HPS-S-D

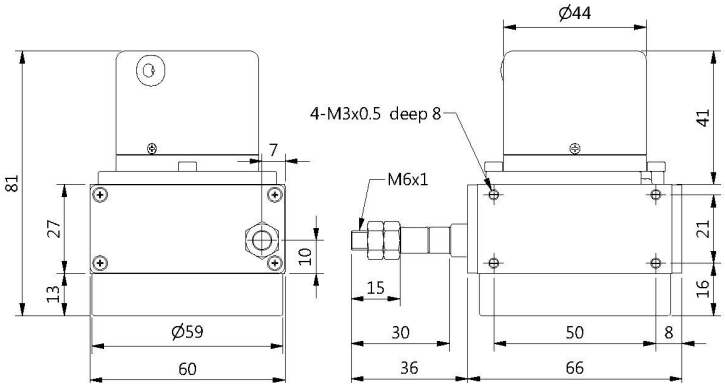
DISPLACEMENT SENSOR

LINEAR WIRE POTENTIOMETER

RS 485

- Stroke 行程: 500/1000 mm
- Interface: RS485 MODBUS RTU Output

DIMENSION



ORDERING INFORMATION

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Measuring Range 量測行程	Signal Mode 信號模式	Pot. Life & Linearity 壽命	Signal Sequence 信號輸出序列
05: 500 mm **10**: 1000 mm	**D**: RS-485	*__F__: 5 X 10^6 cycles, linearity 0.1% FS	***W**: Reversed

* *OPTION*

ELECTRICAL SPEC.

Full Stroke (mm) 量測行程	500,1000			
Sensor	Wire-wound and hybrid potentiometer			
Output Signal Mode 輸出信號模式	RS485 MODBUS RTU	RL	VH	VL
		50Ω	> 2V	< 0.2V
		27Ω	> 1.5V	< 0.2V
Resolution 解析	< 0.025%(mcu AD 解析) / 12 bit (4096)			
Linearity 線性度	[standard class] ±0.15% FS; [precision class] ±0.1% FS			
Repeatability 重覆性	±0.08% FS			
Input Power 供應電壓	DC12-24 Vdc ± 20%			
Input Current 供應電流	20 mA max.			
Output Short Protection 輸出短路保護	Output short protection < 50mA			
Polarity Reverse Protection 極性保護	Input voltage polarity reverse protection 8~26 Vdc			

MECHANICAL SPEC.

Wire Specification 線徑規格	Material: SUS304 with nylon coating; Diameter: 0.7 mm
Starting Torque on Spring 拉力	< 600 g
Max. Travel Speed 最大往復速度	500 mm / sec.
Vibration 震動	10-55 Hz / 1.5 mm Vpp / 10 G (max.)
Cable 電線	Ø4.5, 100 cm long
Weight 重量	< 450 g

ENVIRONMENTAL SPEC.

Operating Temp. / Humidity 操作溫度/濕度	-0°C ~ 70°C, RH35% ~ 90%(No Condensation)
Storage Temp. 儲存溫度	-20°C ~ 80°C
Protection 保護等級	IP50: Dust Proof (only for potentiometer housing)

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RS485 MODBUS RTU Communication Protocol

Baud Rate 傳輸速度	19200 (Programming 可修改)
Data Bit 資料位元	8 (Fix 固定)
Parity Check 極性檢查	N (Fix 固定)
Stop Bit 停止位元	2 (Fix 固定)
Device Address 產品位址	00 (Programming 可修改)

8, N, 2 RTU: 11 bytes(1 start bytes + 8 data bytes + 2 stop bytes)

START BIT	0	1	2	3	4	5	6	7	STOP BIT	STOP BIT
	8 data bytes									
	D1 01h	D2 03h	D3 00h	D4 55h	D5 00h	D6 03h	D7 CRCL	D8 CRCH		

8 data bytes = 6 data bytes + 2 bytes CRC

6 data bits (Readout Data): **01** **03** **0000** **0000**

D1	D2	D3 / D4	D5 / D6
01	**03**	**0003**	**0001**
Device Address	Readout Code		Readout Data Value(16h)

Readout Data Address	Readout Data
0003	0~10000

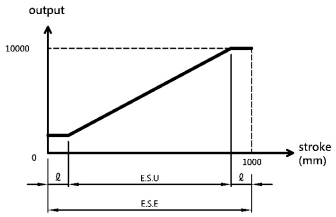
6 data bits (Write Data): **01** **06** **0000** **0000**

D1	D2	D3 / D4	D5 / D6
01	**06**	**0000**	**0000**
Device Address	Write Code		Write Data Value(16h)

Write Data Address	Set Data Address	Data Value
0000	Write Address	0000~00FF(256)
0001	Write Baud Rate	0001~0005(5) 0001: 9600 0002: 19200 0003: 38400 0004: 57600

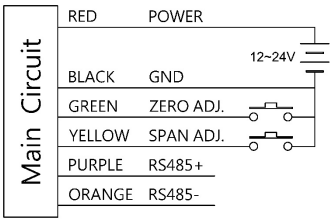
Factory Fault

original parameters



E.S.E. 有效電子行程 (mm)	500	1000
E.S.U. 使用電子行程 (mm)	5~495	5~995
Accuracy 精度	±0.15%FS	
Repeatability Error 重覆性誤差	±0.08%FS	

Electrical Connection



Programming of the start and end

- Pulling stainless wire according to the demand at the start position, connect signal ZERO (Green Wire) to GND (Black Wire) for a short circuit.
- Pulling stainless wire according to demand at the end position, connect signal SPAN (Yellow Wire) to GND (Black Wire) for a short circuit.

- 將鋼索拉至預計開始的行程，連接 ZERO (綠線) 和 GND (黑線) 短路至少 1 秒。
- 將鋼索拉至預計結束的行程，連接 SPAN (黃線) 和 GND (黑線) 短路至少 1 秒。