

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

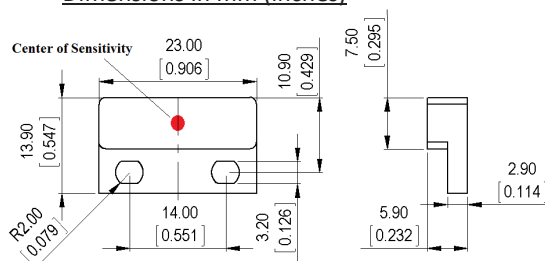
Standex-Meder Asia (Shanghai)
+86.21.37820625
salesasia@standexmeder.com

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

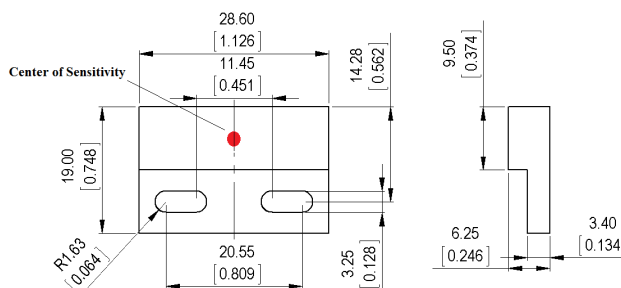
- Standex-Meder Hall Effect Sensors offer solid state reliability, low power consumption, and consistent activation points over a wide temperature range in a rugged and environmentally isolated package.
- Micro-Power versions operate on 2.5-3.5V battery voltage with only 5µA average supply current vs. 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)

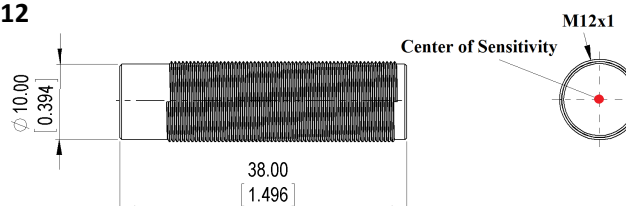
MH04



MH21



MH11/M12



Micro-Power Hall Effect Sensor

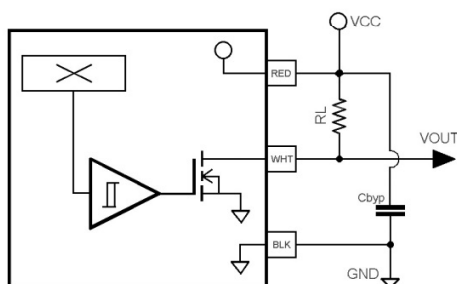
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Electrical & Environmental Characteristics								
Specification	Conditions	Micro-Power Switch			Standard Switch & Latch			Unit
		Min	Typ	Max	Min	Typ	Max	
Supply Voltage	Operating	2.5	2.75	3.5	3		24	V
Output Leakage Current	$V_{OUT} = \text{Max Voltage}$		< 1	1			10	μA
Output On Voltage			100	300		185	500	mV
Awake Time			45	90				μs
Period			45	90				ms
Duty Cycle			0.1					%
Chopping Frequency			340			800		kHz
Supply Current	Chip Awake			2			4	mA
	Chip Asleep			8				μA
	$V_{CC} = 3.5\text{V}$		6.7	10				μA
	$V_{CC} = 12\text{V}$						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) *Micro-Power version only available as switch function	S (Switch) L (Latch) A (Analog)	500* *other lengths available	W (5mm stripped and tinned)* *other terminations available
Example Part Number: MH04-10S-500W				