

# JC120

## SINGLE AXIS JOYSTICK

Developed for applications where ergonomics and system integrity are paramount, the JC120 is a minimum width, low profile joystick that provides smooth, precise fingertip control in one axis with a choice of two lever lengths. The JC120 is sealed to IP66 to enable it to operate in extreme environments. Standing only 54 or 64mm high, the JC120 is less susceptible to unintentional operation. With all of the components contained within the handle, it is ideal for mounting in low profile panels and arm rests. Installation time has been reduced through the use of a standard electronic connector, and the joystick has been designed for maintenance-free operation throughout an operating life of greater than five million operations. An optional neoprene boot is available for the short handle version, allowing operation in environments where aggressive materials are present, protecting from dust and dirt ingress.

Typical applications include remote control chest packs and the control of construction, agricultural or material handling equipment.

### PERFORMANCE

#### MECHANICAL

		Short handle	Short handle with boot	Long handle
Breakout force	N	3.1*	3.8*	2.3*
Operating force	N	5.1*	13.2*	3.4* Full deflection
Maximum allowable force	N	50*	50*	35* Full deflection
Lever operating angle	°	±30	±30	±30 (or 0-60)
Lever action		Self centering	Self centering	Self centering or end return
Expected life (operations)		>5 million	>1million for boot (replaceable)	>5 million
Weight	g	45	47	45

\*At top of handle

#### ENVIRONMENTAL

Operating temperature °C -25 to +70

Storage temperature °C -40 to +85

Environmental protection above flange IP66<sup>†</sup> IEC 60529

<sup>†</sup>Seal integrity can only be achieved when using sealing gasket supplied and screws are tightened to 1Nm. Sealing gasket not required when neoprene boot is fitted to short handle version.

#### ELECTRICAL

##### Analogue Track

Resolution		Virtually infinite
Track resistance (±20%)	kΩ	4 or 5
Track electrical angle	°	±28
Output voltage range	%	0-100, 10-90 or 25-75 of input (±2%)
Center tap voltage (no load)	%	48 - 52 of applied voltage
Center tap angle	°	2.5 either side of center
Supply voltage - maximum	Vdc	32
Wiper circuit impedance	MΩ	Greater than 0.1**
Power dissipation @ 20°C	W	0.25 (no load)

\*\* The long life resistive elements require a high impedance load in the wiper circuit to minimise the current flowing through the wiper for optimum conditions

##### Switch - Directional or Center Off

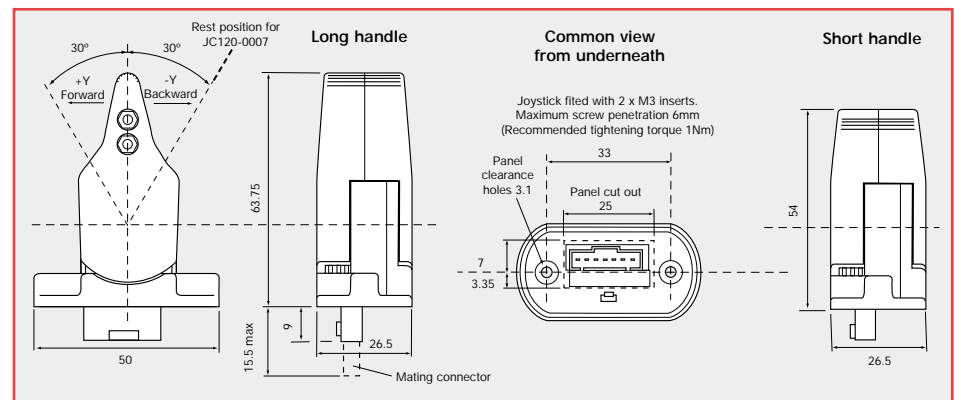
Switch operating angle	°	5 either side of center
Supply voltage - maximum	Vdc	35
Load resistance - minimum	kΩ	10
Load current - maximum	mA	2 (resistive)
Typical contact resistance	Ω	150

## ORDERING CODES

<b>Short handle</b>	0-100% output voltage range, 4k	<b>JC120-0001</b>
	with boot fitted	<b>JC120-0011</b>
	10-90% output voltage range, 5k	<b>JC120-0002</b>
	with boot fitted	<b>JC120-0012</b>
<b>Short handle</b>	25-75% output voltage range, 5k	<b>JC120-0003</b>
	with boot fitted	<b>JC120-0013</b>
<b>Long handle</b>	0-100% output voltage range, 4k	<b>JC120-0004</b>
	10-90% output voltage range, 5k	<b>JC120-0005</b>
	25-75% output voltage range, 5k	<b>JC120-0006</b>
<b>Long handle</b>	0-100% output voltage range, 4k	<b>JC120-0007</b>
	With lever return to backward position	
	Ask for full specification details	
<b>Mating connector</b>	With 0.5m flyleads	<b>SA301649</b>
<b>Neoprene boot</b>	For short handle version only	<b>P304856</b>

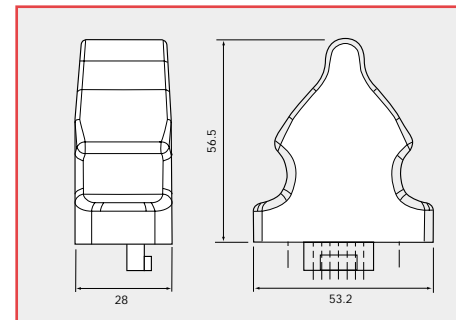
## DIMENSIONS AND MOUNTING OPTIONS

### JC120



### JC120 short handle - neoprene boot option

Recommended JC120 pitch spacing is 39mm minimum when neoprene boot is fitted



## ELECTRICAL CONNECTIONS

Connection

Mating connector kit (order separately)

7 pin Molex series latching male (70553-0006)

SA301649 (7 pin Molex series latching female with 0.5m flyleads fitted)

	Description	Pin Number	Mating Connector/Flylead colour
A	Center tap	A	Orange
B	Positive voltage supply	B	Yellow
C	Output voltage signal	C	Green
D	Negative or zero voltage supply	D	Blue
E	N/O switch, lever backward (-Y)	E	Red
F	N/O switch, lever forward (+Y)	F	White
G	Common terminal for switches	G	Black

Pin A and E are not connected on JC 120-0007