

# GS 4000 SERIES

## GENERAL PURPOSE PRESSURE TRANSDUCERS



DataFax - 1031-B

Page 3 of 4

Issue -E/01/02

### SPECIFICATION

GS 4000 / GS 4100 - mV output

#### INPUT

Pressure ranges.....0-800mbar to 0-700bar  
Pressure reference.....Gauge / Absolute  
Over pressure.....2 x Rated pressure

#### OUTPUT

Span.....0-20mV ( $\pm 1\%$ )  
Type.....4 wire  
Common mode voltage.....4-6Vdc

#### ACCURACY

Zero offset..... $< \pm 1\%$  FSO  
Combined non-linearity / hysteresis..... $< \pm 0.25\%$  FSO  
Repeatability..... $< \pm 0.1\%$  FSO  
Long term stability..... $< \pm 0.2\%$  FSO / 6 months

#### ELECTRICAL

Supply voltage.....10Vdc (15Vdc max)  
Supply voltage effects.....Ratiometric  
Reverse polarity.....No damage  
Power requirements.....29mA  
Input resistance.....1000 $\Omega$   $\pm 30\%$  / 15k $\Omega$   $\pm 30\%$

Output resistance.....1000 $\Omega$   $\pm 30\%$  / 15k $\Omega$   $\pm 30\%$   
Insulation resistance.....100M $\Omega$  @ 100Vdc elec conn to case  
Response time (63%).....0.2mS

#### ENVIRONMENTAL

Pressure media.....Media compatible with 17/4PH +300 Series Stainless Steel / Alumina  
Operating temperature range.....-20 to +80°C  
Storage temperature range.....-40 to +90°C  
Thermal effect Zero..... $< \pm 0.03\%$  FSO/°C  
Thermal sensitivity..... $< \pm 0.03\%$  FSO/°C  
Vibration tolerance.....10g's to 50Hz  
Mechanical shock tolerance.....15g@s (11mS)  
Operating humidity.....95% RH

#### PHYSICAL

Pressure connection.....1/4" BSP male (others on request)  
Electrical connection.....Mini-DIN plug + socket to DIN43650  
Enclosure rating.....IP65  
Natural frequency.....20 Khz 17/4PH / 12Khz Alumina  
Weight.....75 grams  
Materials.....300 series stain'stl body/connector  
17/4PH stain' stl/ceramic diaphragm

### SPECIFICATION

GS 4001 / GS 4101 - 0-5V output

#### INPUT

Pressure ranges.....0-800mbar to 0-700bar  
Pressure reference.....Gauge / Absolute  
Over pressure.....2 x Rated pressure

#### OUTPUT

Span.....0-5Vdc / 1-6Vdc  
Type.....4 wire / 3 wire  
Common mode voltage.....1Vdc  $\pm 1\%$

#### ACCURACY

Zero offset..... $< \pm 1\%$  FSO  
Combined non-linearity / hysteresis..... $< \pm 0.25\%$  FSO  
Repeatability..... $< \pm 0.1\%$  FSO  
Long term stability..... $< \pm 0.2\%$  FSO / 6 months

#### ELECTRICAL

Supply voltage.....13-30Vdc  
Supply voltage effects.....11 $\mu$ V/V  
Reverse polarity.....Protected

Power requirements.....30mA  
Load driving capability.....2.5K $\Omega$  (min)  
Output short circuit (to ground).....No damage  
Insulation resistance.....100M $\Omega$  @ 100Vdc elec conn to case  
Response time (63%).....1mS

#### ENVIRONMENTAL

Pressure media.....Media compatible with 17/4PH +300 Series Stainless Steel / Alumina  
Operating temperature range.....-20 to +80°C  
Storage temperature range.....-40 to +90°C  
Thermal effect Zero..... $< \pm 0.03\%$  FSO/°C  
Thermal sensitivity..... $< \pm 0.03\%$  FSO/°C  
Vibration tolerance.....10g's to 50Hz  
Mechanical shock tolerance.....15g@s (11mS)  
Operating humidity.....95% RH

#### PHYSICAL

Pressure connection.....1/4" BSP male (others on request)  
Electrical connection.....Mini-DIN plug + socket to DIN43650  
Enclosure rating.....IP65  
Natural frequency.....20Khz 17/4PH / 12Khz Alumina  
Weight.....75 grams  
Materials.....300 series stain'stl body/connector  
17/4PH stain' stl/ceramic diaphragm

### SPECIFICATION

GS 4002 / GS 4102 - 0-10V output

#### INPUT

Pressure ranges.....0-800mbar to 0-700bar  
Pressure reference.....Gauge / Absolute  
Over pressure.....2 x Rated pressure

#### OUTPUT

Span.....0-10Vdc / 1-11Vdc  
Type.....4 wire / 3 wire  
Common mode voltage.....1Vdc  $\pm 1\%$

#### ACCURACY

Zero offset..... $< \pm 1\%$  FSO  
Combined non-linearity / hysteresis..... $< \pm 0.25\%$  FSO  
Repeatability..... $< \pm 0.1\%$  FSO  
Long term stability..... $< \pm 0.2\%$  FSO / 6 months

#### ELECTRICAL

Supply voltage.....13-30Vdc  
Supply voltage effects.....11 $\mu$ V/V  
Reverse polarity.....Protected  
Power requirements.....30mA

Load driving capability.....5K $\Omega$  (min)  
Output short circuit (to ground).....No damage  
Insulation resistance.....100M $\Omega$  @ 100Vdc elec conn to case  
Response time (63%).....1mS

#### ENVIRONMENTAL

Pressure media.....Media compatible with 17/4PH +300 Series Stainless Steel / Alumina  
Operating temperature range.....-20 to +80°C  
Storage temperature range.....40 to +90°C  
Thermal effect Zero..... $< \pm 0.03\%$  FSO/°C  
Thermal sensitivity..... $< \pm 0.03\%$  FSO/°C  
Vibration tolerance.....10g's to 50Hz  
Mechanical shock tolerance.....15g@s (11mS)  
Operating humidity.....95% RH

#### PHYSICAL

Pressure connection.....1/4" BSP male (others on request)  
Electrical connection.....Mini-DIN plug + socket to DIN43650  
Enclosure rating.....IP65  
Natural frequency.....20Khz 17/4PH / 12Khz Alumina  
Weight.....75 grams  
Materials.....300 series stain'stl body/connector  
17/4PH stain' stl/ceramic diaphragm

# GS 4000 SERIES

## GENERAL PURPOSE PRESSURE TRANSDUCERS



### SPECIFICATION GS 4003 / GS 4103 - 4-20mA output

#### INPUT

Pressure ranges.....0-800mbar to 0-700bar  
 Pressure reference.....Gauge / Absolute  
 Over pressure.....2 x Rated pressure

#### OUTPUT

Span.....4-20 mA  
 Type.....2 wire

#### ACCURACY

Zero offset.....<±1% FSO  
 Combined non-linearity / hysteresis.....<±0.25% FSO  
 Repeatability.....<±0.1% FSO  
 Long term stability.....<±0.2% FSO / 6 months

#### ELECTRICAL

Supply voltage.....13-36Vdc  
 Supply voltage effects.....3µA/V  
 Reverse polarity.....Protected  
 Load driving capability.....1150Ω @ 36Vdc  
 Output short circuit (to ground).....No damage

Insulation resistance.....100MΩ @ 100Vdc elec conn to case  
 Response time (63%).....1.5mS

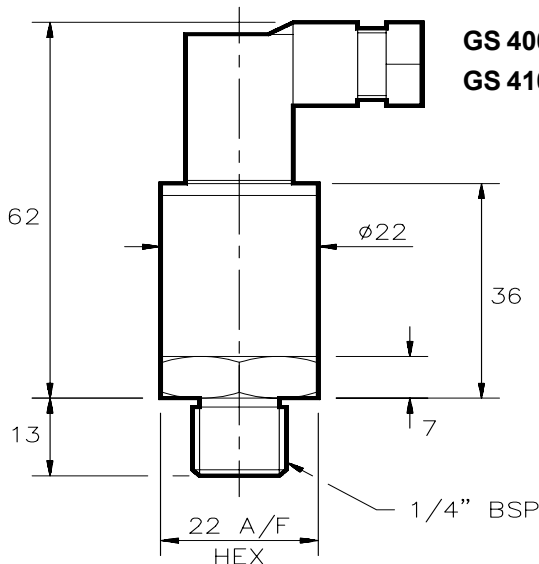
#### ENVIRONMENTAL

Pressure media.....Media compatible with 17/4PH +300 Series Stainless Steel / Alumina  
 Operating temperature range.....-20 to +80 °C  
 Storage temperature range.....-40 to +90°C  
 Thermal effect Zero.....<±0.03% FSO/°C  
 Thermal sensitivity.....<±0.03% FSO/°C  
 Vibration tolerance.....10g's to 50Hz  
 Mechanical shock tolerance.....15g@s (11mS)  
 Operating humidity.....95% RH

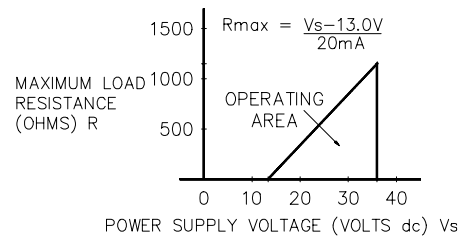
#### PHYSICAL

Pressure connection.....1/4" BSP male (others on request)  
 Electrical connection.....Mini-DIN plug + socket to DIN43650  
 Enclosure rating.....IP65  
 Natural frequency.....20Khz 17/4PH / 12Khz Alumina  
 Weight.....75grams  
 Materials.....300 series stain'stl body/connector  
 17/4PH stain' stl/ceramic diaphragm

### DIMENSIONS / LOAD DIAGRAM



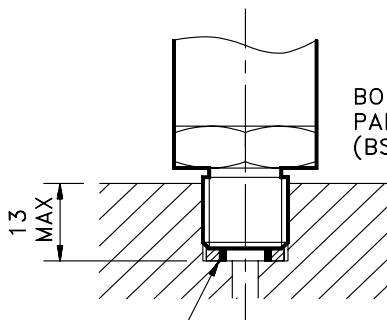
#### LOAD DRIVING CHART for GS 4003 / GS 4103



### MOUNTING DETAILS

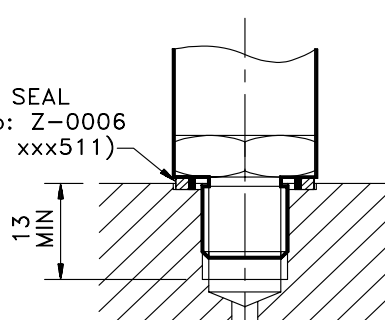
(1/4" BSP MALE THREAD)

SEALING FOR PRESSURES  
UP TO 50 bar



BONDED SEAL  
PART No: Z-0032  
(BS REF xxx004)

SEALING FOR PRESSURES  
OVER 50 bar



BONDED SEAL  
PART No: Z-0006  
(BS REF xxx511)

#### NOTE:-

- 1) Sealing to ISO 1179-1973.
- 2) Tightening Torque for sealing 15.8Nm.
- 3) Sealing face to be flat, free from marks, and 90° to the thread.