Data Sheet

JS120 Single Axis Fingertip Joystick

Mobile Machine Management

The JS120 single axis fingertip joystick is an element of the flexible, powerful, expandable, and affordable joystick family of mobile machine management products. The JS120 has been specially designed to provide proportional control in a slim low profile joystick that meets the harsh operating requirements of today's mobile machine market.

Ergonomic and Precise Operation

Developed for applications where ergonomics and precise proportional control are required, the JS120's slim low profile design provides smooth fingertip control with low operating forces that minimize repetitive stresses and operator fatigue.

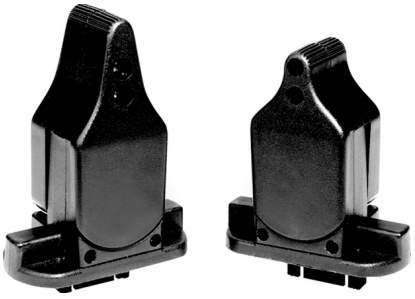
Compact Design

The compact design of the JS120 is ideal for improving operator panel layouts, and installs easily into chest packs and seating arm rests.

Multi-function

The long life conductive plastic potentiometer technology used in the JS120 to provide the ratiometric sensor output, also incorporates direction switch outputs for independent forward and reverse signals.

Local Address:



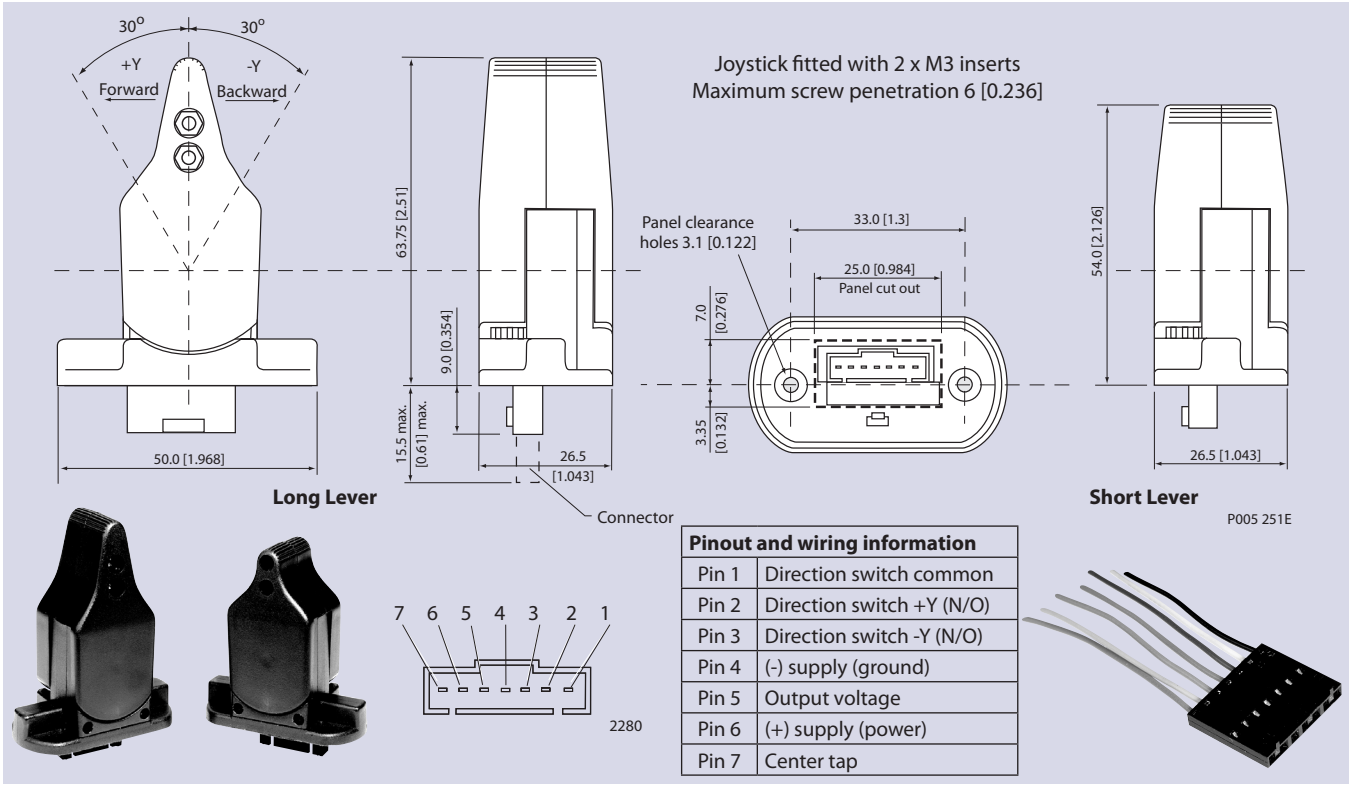
JS120 Long and Short Levers

Features and Options

- Long life potentiometric sensing
- Single axis
- Spring center return and end return options
- Slim profile with low operating forces
- Easy installation
- Operating life > 5 million cycles
- Output options:
  - 10 to 90 % Vs
  - 25 to 75 % Vs
- IP 66 environmental sealing above panel
- Independent direction switch signals.

Dimensions and installation Details

Dimensions in Millimeters [Inches]



Pinout and wiring information	
Pin 1	Direction switch common
Pin 2	Direction switch +Y (N/O)
Pin 3	Direction switch -Y (N/O)
Pin 4	(-) supply (ground)
Pin 5	Output voltage
Pin 6	(+) supply (power)
Pin 7	Center tap

Specifications

Electrical Characteristics

Sensor type	Potentiometric
Electrical angle of movement	± 28 degrees
Total track resistance	4 kΩ or 5 kΩ (± 20%)
Maximum supply voltage (Vs)	35 Vdc
Maximum wiper current	5 mA (non-destructive)
Maximum power dissipation	0.25 W at 20 °C [at 68 °F]
Wiper circuit impedance	200 kΩ minimum
Output voltage	10 to 90 % Vs 25 to 75 % Vs
Resolution	Infinite
Center tap voltage (no load)	50 % Vs ± 2%
Center tap angle	± 2.5° either side of centre (±1° tolerance)
Insulation resistance	> 50 MΩ at 500 Vdc
Connector	7 pin AMP series latching male
Switch operating angle	± 5° of center (± 1° tolerance)
Load resistance minimum	10 kΩ
Load current maximum	2 mA resistive

Mechanical Characteristics

Lever type	**Short lever**	**Long lever**
Breakout force (at lever tip)	3.1 N [0.70 lbf]	2.3 N [0.52 lbf]
Operating force (at tip, full deflection)	5.1 N [1.15 lbf]	3.4 N [0.76 lbf]
Maximum allowable force	50 N [11.24 lbf]	35 N [7.87 lbf]
Lever operating angle	± 30 degrees	
Lever action	Self centering or end return	
Expected life	> 5 million cycles	
Weight	0.045 kg [0.099 lb]	

Environmental Parameters

Operating temperature	-25°C to 70°C [-13 °F to +158°F]
Storage temperature	-40°C to 85°C [-40°F to +185°F]
Environmental sealing above the flange	IP 66 - BS EN 60529

Mating Connector – AMP MODU MTE Series

Connector	**AMP ordering number**
7 pin	103957-6

Mating Connector Assembly

Type	**Sauer-Danfoss ordering number**
7 pin with 610 mm [24.02 in] leads	10101762

Comprehensive technical information: *JS120 Single Axis Fingertip Joystick Technical Information*, **520L0877**
Sauer-Danfoss product literature is on line at: www.sauer-danfoss.com