



## JS6000 Joystick Base

### Mobile Machine Management

The JS6000 joystick base is an element of the flexible, powerful, expandable, and affordable joystick family of mobile machine management products. The JS6000 has been specially developed to meet the harsh operating requirements of today's mobile machine market. Combine the JS6000 joystick base with a standard or custom grip to configure a complete joystick solution.

### Versatile Design

The JS6000 joystick base is available with either contactless Hall effect sensors or long-life potentiometer sensors to meet the specific requirements of your most demanding applications.

### Reliable Performance

Hall effect sensor or potentiometer sensor options are both offered with single or dual sensors on each axis for redundancy in safety critical systems. Additional security can be added with optional mechanical neutral switches and an operator presence trigger switch.



JS6000 Joystick Base

### Features

- Hall effect or long-life potentiometer position sensing
- Redundant sensors
- Single (Y axis) or dual axis
- Optional mechanical neutral switches
- Two centering spring forces
- Three friction-hold forces
- Four output options:
  - Analog
  - CAN 2.0 B, J1939 protocol
  - CANopen protocol
  - High current PWM
- Operating life:
  - Potentiometer: > 7.5 million cycles
  - Hall effect: > 15 million cycles
- Environmental sealing – grip dependent
- Multiple grip options:
  - HKN – plain knob
  - MG – with operator trigger and hand rest
  - A – configurable ergonomic
  - No grip

See Sauer-Danfoss publication *JS6000 Joystick Grips Technical Information*, **520L0872** for detailed information on available grip options.

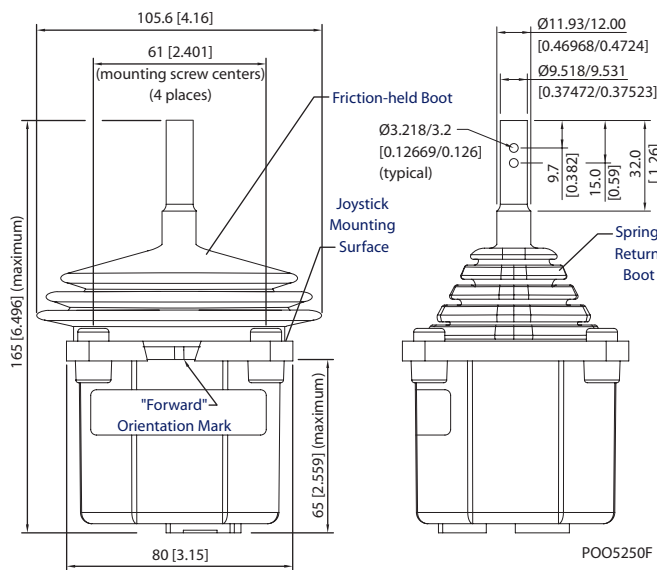
See Sauer-Danfoss publication *JS6000 Joystick Base Technical Information*, **520L0760** for technical details on all JS6000 versions.

See Sauer-Danfoss publication *JS6000 PWM Service Tool User Manual*, **11060942** for technical details on the JS6000 PWM Joystick Base and complete details regarding the use of the PLUS+1 GUIDE Service Tool interface for troubleshooting and configuring the device.

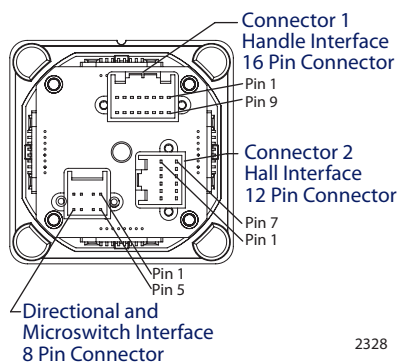
Obtain free Service Tool software license and download the P1D file at:  
<http://www.sauer-danfoss.com/Products/MobileElectronics/PLUS1Guide/PLUS1GuideDownloads/PLUS1GUIDEServiceToolSoftwareLicense/index.htm>

## Grip Dimensions and Installation Details

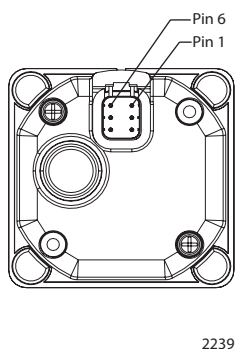
mm [in]



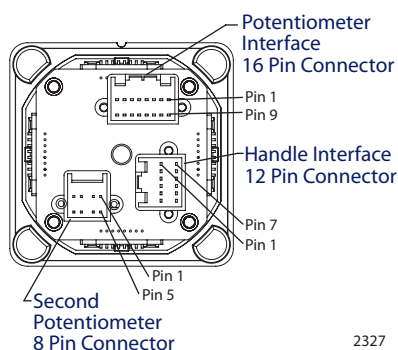
### Hall Sensor Analog



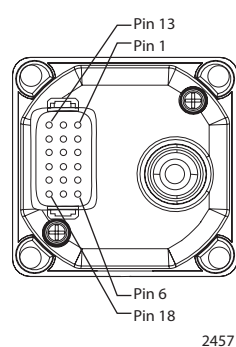
## CAN J1939 and CANopen



### Potentiometric Sensor Analog



## CAN+ and PWM



Comprehensive technical information  
(including pin assignments):

*JS6000 Joystick Grips, 520L0872*

*JS6000 Joystick Base, 520L0760*

Sauer-Danfoss product literature is on line at:  
[www.sauer-danfoss.com](http://www.sauer-danfoss.com)

## Specifications

### Electrical Characteristics

<b>Sensor type</b>	Long-life potentiometer
	Hall effect
<b>Resolution</b>	Infinite
<b>Supply voltage (Vs)</b>	Potentiometer: 9 to 36 Vdc
	Hall effect: 5 ± 0.5 Vdc
<b>Output</b>	Analog: 0.5 to 4.5 Vdc nominal
	CAN: 2.0 B, J1939 protocol and CANopen protocol
	PWM: 2.5 Amps maximum; Digital: 3.0 Amps maximum
<b>Hall effect sensor current consumption (base without grip)</b>	Hall effect with analog output: 50 mA
	Hall effect with CAN output: 100 mA

### Mechanical Characteristics

<b>Lever mechanical angle</b>	±20°
<b>Lever operating force</b>	Medium: 6 to 8.5 N [1.349 to 1.911 lbf]
	High: 12 to 19 N [2.698 to 4.271 lbf]
<b>Operating life</b>	Potentiometer: > 7.5 million cycles
	Hall effect: > 15 million cycles
<b>Vibration</b>	3 G random sinusoidal
<b>Shock</b>	20 G
<b>Weight (base without grip)</b>	0.75 kg [1.653 lb]

### Environmental Parameters

<b>Operating temperature</b>	-40°C to 80°C [-40°F to 176°F]
<b>Storage temperature</b>	-40°C to 85°C [-40°F to 185°F]
<b>Ingress protection rating grip dependent</b>	Above panel: IP 65, IP 66, IP 67
	Below panel: IP 66 for CAN, CAN+, and PWM models, IP 40 for analog models
<b>EMI/RFI rating</b>	100 V/m

## Pinout and Wiring Information

<b>Sensor and grip dependent</b>	Refer to comprehensive technical information *
----------------------------------	------------------------------------------------

### Related Product

<b>Mating connector assemblies</b>	<b>Sauer-Danfoss material number</b>
16 pin AMP® connector bag assembly	10101552
12 pin AMP connector bag assembly	10101020
8 pin AMP connector bag assembly	10101022
12 and 8 pin AMP connector bag assembly	10101023
6 pin Deutsch® connector bag assembly	10101551
18 pin Deutsch connector bag assembly	11012648
16 pin connector with 400 mm [15.75 in] leads	10101556
12 pin connector with 400 mm [15.75 in] leads	10101555
8 pin connector with 400 mm [15.75 in] leads	10101554
6 pin connector with 400 mm [15.75 in] leads	10101557
18 pin connector with 400 mm [15.75 in] wire harness	11012646