



## P Series – Potentiometer Joysticks



### General Description

#### Potentiometer Joysticks

PML FlightLink P-Series Potentiometric joysticks incorporate high quality potentiometers in a compact, durable assembly suitable for a wide variety of electronic equipment. Options include plain, push-button or third axis knobs; narrow angle & center tapped pots. Built in electronic amplification & buffering are also optional & can further ensure simple interfacing.

### Features & Benefits

- Compact
- Precise
- Strong & Durable
- Long Life
- Single , Dual & Third Axis Versions
- Push Button Option
- Smooth Centering
- Internal or External Gaiters
- IP65 Simple Installation
- Low Profile
- Compact design



## Joystick Specification

### Electronic Specification

**Note:** As the performance in service of any potentiometer is outside the direct control of PML FlightLink, warranties in respect of potentiometer life is limited to that provided by the manufacturer of the potentiometer

### Standard Potentiometer

Track Value / tol	10k, 5k, 5k ohms Center Tap – all +/- 20%
Track Angle	300° (Standard) 55° (Optional)
Tapping Point	None (Standard) 5k ohms only (2° wide, voltage type)
Power Rating	1.0 Watt @70°C. De-rate to 0 @ 125° (300° track) 0.2 Watt @70°C. De-rate to 0 @ 125° (55° track)
Insulation Resistance	>1000 Meg ohms @ 500Vcc @20°C
Dielectric Strength	1000V RMS @ 50 Hz
Linearity	=/- 2%
Track Material	Plastic film
Output Smoothness	0.1% max
Permissible Load	Higher than 100k ohms for long life (see note above)
Alignment	=/- 0.5% of track, or as limited by potentiometers
Repeatability	=/- 0.2% of track (when new)

### Mechanical Specification

<b>Types</b>	Sprung to center(standard)
<b>Material</b>	
Frame	Mild Steel, Zinc-plated
Trunnion	Anodized HE30 Aluminum
Angle	Anodized HE30 Aluminum
Levers	Stainless steel
Shaft	Stainless Steel
Bush	Brass
Moldings	Nylon
Gaiters	PVC
Wire	Mechanism PVC insulated 144/0.12 3 <sup>rd</sup> axis 7/ 0.1
<b>Wiring Information (mechanism)</b>	
Pin 1	Common red (+ve supply)
Pin 2	X axis blue
Pin 3	Y axis yellow
Center Tap	Common black (-ve supply) Green (if present)
<b>Wiring Information (3<sup>rd</sup> Axis knobs)</b>	
Pin 1	Red (+ve supply)
Pin 2	Z axis green
Pin 3	Blue (-ve supply)
Push Button	White / yellow (if present)
<b>Mounting Dimensions</b>	
Hole Size	M25 mm std. 4 / 40 UNF optional
Spring Torque	Torque from center
	Weak                    0.7 kg cm Standard                1.0 kg cm Heavy                   1.7 kg cm



## Other Information

Amplified Outputs	Any gain / signal specification, with buffering of wipers is achievable using a PCB unit on the fixed pot (see application notes).						
Micro-switches	V4.5 amp 250V a.c. single pole changeover (see application notes)						
Mode	Center detect(1) or trips either side of center (2)						

## Order Codes – Main Mechanism

Sample Model Code	P	2		1	0	0*	
Code Position	(1)	(2)	(3)	(4)	(5)	(6)	(7)

(1) Series	P	Potentiometric Joystick				
(2) Mechanism / Axis	1					
	2	Dual axis (X + Y)				
	3	Three axis (X + Y + Z)				
(3) Lever Thread	2					
	4					
(4) Lever Mode	S	Standard spring				
	W					
	H	High force spring				
	F					
	D					
	E					
(5) Pot Values / Tracks	0					
	1	10k Ohms / 300° total track (standard)				
	2					
	3					
	4					
	5					
	6					
(6) Wiring	0	Not wired or special				
	1					
	2					
	5					
(7) Modifier	00	None				
	0*	Customer Specific				



## Order Codes – Knobs / Levers / Accessories

Sample Model Code	P	S	1	E	R	8	6	0	00	
Code Position	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)

(1) Series	P	Potentiometric Joystick
(2) Spring	0	
	S	Standard spring (third axis only)
(3) 3 Axis Pot Values / Track	0	
	1	10k Ohms / 300° total track (standard)
	2	
	3	
	4	
	6	
(4) Gaiter	0	
	B	
	E	External PVC, gaiter only
	I	
(5) Bezel / Limiter	0	None
	C	
	R	Round hole bezel
	S	
	X	
	I	
	E	
(6) Lever Lengths (§)	0	
	1	
	2	
	3	
	4	
	5	
	6	
	7	
	8	60 mm
(7) Lever Type	0	
	1	
	2	
	3	
	4	
	5	
	6	2BA tubular (third axis)
	7	



(8) Knob 0 None or Special

O A B C D E F G H K R S T U

### None or Special

3<sup>rd</sup> axis – Twist – Push button – Black

(9) **Wiring** 0 Not wired or special

0  
1  
2  
5

Not wired or special

**(10) Modifiers** 00 None  
0\* Customer special

00

None

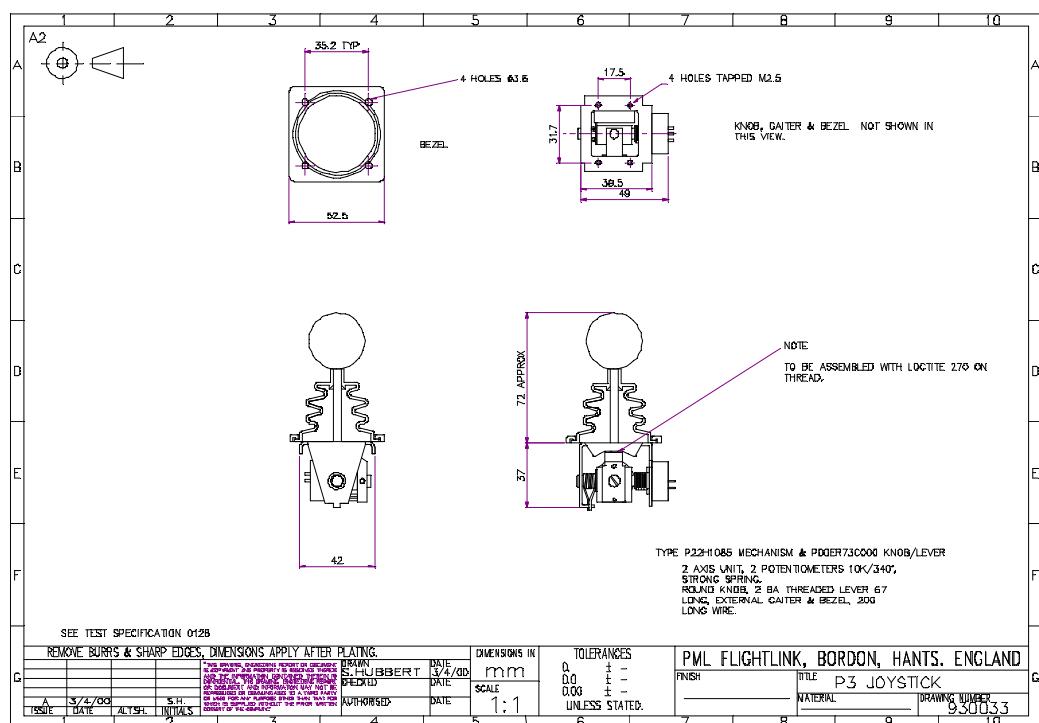
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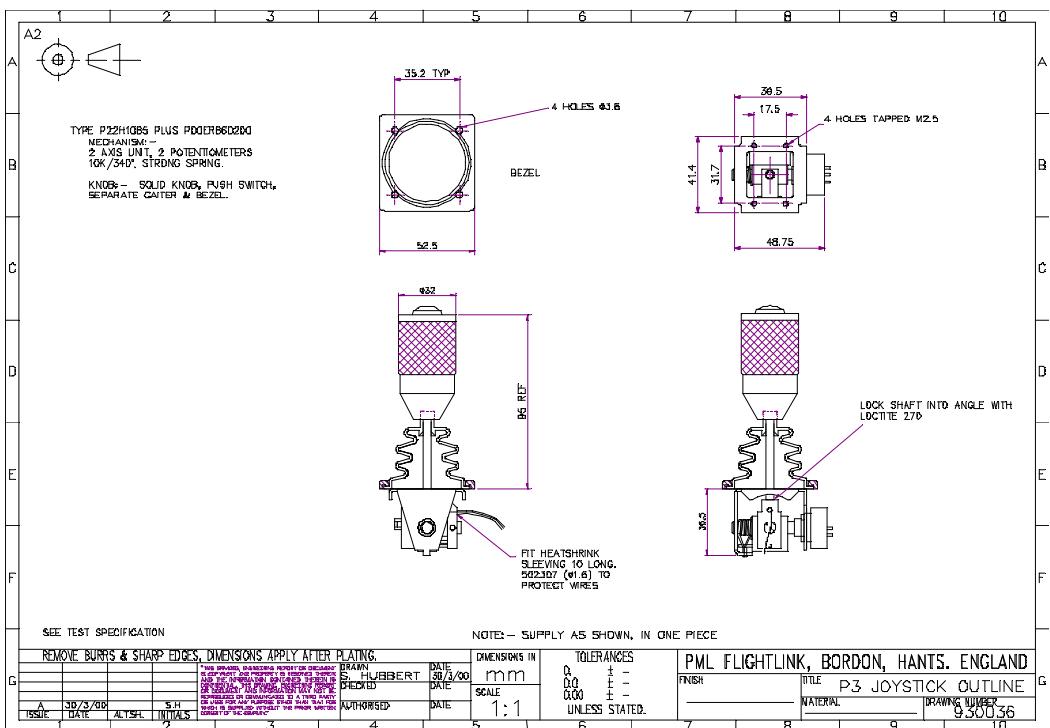
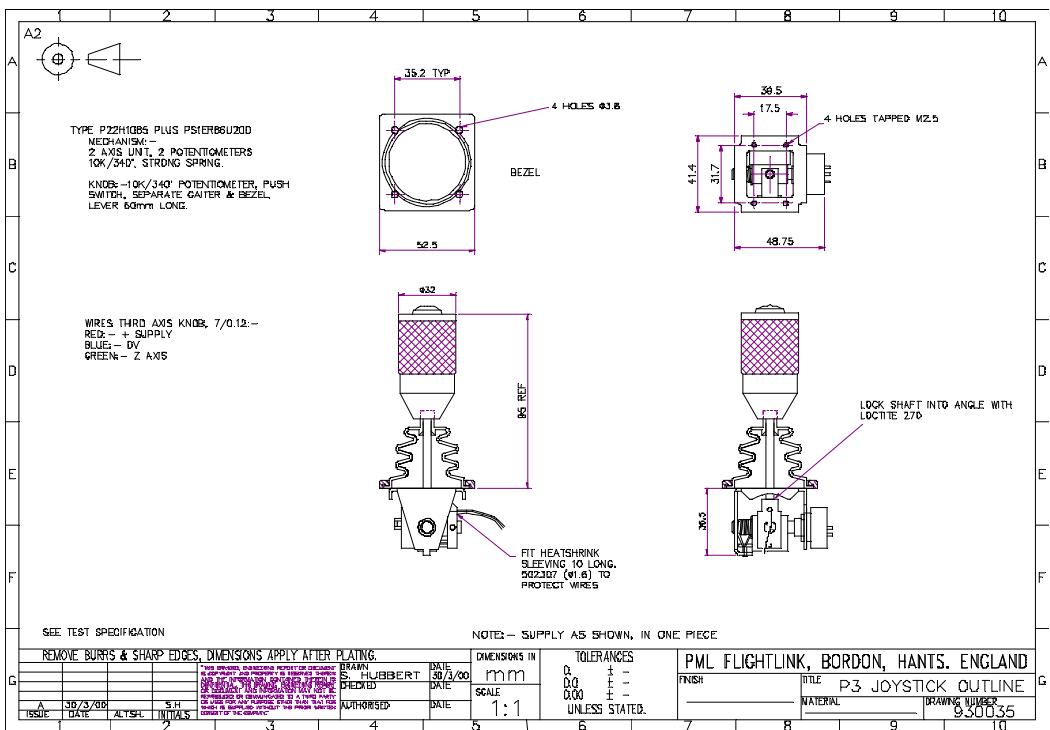
## Customer special

## Notes:

**Notes:** This information indicates standard product portfolio, further options do exist & are available on request

## Installation Details





PML FlightLink reserve the write to change content with out prior notification