

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)

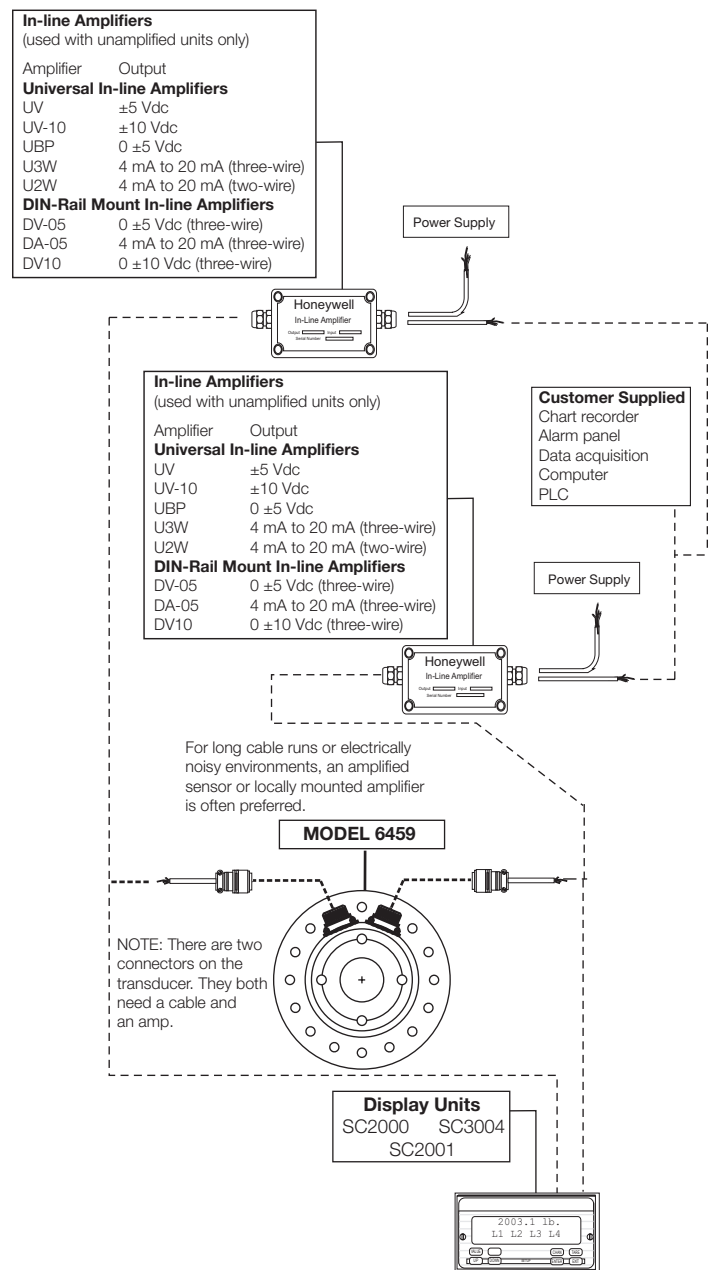
Table 2. Environmental Specifications

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)

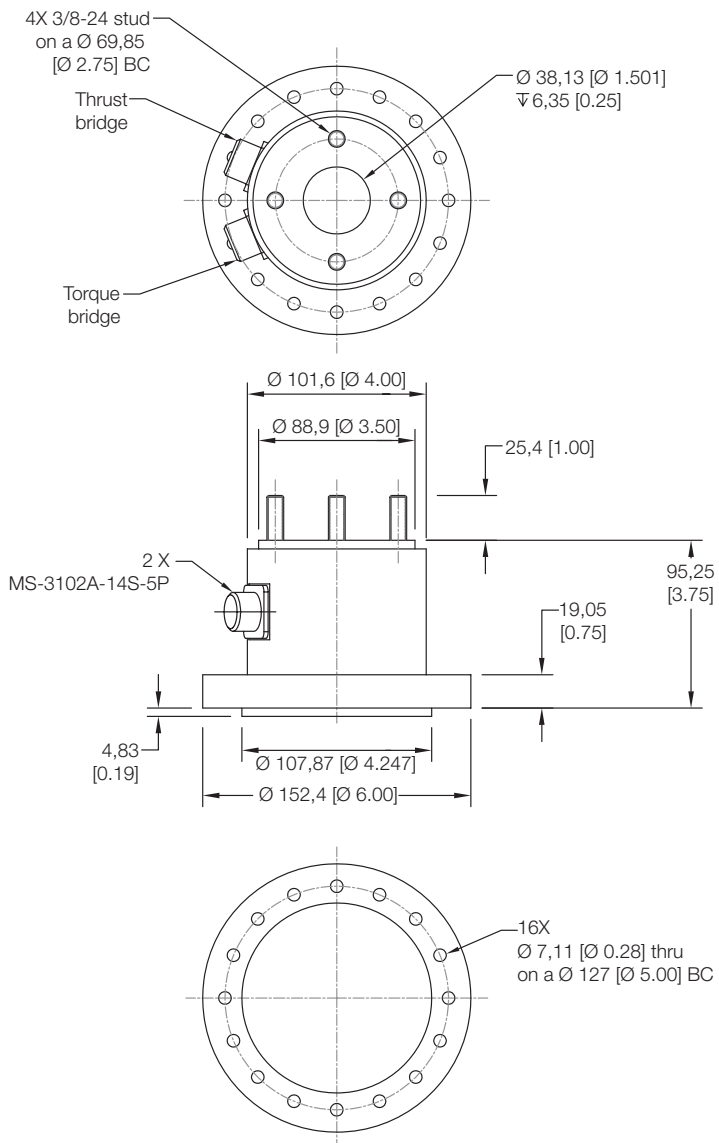
* XX represents length in feet, 100 ft maximum

** 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)

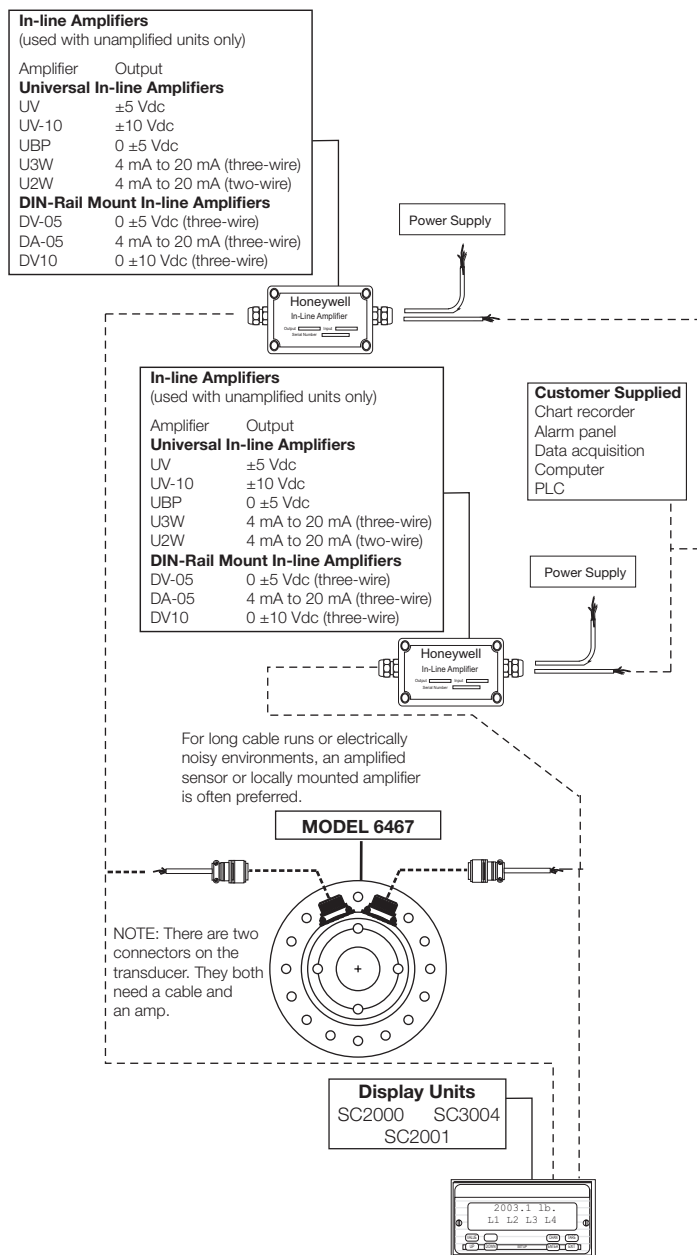
Table 2. Environmental Specifications

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)

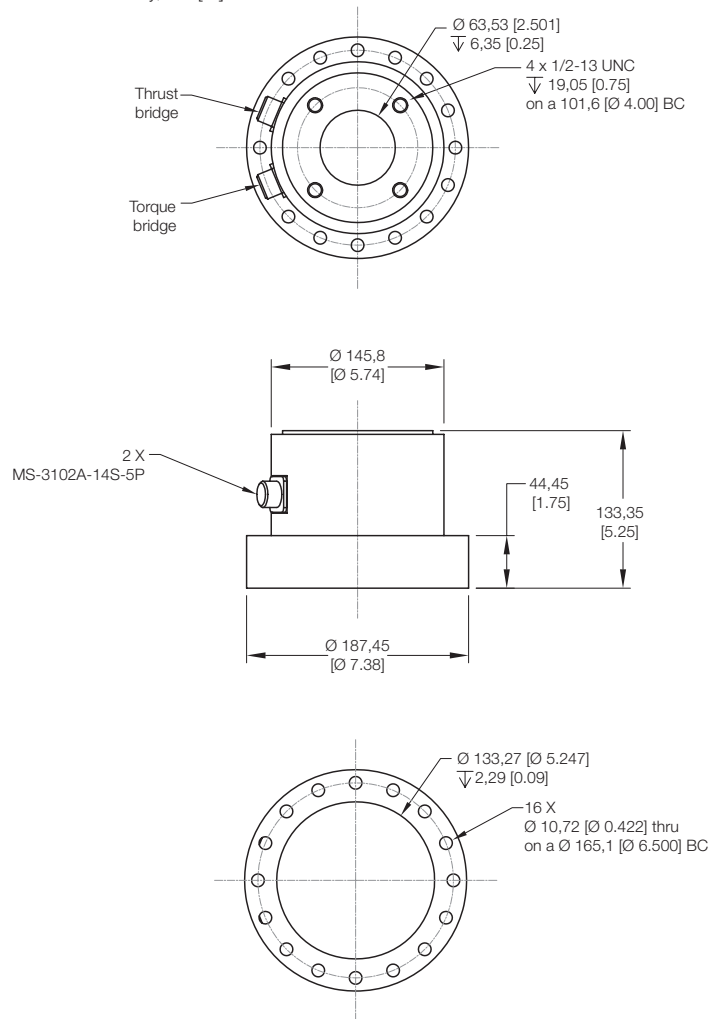
* XX represents length in feet, 100 ft maximum

** 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)

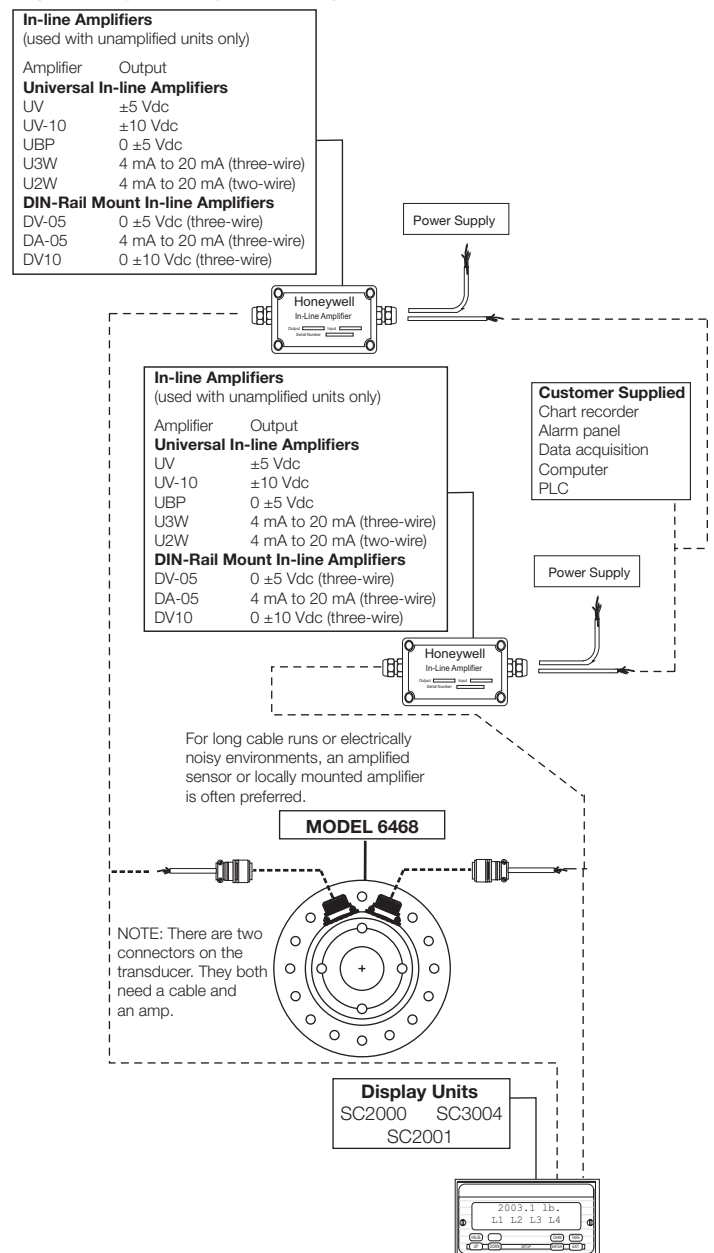
Table 2. Environmental Specifications

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)

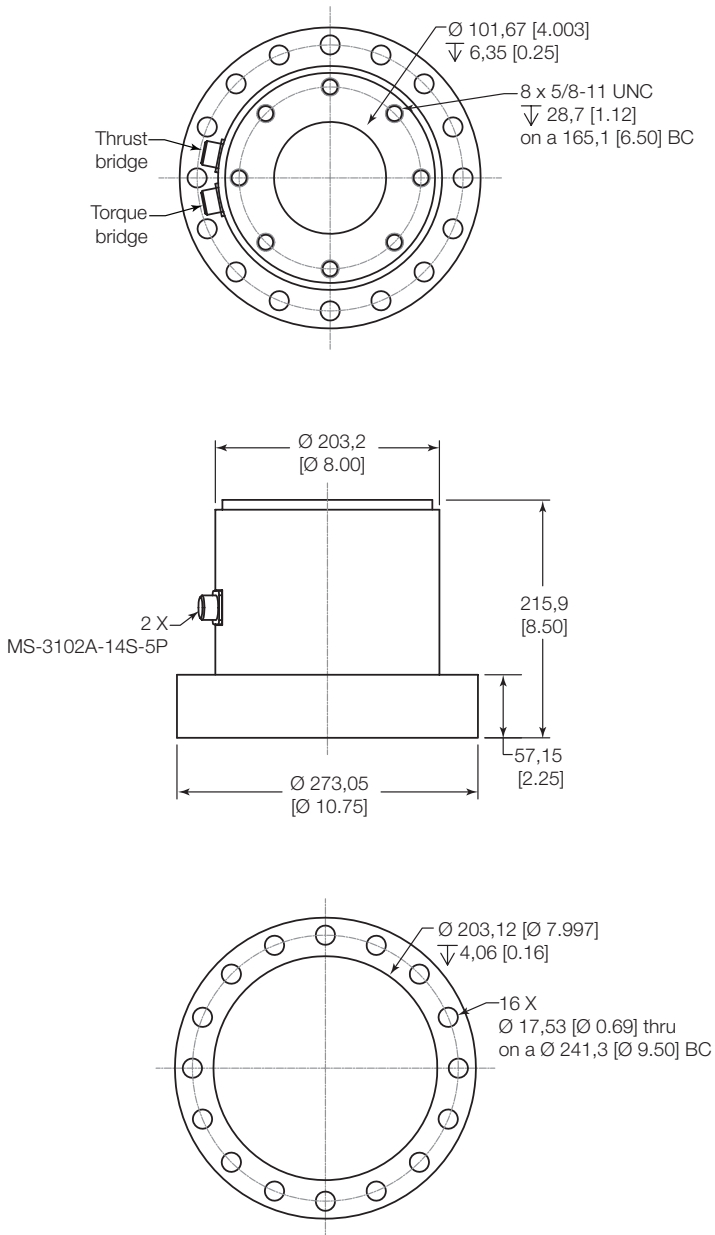
* XX represents length in feet, 100 ft maximum

** 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)

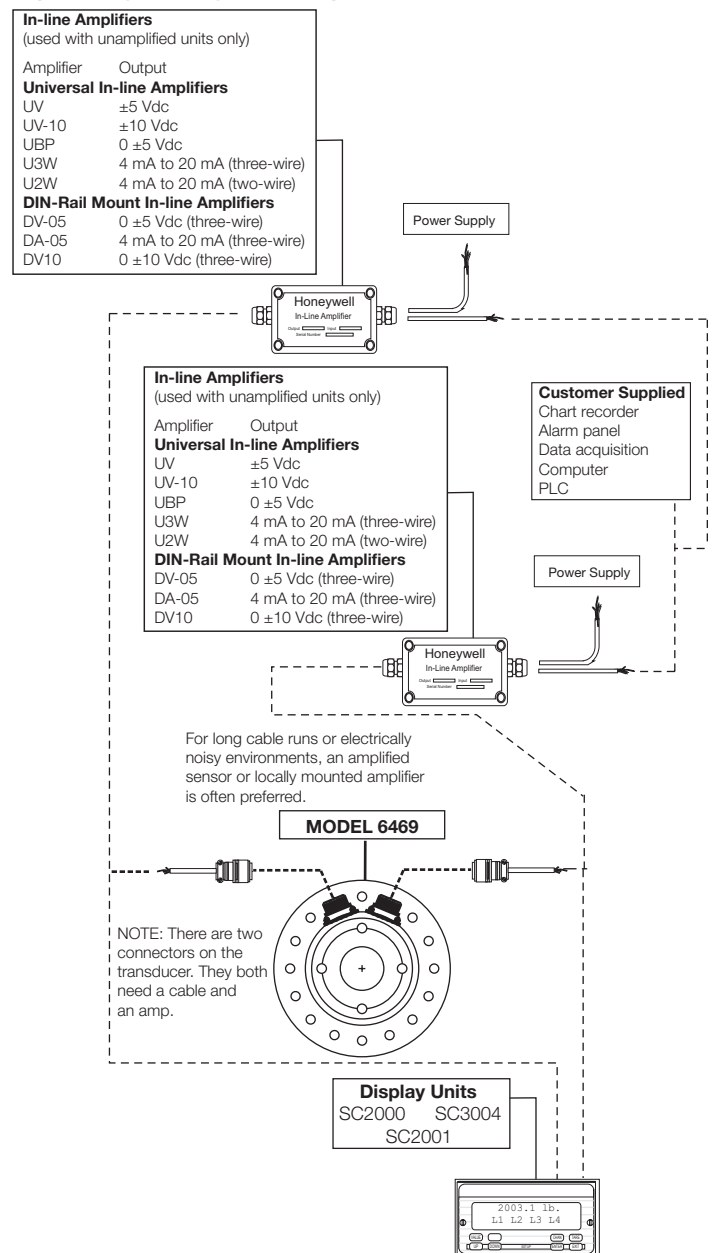
Table 2. Environmental Specifications

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)

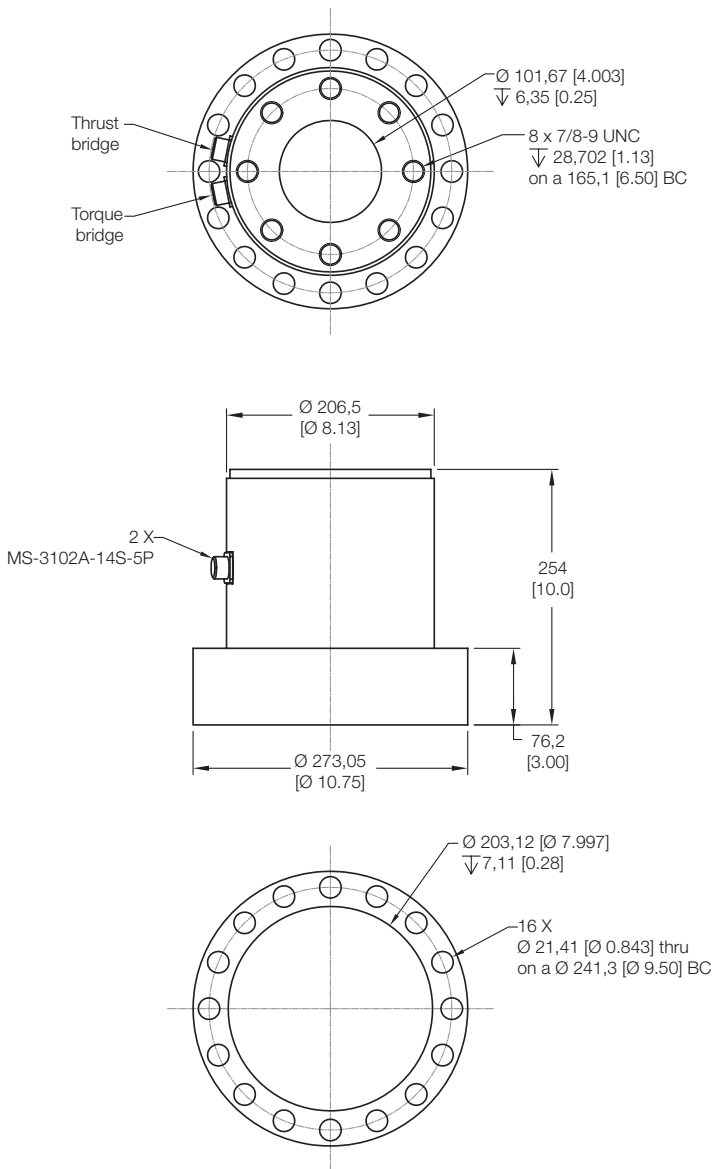
* XX represents length in feet, 100 ft maximum

** 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)

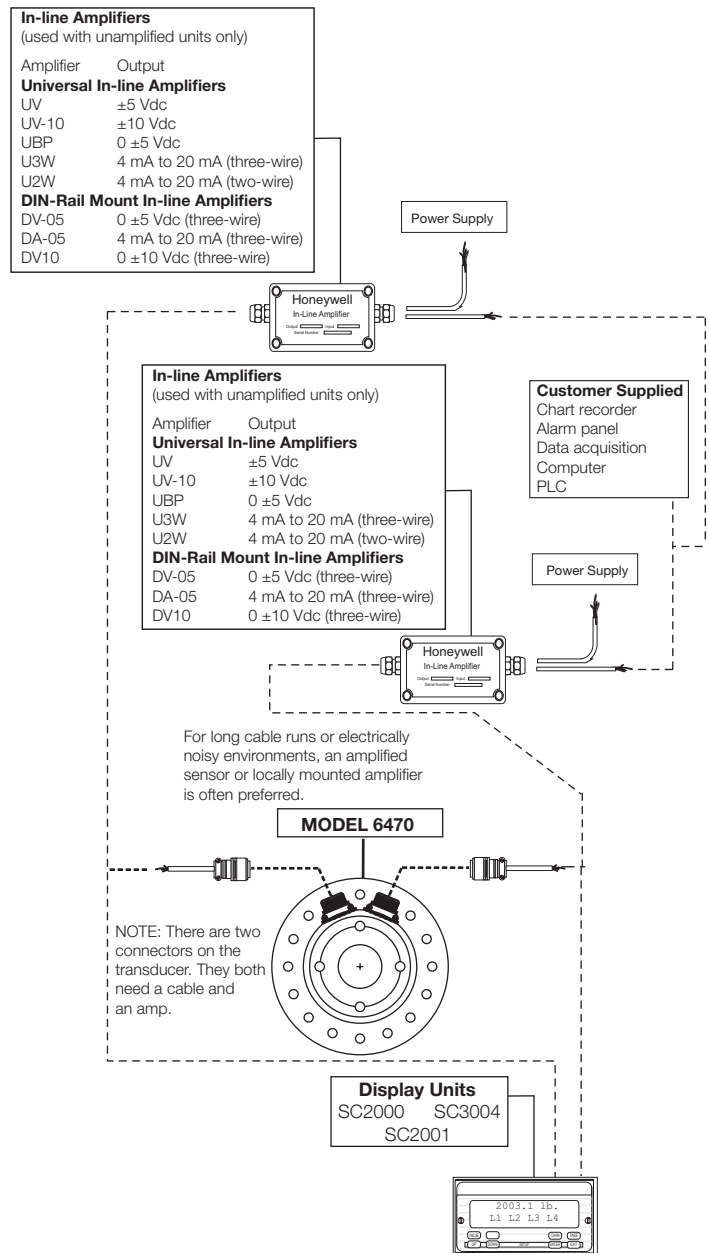
Table 2. Environmental Specifications

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)

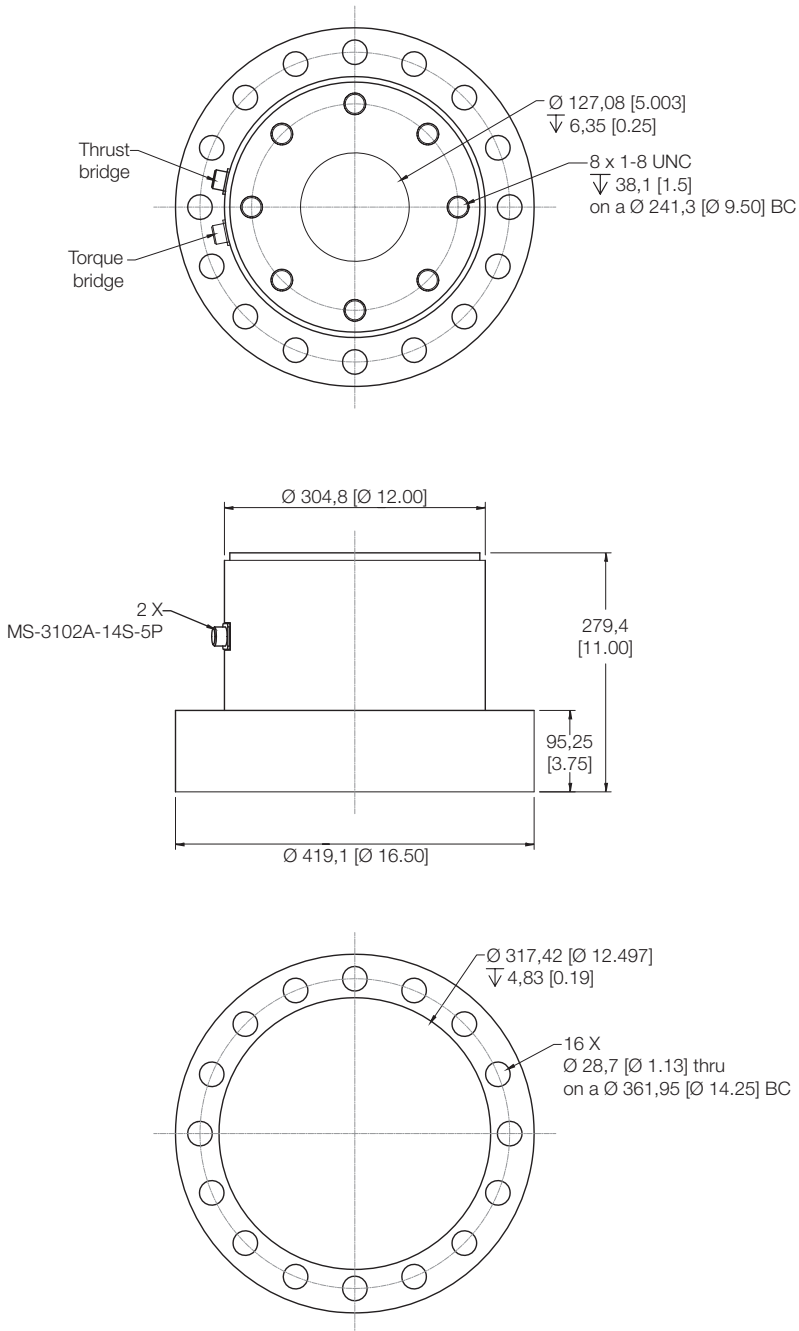
* XX represents length in feet, 100 ft maximum

** 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:

- [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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