

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**

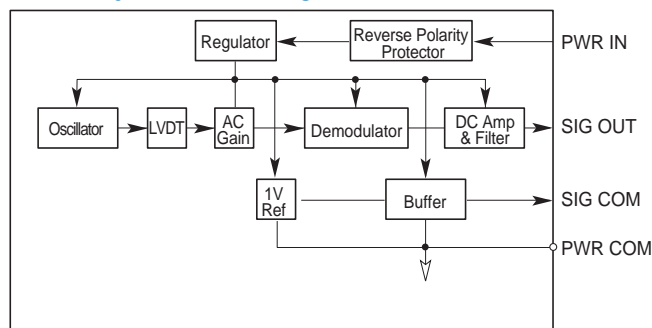
Applications

- 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 | -13°F to 185°F |
| Range | (-25°C to 85°C) |
| Storage Temperature | -65°F to 200°F |
| Range | (-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 hermetic connector |

How to Order

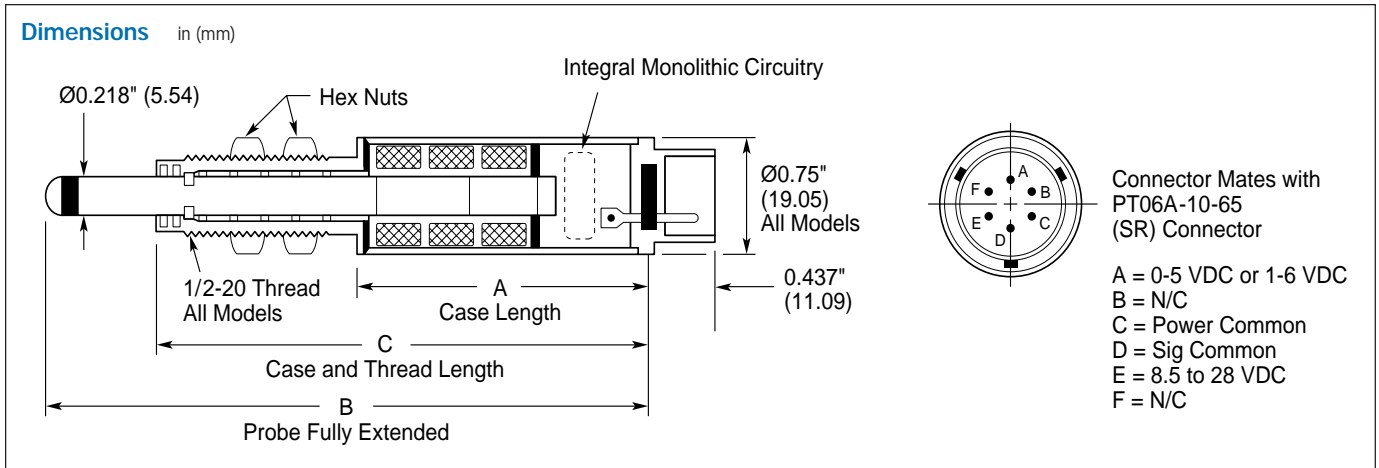
Specify the model name, followed by the desired Gaging Range suffix. For example: GCD-SE-100 is AC operated with a 0.100" range. Special contact tips are also available and can be ordered separately (see back).

| Model Number | Operation | Gaging Range | Description |
|---------------|-----------|--------------|------------------|
| GCD-SE | DC | 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

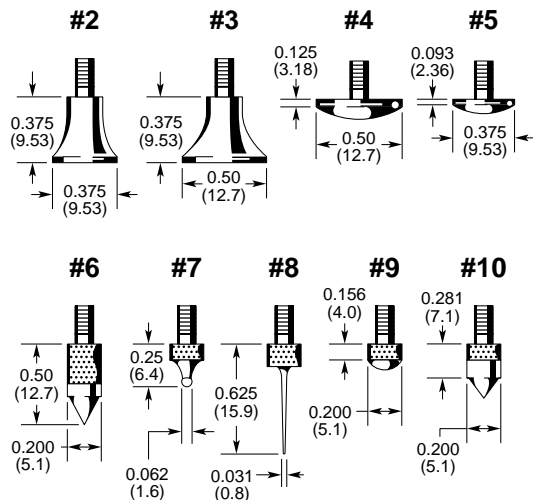


GCD Specifications - DC-Operated Models

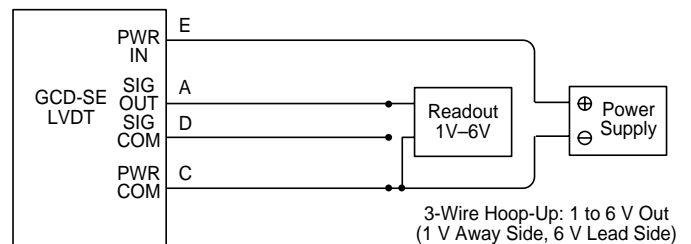
| Model Number | GCD-SE-100 | GCD-SE-250 | GCD-SE-500 | GCD-SE-1000 | GCD-SE-2000 |
|----------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|
| Gaging Range | 0.100" (2.54mm) | 0.250" (6.35mm) | 0.500" (12.7mm) | 1.000" (25.4mm) | 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

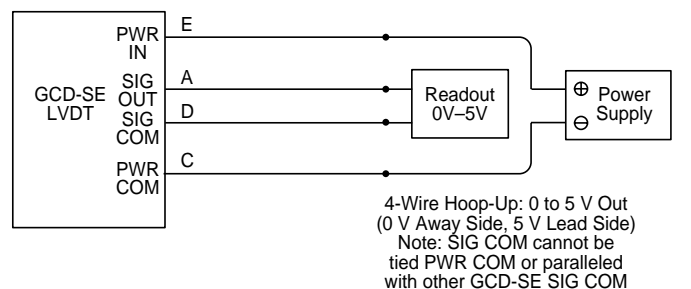
Nine different Schaevitz contact tips are available for special applications and as replacements for standard tips supplied with most gage heads. All Schaevitz contact points are 4-48 AGD threaded. To order, select the proper contact tip number.



3-Wire Hook-Up



4-Wire Hook-Up



Options and Accessories

See individual gage head model specification pages for compatibility

Connectors

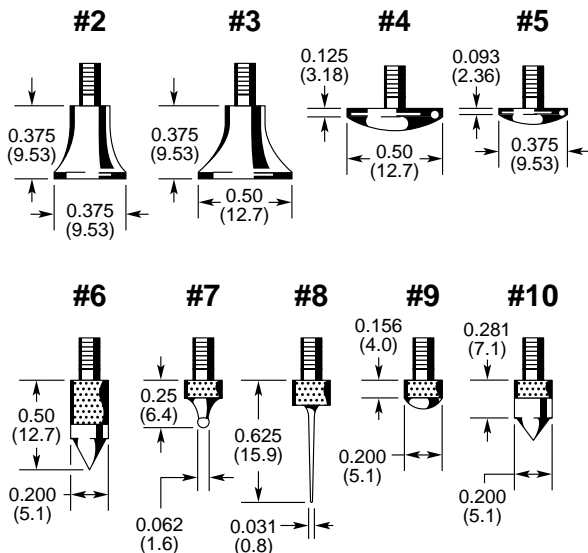
Seven different connectors are available to simplify installation of LBB and PCA Series gaging probes, including the PCA Series Bi-directional Lever Probe. To select the proper connector, simply add the appropriate number to the end of the gage head part number. For example, by adding a 2 to a model 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 |

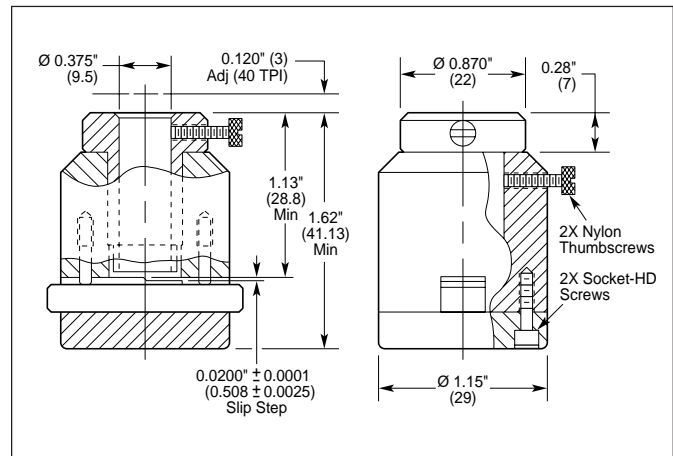
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Pocket-Size Calibrator

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.