



Ultra-Low Power Omnipolar Hall Effect Switch

The AH1911 and AH1921 are third generation ultra-low power omnipolar Hall effect switch ICs from Diodes' broad Hall effect switches family.

Due to the hibernating clocking system, the AH1911/AH1921 only consumes 1.6 μ A (@3V) in average, making the AH1911/AH1921 perfectly fit for battery-powered consumer products, e-meters, smoke detectors and IoT devices.

The wider range of supply voltage (1.6V to 5.5V) extends battery operating time and supports low voltage system microcontrollers, which provides great flexibility for system design.

The advanced chopper stabilized design can ease designers' mind for switching point drift over temperature and supply voltage. The AH1911/AH1921 have superior temperature stability among industrial peers.

The AH1911/AH1921 come in the industry-standard SC59 package and are available at Diodes' major distributors.



The Diodes Advantage

AH1911/21 provide a power saving, high reliable and wider input voltage hall effect switch solution for broad applications – from battery powered, home appliance to industrial

▪ **Ultra-low Power**

- Only 1.6 μ A @ 3V Ultra-low average supply current to extend battery lifetime, thanks to the hibernating clocking system design.

▪ **Wider Input Voltage Range**

- Wider operating input voltage range from 1.6V to 5.5V offered great flexibility for system design.

▪ **High Reliability and Very Stable Bop / Brp**

- Advanced Chopper stabilized design provides minimal switching point drift over supply voltage range and superior temperature stability
- High ESD voltage rating of 6kV (HBM)

Applications

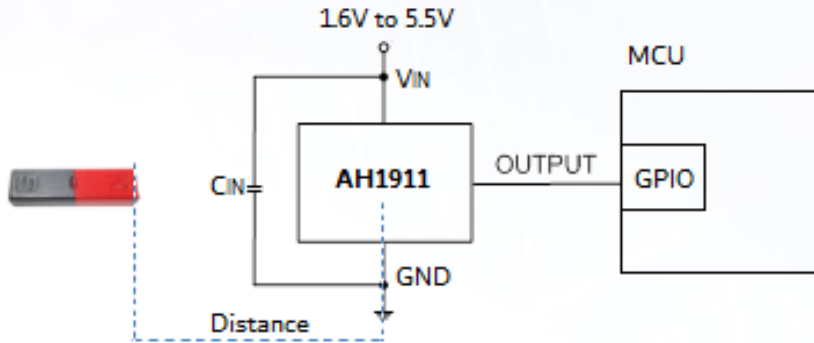
- Smart Cover or Dock detection for Cellular Phones and Tablet PC
- Medical Devices, IoT Systems
- Gas or Water Consumption Measurement in Remote, Battery-Powered Utility Meters
- Level, Proximity and Position Detection
- E-locks, Smoke Detectors, Home Appliances



New Product Announcement

AH1911/21

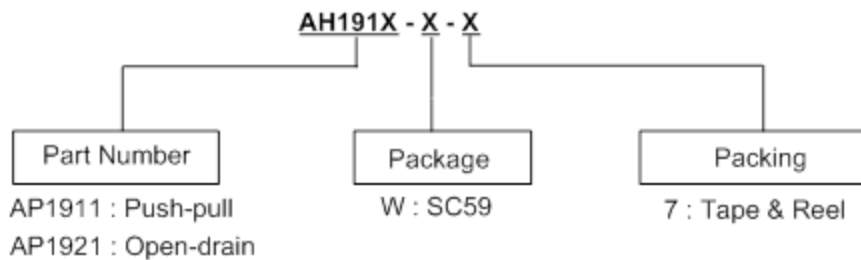
Typical Application Schematic



Product Portfolio

Part	Output Type	Operating Voltage (V)	Supply Current (μ A)	Reverse Protection	ESD (kV)	Operating Point (Bop) (Gauss)	Release Point (Brp) (Gauss)	Temp Range (°C)	Package
AH1911	Push Pull	1.6 to 5.5	1.6	Yes	6	\pm 60	\pm 45	-40 to + 85	SC59
AH1921	Open Drain	1.6 to 5.5	1.6	Yes	6	\pm 60	\pm 45	-40 to +85	SC59

Ordering Information



Part Number	Packaging	Packaging Code	7" Tape and Reel	
			Tape Width	Quantity
AH1911-W-7	SC59	W	8mm	3000
AH1921-W-7	SC59	W	8mm	3000

For more information:

AH1911: <https://www.diodes.com/part/AH1911>

AH1921: <https://www.diodes.com/part/AH1921>