GCD-SE Series Precision Gage Heads

Spring-Loaded Design for 0.100" to 2.00" Range Measurement

Features

- ❑ ***CE compliance***
- ❑ ***Heavy-duty, all-welded construction***
- ❑ ***Unipolar ranges: 0.1" to 2.0"***
- ❑ ***8.5 to 28 VDC operation***
- ❑ ***Low power consumption***
- ❑ ***May be battery operated***
- ❑ ***0 to 5 and 1 to 6 VDC outputs***
- ❑ ***New heavy duty front end***
- ❑ ***Hermetically sealed design***

Options

- ❑ ***Special contact tips***
- ❑ ***Mating connector***

Applications

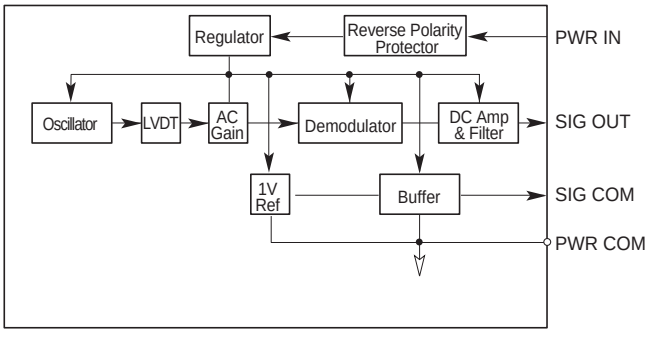
- ❑ ***Roller gap control***
- ❑ ***In-process wet grinding***
- ❑ ***Hand held gages***
- ❑ ***X-Y positional feedback***



The NEW GCD-SE is available in five unipolar measurement ranges, with standard strokes from 0 to 0.1 inch to 0 to 2.0 inches. Operating on a single ended 8.5 to 28.0 volt dc. input, and minimal current draw, the GCD-SE is ideally suited to portable measurement applications. Hermetically sealed, the GCD-SE is also well suited to in-process wet grinding and machining applications.

Internal regulation provides immunity from output sensitivity to input voltage fluctuation and ripple. Internal EMI, ESD and RFI protection, provide CE compliance when correctly installed. Incorporation of a new oscillator design provides exceptional output stability over a wide range of operating temperatures. Synchronous demodulation insures unsurpassed noise rejection.

GCD-SE System Block Diagram



General Specifications

Input Voltage	8.5 to 28 VDC
Input Current	6 mA nominal
Line Regulation	0.2 mV/V (typical)
Operating Temperature Range	-13°F to 185°F (-25°C to 85°C)
Storage Temperature Range	-65°F to 200°F (-55°C to 95°C)
Output Voltage	0 to 5 VDC (4-wire); 1 to 6 VDC (3-wire)
Output Impedance	< 1
Noise and Ripple	<10 mV Rms
Linearity	0.25% full range
Repeatability	0.000025 in (0.0006 mm)
Stability	0.1% full range
T/C of Scale Factor	0.025%/°F max (0.05%/°C max)
Shock Survival	250 *g* for 11 milliseconds
Vibration Tolerance	10 *g* up to 2 kHz
Housing Construction	TIG welded 400 series stainless steel
Termination	6-pin MS style hermitic connector

How to Order

Specify the model name, followed by the desired Gaging Range suffix. For example: GCD-SE-100 is AC operated with a 0.100" range. Special contact tips are also available and can be ordered separately (see back).

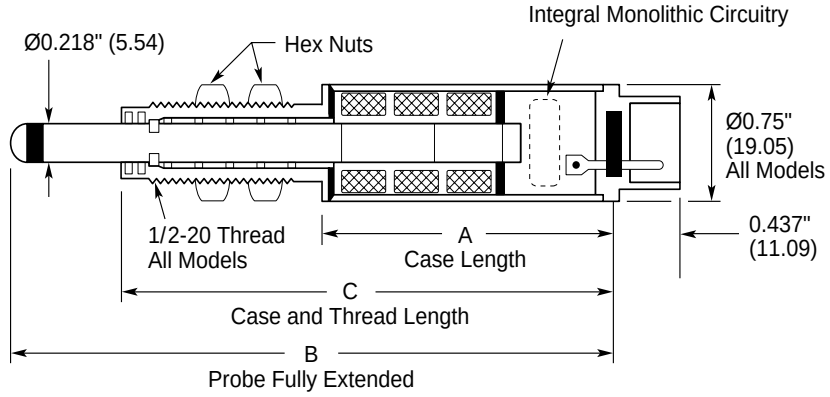
Model Number	Operation
GCD-SE	DC

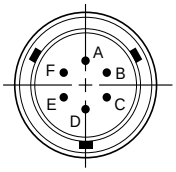
Gaging Range	Description
100	0.100" (2.54 mm)
250	0.250" (6.35 mm)
500	0.50" (12.7 mm)
1000	1.00" (25.4 mm)
2000	2.00" (50.8 mm)

GCD-SE Series models, when correctly installed, are CE certified to comply with the EMC Directive 89/336/EEC Generic Standards for Residential, Commercial, Light Industrial and Industrial Environments.

GCD-SE Series
Precision Performance
Ranges: 0.100" to 2.00"
DC operated

Dimensions in (mm)





Connector Mates with
PT06A-10-65
(SR) Connector

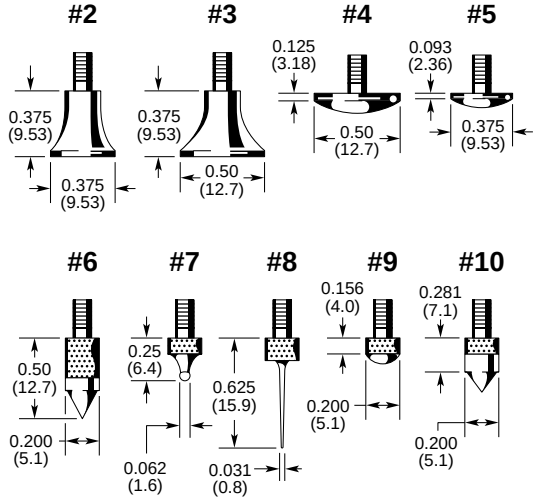
A = 0-5 VDC or 1-6 VDC
B = N/C
C = Power Common
D = Sig Common
E = 8.5 to 28 VDC
F = N/C

GCD Specifications – DC-Operated Models

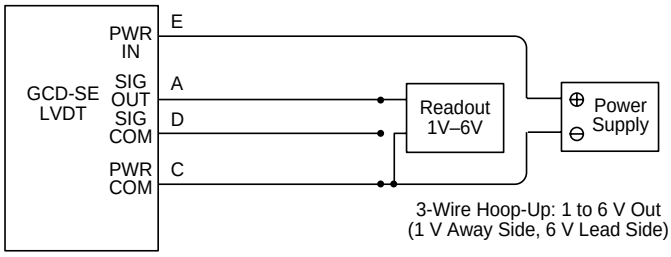
Model Number	GCD-SE-100	GCD-SE-250	GCD-SE-500	GCD-SE-1000	GCD-SE-2000
Gaging Range	0.100" (2.54mm)	0.250" (6.35mm)	0.500" (12.7mm)	1.000" (25.4mm)	2.000" (50.8mm)
Scale Factor	50	20	10	5	2.5
Pretravel (Nominal)	0.30" (7.6mm)	0.28" (7.1mm)	0.18" (4.5mm)	0.20" (5.08mm)	0.10" (2.5mm)
Overtravel	0.39" (9.4mm)	0.29" (7.4mm)	0.03" (0.8mm)	1.00" (25.4mm)	0.10" (2.5mm)
Dimensions					
A (±0.01"/0.25mm)	4.06" (103.1mm)	4.90" (124.5mm)	5.76" (146.3mm)	7.45" (189.2mm)	9.71" (246.6mm)
B (±0.03"/0.76mm)	6.48" (164.6mm)	6.49" (164.8mm)	8.16" (207.3mm)	12.93" (328.4mm)	15.16" (385.1mm)
C (±0.02"/0.50mm)	5.42" (137.7mm)	6.27" (159.3mm)	7.13" (181.1mm)	10.45" (265.4mm)	12.69" (322.3mm)

Optional Special Contact Tips

Nine different Schaevitz contact tips are available for special applications and as replacements for standard tips supplied with most gage heads. All Schaevitz contact points are 4-48 AGD threaded. To order, select the proper contact tip number.

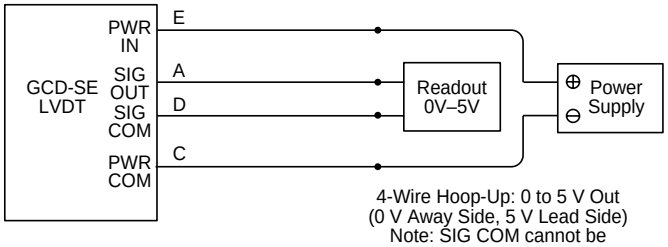


3-Wire Hook-Up



3-Wire Hoop-Up: 1 to 6 V Out
(1 V Away Side, 6 V Lead Side)

4-Wire Hook-Up



4-Wire Hoop-Up: 0 to 5 V Out
(0 V Away Side, 5 V Lead Side)
Note: SIG COM cannot be
tied PWR COM or paralleled
with other GCD-SE SIG COM

Options and Accessories

See individual gage head model specification pages for compatibility

Connectors

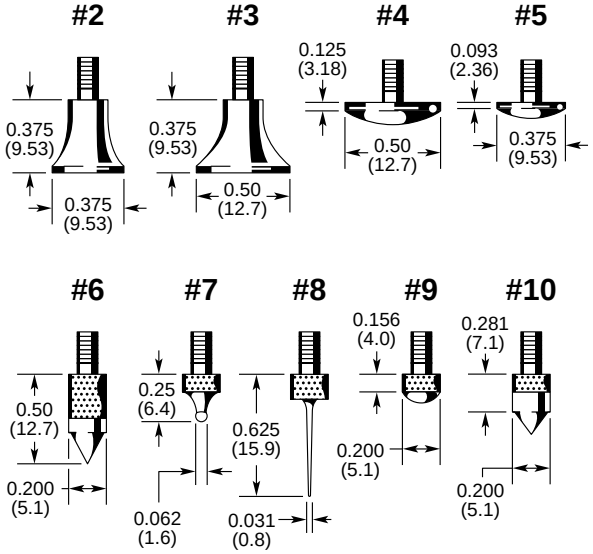


Seven different connectors are available to simplify installation of LBB and PCA Series gaging probes, including the PCA Series Bi-directional Lever Probe. To select the proper connector, simply add the appropriate number to the end of the gage head part number. For example, by adding a 2 to a model number such as LBB375PA-020-2 allows the user to specify a standard sensitivity gage head with an Amphenol-type 126-195 connector.

Connector Part Number Suffix	Description
1	Bendix-type PTO6A-10-6P (SR)
2	Amphenol-type 126-195
3	Amphenol-type 165-13
4	DE-9 compatible with Schaevitz ATA2001
5	Switchcraft-type 12CL5-M compatible with Schaevitz SYS-96 Dimensional Data Acquisition System
6	LEMO-type CONN. FGG-OB-305-CNAD52
7	Switchcraft-type 05BL5-M compatible with Schaevitz MP series LVDT readout/ controller

Special Contact Tips

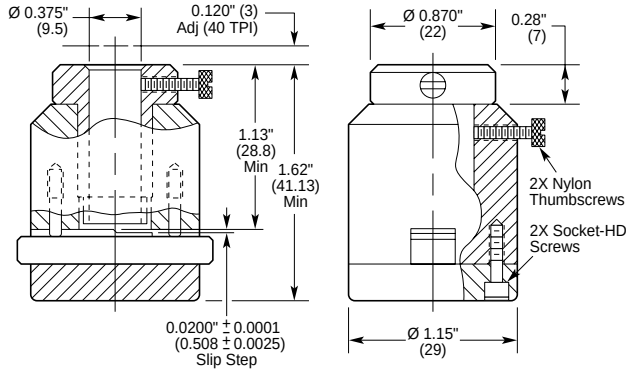
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Pocket-Size Calibrator



The GageCal is a convenient, pocket-size shop floor calibrator designed to work with all LBB Series gaging probes. The GageCal incorporates a micrometer thread for fine zero adjustments. A scaling slip, with a precision ground 0.020" step, provides a highly accurate calibration displacement. One GageCal may be used to calibrate all LBB Series gage heads as the 0.020" step is sufficient to establish the transducer slope for all ranges. The small size, lightweight (6 oz) and easy operation of the GageCal allows its implementation under the most difficult shop floor conditions. To order, specify model GageCal.



MS-Type Connector Cables

Consult factory for price and availability of adaptor cables for LVDTs and signal conditioners.

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