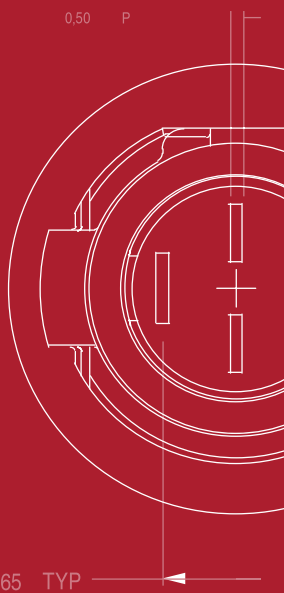
C&K® Sensors PRODUCT GUIDE



This product guide contains a selection of our most popular sensors and components

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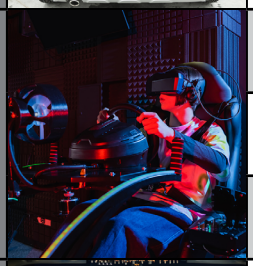
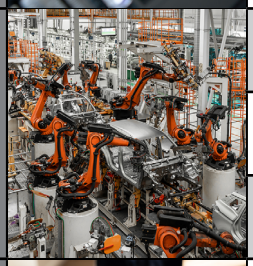
C&K®

				Navigation		
Market	Segment		Application	THB	TSW	MSW
Automotive	Infotainment		Interior Light Controls			
			Climate Control			
			Automotive Entertainment Cluster			
	Vehicle Access Systems		Trunk Open/Close Detection			
			Trailer/Container Door Open Detection			
High-End Consumer	Pro Gaming		Gaming Controllers	X		
			Virtual Reality Controllers	X		
			Racing Simulator Controllers	X	X	
	Aviation		Drone Controllers	X		
			Flight Simulator Controllers	X	X	X
Industrial	Professional Audio/Video		Pro Audio Controllers		X	
			Broadcast Studio Robotic Camera Systems		X	X
			Pro Lighting Controllers		X	
	Automation		Industrial Robots			X
			Linear Actuators			
			Computer Aided Design & Manufacturing	X	X	X
	Security		Remote Monitoring			
			Window/Door Sensing			
Medical	Devices		Robotic Surgery	X		X
			Automatic Emergency Defibrilators (AEDs)		X	

Detect				Rotary	
MPS	MPSR	LTS (Rotary)	LTS (Linear)	ENC	ENC W/Screen
		X	X	X	X
		X	X	X	X
				X	X
X					
X	X				
				X	X
				X	X
		X	X	X	X
		X	X	X	X
		X	X	X	X
X	X				
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		X	X	X	X
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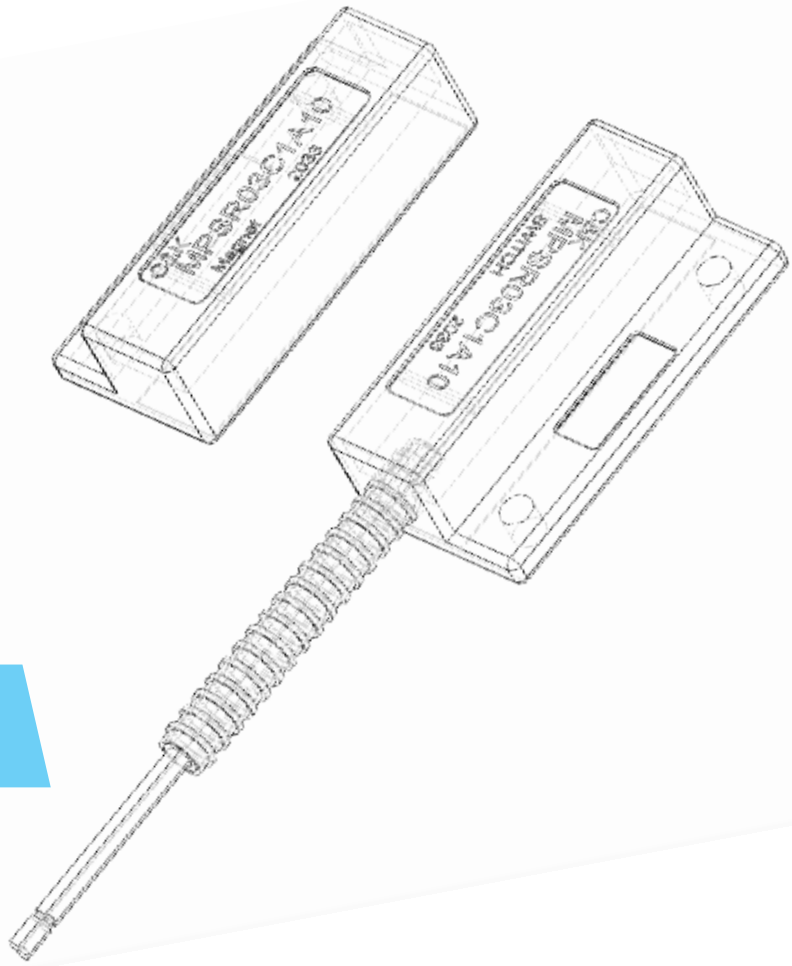
X				X	X
				X	X



PRODUCT SELECTION GUIDE

SENSOR PRODUCTS

C&K's proud history of product innovation continues with sensor solutions ideal for position, proximity sensing, and touch sensing in a wide range of applications. Inherently robust with available IP ratings up to IP69, MPS and MPSR are capable of millions of operations using magnetic actuation to provide contactless detection across hermetic barriers and distances up to 1". They're designed to be easy to install and easily customizable to fit the needs of applications ranging from automotive and industrial to construction, security and anti-tampering, and medical devices. The New LTS Series features capacitive touch control with a wide range of customizable options that will fulfill the demans of audio/video, industrial, automotive and other control applications.

MPS SERIES
Magnetic Promimity Sensors

Features / Benefits

Long life - 4M operations
Sealed contacts
Quality construction
UL61058
Quick & easy installation

Typical Applications

Remote Monitoring
Anti-Tamper Detection
Security

PART NUMBER	Function
MPS45WGW	SPST N.O. subminiature surface mount (adhesive or flange), side exit leads, 1" make gap

MPSR SERIES
Ruggedized Magnetic Promimity Sensors

Features / Benefits

Long life - 4M+ operations
Hermetically sealed contacts
Form C (SPDT) contacts w/ 3 W rating
IP69 Rating
Quick & easy installation

Contact Rating:
200 mA @ 3 W, 30 VDC

Typical Applications

Remote monitoring
Anti-tamper detection
Security

PART NUMBER	Function
MPSR03C1A10	Form C (SPDT N.O. / N.C.) 3 W / 30 VDC 72" Stainless steel hose w/ bare wire leads
MPSR05A1A10 NEW	Form A (SPST N.O) 5W / 180 VDC 72" Stainless hose w/bare wire leads

* Contact C&K for custom options availability

LTS (ROTARY) SERIES
Illuminated Capacitive Touch Sensors

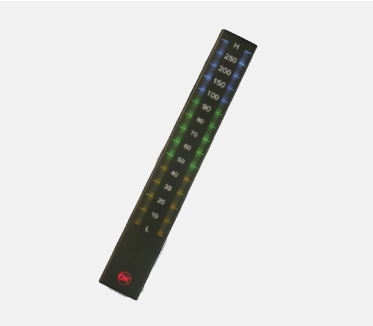
Features / Benefits

Choice of Encoder or VR Operation Modes
Scroll Plus Additional Key Output
Multiple Customizable Sensing Zones
Multiple Cap Options
Integrated Illumination
Capacitive Touch Controls

Typical Applications

Audio/Video Equipment
Consumer Products
IT Equipment
Communications Equipment
Appliances
Lighting & Fan Controls

PART NUMBER	Function & Output	One Key Operation	Block 1 LED Color	Block 2 LED Color	Block 3 LED Color	One Key LED Color	Termination
LTSR14V-TXR003K-BPGXXC NEW	Rotary 14 Position (VR)	Toggle Mode	Blue	Red & Blue	Green	N/A	Cable & Connection



LTS (LINEAR) SERIES

Illuminated Capacitive Touch Sensors

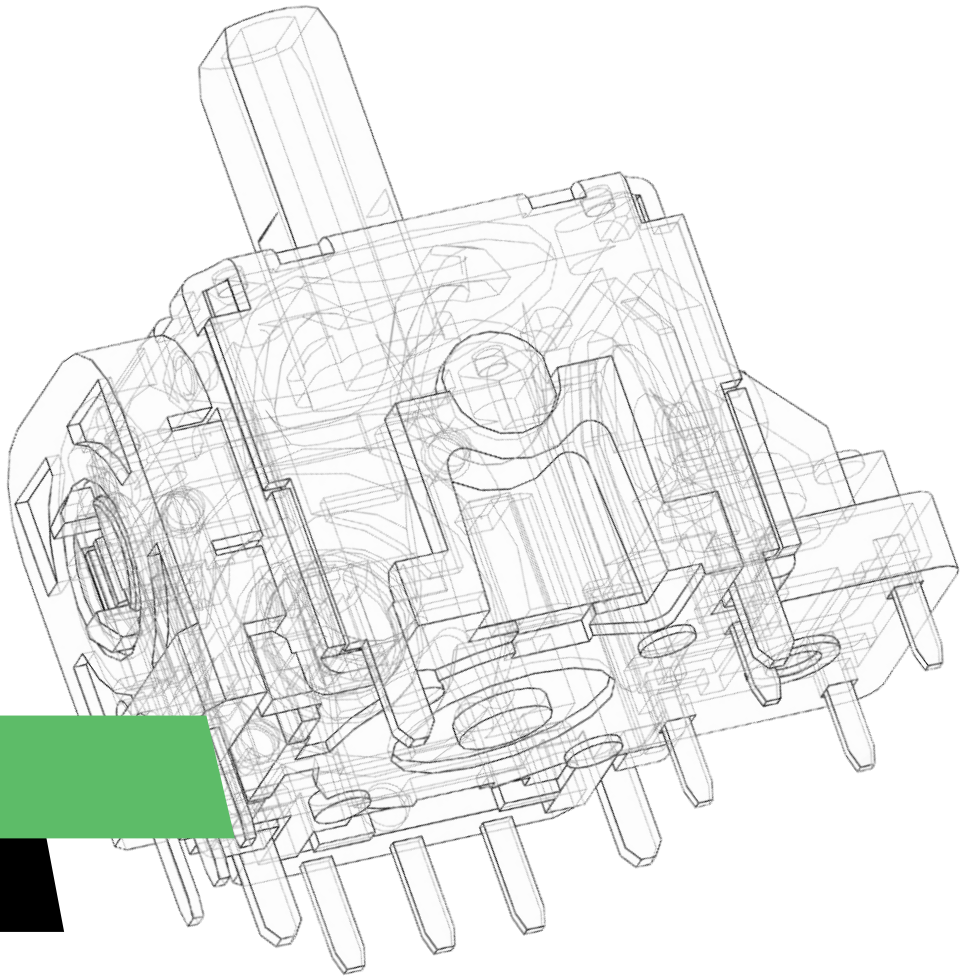
Features / Benefits

Choice of Encoder or VR Operation Modes
Scroll Plus Additional Key Output
Multiple Customizable Sensing Zones
Multiple Cap Options
Integrated Illumination
Capacitive Touch Controls

Typical Applications

Audio/Video Equipment
Consumer Products
IT Equipment
Communications Equipment
Appliances
Lighting & Fan Controls

PART NUMBER	Function & Output	One Key Operation	Block 1 LED Color	Block 2 LED Color	Block 3 LED Color	One Key LED Color	Termination
LTSL15V-TXL004K-YGBPXC NEW	Linear 15 Position (VR)	Toggle Mode	Yellow	Green	Blue	Red & Blue	Cable & Connection



PRODUCT SELECTION GUIDE

Navigation Sensors

C&K's navigation sensors are miniature, compact and multi-directional products. The THB series dual action 360° joystick is ideal for gaming, drone, and other controllers. The TSW Series scroll wheel offers easy one-handed control of electronics. The MSW packs three axes of movement and a pushbutton into one device for the ultimate control of robotics or industrial controllers.

THB SERIES
Miniature Thumbstick

Features / Benefits

Higher actuation force
Reduced “Dead Zone” slack & wide angular sweep
Small form factor

Typical Applications

Industrial
High-end consumer
Gaming Controllers
AV Controls

PART NUMBER	Circuit	Mounting Type	Operating Torque	Pushbutton Force	Life Cycle
THB001P	Dual Potentiometer + SPST N.O.	Thru-hole	120 ± 50 gfcm	7 N	2,000,000 cycles for toggle
THB111R NEW	Dual Potentiometer + SPST N.O	Thru-hole	110 ± 40 gfcm	8 N	1,000,000 Cycles for Toggle
THB211QX NEW	Dual Potentiometer + SPST N.O (No Return to Center X-X Axis)	Thru-hole	140 ± 100 gfcm	7.4 N	2,000,000 Cycles for Toggle

MSW SERIES
Multifunction Hall Effect Joystick

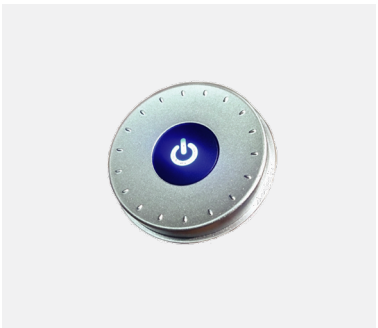
Features / Benefits

Analog Voltage Output for Easy Interfacing
Contactless Hall Effect Sensing for Long Life
Tri-axis Operation
Integrated Pushbutton
Panel Mount for Easy Installation
Cable and Connector Termination

Typical Applications

Industrial Controllers
Robotics
Medical Instruments
AV Equipment

PART NUMBER	Circuit	Mounting Type	Operating Torque	Pushbutton Force	Life Cycle
MSW311P1C NEW	Tri-Axis Analog Voltage Output + SPST N.O	Panel	TBD (X/Y Axis) TBD (Z Axis)	TBD	5,000,000 cycles for X/Y Axis 1,000,000 cycles for Z Axis



TSW SERIES
Three Function Tact and Scroll Wheel

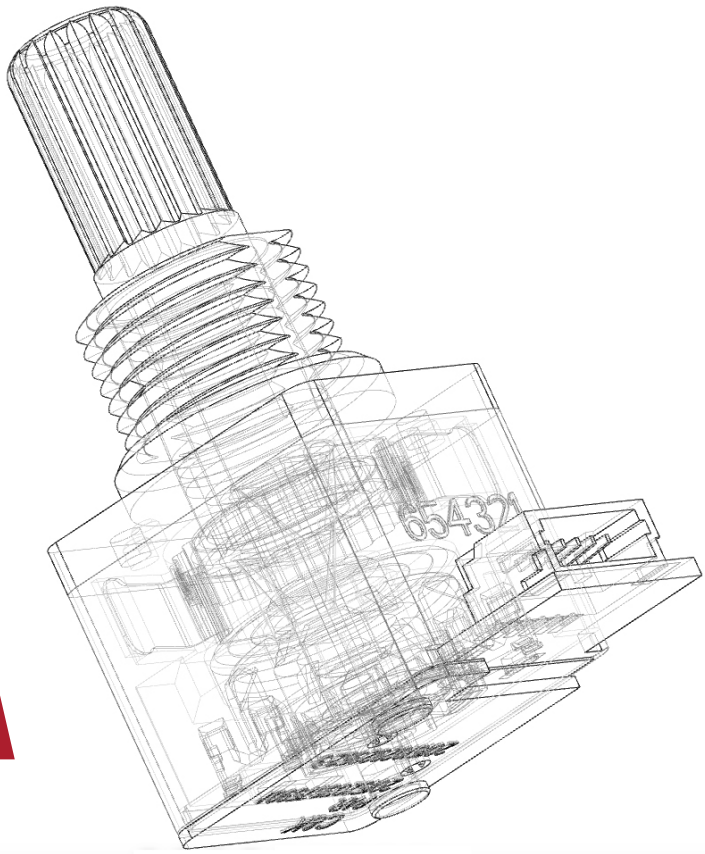
Features / Benefits

Compact & Slim
Multiple Functions in One Component (Rotary, Select)
Easy Installation
Thru Hole Termination
Integrated Illumination

Typical Applications

Remote controls
Desk Phones
Keyboards
Printers
Entertainment Systems
White Goods

PART NUMBER	Number of Circuits	Mounting Type	Illumination Color	Pushbutton Force	Life Cycle
TSWA-3N-CD23W LFS NEW	Three	Panel	White	220g ± 50g	1,000,000 cycles Scroll Wheel 1,000,000 cycles Pushbutton



PRODUCT SELECTION GUIDE

Rotary Encoders

Rotary encoders from C&K are available with variety of indexing options. The ENC Series features easy install connector sockets and integrated pushbutton. The TFT screen provides wide design flexibility for consumer, audio/video, industrial, and other applications.

ENC SERIES
Rotary Encoder

Features / Benefits

Clear detent / haptic feel
Two channel, 2-bit code output
Quadrature (incremental type)
Integrated pushbutton

Typical Applications

Automotive interior control
Industrial equipment
Test & instrumentation
Medical equipment

PART NUMBER	Function	Contact Rating	Rational Torque	Pushbutton Force	Operating Life	Termination
ENCOS16D2S65C	16 position Incremental Encoder	Rotary: 30 mA @ 5 V DC Pushbutton: 10 mA @ 5 V DC	265 gfcm	600 ± 20% gf	300,000 cycles	SMT
ENC0S24D2S65R NEW	24 position Incremental Encoder	Rotary: 30 mA @ 5 V DC Pushbutton: 10 mA @ 5 V DC	265 gfcm	600 ± 20% gf	300,000 cycles	Connector

ENC SERIES
Rotary Encoder

Features / Benefits

Clear detent / haptic feel
Two channel, 2-bit code output
Quadrature (incremental type)
Integrated pushbutton

Typical Applications

Automotive interior control
Industrial equipment
Test & instrumentation
Medical equipment

PART NUMBER	Function	Contact Rating	Rational Torque	Pushbutton Force	Operating Life	Termination
ENCOT24D5SX5T NEW	24 position Incremental Encoder w/screen	Rotary: 30 mA @ 5 V DC Pushbutton: 10 mA @ 5 V DC	450 gfcm	600 ± 20% gf	500,000 cycles	Pin Out

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