

NAME	HES-06-2MHT
TYPE	800-050-00E
Q' TY	1 3Y
No.	E003396-050E

NEMICON CORP.

Do not give vibration or shock. It may result in internal damage.



Model

HES- - 2M - - - - - 0 0

Resolution

002	20P/R	05	500P/R
003	30P/R	0512	512P/R
0032	32P/R	06	600P/R
004	40P/R	08	800P/R
005	50P/R	09	900P/R
006	60P/R	10	1000P/R
01	100P/R	1024	1024P/R
0125	125P/R	12	1200P/R
02	200P/R	15	1500P/R
0250	250P/R	18	1800P/R
0256	256P/R	20	2000P/R
03	300P/R	2048	2048P/R
036	360P/R	25	2500P/R
04	400P/R	36	3600P/R

Hollow Shaft Diameter

- 800 : $\phi 8$
- 635 : $\phi 6.35$
- 600 : $\phi 6$
- 500 : $\phi 5$

Cable Length

- 050 : 500mm (Standard)
- 100 : 1000mm
- 300 : 3000mm

Output Mode

- No Indication : Voltage Output
- C : Open Collector Output
- HC : Open Collector Output / High Voltage
- HCP : PNP Mode Open Collector Output / High Voltage
- HT : Push-Pull Output / High Voltage
- D : Line Driver Output
Low Power Consumption C-MOS Output Available

No Indication : 0 ther than D output

No Indication : D output with LS

C : D output with C-MOS

Signals ——— 2M : AB90° Phase Difference + Zero Signal

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Electrical Spec.

※1) at Maximum Output Current ※2) Maximum Source Current

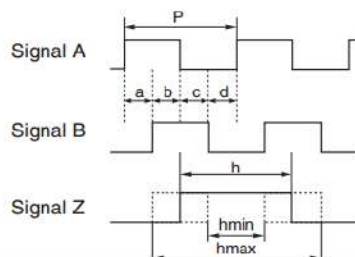
TYPE		2・2M	2C・2MC	2HC・2MHC	2HCP・2MHCP	2HT・2MHT	2MD
Supply Voltage		DC4.5 ~ 13.2 V			DC10.8 ~ 26.4 V		DC4.75 ~ 5.25V C-MOS DC4.5 ~ 5.5V
Requirement		80 mA Max	60 mA Max		100 mA Max	60 mA Max	150 mA Max C-MOS60 mA Max
Output Voltage	“H”	Within -1 Power Volt	—————		Within -1※ ² Power Volt	Within -3 Power Volt	2.5 V or More
	“L” ※ ¹	0.5 V Max			—————	3 V Max	0.5 V Max
Maximum Output Current		20 mA MAX				40 mA MAX	20 mA MAX
Rise & Fall Time		1 μs Max					200 ns Max
Maximum Frequency Response		200 kHz			50 kHz	200 kHz	
Withstanding Voltage of Output Tr.		—————	50 V MAX.		—————		

Wave Form.

CW → Rotating Toward Clockwise Viewed from an Arrow



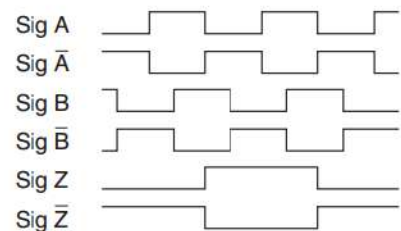
Rising point of A-Signal is always at one point while Z-Signal is at H-Level in CW.



$$P = \frac{1}{1\text{Resolution}}$$

$$a, b, c, d = \frac{P}{4} \pm \frac{P}{8} \quad \frac{P}{2} \leq h \leq \frac{3P}{2}$$

Wave Ratio (Duty); 50 ± 25 (%)



Electrical Connections

2M
2MC
2MHC
2MHCP
2MHT

Color of Lead Wire	Description
Red	Power Source
Black	0V Common
Green or Blue	Signal A
White	Signal B
Yellow	Signal Z
Shielding Braid	NC

2MD

Color of Lead Wire	Description	Color of Lead Wire	Description
Red	Power Source	White	Signal B
Black	0V Common	Gray	Signal B
Green	Signal A	Yellow	Signal Z
Blue	Signal A	Orange	Signal Z
Shielding Braid	NC		

Mechanical Spec.

Starting Torque		$9.8 \times 10^{-4} \text{ N} \cdot \text{m}$ Max
Angular Acceleration		$1 \times 10^5 \text{ rad/s}^2$
Shaft Loading	Thrust axial	9.8N
	Radial	29.4N
Moment of Inertia		$8 \times 10^{-7} \text{ kg} \cdot \text{m}^2$
Maximum RPM		6000r/min
Net Weight		120g Max

Environmental Spec.

Operating Temperature	$-10^{\circ}\text{C} \sim +70^{\circ}\text{C}$
Storage Temperature	$-30^{\circ}\text{C} \sim +80^{\circ}\text{C}$
Humidity	RH 85% Max No Condensation
Vibration	10~55 Hz / 1.5mm 2 h
Shock	294m/s ² , 11ms X, Y, Z Each 3 times
Degree of Protection	IP50