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 In-line Amplifiers (used with unamplified units only) Output Amplifier Universal In-line Amplifiers ±5 Vdc UV UV-10 ±10 Vdc UBP 0 ±5 Vdc 4 mA to 20 mA (three-wire) 4 mA to 20 mA (two-wire) U3W U2W **DIN-Rail Mount In-line Amplifiers** 0 ±5 Vdc (three-wire) 4 mA to 20 mA (three-wire) Power Supply DV-05 DA-05 DV10 0 ±10 Vdc (three-wire) Honeywel **B** 38) E nel Como Input In-line Amplifiers **Customer Supplied** (used with unamplified units only) Chart recorder Amplifier Output Alarm panel **Universal In-line Amplifiers** Data acquisition UV ±5 Vdc Computer ±10 Vdc UV-10 PLC UBP 0 ±5 Vdc U3W 4 mA to 20 mA (three-wire) U2W 4 mA to 20 mA (two-wire) DIN-Rail Mount In-line Amplifiers Power Supply DV-05 0 ±5 Vdc (three-wire) DA-05 4 mA to 20 mA (three-wire) DV10 0 ±10 Vdc (three-wire) (O Honeywel -086 的 For long cable runs or electrically noisy environments, an amplified sensor or locally mounted amplifier is often preferred. **MODEL 6459** -00 NOTE: There are two 0 connectors on the 0 transducer. They both need a cable and С 0 an amp. 0 0 0 **Display Units** SC2000 SC3004 SC2001 2003.1 lb. L1 L2 L3 L4

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)

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* XX represents length in feet, 100 ft maximum ** XX represents length in feet, 20 ft maximum

Model 6459 Torque Thrust Transducer



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 In-line Amplifiers (used with unamplified units only) Output Amplifier Universal In-line Amplifiers ŪV ±5 Vdc UV-10 ±10 Vdc UBP 0 ±5 Vdc U3W 4 mA to 20 mA (three-wire) U2W 4 mA to 20 mA (two-wire) DIN-Rail Mount In-line Amplifiers DV-05 0 ±5 Vdc (three-wire) Power Supply DA-05 4 mA to 20 mA (three-wire) DV10 0 ±10 Vdc (three-wire) í0 Honeywell 的 = In-line Amplifiers Customer Supplied Chart recorder (used with unamplified units only) Amplifier Output Alarm panel **Universal In-line Amplifiers** Data acquisition UV UV-10 ±5 Vdc Computer ±10 Vdc PLC UBP 0 ±5 Vdc U3W 4 mA to 20 mA (three-wire) U2W 4 mA to 20 mA (two-wire) DIN-Rail Mount In-line Amplifiers DV-05 0 ±5 Vdc (three-wire) Power Supply DA-05 4 mA to 20 mA (three-wire) DV10 0 ±10 Vdc (three-wire) Honeywell Œ 的 For long cable runs or electrically noisy environments, an amplified sensor or locally mounted amplifier is often preferred. **MODEL 6467** ···· (III) С NOTE: There are two 0 connectors on the transducer. They both 0 need a cable and an amp. 0 C 0 0 0 **Display Units** SC2000 SC3004 SC2001 2003.1 lb. L1 L2 L3 L4

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

Figure 2. Mounting Dimensions



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
	10,000 lb-in, 20,000 lb
Torque-thrust range	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 In-line Amplifiers (used with unamplified units only) Amplifier Output **Universal In-line Amplifiers** UV UV-10 ±5 Vdc ±10 Vdc UBP 0 ±5 Vdc UЗW 4 mA to 20 mA (three-wire) U2W 4 mA to 20 mA (two-wire) DIN-Rail Mount In-line Amplifiers DV-05 0 ±5 Vdc (three-wire) Power Supply DA-05 DV10 4 mA to 20 mA (three-wire) 0 ±10 Vdc (three-wire) Honeywel 的 r BE In-line Amplifiers Customer Supplied (used with unamplified units only) Chart recorder Amplifier Output Alarm panel Universal In-line Amplifiers Data acquisition Computer UV-10 ±10 Vdc PLC UBP 0 ±5 Vdc U3W U2W 4 mA to 20 mA (three-wire) 4 mA to 20 mA (two-wire) **DIN-Rail Mount In-line Amplifiers** Power Supply DV-05 0 ±5 Vdc (three-wire) DA-05 4 mA to 20 mA (three-wire) DV10 0 ±10 Vdc (three-wire) Honeywell 的 For long cable runs or electrically noisy environments, an amplified sensor or locally mounted amplifier is often preferred. **MODEL 6468** ---С NOTE: There are two 0 C connectors on the 0 С transducer. They both need a cable and 0 an amp. 0 0 0 **Display Units** SC2000 SC3004 SC2001 2003.1 lb. L1 L2 L3 L4

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)

22

* XX represents length in feet, 100 ft maximum

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
loique-tillust larige	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 In-line Amplifiers



064-LVV13621	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

Figure 2. Mounting Dimensions





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.

Torque Thrust Transducers

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



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

Model 6470

Figure 2. Mounting Dimensions



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

Find out more

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- 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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