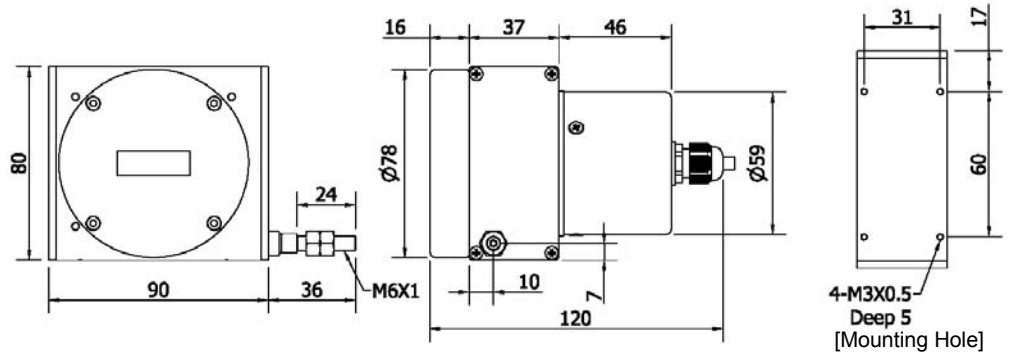


# HLS-M

# LINEAR WIRE ENCODER



## ELECTRICAL SPEC.

Detection System	Incremental 增量型
Output Wave 輸出波形	Square Wave 方波
Stroke (mm) 量測行程	500, 1000, 2000, 3000, 4000, 5000
Standard Resolution (mm/pulse) 解析	1, 0.5, 0.2, 0.1, *0.05 mm/pulse (*0.05 mm/pulse only for stroke: 500, 1000, 2000 mm)
Accuracy 精度	(stroke 500 ~ 1000 mm) $\pm 0.03\%$ FS, $\pm 1$ count; (stroke 2000 ~ 5000 mm) $\pm 0.05\%$ FS, $\pm 1$ count
Output Phase 輸出相	AB phase or ABZ phase
Electronics 電路特性	NPN Voltage, NPN Open Collector, Push Pull or Line Driver
Power Supply 供應電源	DC 8~26V, DC 5V fixed
Current Consumption 消耗電流	$\leq 60$ mA
Output Capacity 輸出容量	Sync. Current: 20 mA, Residual Voltage: 0.5V or less
Max. Response 最大響應頻率	10K Hz ~ 50K Hz
Phase Different 相位差	A, B phase different $90^\circ \pm 45^\circ$ (T/4 $\pm$ T/8), Z phase T $\pm$ T/2
Wave Form Rise / Fall 波形上下時間	2 $\mu$ s or less
Polarity 極性保護	Against Reverse Protection (not with DC 5V)

## MECHANICAL SPEC.

Wire Specification 線徑規格	Material: SUS304 with nylon coating (stroke < 3 m) Diameter: 0.6 mm; Breaking load: 16 Kg (stroke $\geq$ 3 m) Diameter: 0.7 mm; Breaking load: 23 Kg
Max. Travel Speed 最大往復速度	1,000 mm / sec.
Vibration 震動	10g (10 $\pm$ 1,500 Hz)
Shock 衝擊	20g per 11 ms
Cable 電線	$\phi 5.4$ , 100 cm long
Weight 重量	< 1,000g
Starting Torque on Spring 拉力	(stroke < 2 m) Max. 600 g; (stroke $\geq$ 2 m) Max. 900 g

## ENVIRONMENTAL SPEC.

Operating Temp. / Humidity 操作溫度/濕度	-15°C ~ 95°C, RH 35% ~ 90% (No Condensation)
Storage Temp. 儲存溫度	-20°C ~ 120°C
Protection 保護等級	IP64: Dust & Dripping Proof (only for encoder housing)
Life 壽命	Typical > 1 X 10 <sup>6</sup> cycles

## ORDERING INFORMATION

HLS-M	Measuring Range 量測行程	Resolution 解析	Output Phase 輸出相	Electronics 電路特性	Supply Voltage 供應電源	Connection 連接器
	05 : 500 mm    30 : 3000 mm	1 : 1 mm	Blank: AB phase	Blank: NPN Voltage	Blank: 8~26Vdc	Blank: Axial Cable
	10 : 1000 mm    40 : 4000 mm	05 : 0.5 mm	*Z: ABZ phase	C: NPN Open-Collector	5V: 5Vdc fixed	*R7: Radial 7 pin
	20 : 2000 mm    50 : 5000 mm	02 : 0.2 mm		PP: Push-Pull		*R10: Radial 10 pin
		01 : 0.1 mm		*L: Line Driver 5Vdc		
		005 : 0.05 mm		*HL: Line Driver 5~26Vdc		

\*0.05 mm/pulse only for stroke: 500, 1000, 2000 mm