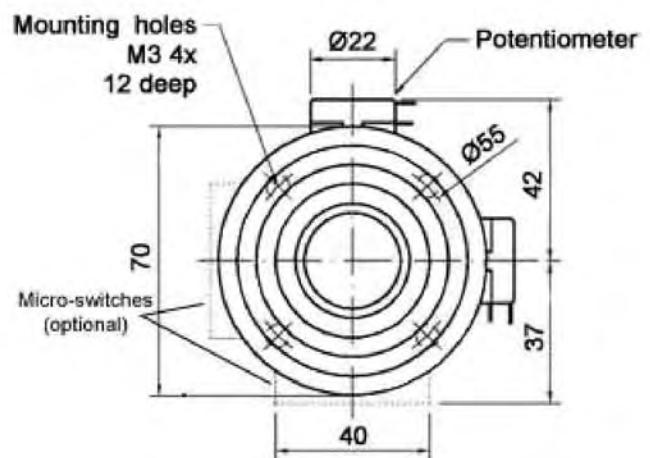
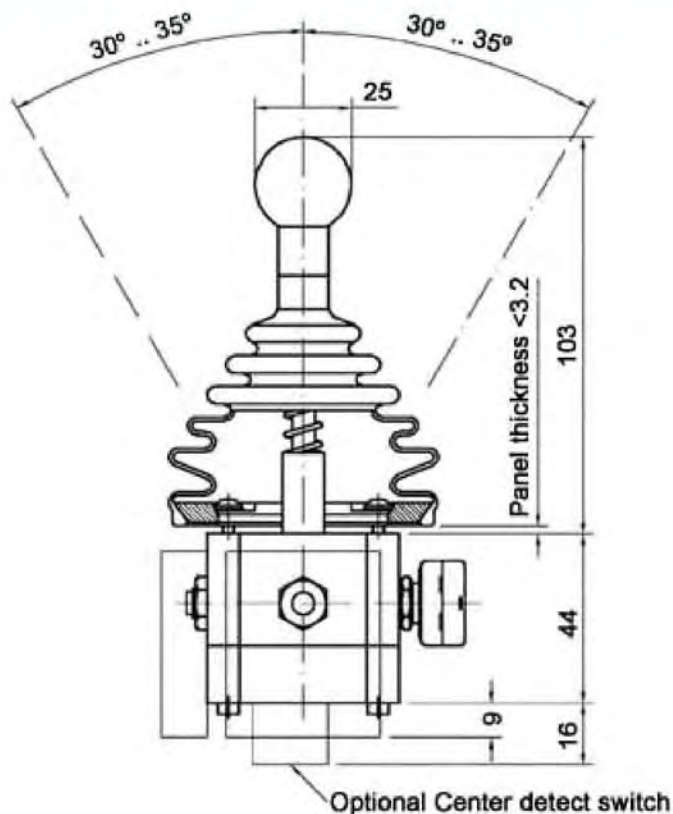


Heavy Duty Industrial Joystick - Model 826**重型搖桿控制器-型號826**

- * *Single or Dual Axis*
- * *Stainless Steel Shaft*
- * *Wide Operating Angle*
- * *Precision 10K Potentiometers*
- * *Directional Micro-Switches*
- * *Detents*
- * *IP65 (above panel)*



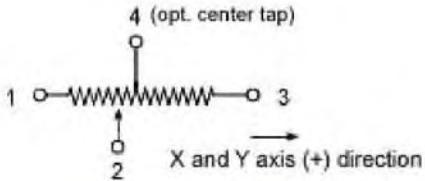
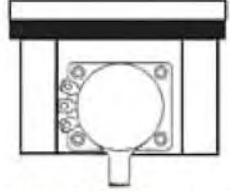
Robust construction and precision components comprise the customizable 826 series industrial joystick. Precision potentiometers, matched to the operating angle, are direct coupled to the joystick gimbal ensuring smooth, precise control throughout the operating angle. Directional or center detect micro-switches are optional as well as center or positional detents on either axis.

Joystick Standard Dimensions (mm) 搖桿開關標準尺寸

Joystick Mechanical Specifications 搖桿機械規格

Operating Angle	30° ~ 35° from center position (60° ~ 70° overall)
Operating Force	Approx. 3 to 15N (standard spring return)
Center Positioning Accuracy	50% ±1°
Operating Temperature	-30°C - +70°C
Storage Temperature	-30°C - +100°C
Vibration	10 - 55hz, 10g, 1 minute per MIL-STD-202F-204
Shock	30g per MIL-STD-202F-213
Weight	about 400 grams
IP Rating	65 (above panel)

Joystick Potentiometer Specifications 搖桿標準定位器規格

Resistance Value:	10K ohms ±15%		 <p>Optional Potentiometer Trim</p>
Electrical Angle:	60° ±10°		
Rotational Life:	5 million turns (typical)		
Power Rating:	0.15W		
Max. Wiper Current:	1mA		
Linearity Tolerance:	±1.5% (Independent)		
Resolution	Essentially infinite		

Handle Dimensions (mm) 手把尺寸



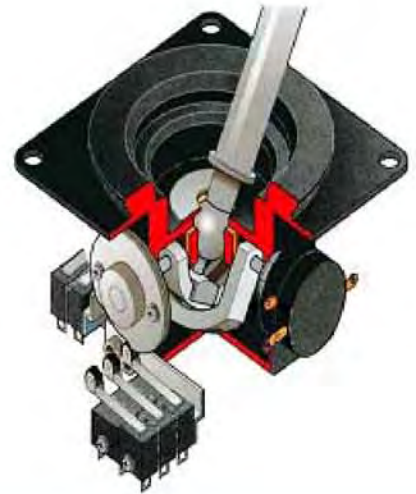
Pushbutton Handle (Type 6) 押扣手把-6型

Switch Type:	Momentary, SPST	 <p>Protective Pushbutton Cover</p>	 <p>Flexible metal sheathing protects wires</p>
Electrical Rating:	125VAC / 6A		
Life:	25,000 (min.)		
Lead Wires	AWG26, 300mm		

Axis Driven Micro-switches (activated by handle movement) 軸驅動微調開關(由手把移動)

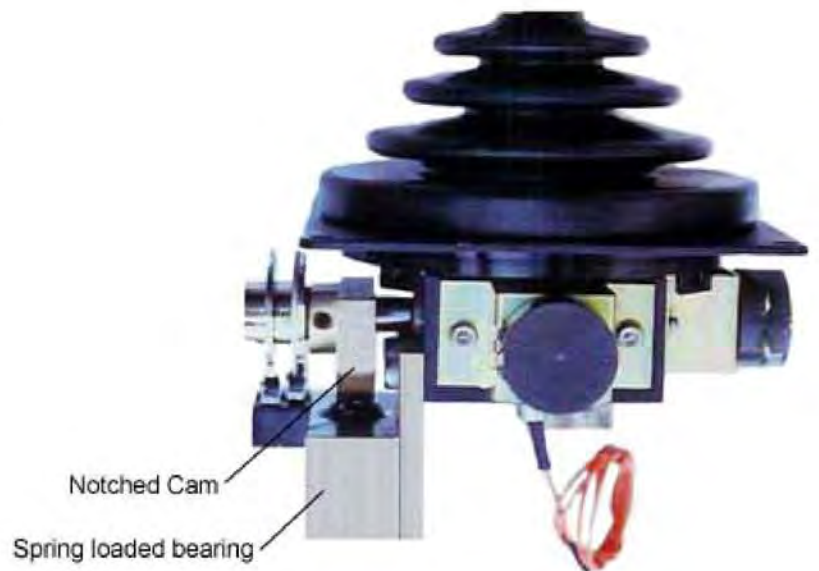
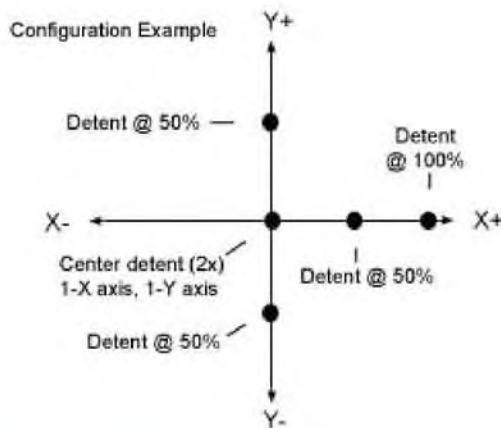
Precision machined cams, driven by operating the handle along the X and/or Y axis, activate micro-switches for detecting center (neutral) position, handle direction from center, or both.

Center Detect Switch	Switch Type:	SPDT (NO - C - NC)
	Electrical Rating:	125VAC / 5A
	Operational Life:	100,000
	Activation:	ON at center OFF at $\pm 5^\circ$ from center
Directional Switches	Switch Type:	SPDT (NO - C - NC)
	Electrical Rating:	125VAC / 5A
	Operational Life:	200,000
	Activation:	OFF at center ON at $\pm 5^\circ$ from center (std.) (can be specified)

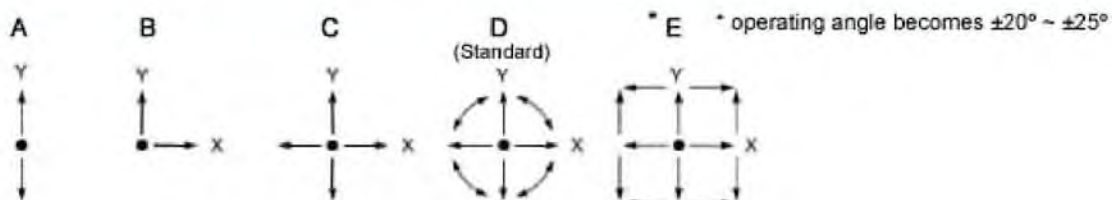


Detent Mechanism 掣子機構

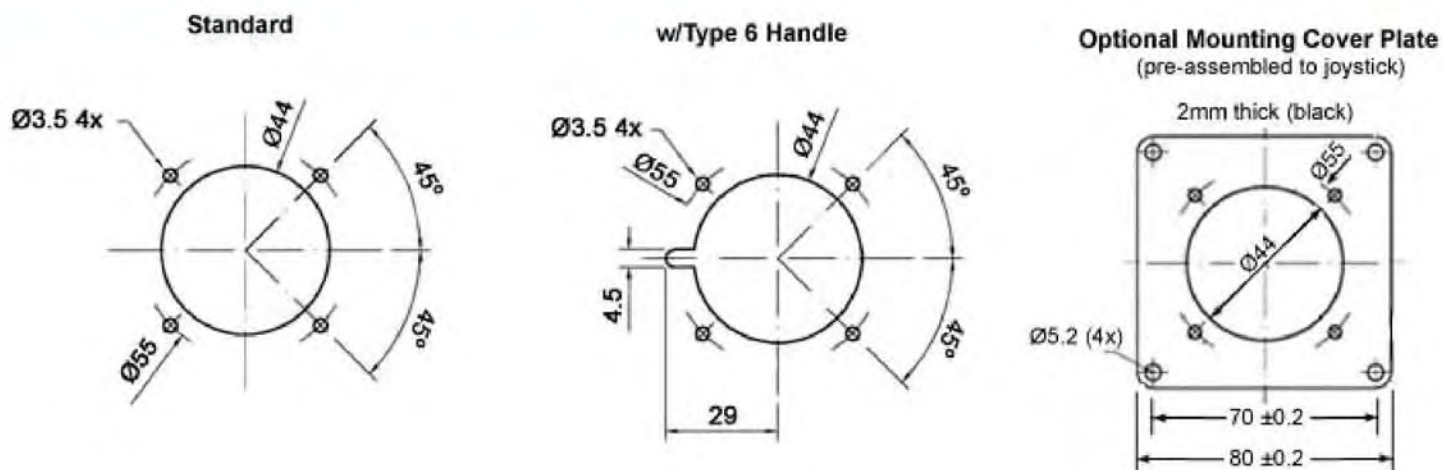
Machined cam with notches, locations specified by user, rides along spring loaded bearing. When notch and bearing align a distinct tactile feedback is produced. For spring return models, detent force is sufficient to maintain handle position. 3 detents per axis maximum.



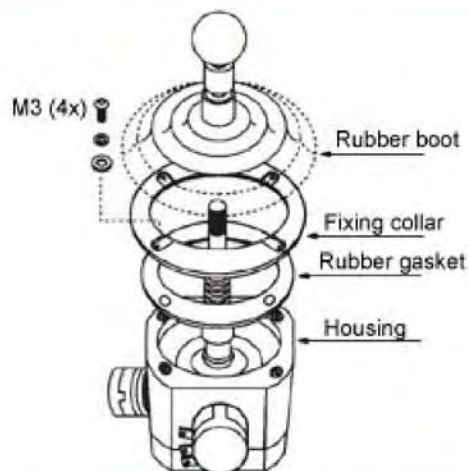
Handle Operating Patterns 手把操作圖樣



Panel Mounting Arrangements 框架安裝組合



Mounting Method 安裝方法



Mounting instructions (w/out optional mounting plate)

1. Turn up rubber boot
2. Remove M3 screws (4x)
3. Locate housing to pre-drilled holes
4. Replace screws back through collar and gasket
5. Tighten

Additional Options 增加選項

- *Position hold - no spring(s)*
- *Center tapped potentiometers*
- *Multiple ganged potentiometers*
- *Multiple ganged switches*
- *Switch activation angle*
- *More*



HWE WANG ENTERPRISES INC.

No.178 SHYE RD., CHIANJEN DIST, KAOHSIUNG(80672) TAIWAN / TEL:886-7-8317878 / FAX:886-7-8311789 • 886-7-8224967

重型搖桿控制器-型號890

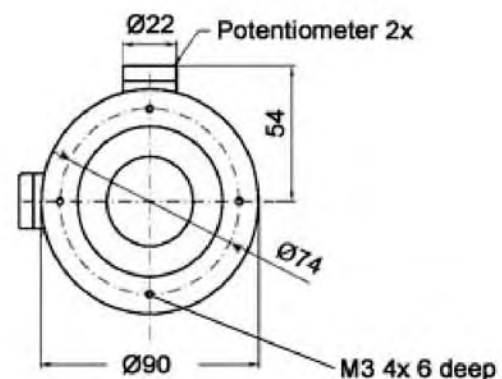
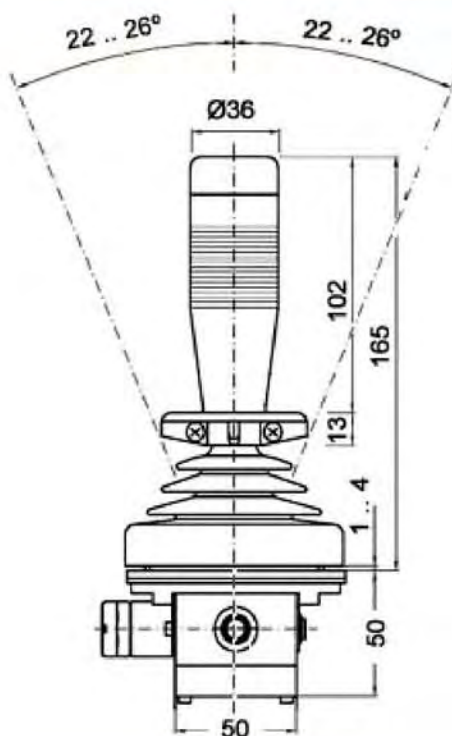
Heavy Duty Industrial Joystick - Model 890

- * *Single, Dual or Triple Axis*
- * *Stainless Steel Shaft*
- * *Robust Construction*
- * *Precision Sensors*
- * *Directional Micro-Switches*
- * *Detents*
- * *IP65 (above panel)*



Robust construction and precision components comprise the customizable 890 series industrial joystick. Precision potentiometers (or inductive sensors), matched to the operating angle, are direct coupled to the joystick gimbal ensuring smooth, precise control throughout the operating angle. Directional or center detect micro-switches are optional as well as center or positional detents on either axis.

Joystick Standard Dimensions (mm) 搖桿開關標準尺寸



Joystick Mechanical Specifications 搖桿機械規格

Operating Angle (X & Y axis)	22° ~ 26° from center position (44° ~ 52° overall)
Operating Angle (Z axis)	45° ~ 50° from center position (90° ~ 100° overall)
Operating Force (X & Y axis)	Approx. 2 to 12N (standard spring return)
Operating Force (Z axis)	Approx. 2 to 12N (standard spring return)
Center Positioning Accuracy	50% ±1.5%
Operating Temperature	-20°C - +70°C
Vibration	10 - 55hz, 10g, 1 minute per MIL-STD-202F-204
Shock	30g per MIL-STD-202F-213
Weight	about 650 ~ 750 grams
IP Rating	65 (above panel)

Joystick Standard Potentiometer Specifications 搖桿標準定位器規格

Resistance Value:	10K ohms ±15%		<p>Opt. Potentiometer Trim X & Y Axis Only</p>
Electrical Angle: X & Y axis	44° ~ 52°		
Electrical Angle: Z axis	90° ~ 100°		
Rotational Life:	5 million turns (typical)		
Power Rating:	0.2W (0.3W Z axis)		
Max. Wiper Current:	1mA		
Linearity Tolerance:	±3% (Independent)		
Resolution	Essentially infinite		

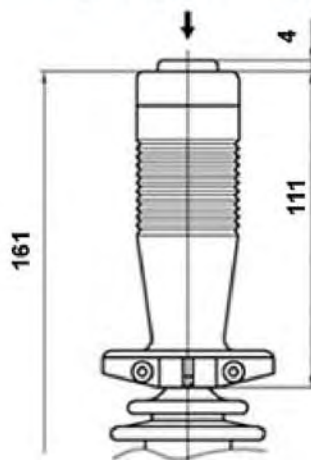
搖桿選用無接點感應器規格, 軸只有X和Y

Joystick Optional Contact-less Sensor Specifications: X & Y Axis Only

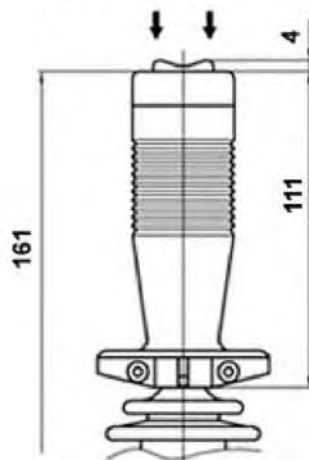
Supply Voltage:	5VDC		
Output Voltage:	1.52V ~ 3.48V		
Rotational Life:	10 million turns (typical)		
Linearity Tolerance:	±0.5% (Independent)		
Load Resistance:	>10K ohms		
Return to Center Accuracy:	50% ±1.5%		

Handle Dimensions (mm) 手把尺寸

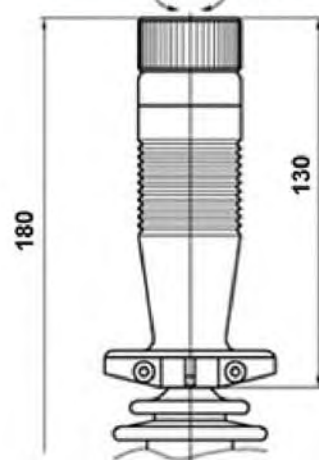
Type 6 (pushbutton)



Type A (rocker switch)



Type 8 (Z axis)



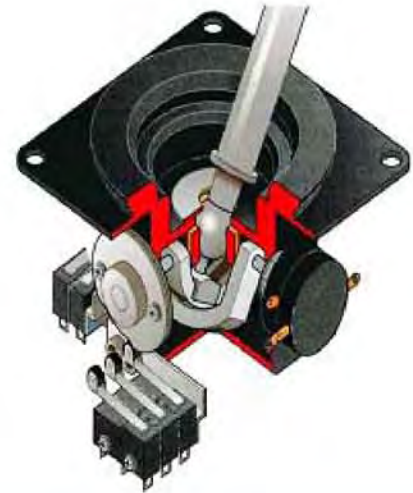
Pushbutton Handle Switch Ratings 押扣手把開關額定容量

Handle Type 6		Handle Type A	
Switch Type:	Momentary, SPST	Switch Type:	Rocker, SPDT
Electrical Rating:	250VAC / 10A	Electrical Rating:	250VAC / 10A
Life:	300,000 (min.)	Life:	300,000 (min.)
Lead Wires:	AWG26, 300mm	Lead Wires:	AWG26, 300mm

Axis Driven Micro-switches (activated by handle movement) 軸驅動微調開關(由手把移動)

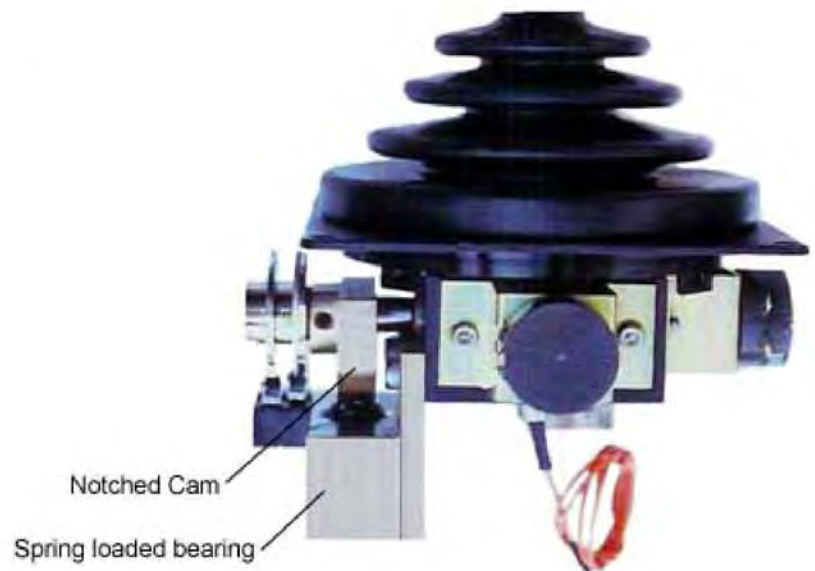
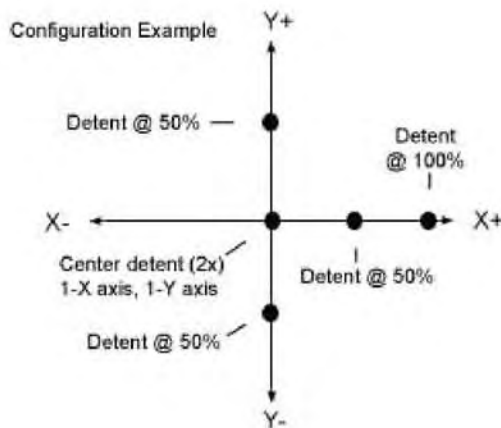
Precision machined cams, driven by operating the handle along the X and/or Y axis, activate micro-switches for detecting center (neutral) position, handle direction from center, or both.

Center Detect Switch	Switch Type:	SPDT (NO - C - NC)
	Electrical Rating:	125VAC / 5A
	Operational Life:	200,000
	Activation:	ON at center OFF at $\pm 5^\circ$ from center
Directional Switches	Switch Type:	SPDT (NO - C - NC)
	Electrical Rating:	125VAC / 5A
	Operational Life:	200,000
	Activation:	OFF at center ON at $\pm 5^\circ$ from center (std.) (can be specified)

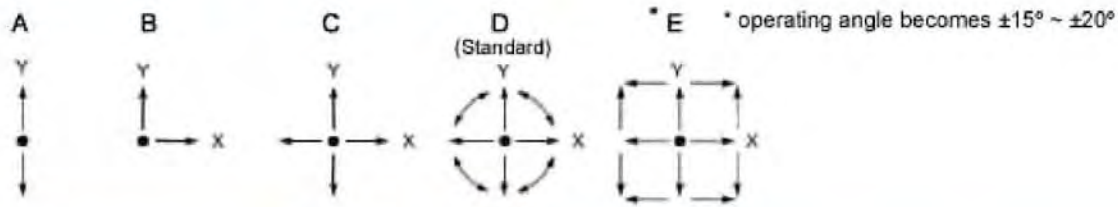


Detent Mechanism 掣子機構

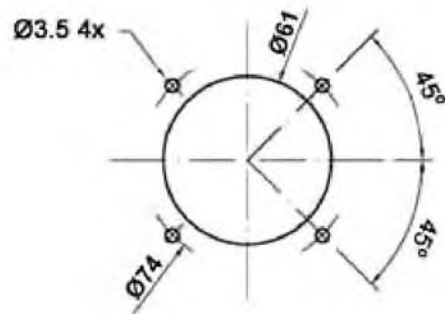
Machined cam with notches, locations specified by user, rides along spring loaded bearing. When notch and bearing align a distinct tactile feedback is produced. For spring return models, detent force is sufficient to maintain handle position. 3 detents per axis maximum.



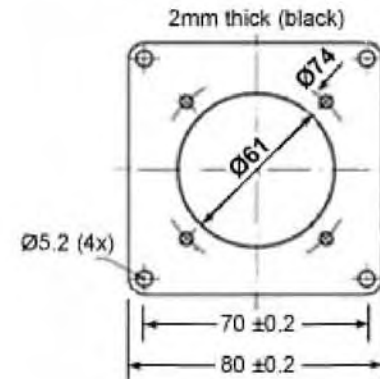
Handle Operating Patterns 手把操作圖樣



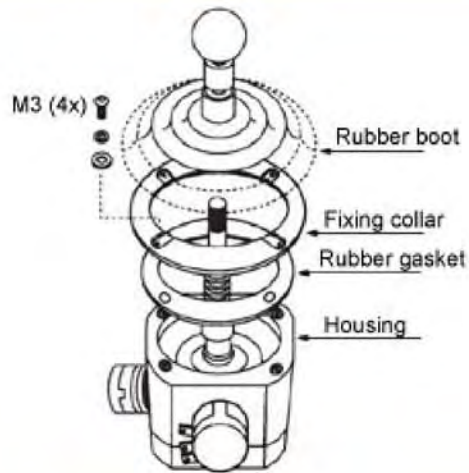
Panel Mounting Arrangements 框架安裝組合



Optional Mounting Cover Plate (pre-assembled to joystick)



Mounting Method 安裝方法



Mounting instructions (w/out optional mounting plate)

1. Turn up rubber boot
2. Remove M3 screws (4x)
3. Locate housing to pre-drilled holes
4. Replace screws back through collar and gasket
5. Tighten

Additional Options 增加選項

- Position hold - no spring(s)
- Center tapped potentiometers
- Multiple ganged potentiometers
- Multiple ganged switches
- Switch activation angle
- More



HWE WANG ENTERPRISES INC.

No.178 SHYE RD., CHIANJEN DIST, KAOHSIUNG(80672) TAIWAN / TEL:886-7-8317878 / FAX:886-7-8311789 • 886-7-8224967