,5VDC ±1,25V)								2
±30% x 5VDC (2,5VDC ±1,5V)								3
±40% x 5VDC (2,5VDC ±2V)								4

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±50% x 5VDC (Rail To Rail) (2,5VDC ±2,5V)								5
PWM specification								x0

*) please ask for availability

Please ask for more options and accessories.

The specifications and information in this datasheet cannot consider all special demands that are caused by the application. Because of this, they are no general description of the properties of the product.
2008. All specifications are subject to change without notice.

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