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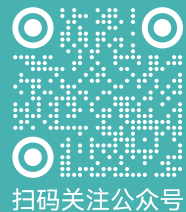
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Smart Sensing Creates Better Life !

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Founded in 2016, Conntek Microelectronics Technology Co., Ltd. is a global leader in the field of high-tech integrated circuits (ICs), specializing in the design and manufacture of **advanced magnetic sensor ICs**. We are dedicated to enhancing technological capabilities and efficiencies across various industries, guided by our vision: "Smart Sensing Creates a Better Life!"

Innovative Magnetic Sensor IC Solutions:

- 3D Linear Hall-effect sensor ICs
- High-Speed High-Precision Magnetic Angle Sensor ICs
- High sensitivity 3D Hall Switch/Latch ICs
- Fluxgate Magnetic Sensor Signal Conditioning ICs for Leakage current measurement
- Nanopower TMR Magnetic Switch/Latch ICs
- AMR Magnetic Switch ICs for Air Cylinder
- Linear Hall-effect Sensor IC
- Zero-Drift Zero-Offset Operational Amplifier ICs
- Temperature sensor IC and more...

These pioneering products are essential for a wide range of applications, from intelligent IoT devices and photovoltaic energy systems to industrial automation and automotive technologies. Conntek’s magnetic sensor ICs are renowned for their high performance, reliability, and the ability to operate under low power conditions.

Leading-Edge Development and Manufacturing:

Conntek is equipped with the most comprehensive magnetic sensor technology capabilities worldwide. Our state-of-the-art design and manufacturing processes are spearheaded by a skilled team of professionals who graduated from some of the world's top universities such as Tsinghua University, Peking University, Delft University of Technology and EPFL and have worked at leading semiconductor companies such as NXP, Marvell, IBM and Qualcomm.

With nearly **100 authorized patents** and numerous industry firsts, such as the debut of **the first 3D Hall Sensor IC**, Conntek is at the **forefront of magnetic sensor technology**. Our products, developed with proprietary intellectual property, are in mass production and have achieved significant sales success, demonstrating our commitment to innovation and quality.

Conntek Microelectronics Technology Co., Ltd. is driven to push the boundaries of what is possible with magnetic sensor IC technology, constantly innovating to provide solutions that advance global technological standards and improve life through intelligent sensing.

Join us on our mission to lead the development of the smart sensing technologies that power the future.

CORE COMPETENCE

We know electronics circuit, structure and magnetic circuit designs.



Circuit Design

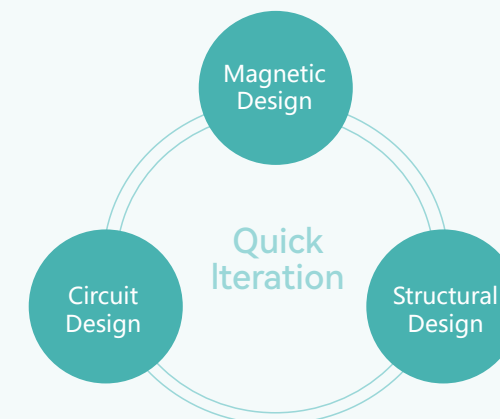


Magnetic Design



Structural Design

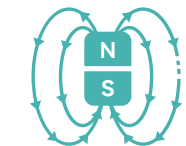
SOLUTION



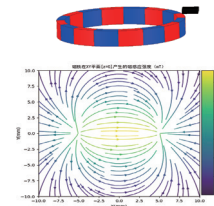
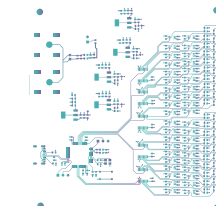
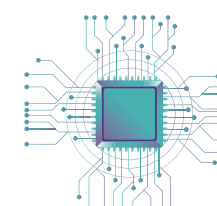
Magnetic sensor and ASIC customization



PCB/Sensor module structure design and control software development



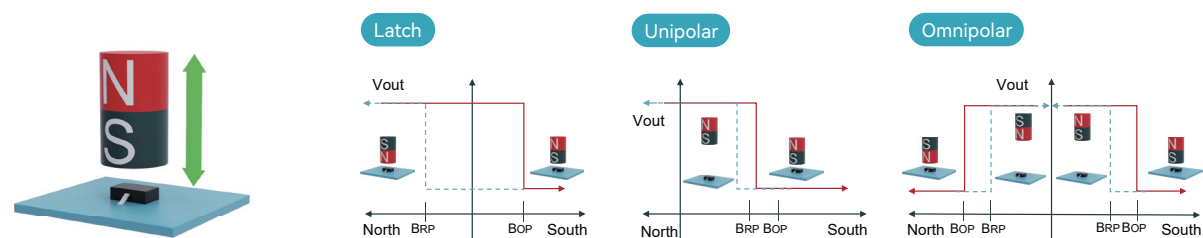
Magnetic circuit design/ Magnet selection/EM simulation/ EM shielding design



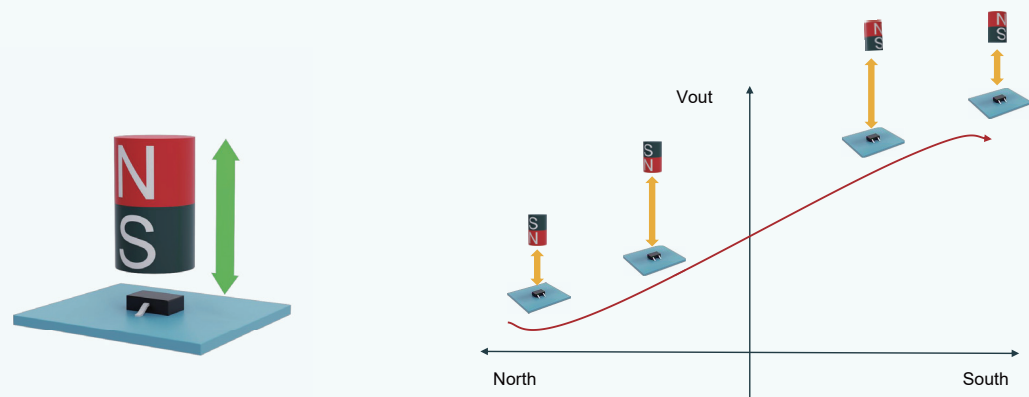
Fundamentals of Magnetic Sensors ICs

Conntek Core Competence

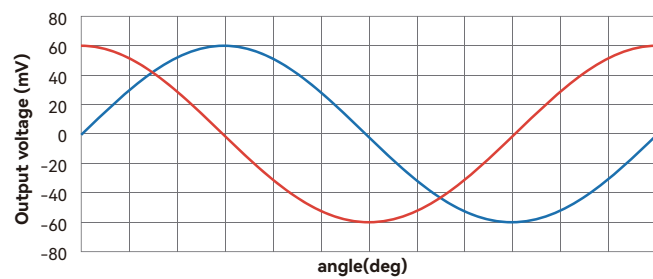
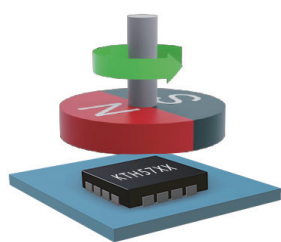
01 Magnetic Switch Sensor IC



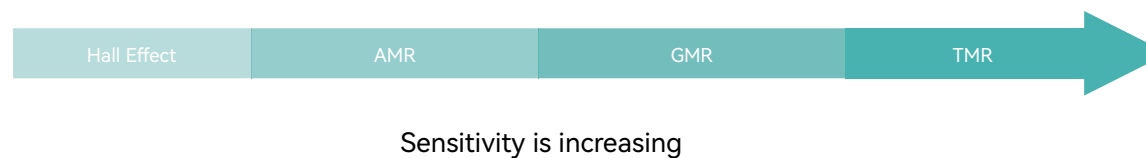
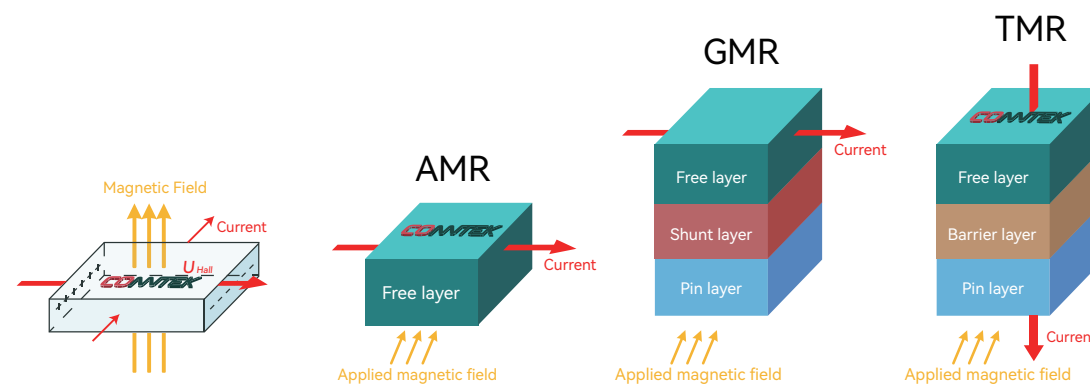
02 Magnetic Linear Sensor IC



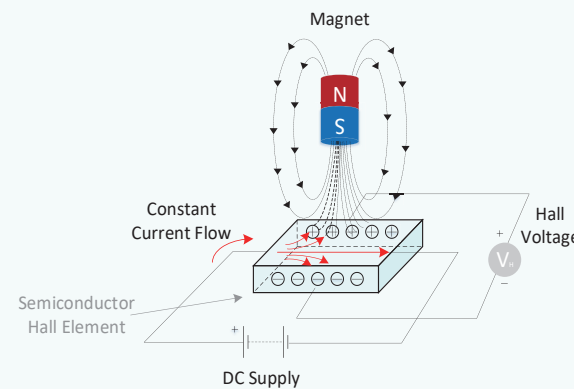
03 Magnetic Angle Encoder IC



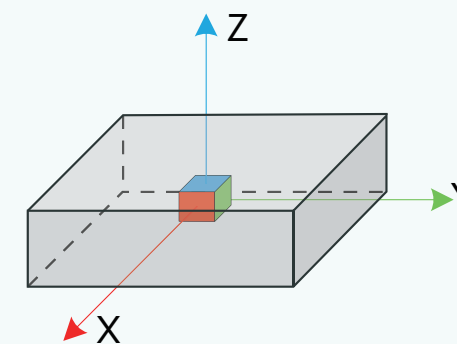
Different Magnetic Sensor Principles



Conntek Core Competence - 3D Hall Magnetic Sensing



Conventional planar Hall senses only single-axis magnetic fields

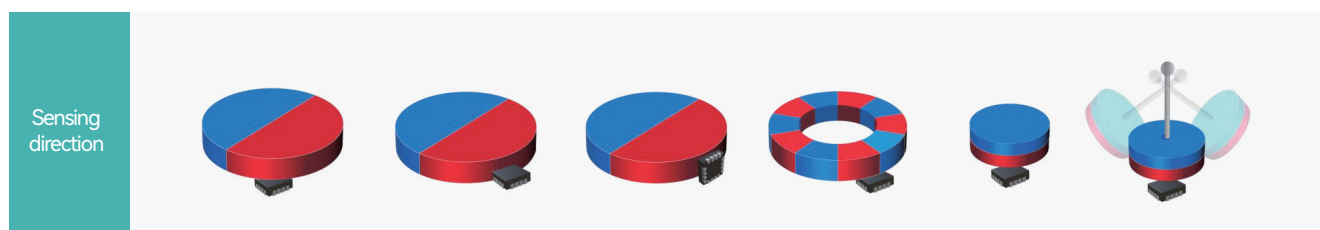


Conntek core technology 3D Hall magnetic sensing

Product Descriptions

01 3D Linear Hall-effect Sensor ICs

Series	Magnet placement	Detection range	Operating voltage	Precision	Standby current consumption	Average current consumption	Measurement mode
KTH57XX	On-axis/off-axis	360°	2.8~5.5V	16 Bit	1.4uA	25.2uA@5Hz/ 113.7uA@25Hz	Continuous Sensing Mode/ Wake-up & Sleep Mode/ Single Conversion Mode
	Output mode	Magnetic induction	Magnetic field detection range	Operating frequency	Operating temperature	Package	
	I2C/SPI digital output	X,Y,Z axis	XY axis ±130mT Z axis ±80mT	1000Hz	-40~+125°C	QFN3*3/2*2.5	



3D Hall Sensor Applications

3D Linear Hall-effect sensor ICs

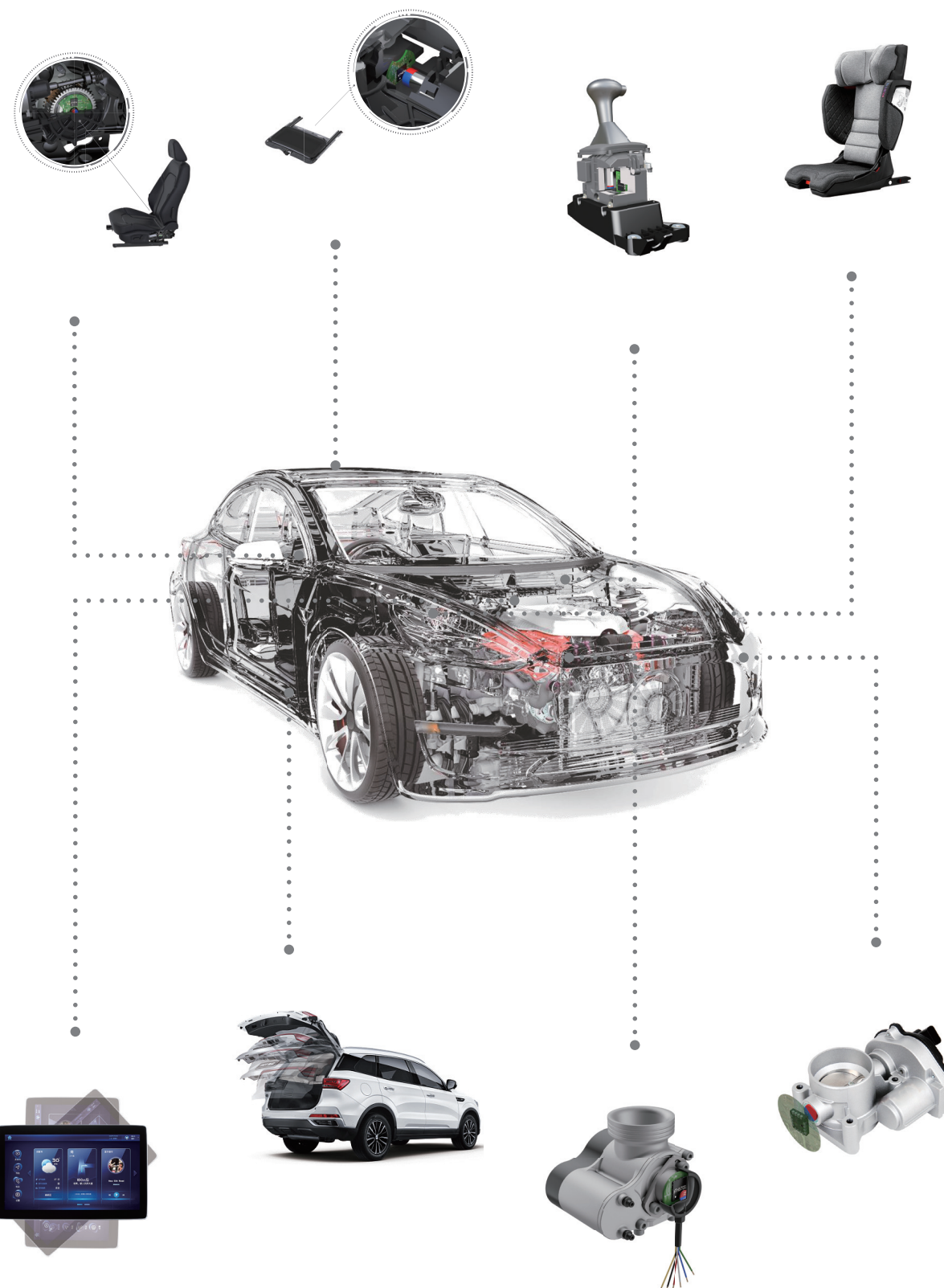
- Drone Pan-Tilt
- Handheld Pan-Tilt
- Wheelchair rockers
- Flight simulators
- Drone rockers
- PSP rockers
- Joysticks
- Gamepads
- Mouses



Smart Traffic

3D Linear Hall-effect sensor ICs

- Seat controls
- Sunroof
- Electronic shifter
- Electronic cockpit
- Car tablet
- Power tailgate
- Electronic throttle
- EGR valve



IOT Equipment

3D Linear Hall-effect sensor ICs

- Robot joints
- Robot vacuum cleaners
- Companion robots
- Turnstiles
- Professional cameras
- High speed pan tilt
- Smart toys



Intelligent Wearables

3D Linear Hall-effect sensor ICs

- Volume control knobs
- Smart watches



Smart Home Appliances

3D Linear Hall-effect sensor ICs

- Coffee machines
- Gas stoves
- Smart cooking machines
- Intelligent closetools
- Washing machines



Consumer Electronics

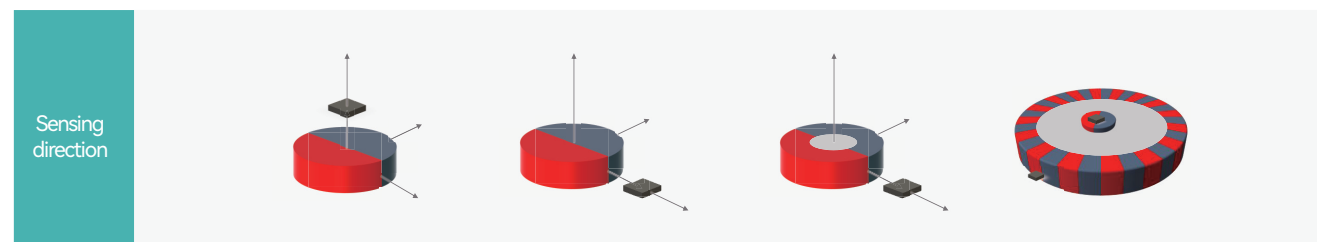
3D Linear Hall-effect sensor ICs

- Joysticks
- Notebooks
- Mouses
- Flip cameras
- Keyboards
- Foldable phones

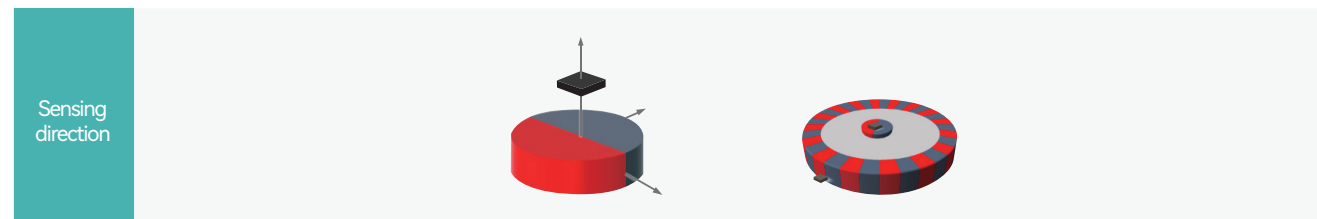


02 High-speed High-precision Magnetic Angle Sensor ICs

Series	Magnet placement	Detection range	Operating voltage	Noise	INL	Operating current	Rotational speed
KTH78XX	On-axis/off-axis	360°	3.3V / 5V	0.004MS-0.24°	±0.35°	11.6mA	120,000 rpm
	Output mode	Temperature drift	Magnetic field detection range	Start-Up time	Operating temperature	Package	
	ABZ/UVW/PWM/SPI/SSI output	0.002°/°C	30~150mT	1ms	-40~+125 °C	QFN3*3-16L SOP-8	

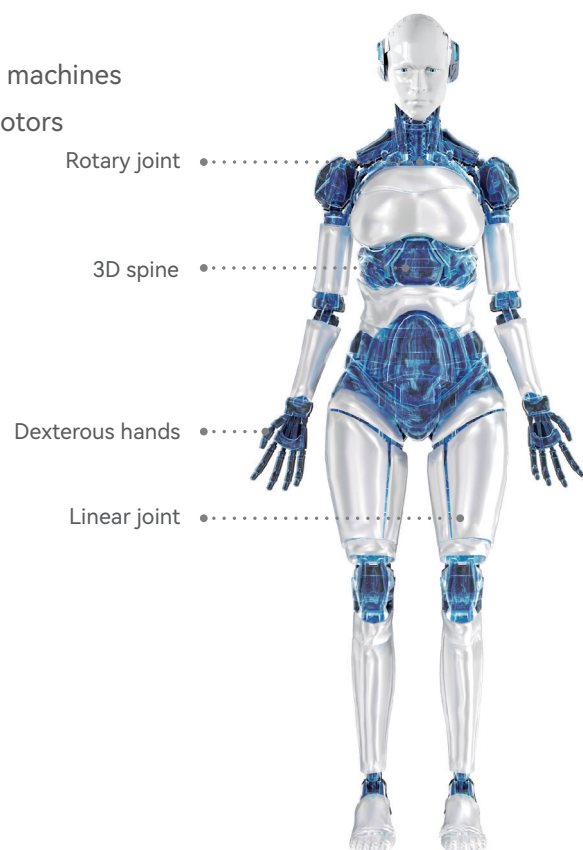


Series	Magnet placement	Detection range	Operating voltage	Noise	INL	Operating current	Rotational speed
KTH58XX	On-axis/off-axis	360°	3~5.5V	0.01	±0.02°	40mA	180,000 rpm
	Output mode	Feature	Magnetic field detection range	Start-Up time	Operating temperature	Package	
	ABZ/UVW/PWM/SPI	Supports multiple pairs of poles (1-4096), supports one click self calibration	10~150mT	23ms	-40~+125 °C	HFBP5*5-32L	



Automation and Robotics High-Speed High-Precision Magnetic Angle Sensor ICs

- Hollow encoders
- Electromobile(BLDC)
- Servo motors
- Stepper motors
- Industrial sewing machines
- Coreless micro motors
- Robot joints
- Stage lightings



03 Fluxgate Magnetic Sensor Signal Conditioning ICs for Leakage Current Measurement

Series	Vref	Min resolution	Operating voltage	Average current consumption	Band-width	Feature	Operating temperature	Operating temperature	Package
KTD1100-QNX	2.495V~2.505V	0.1mA	4.75~5.25V	12mA	780Hz	High sensitivity 1mV/mA	Analog Signal	-40~105°C	QFNWB3*3 24L

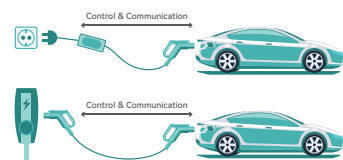
Applications

Fluxgate Magnetic Sensor Signal Conditioning ICs for Leakage Current Measurement

- EV charging stations
- Photovoltaic inverters
- ELCBs



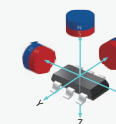
Standards clearance:
GB/T 22794
GB/T 50178
IEC 62955
IEC 62752



04 High Sensitivity 3D Hall Switch/Latch ICs

Series	Product name	Type	Operating voltage	Average current consumption	Operating frequency	BOP(Gs)	BRP(Gs)	Output interface	Operating temperature	Package
KTH46XX	KTH4603AA-STx	Omnipolar	2.5~5.5V	5.5uA@3.3V	2.5Hz	25/-25	12.5/-12.5	Open-drain output	-40~125°C	SOT-23-3L SOT-23-6L
	KTH4603AB-STx	Omnipolar	2.5~5.5V	8.0uA@3.3V	5.0Hz	25/-25	12.5/-12.5	Open-drain output	-40~125°C	SOT-23-3L SOT-23-6L

Sensing direction



Applications for Utility and Automotive

High sensitivity 3D Hall Switch/Latch ICs

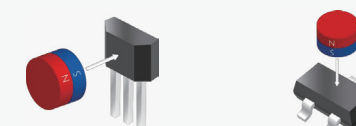
- Electricity meter anti-tampering
- Car sunroofs
- Water meters



05 Automotive Hall-effect Switch/Latch Sensor ICs

Series	Product name	Type	Operating voltage	Average current consumption	Operating frequency	BOP(Gs)	BRP(Gs)	Output interface	Operating temperature	Package
KTH2502 (AUTOMOTIVE)	KTH2502QA	Latch	2.7~32V	2.7mA	30KHz	15	-15	Open-drain output	-40~150°C	SOT-23-3L TO-92S
	KTH2502QB					30	-30			
	KTH2502QC					60	-60			
KTH2582 (INDUSTRIAL)	KTH2582NA	Latch	2.7~32V	2.7mA	30KHz	15	-15	Open-drain output	-40~125°C	SOT-23-3L TO-92S
	KTH2582NB					30	-30			
	KTH2582NC					60	-60			

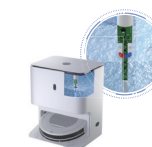
Hall sensing direction



Applications in Smart Traffic and Home Appliances

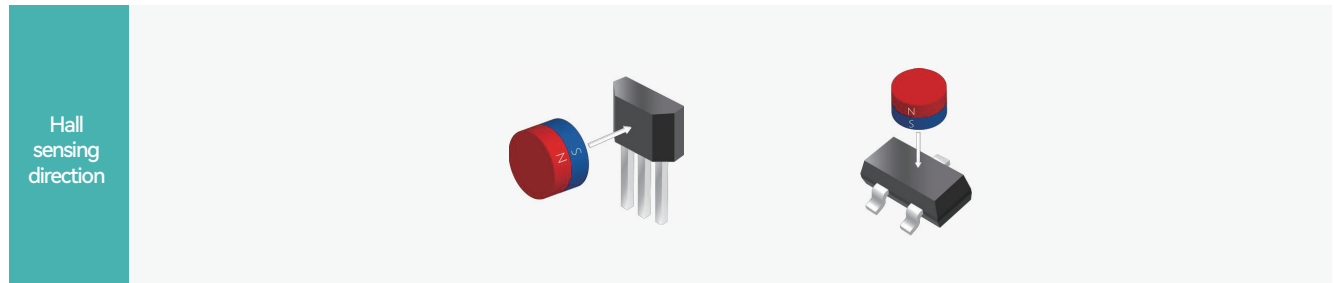
Automotive Hall Effect Switch /Latch Sensor ICs

- Safety belts
- Water heaters
- Car seats
- Toilet liquid level
- Mowers



06 Linear Hall-effect Sensor ICs

Series	Product name	Type	Operating voltage	Average current consumption	Sensitivity	Magnetic field range	Output interface	Operating temperature	Package
KTH5641	KTH5641A1	Linear	2.8-6.0V	3.3mA@5V	A1:1.5mV	A1: ±1600GS	Linear analog output	-40~125°C	SOT-23-3L TO-92S
	KTH5641A2				A2: 2.0mV	A2: ±1200GS			
	KTH5641A3				A3: 2.5mV	A3: ±960GS			
	KTH5641A4				A4: 3.0mV	A4: ±800GS			
KTH564A1	KTH564A1	Linear	2.8-6.0V	3.3mA@5V	1.5mV/Gs 2.0mV/Gs 2.5mV/Gs 3.0mV/Gs	1.5mV/Gs 2.0mV/Gs 2.5mV/Gs 3.0mV/Gs	Linear analog output	-40~125°C	DFN1616-6L
KTH5642	KTH5642A1	Linear	2.8-6.0V	3.3mA@5V	A1: 5.0mV	A1: ±480GS	Linear analog output	-40~125°C	SOT-23-3L TO-92S
	KTH5642A2				A2: 9.0mV	A2: ±266GS			
KTH5643	KTH5643A1	Linear	2.8-6.0V	3.3mA@5V	A1: 4.0mV	A1: ±1600GS	Linear analog output	-40~125°C	SOT-23-3L TO-92S
	KTH5643A2				A2: 7.0mV	A2: ±343GS			
	KTH5643A3				A3: 10mV	A3: ±240GS			
	KTH5643A4				A4: 13mV	A4: ±185GS			



Applications of Hall-effect Sensors

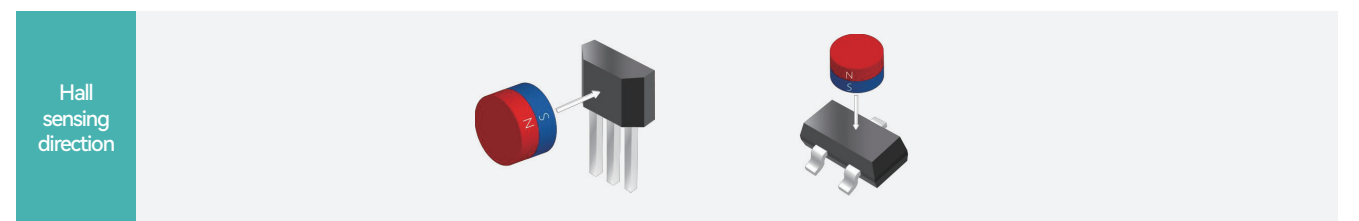
Linear Hall-effect Sensor IC

- Power Tools - for precise speed and position control
- Automotive Applications - for accurate sensing in vehicles
- Industrial Equipments - for robust detection and control in machinery



07 Hall-effect Switch/Latch ICs

Series	Product name	Type	Operating voltage	Average current consumption	Operating frequency	BOP(Gs)	BRP(Gs)	Output interface	Operating temperature	Package
KTH1601	KTH1601TH	Omnipolar	1.6~5.5V	3.3µA@1.8V	20Hz	46/-46	34/-34	CMOS	-40~85°C	SOT-23-3L TO-92S
	KTH1601SH			1.6µA@1.8V	5Hz					
	KTH1601TL			3.3µA@1.8V	20Hz					
	KTH1601SL			1.6µA@1.8V	5Hz					
	KTH1601SU			1.6µA@1.8V	5Hz					
KTH1611	KTH1611TH	S pole	1.6~5.5V	3.3µA@1.8V	20Hz	46	34	CMOS	-40~85°C	SOT-23-3L TO-92S
	KTH1611SH			1.6µA@1.8V	5Hz					
	KTH1611TL			3.3µA@1.8V	20Hz					
	KTH1611SL			1.6µA@1.8V	5Hz					
KTH1621	KTH1621TH	N pole	1.6~5.5V	3.3µA@1.8V	20Hz	-46	-34	CMOS	-40~85°C	SOT-23-3L TO-92S
	KTH1621SH			1.6µA@1.8V	5Hz					
	KTH1621TL			3.3µA@1.8V	20Hz					
	KTH1621SL			1.6µA@1.8V	5Hz					
KTH1604	KTH1604TH	Dual outputs unipolar	1.6~5.5V	3.3µA@1.8V	20Hz	46/-46	34/-34	CMOS	-40~85°C	HFBP 1010-4L
	KTH1604SH			1.6µA@1.8V	5Hz					
	KTH1604TL			3.3µA@1.8V	20Hz					
	KTH1604SL			1.6µA@1.8V	5Hz					
	KTH1604SU			1.6µA@1.8V	5Hz					
KTH1631	KTH1631FU	Latch	1.8~5.5V	2.25mA@1.8V	40KHz	-20/20	20/-20	CMOS	-40~85°C	SOT-23-3L TO-92S
KTH1605p	KTH1605PL	Omnipolar	1.6~5.5V	700µA@1.8V	5KHz	33/-33	23/-23	CMOS	-40~85°C	SOT-23-3L TO-92S
KTH1531 (Industrial)	KTH1531FU	Latch	1.8~5.5V	2.25mA@1.8V	40KHz	-22/22	22/-22	CMOS	-40~125°C	SOT-23-3L TO-92S
KTH1501 (Industrial)	KTH1501SL	Omnipolar	1.6~5.5V	1.6µA@1.8V	5Hz	33/-33	23/-23	CMOS	-40~125°C	SOT-23-3L TO-92S
KTH1642	KTH1642	Omnipolar	1.8~5.5V	10µA@3.0V	14.29Hz (70ms)	6~60/-60~-6	5~59/-59~-5	Open-drain output	-40~85°C	SOT-23-3L TO-92S QFN2020-3L
KTH1701	KTH1701FH	Omnipolar	1.8~5.5V	10.4uA@1.8V	500Hz	48/-48	28/-28	CMOS	-40~85°C	SOT-23-3L TO-92S
	KTH1701TH			2.4uA@1.8V	100Hz					
	KTH1701SH			0.9uA@1.8V	25Hz					
	KTH1701FL			10.4uA@1.8V	500Hz					
	KTH1701TL			2.4uA@1.8V	100Hz					
	KTH1701SL			0.9uA@1.8V	25Hz					
	KTH1701FU			10.4uA@1.8V	500Hz					
	KTH1701TU			2.4uA@1.8V	100Hz					
	KTH1701SU			0.9uA@1.8V	25Hz					
KTH1711	KTH1711TH	S pole	1.8~5.5V	2.4uA@1.8V	100Hz	50	35	CMOS	-40~85°C	SOT-23-3L TO-92S
	KTH1711SH			0.9uA@1.8V	25Hz					
KTH1721	KTH1721TH	N pole	1.8~5.5V	2.4uA@1.8V	100Hz	-50	-35	CMOS	-40~85°C	SOT-23-3L TO-92S
	KTH1721SH			0.9uA@1.8V	25Hz					
KTH1722	KTH1722CC	N pole	1.8~5.5V	2.25mA@1.8V	40kHz	-125	-90	Open-drain output	-40~85°C	SOT-23-3L TO-92S



High Voltage Applications

Hall-effect Switch/Latch ICs

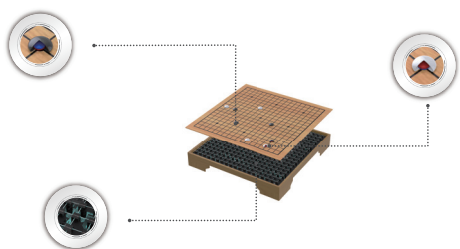
- Collision detection
- TWS earbuds
- Smart home
- Customer Safety
- Portable devices
- Comfort systems



Healthy Industry Applications

Hall-effect Switch/Latch ICs

- Energy management
- Automation systems
- Navigation systems
- Game systems
- Robotics



Home Applications

Hall-effect Switch/Latch ICs

- Wheel sensors
- Door sensors



08 Nano-power TMR Magnetic Switch/Latch ICs

Series	Product name	Type	Operating voltage	Average current consumption	Operating frequency	BOP(Gs)	BRP(Gs)	Output interface	Operating temperature	Package
KTM1301	KTM1301TA	Omnipolar	1.8~5.5V	1.9µA@3.0V	5000Hz	±45	±36	CMOS	-40~125°C	SOT-23-3L TO-92S
	KTM1301SA			160nA@3V	50Hz					
	KTM1301TB		1.8~5.5V	1.9µA@3.0V	5000Hz	±30	±21			
	KTM1301SB			160nA@3V	50Hz					
	KTM1301TC		1.8~5.5V	1.9µA@3.0V	5000Hz	±18	±12			
	KTM1301SC			160nA@3V	50Hz					
	KTM1301TD		1.8~5.5V	1.9µA@3.0V	5000Hz	±9	±6			
KTM1301SD	160nA@3V	50Hz								
KTM1301TE	1.8~5.5V	1.9µA@3.0V	5000Hz	±7	±4					
KTM1301SE		160nA@3V	50Hz							
KTM1311	KTM1311TA	S pole	1.8~5.5V	1.9µA@3.0V	5000Hz	45	36	CMOS	-40~125°C	SOT-23-3L TO-92S
	KTM1311SA			160nA@3V	50Hz					
	KTM1311TB		1.8~5.5V	1.9µA@3.0V	5000Hz	30	21			
	KTM1311SB			160nA@3V	50Hz					
	KTM1311TC		1.8~5.5V	1.9µA@3.0V	5000Hz	18	12			
	KTM1311SC			160nA@3V	50Hz					
	KTM1311TD		1.8~5.5V	1.9µA@3.0V	5000Hz	9	6			
KTM1311SD	160nA@3V	50Hz								
KTM1321	KTM1321TA	N pole	1.8~5.5V	1.9µA@3.0V	5000Hz	-45	-36	CMOS	-40~125°C	SOT-23-3L TO-92S
	KTM1321SA			160nA@3V	50Hz					
	KTM1321TB		1.8~5.5V	1.9µA@3.0V	5000Hz	-30	-21			
	KTM1321SB			160nA@3V	50Hz					
	KTM1321TC		1.8~5.5V	1.9µA@3.0V	5000Hz	-18	-12			
	KTM1321SC			160nA@3V	50Hz					
	KTM1321TD		1.8~5.5V	1.9µA@3.0V	5000Hz	-9	-6			
KTM1321SD	160nA@3V	50Hz								
KTM1331	KTM1331TA	Latch	1.8~5.5V	1.9µA@3.0V	5000Hz	45	-45	CMOS	-40~125°C	SOT-23-3L TO-92S
	KTM1331SA			160nA@3V	50Hz					
	KTM1331TB		1.8~5.5V	1.9µA@3.0V	5000Hz	30	-30			
	KTM1331SB			160nA@3V	50Hz					
	KTM1331TC		1.8~5.5V	1.9µA@3.0V	5000Hz	17	-17			
	KTM1331SC			160nA@3V	50Hz					
	KTM1331TD		1.8~5.5V	1.9µA@3.0V	5000Hz	9	-9			
KTM1331SD	160nA@3V	50Hz								
KTM1331TE	1.8~5.5V	1.9µA@3.0V	5000Hz	5	-5					
KTM1331SE		160nA@3V	50Hz							
KTM1302	KTM1302TA	Omnipolar	1.8~5.5V	1.9µA@3.0V	5000Hz	±45	±36	Open-drain output	-40~125°C	SOT-23-3L TO-92S
	KTM1302SA			160nA@3V	50Hz					
	KTM1302TB		1.8~5.5V	1.9µA@3.0V	5000Hz	±30	±21			
	KTM1302SB			160nA@3V	50Hz					
	KTM1302TC		1.8~5.5V	1.9µA@3.0V	5000Hz	±18	±12			
	KTM1302SC			160nA@3V	50Hz					
	KTM1302TD		1.8~5.5V	1.9µA@3.0V	5000Hz	±9	±6			
KTM1302SD	160nA@3V	50Hz								
KTM1302TE	1.8~5.5V	1.9µA@3.0V	5000Hz	±7	±4					
KTM1302SE		160nA@3V	50Hz							
KTM1304	KTM1304SB	Omnipolar	1.8~5.5V	160nA@3V	50Hz	±30	±21	CMOS	-40~125°C	DFN2*2-3L
	KTM1304SD		1.8~5.5V	160nA@3V	50Hz	±9	±6	CMOS		
	KTM1304SE		1.8~5.5V	160nA@3V	50Hz	±7	±4	CMOS		

TMR sensing direction



Home Applications

Nano-power TMR Magnetic Switch/Latch ICs

- Electric meters
- Smart locks
- Water meters



Industrial Applications

Nano-power TMR Magnetic Switch/Latch ICs

- Multi-function pens
- Portable scanners
- Security locks



Consumer Electronics

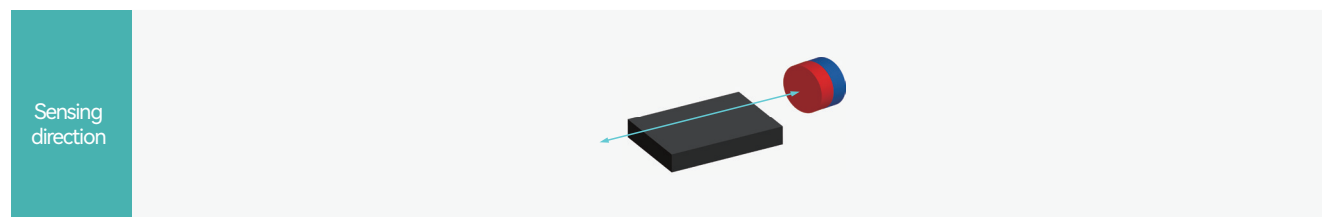
Nano-power TMR Magnetic Switch/Latch ICs

- Smart faucets
- Security cameras



09 AMR Magnetic Switch ICs for Air Cylinder

Series	Product name	Type	Operating voltage	Average current consumption	Operating frequency	BOP(Gs)	BRP(Gs)	Output interface	Operating temperature	Package
KTM280X	KTM2801	Omni	3~32V	70uA	4KHz	±18	±16	Open-drain output	-40~105°C	HFBP2*3-6L
	KTM2802									



Applications

AMR Magnetic Switch ICs for Air Cylinder

- High-voltage cylinder position detection sensors



10 Zero-Drift Zero-Offset Operational Amplifier ICs

Series	Product name	Channel	Supply voltage (VCC)	Input offset voltage (VOS)	Gain-bandwidth product (GBW)	Offset voltage drift over tem Input perature (dVos/dT)	Voltage noise (f = 0.1Hz ~ 10Hz)	Slew rate (SR)	Input bias current (IB)
KTA2333	KTA2333-MP8	Single or dual	1.8V-5.5V	2μV(TYP) 10μV(MAX)	350KHz	0.02μV/°C	1.1μVPP	0.16V/μs	+100pA
	KTA2333-SP8								
	KTA333-ST5								
KTAX333	Input offset current (IOS)	Input offset current (IOS)	Quiescent consum current ption (CMRR)	Power Supply rejection ratio (PSRR)	Open-loop gain (AOL)	Rail-to-Rail I/O	Temperature range	Package	
	±120pA	30μA	120dB	1μV/V	120dB	IN,OUT	-40~+125 °C	MSOP-88(Dual channel) SOP-88(Dual channel) SOT23-58(Dual channel)	

Instruments and Apparatus

Zero-Drift Zero-Offset Operational Amplifier ICs

- Temperature sensors
- Humidity sensors
- Air quality detectors



Signal Detection Applications

Zero-Drift Zero-Offset Operational Amplifier ICs

- Air pressure sensors
- Torque sensors
- Gas stove temperature detection



11 Temperature Sensor ICs

Series	Temp accuracy	Temp resolution	Operating voltage	Average current consumption	Standby current consumption	Feature	Interface type	Operating temperature	Package
KTP112	±0.5°C	0.0078°C (16 bits)	1.8~5.5V	5uA@1Hz	200nA	Programmable temperature alert limits	I2C,SMBus	-40~125°C	DFN2*2-6L

Applications

Temperature sensor ICs

- Thermometers
- Mobile devices
- PC docks
- Power converters
- Projection equipment

