

## Torque Thrust Transducers Model 6459

008906

Issue 1

Datasheet



### DESCRIPTION

Model 6459 torque thrust transducers are used in applications where the need to sense both torque and thrust parameters simultaneously. Nickel-plated, alloy steel, one-piece construction. Designed specifically to provide the strength and rigidity required to withstand extraneous loads and bending moments. Unique construction provides both maximum structure life and minimum thrust/torque crosstalk.

### VALUE TO CUSTOMERS

- Capable of sensing both torque and thrust parameters simultaneously
- Independent torque and thrust connectors with output values

### DIFFERENTIATION

- Unique design offers enhanced accuracy performance with minimal crosstalk error, along with ability to handle extraneous loading conditions under high-cycle fatigue test situations

### FEATURES

- 500 lb-in torque, 500 lb thrust
- 1000 lb-in torque, 1000 lb thrust
- 2000 lb-in torque, 2000 lb thrust
- 0.15 % non-linearity and hysteresis
- Minimized crosstalk
- Extraneous load resistance
- Single piece construction
- Fatigue rated

### POTENTIAL APPLICATIONS

#### Industrial

- Material test machines
- Durability testing
- Structural/integrity testing
- Fatigue/endurance testing
- Metrology lab
- R&D center

### PORTFOLIO

The Model 6459 is part of a family of torque thrust transducers that includes [Models 6467-6470](#).

# Model 6469 Torque Thrust Transducer

**Table 1. Performance Specifications**

Characteristic	Measure
Torque-thrust range	500 lb-in torque, 500 lb thrust
	1000 lb-in torque, 1000 lb thrust
	2000 lb-in torque, 2000 lb thrust
Non-linearity	±0.15 % of rated output
Hysteresis	±0.15 % of rated output
Repeatability	±0.1 % of rated output
Output @ rated capacity	±1.5 mV/V (nominal) (Both components)

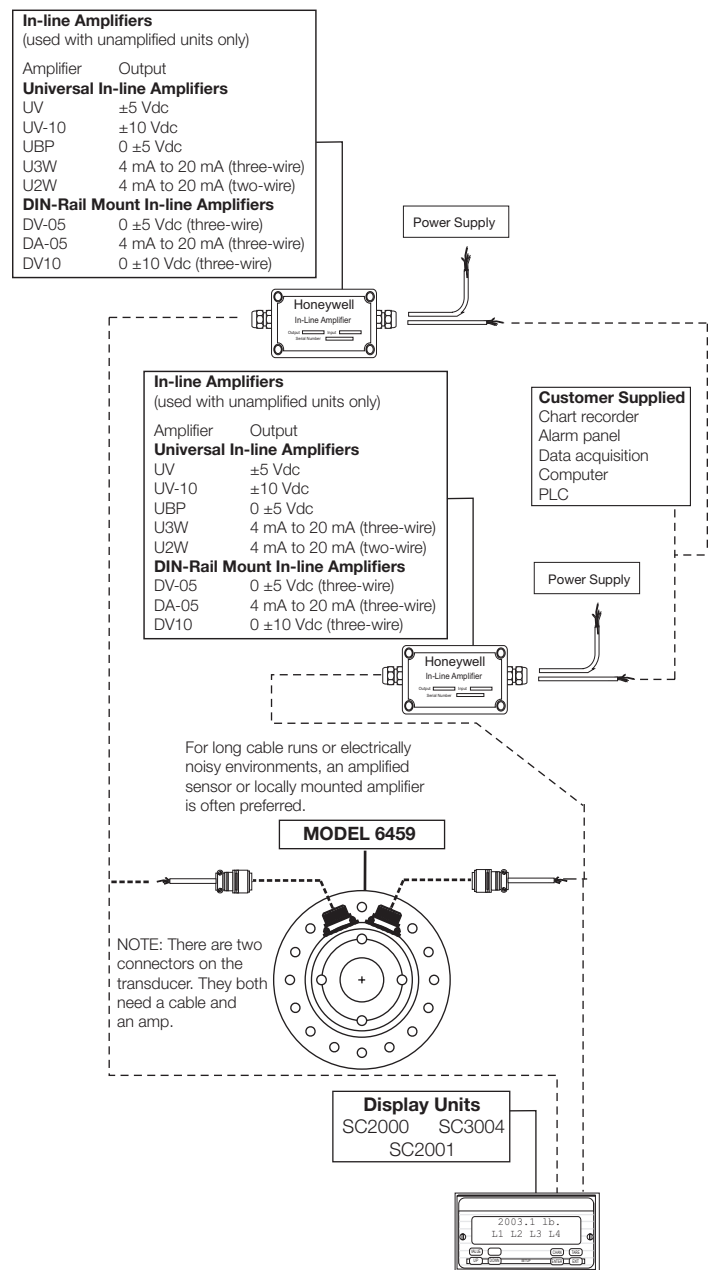
**Table 2. Environmental Specifications**

Characteristic	Measure
Temperature, operating	-54 °C to 93 °C [-65 °F to 200 °F]
Temperature, compensated	21 °C to 77 °C [70 °F to 170 °F]
Temperature effect, zero	±0.002 % of rated output/°F
Temperature effect, output	±0.002 % of reading/°F

**Table 3. Electrical Specifications**

Characteristic	Measure
Excitation (maximum)	20 Vdc or Vac RMS
Insulation resistance	> 5000 mOhm @ 50 Vdc
Bridge resistance	700 ohm (nominal)
Zero balance	±1 % of rated output
Static overload capacity	150 % of rated capacity

**Figure 1. Typical System Diagram**



**Mating Connectors and Cables**

- 064-LW13621 Mating connector
- 7200-76-XX\* Mating connector and six-conductor cable (unamplified unit with sense leads, but not shunt cal)
- 7200-75-XX\*\* Mating connector and four-conductor cable (unamplified unit without sense leads, but not shunt cal)
- 7200-111-XX\* Mating connector and six-conductor cable (for connection to instrument 7541)
- 7200-110-XX\*\* Mating connector and four-conductor cable (for connection to instrument 7541)

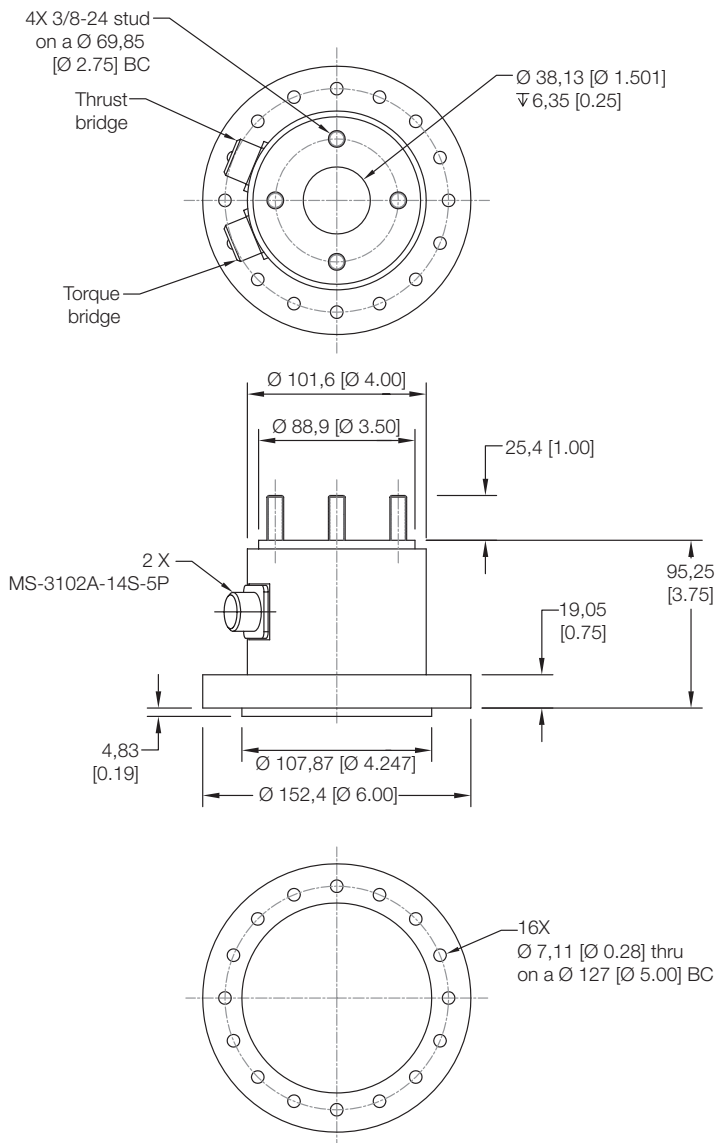
\* XX represents length in feet, 100 ft maximum

\*\* XX represents length in feet, 20 ft maximum

# Model 6459 Torque Thrust Transducer

**Figure 2. Mounting Dimensions**

For reference only, mm[in]



## Torque Thrust Transducers

Model 6467

008907

Issue 1

Datasheet



### DESCRIPTION

Model 6467 torque thrust transducers are used in applications where the need to sense both torque and thrust parameters simultaneously. Nickel-plated, alloy steel, one-piece construction. Designed specifically to provide the strength and rigidity required to withstand extraneous loads and bending moments. Unique construction provides both maximum structure life and minimum thrust/torque crosstalk.

### VALUE TO CUSTOMERS

- Capable of sensing both torque and thrust parameters simultaneously
- Independent torque and thrust connectors with output values

### DIFFERENTIATION

- Unique design offers enhanced accuracy performance with minimal crosstalk error, along with ability to handle extraneous loading conditions under high-cycle fatigue test situations

### FEATURES

- 2500 in-lb, 2500 lb
- 2500 in-lb, 5000 lb
- 5000 in-lb, 10,000 lb
- 0.15 % non-linearity and hysteresis
- Minimized crosstalk
- Extraneous load resistance
- Single piece construction
- Fatigue rated

### POTENTIAL APPLICATIONS

#### Industrial

- Material test machines
- Durability testing
- Structural/integrity testing
- Fatigue/endurance testing
- Metrology lab
- R&D center

### PORTFOLIO

The Model 6467 is part of a family of torque thrust transducers that includes [Models 6459 and 6467-6470](#).

# Model 6467 Torque Thrust Transducer

**Table 1. Performance Specifications**

Characteristic	Measure
Torque-thrust range	2500 in-lb, 2500 lb
	2500 in-lb, 5000 lb
	5000 in-lb, 10,000 lb
Non-linearity	±0.15 % of rated output
Hysteresis	±0.15 % of rated output
Repeatability	±0.1 % of rated output
Output @ rated capacity	±1.5 mV/V (nominal) (Both components)

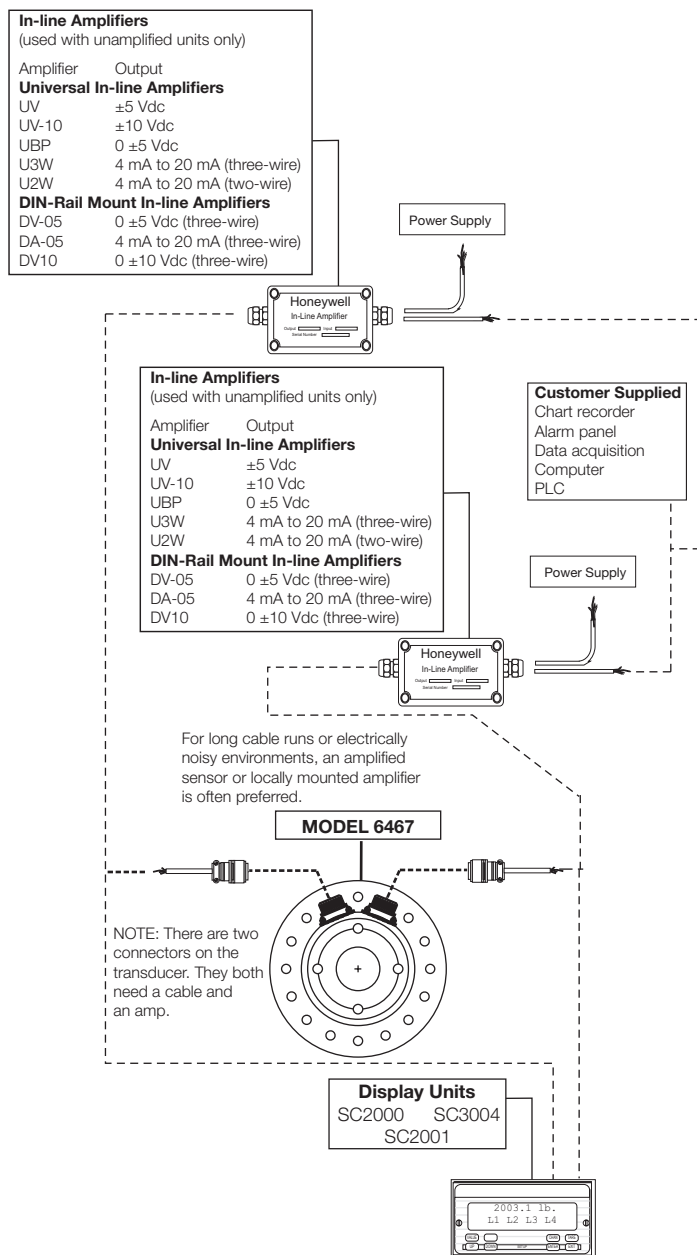
**Table 2. Environmental Specifications**

Characteristic	Measure
Temperature, operating	-54 °C to 93 °C [-65 °F to 200 °F]
Temperature, compensated	21 °C to 77 °C [70 °F to 170 °F]
Temperature effect, zero	±0.002 % of rated output/°F
Temperature effect, output	±0.002 % of reading/°F

**Table 3. Electrical Specifications**

Characteristic	Measure
Excitation (maximum)	20 Vdc or Vac RMS
Insulation resistance	> 5000 mOhm @ 50 Vdc
Bridge resistance	700 ohm (nominal)
Zero balance	±1 % of rated output
Static overload capacity	150 % of rated capacity

**Figure 1. Typical System Diagram**



**Mating Connectors and Cables**

- 064-LW13621 Mating connector
- 7200-76-XX\* Mating connector and six-conductor cable (unamplified unit with sense leads, but not shunt cal)
- 7200-75-XX\*\* Mating connector and four-conductor cable (unamplified unit without sense leads, but not shunt cal)
- 7200-111-XX\* Mating connector and six-conductor cable (for connection to instrument 7541)
- 7200-110-XX\*\* Mating connector and four-conductor cable (for connection to instrument 7541)

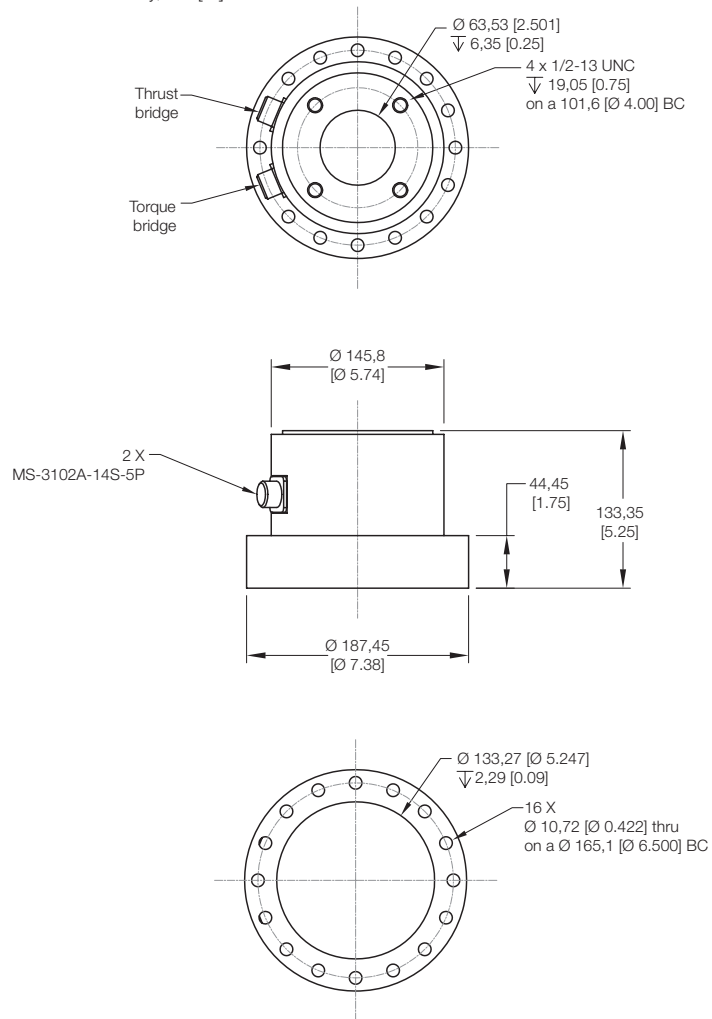
\* XX represents length in feet, 100 ft maximum

\*\* XX represents length in feet, 20 ft maximum

# Model 6467 Torque Thrust Transducer

**Figure 2. Mounting Dimensions**

For reference only, mm[in]



## Torque Thrust Transducers

Model 6468

008904

Issue 1

Datasheet



### DESCRIPTION

Model 6468 torque thrust transducers are used in applications where the need to sense both torque and thrust parameters simultaneously. Nickel-plated, alloy steel, one-piece construction. Designed specifically to provide the strength and rigidity required to withstand extraneous loads and bending moments. Unique construction provides both maximum structure life and minimum thrust/torque crosstalk.

### VALUE TO CUSTOMERS

- Capable of sensing both torque and thrust parameters simultaneously
- Independent torque and thrust connectors with output values

### DIFFERENTIATION

- Unique design offers enhanced accuracy performance with minimal crosstalk error, along with ability to handle extraneous loading conditions under high-cycle fatigue test situations

### FEATURES

- 10,000 lb-in, 20,000 lb
- 25,000 lb-in, 50,000 lb
- 25,000 lb-in, 75,000 lb
- 0.15 % non-linearity and hysteresis
- Minimized crosstalk
- Extraneous load resistance
- Single piece construction
- Fatigue rated

### POTENTIAL APPLICATIONS

#### Industrial

- Material test machines
- Durability testing
- Structural/integrity testing
- Fatigue/endurance testing
- Metrology lab
- R&D center

### PORTFOLIO

The Model 6468 is part of a family of torque thrust transducers that includes [Models 6459 and 6467-6470](#).

# Model 6468 Torque Thrust Transducer

**Table 1. Performance Specifications**

Characteristic	Measure
Torque-thrust range	10,000 lb-in, 20,000 lb
	25,000 lb-in, 50,000 lb
	25,000 lb-in, 75,000 lb
Non-linearity	±0.15 % of rated output
Hysteresis	±0.15 % of rated output
Repeatability	±0.1 % of rated output
Output @ rated capacity	±1.5 mV/V (nominal) (Both components)

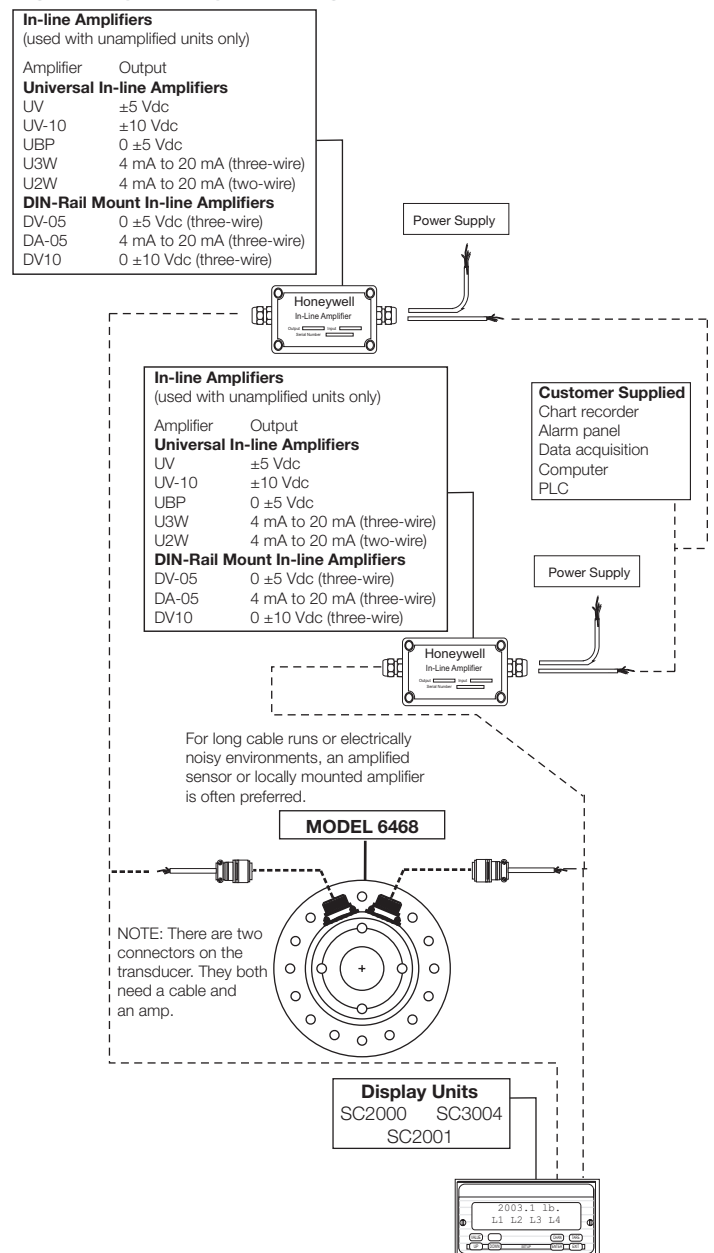
**Table 2. Environmental Specifications**

Characteristic	Measure
Temperature, operating	-54 °C to 93 °C [-65 °F to 200 °F]
Temperature, compensated	21 °C to 77 °C [70 °F to 170 °F]
Temperature effect, zero	±0.002 % of rated output/°F
Temperature effect, output	±0.002 % of reading/°F

**Table 3. Electrical Specifications**

Characteristic	Measure
Excitation (maximum)	20 Vdc or Vac RMS
Insulation resistance	> 5000 mOhm @ 50 Vdc
Bridge resistance	700 ohm (nominal)
Zero balance	±1 % of rated output
Static overload capacity	150 % of rated capacity

**Figure 1. Typical System Diagram**



**Mating Connectors and Cables**

- 064-LW13621 Mating connector
- 7200-76-XX\* Mating connector and six-conductor cable (unamplified unit with sense leads, but not shunt cal)
- 7200-75-XX\*\* Mating connector and four-conductor cable (unamplified unit without sense leads, but not shunt cal)
- 7200-111-XX\* Mating connector and six-conductor cable (for connection to instrument 7541)
- 7200-110-XX\*\* Mating connector and four-conductor cable (for connection to instrument 7541)

\* XX represents length in feet, 100 ft maximum

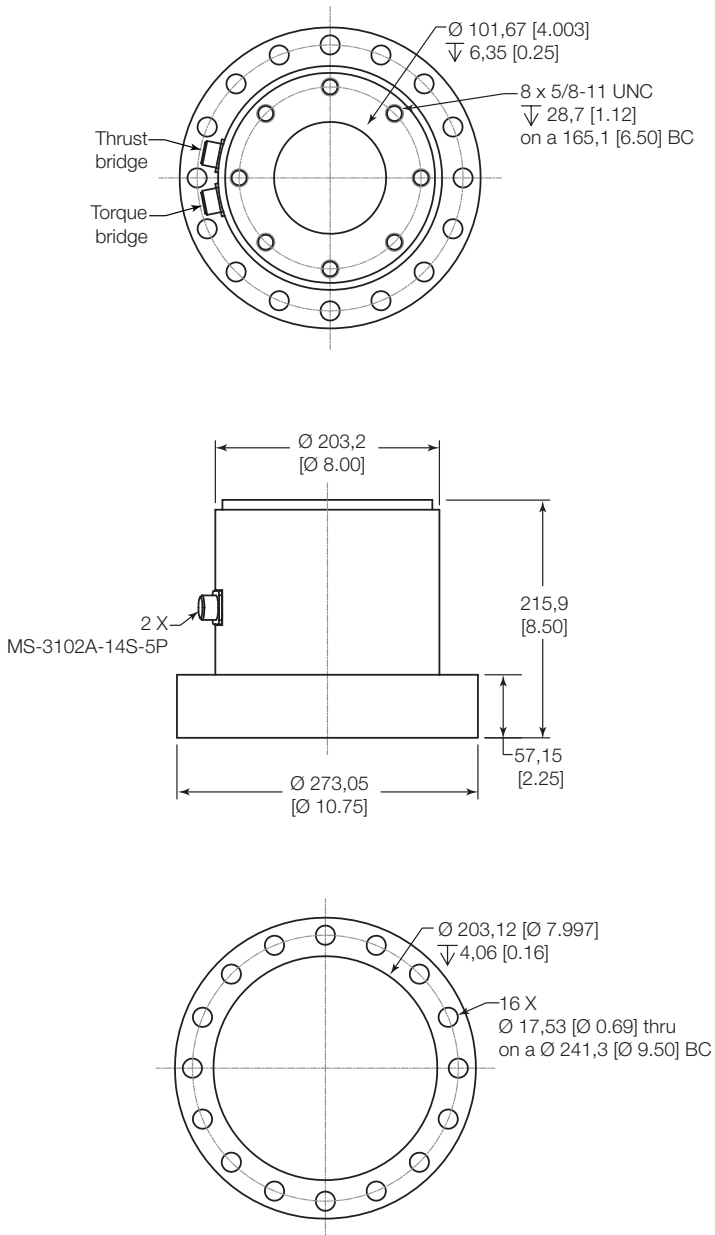
\*\* XX represents length in feet, 20 ft maximum



# Model 6468 Torque Thrust Transducer

**Figure 2. Mounting Dimensions**

For reference only, mm[in]



## Torque Thrust Transducers

Model 6469

008905

Issue 1

Datasheet



### DESCRIPTION

Model 6469 torque thrust transducers are used in applications where the need to sense both torque and thrust parameters simultaneously. Nickel-plated, alloy steel, one-piece construction. Designed specifically to provide the strength and rigidity required to withstand extraneous loads and bending moments. Unique construction provides both maximum structure life and minimum thrust/torque crosstalk.

### VALUE TO CUSTOMERS

- Capable of sensing both torque and thrust parameters simultaneously
- Independent torque and thrust connectors with output values

### DIFFERENTIATION

- Unique design offers enhanced accuracy performance with minimal crosstalk error, along with ability to handle extraneous loading conditions under high-cycle fatigue test situations

### FEATURES

- 50,000 lb-in, 50,000 lb
- 50,000 lb-in, 100,000 lb
- 0.15 % non-linearity and hysteresis
- Minimized crosstalk
- Extraneous load resistance
- Single piece construction
- Fatigue rated

### POTENTIAL APPLICATIONS

#### Industrial

- Material test machines
- Durability testing
- Structural/integrity testing
- Fatigue/endurance testing
- Metrology lab
- R&D center

### PORTFOLIO

The Model 6469 is part of a family of torque thrust transducers that includes [Models 6459 and 6467 to 6470](#).

# Model 6469 Torque Thrust Transducer

**Table 1. Performance Specifications**

Characteristic	Measure
Torque-thrust range	50,000 lb-in, 50,000 lb 50,000 lb-in, 100,000 lb
Non-linearity	±0.15 % of rated output
Hysteresis	±0.15 % of rated output
Repeatability	±0.1 % of rated output
Output @ rated capacity	±1.5 mV/V (nominal) (Both components)

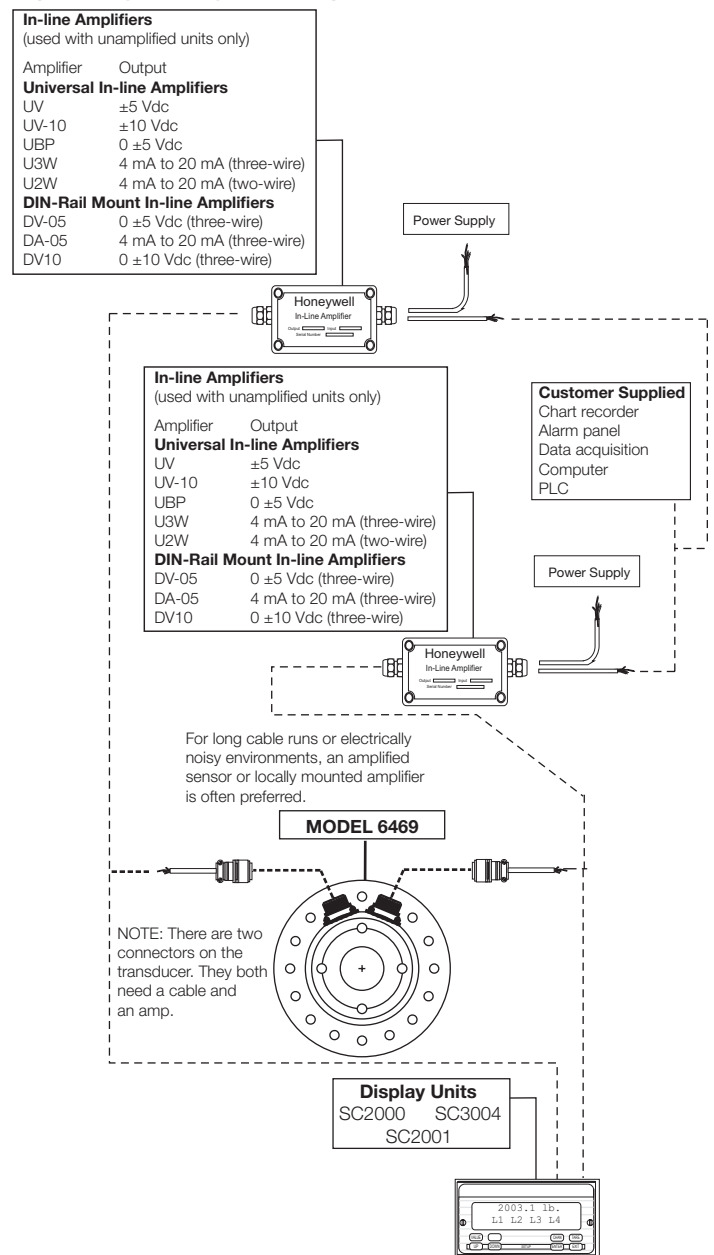
**Table 2. Environmental Specifications**

Characteristic	Measure
Temperature, operating	-54 °C to 93 °C [-65 °F to 200 °F]
Temperature, compensated	21 °C to 77 °C [70 °F to 170 °F]
Temperature effect, zero	±0.002 % of rated output/°F
Temperature effect, output	±0.002 % of reading/°F

**Table 3. Electrical Specifications**

Characteristic	Measure
Excitation (maximum)	20 Vdc or Vac RMS
Insulation resistance	> 5000 mOhm @ 50 Vdc
Bridge resistance	700 ohm (nominal)
Zero balance	±1 % of rated output
Static overload capacity	150 % of rated capacity

**Figure 1. Typical System Diagram**



**Mating Connectors and Cables**

- 064-LW13621 Mating connector
- 7200-76-XX\* Mating connector and six-conductor cable (unamplified unit with sense leads, but not shunt cal)
- 7200-75-XX\*\* Mating connector and four-conductor cable (unamplified unit without sense leads, but not shunt cal)
- 7200-111-XX\* Mating connector and six-conductor cable (for connection to instrument 7541)
- 7200-110-XX\*\* Mating connector and four-conductor cable (for connection to instrument 7541)

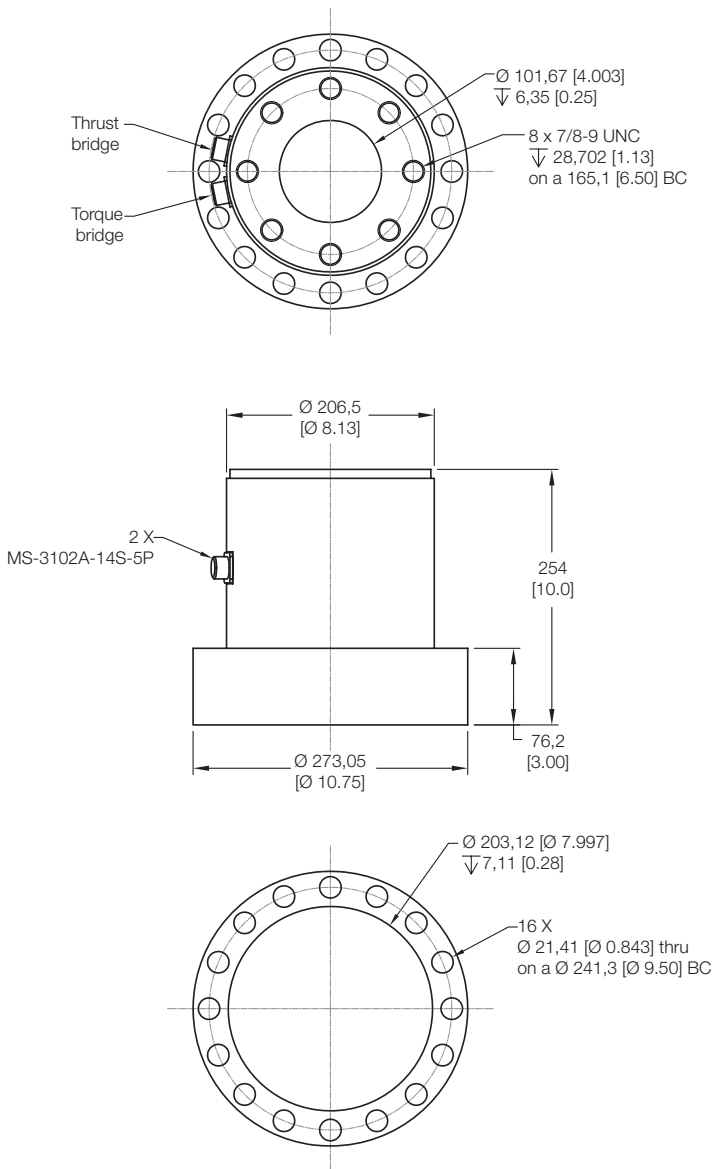
\* XX represents length in feet, 100 ft maximum

\*\* XX represents length in feet, 20 ft maximum

# Model 6469 Torque Thrust Transducer

**Figure 2. Mounting Dimensions**

For reference only, mm[in]



## Torque Thrust Transducers Model 6470

008908

Issue 1

Datasheet



### DESCRIPTION

Model 6470 torque thrust transducers are used in applications where the need to sense both torque and thrust parameters simultaneously. Nickel-plated, alloy steel, one-piece construction. Designed specifically to provide the strength and rigidity required to withstand extraneous loads and bending moments. Unique construction provides both maximum structure life and minimum thrust/torque crosstalk.

### VALUE TO CUSTOMERS

- Capable of sensing both torque and thrust parameters simultaneously
- Independent torque and thrust connectors with output values

### DIFFERENTIATION

- Unique design offers enhanced accuracy performance with minimal crosstalk error, along with ability to handle extraneous loading conditions under high-cycle fatigue test situations

### FEATURES

- 100,000 lb-in 200,000 lb
- 0.15 % non-linearity and hysteresis
- Minimized crosstalk
- Extraneous load resistance
- Single piece construction
- Fatigue rated

### POTENTIAL APPLICATIONS

#### Industrial

- Material test machines
- Durability testing
- Structural/integrity testing
- Fatigue/endurance testing
- Metrology lab
- R&D center

### PORTFOLIO

The Model 6470 is part of a family of torque thrust transducers that includes [Models 6459 and 6467-6469](#).

**Table 1. Performance Specifications**

Characteristic	Measure
Torque-thrust range	100,000 lb-in 200,000 lb
Non-linearity	±0.15 % of rated output
Hysteresis	±0.15 % of rated output
Repeatability	±0.1 % of rated output
Output @ rated capacity	±1.5 mV/V (nominal) (Both components)

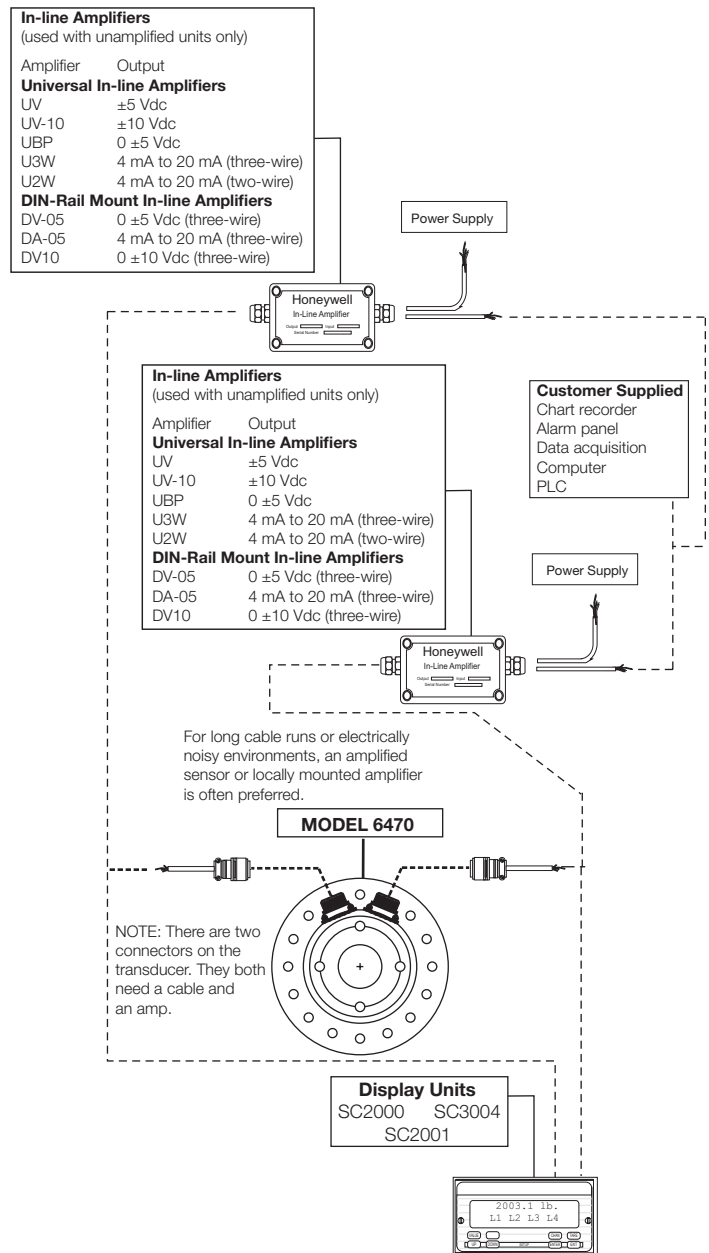
**Table 2. Environmental Specifications**

Characteristic	Measure
Temperature, operating	-54 °C to 93 °C [-65 °F to 200 °F]
Temperature, compensated	21 °C to 77 °C [70 °F to 170 °F]
Temperature effect, zero	±0.002 % of rated output/°F
Temperature effect, output	±0.002 % of reading/°F

**Table 3. Electrical Specifications**

Characteristic	Measure
Excitation (maximum)	20 Vdc or Vac RMS
Insulation resistance	> 5000 mOhm @ 50 Vdc
Bridge resistance	700 ohm (nominal)
Zero balance	±1 % of rated output
Static overload capacity	150 % of rated capacity

**Figure 1. Typical System Diagram**



**Mating Connectors and Cables**

- 064-LW13621 Mating connector
- 7200-76-XX\* Mating connector and six-conductor cable (unamplified unit with sense leads, but not shunt cal)
- 7200-75-XX\*\* Mating connector and four-conductor cable (unamplified unit without sense leads, but not shunt cal)
- 7200-111-XX\* Mating connector and six-conductor cable (for connection to instrument 7541)
- 7200-110-XX\*\* Mating connector and four-conductor cable (for connection to instrument 7541)

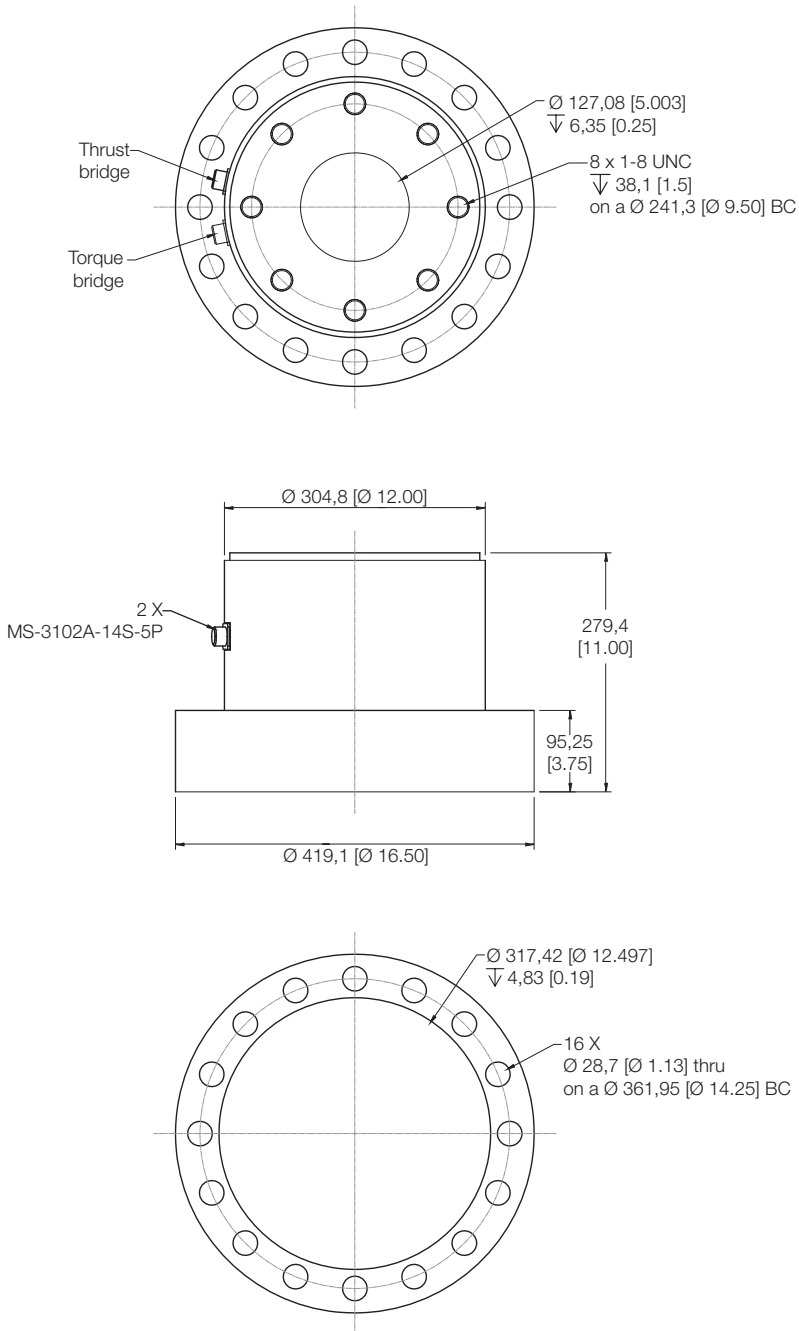
\* XX represents length in feet, 100 ft maximum

\*\* XX represents length in feet, 20 ft maximum

# Model 6470

**Figure 2. Mounting Dimensions**

For reference only, mm[in]



## ADDITIONAL MATERIALS

The following associated literature is available on the Honeywell web site at [sensing.honeywell.com](http://sensing.honeywell.com):

- [Torque transducer range guide](#)
- [White Paper: New Ways To Measure Torque](#)

### **WARNING** **PERSONAL INJURY**

DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

**Failure to comply with these instructions could result in death or serious injury.**

### **WARNING** **MISUSE OF DOCUMENTATION**

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

**Failure to comply with these instructions could result in death or serious injury.**

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