



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



## Contact us

Tel: +86-755-8981 8866 Fax: +86-755-8427 6832

Email & Skype: info@chipsmall.com Web: www.chipsmall.com

Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China



# Micro-Power Hall Effect Sensors MH04, MH21 and MH11/M12



## Contact Information:

Standex-Meder Electronics  
World Headquarters  
4538 Camberwell Road  
Cincinnati, OH 45209 USA

**Standex Americas (OH)**  
+1.866.STANDEX  
(+1.866.782.6339)  
info@standexelectronics.com

**Meder Americas (MA)**  
+1.800.870.5385  
salesusa@standexmeder.com

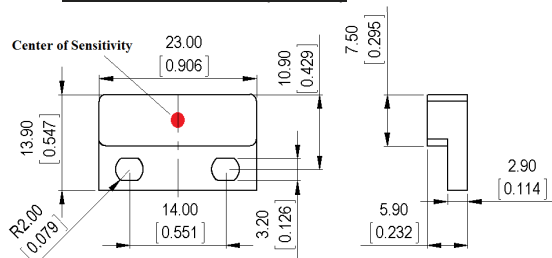
**Standex-Meder Asia (Shanghai)**  
+86.21.37820625  
salesasia@standexmeder.com

**Standex-Meder Europe (Germany)**  
+49.7731.8399.0  
info@standexmeder.com

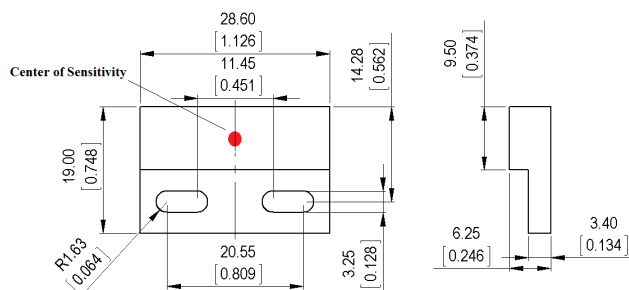
- Standex-Meder Hall Effect Sensors offer solid state reliability, low power consumption, and consistent activation points over a wide temperature range in a rugged and environmentally isolated package.
- Micro-Power versions operate on 2.5-3.5V battery voltage with only 5µA average supply current vs. the industry average of 5mA
- Custom options include: output- switch, latch, analog, angular, etc., high temperature resistance, package design and much more.
- Standex-Meder specializes in customizing designs to specific customer needs for a wide range of applications. Please contact us to provide the optimal solution for your specific needs.

### Dimensions in mm (inches)

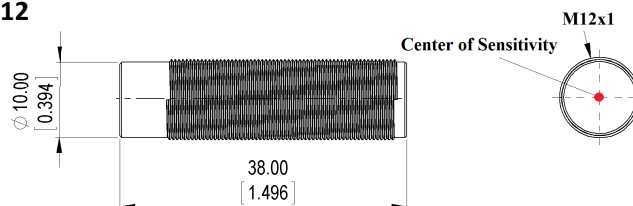
**MH04**



**MH21**



**MH11/M12**

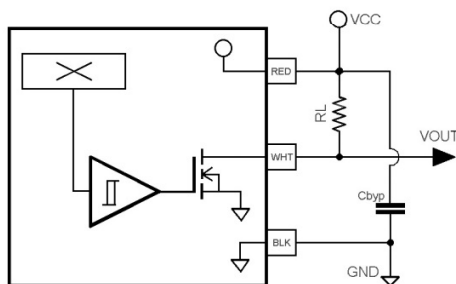


Electrical & Environmental Characteristics								
Specification	Conditions	Micro-Power Switch			Standard Switch & Latch			Unit
		Min	Typ	Max	Min	Typ	Max	
Supply Voltage	Operating	2.5	2.75	3.5	3		24	V
Output Leakage Current	$V_{OUT} = \text{Max Voltage}$		< 1	1			10	$\mu\text{A}$
Output On Voltage			100	300		185	500	mV
Awake Time			45	90				$\mu\text{s}$
Period			45	90				ms
Duty Cycle			0.1					%
Chopping Frequency			340			800		kHz
Supply Current	Chip Awake			2			4	mA
	Chip Asleep			8				$\mu\text{A}$
	$V_{CC} = 3.5\text{V}$		6.7	10				$\mu\text{A}$
	$V_{CC} = 12\text{V}$						4	mA
Operating Temperature		-40		+85*	-40		+85*	C
Storage Temperature		-65		+105	-65		+105	C

\*Higher temperature versions available

Magnetic Characteristics					
Specification	Conditions	Micro-Power Switch (Typ)	Standard Switch (Typ)	Standard Latch (Typ)	Unit
Operation Point	$V_{OUT} = \text{Low (Output On)}$	37	95	22	G
Release Point	$V_{OUT} = \text{High (Output Off)}$	31	70	-23	G
Hysteresis		5.9	25	45	G

Circuit Diagram for 3-wire Hall Effect Sensors



Notes:

- Add external pull-up resistor ( $R_L$ ) for sinking output between  $V_{CC}$  and  $V_{OUT}$ .
- Add external bypass capacitor ( $C_{BYP}$ ) close to the sensor to reduce external noise as needed.

Part Number Builder				
Series	Hall Model	Hall Function	Cable Length (mm)	Termination
MH04, MH21, MH11/M12	10 (Micro-Power)* 11 (Standard)	S (Switch) L (Latch) A (Analog)	500*	W (5mm stripped and tinned)*
	*Micro-Power version only available as switch function		*other lengths available	*other terminations available
<b>Example Part Number: MH04-10S-500W</b>				