

Data Sheet

# Joystick

## JS1000 Joystick Base



### Rugged compact design

The unique design of the JS1000 joystick base incorporates contactless Hall effect sensors into a simple, compact and rugged mechanical construction for the most demanding applications. It is ideally suited for low clearance and armrest mounting, and yet withstands the most punishing environments.

### Environmental sealing

The JS1000 joystick base is designed and tested for use in harsh out of cab environments. It meets IP 67 environmental protection below the panel mount if the vent plug is installed. The vent plug is a base option. If it is not ordered, the base is not protected from below-panel particulate and moisture ingress. Environmental protection above the panel mount is IP 67 with the exception of the Pro grip option. The Pro grip is for in machine cab use only.



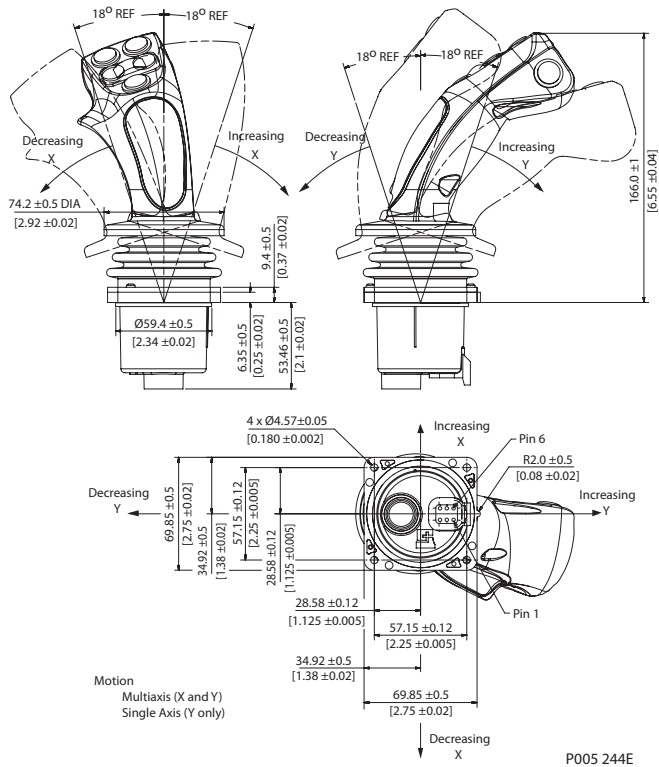
### Features

- Non-contacting hall effect sensing
  - Available redundant sensing per axis for CAN output configurations
- Single or dual axis
- X – Y axis guided
- Spring return to center
- Choice of two centering spring forces
- Operating life > 10 million cycles per axis
- Two output options:
  - 0.5 to 4.5 V<sub>DC</sub>
  - CAN 2.0 B, J1939 protocol
  - CAN 2.0 B, CANopen protocol
- IP 67 environmental sealing above panel (grip dependent)
- IP 67 environmental sealing below panel with vent plug installed (base dependent)
- Integrated 6 pin DEUTSCH DTM connector
- Multiple grip options:
  - Ball grip
  - Grip with analog rocker switch
  - Grip with analog banana switch
  - PRO style ergonomic grip, which offers a wide variety of configurable push-button switches and proportional roller switch functions. (Pro grip is not recommended in an open cab environment)
  - Custom designed grips to meet specific user requirements

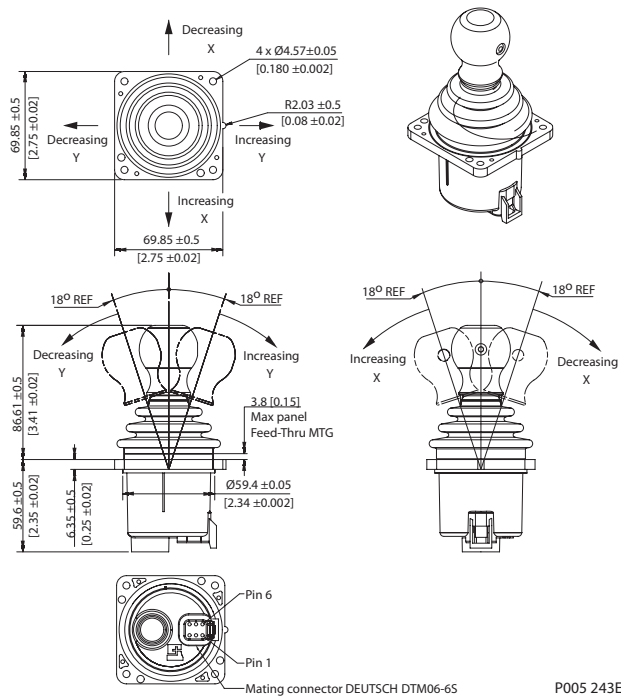
Comprehensive technical literature online at [powersolutions.danfoss.com](http://powersolutions.danfoss.com)

**Dimensions in millimeters [inches] and connectors**

**PRO Grip**



**Ball Grip**



**Pin assignments**

Pin	CAN	Analog
Pin 1	Ground	Ground
Pin 2	Power	Power
Pin 3	CAN high	X output signal
Pin 4	CAN low	Y output signal
Pin 5	CAN shield	Rocker switch
Pin 6	No connection	No connection

**Electrical characteristics**

<b>Sensor type</b>	Hall effect
<b>Resolution</b>	Infinite
<b>Supply voltage (Vs)</b>	Analog output: $5 \pm 0.5$ Vdc CAN: 9 to 32 Vdc
<b>Output</b>	Analog: 0.5 to 4.5 Vdc nominal CAN: 2.0 B, J1939 protocol
<b>Current consumption</b>	25 mA PRO grip = 150 mA

**Mechanical characteristics**

<b>Lever mechanical angle</b>	$\pm 18^\circ$ on axis
<b>Operating life</b>	> 10 million cycles
<b>Vibration</b>	7.67 Gs RMS
<b>Shock</b>	50 Gs
<b>Weight (base without grip)</b>	0.38 kg [0.838 lb]

**Environmental parameters**

<b>Operating temperature</b>	$-40^\circ\text{C}$ to $+80^\circ\text{C}$ [ $-40^\circ\text{F}$ to $+175^\circ\text{F}$ ]
<b>Storage temperature</b>	$-55^\circ\text{C}$ to $+85^\circ\text{C}$ [ $-67^\circ\text{F}$ to $+180^\circ\text{F}$ ]
<b>Protection</b>	Above panel ball grip: IP 67 (PRO grip IP 43 and IP 40 with proportional roller function) Below panel: IP 67 with vent plug installed
<b>EMI/RFI rating</b>	100 V/m

**Mating connector assemblies**

Type	Danfoss part number
6 pin DEUTSCH connector bag assembly	10101551
6 pin connector with 400 mm [15.75 in] leads	10101557