

- A/B quadrature signal output with differential line driver
- Highly reliable Magnescale® principle
- Two types of power supply voltage + 5V DC and + 12 to + 24V DC
- Compact design (outside diameter \varnothing 8 mm: DG805/ 810) and a line up to cover a wide measuring range (5 mm to 205 mm)

Specifications (Gauges)

| Model | DG805 BLM/BLE FLM/FILE | DG810 BM/BE FM/FE | DG810 BLM/BLE FLM/FILE | DG10 BPM/BPE | DG10 BSM/BSE | DG10 BNM/BNE | DG25 BPM/BPE | DG25 BSM/BSE | DG25 BNM/BNE | DG25 BLM/BLE |
|-----------------------------------|---|-------------------------|------------------------------|--|-----------------|---------------------------|--------------------------------|---------------------------|-----------------|-----------------|
| Measuring length L mm (inch) | 5.2mm | | | 10 mm | | | 25 mm | | | |
| Resolution | 0.5/ (1)/ (2)/ (5)/ (10) μ m (Switch-selectable) | | | | | | | | | |
| Accuracy (at 20 °C /68 °F) | $\pm 1 \mu$ m | | | | | | | | | |
| Measuring force (at 20 °C /68 °F) | Upward | 0.35 \pm 0.25N | 0.4 \pm 0.3N | All directions 4.9N or less | | 0.3 \pm 0.25N | All directions 4.9N or less | | 0.4 \pm 0.3N | |
| | Lateral | 0.40 \pm 0.25N | 0.5 \pm 0.3N | | | 0.6 \pm 0.3N | | | 0.7 \pm 0.35N | |
| | Downward | 0.45 \pm 0.25N | 0.6 \pm 0.3N | | | 0.8 \pm 0.35N | | | 1 \pm 0.4N | |
| Protection grade | — | | | IP64 equivalent | | | — | | IP64 equivalent | |
| Mounting stem diameter | \varnothing 8 (0/ -0.009 mm)/ \varnothing 0.31" (+0/ -0.0004") L type: \varnothing 9.5(+0/-0.009 mm)/ \varnothing 0.37" (+0/ -0.0004") | | | \varnothing 20(0/ -0.013 mm)/ \varnothing 0.79" (+0/ -0.0005") | | | | | | |
| Lift lever | N/A | | | N/A | | | DZ161(OPTION) | | N/A | |
| Air lifter | DZ801(OPTION) Note 1 | N/A | | DZ801(OPTION) Note 1 | | DZ174-010 (OPTION) Note 1 | | DZ174-025 (OPTION) Note 1 | | |
| Cable length | 5 m/ 16.4" | | | | | | | | | |
| Operating temperature | 0 to 50 °C / 32 °F to 122 °F | | | | | | | | | |
| Storage temperature | 20 to 60 °C / 4 °F to 140 °F | | | | | | | | | |
| Feeler | Feeler \varnothing 3mm carbide ball with M2.5 x 0.45 screw on fitting end (DZ123) | | | Feeler \varnothing 2.5 mm carbide ball with M2.5 x 0.45 screw on fitting end (DZ122) | | | | | | |
| Mass (excl. cable unit) | 20 g | | 40 g | | 100 g | | | 200 g | | |

Specifications (Gauges)

| Model | DG50 BPM/BPE | DG50 BNM/BNE | DG100 BPM/BPE | DG100 BNM/BNE | DG110 BM/BE | DG155 BPM/BPE | DG205 BPM/BPE |
|-----------------------------------|--|----------------------------------|--|--------------------------------|--|--|------------------|
| Measuring length L mm (inch) | 50 mm | | 100 mm | | 110 mm | 155 mm | 205 mm |
| Resolution | 0.5/ (1)/ (2)/ (5)/ (10) μ m (Switch-selectable) | | | | | | |
| Accuracy (at 20 °C /68 °F) | $\pm 1 \mu$ m | | | $\pm 2 \mu$ m | | $\pm 2.5 \mu$ m | $\pm 3 \mu$ m |
| Measuring force (at 20 °C /68 °F) | Upward | — | | All directions 9.3N or less | — | Resistance against slip: 2.7N (Do not have an internal spring) | |
| | Lateral | 6.2N or less | | | 1.8 \pm 0.65N | — | |
| | Downward | 0.9 \pm 0.4N 1.3 \pm 0.5N | | | 2.7 \pm 0.55N | 1.55 \pm 0.15N (Note2) | |
| Protection grade | IP64 equivalent | | — | | IP64 equivalent | | |
| Mounting stem diameter | \varnothing 20 (+0/-0.013 mm) / \varnothing 0.79" (+0/ -0.0005") | | | | \varnothing 20 (+0/-0.03 mm) \varnothing 0.79" (+0/-0.001") | \varnothing 32 (+0/ -0.05 mm) \varnothing 1.26" (+0/ -0.002") | |
| Lift lever | N/A | | DZ161 (OPTION) | | DZ161 (OPTION) | | |
| Air lifter | DZ174-050 (OPTION) Note 1 | | N/A | | | | |
| Cable length | 5m/ 16.4' | | | | 2 m/ 6.56' | | 5 m/ 16.4' |
| Operating temperature | 0 to 50 °C / 32 °F to 122 °F | | | | | | |
| Storage temperature | -20 to 60 °C / -4 °F to 140 °F | | | | | | |
| Feeler | Feeler tipped with \varnothing 2.5 mm carbide ball with M2.5 x 0.45 screw on fitting end (DZ122) | | Feeler tipped with \varnothing 2.5 mm carbide ball with M2.5 x 0.45 screw on fitting end (DZ121) | | | | |
| Magnetic feeler | N/A | | | | | DZ181 (Included) Attraction force : 10N | |
| Mass (excl. cable unit) | 350 g | | 600 g | | 1150 g | 1100 g | 1300 g |

Note1: Tubing for compressed air device can be attached

Note2: The measurement force values given apply when DZ-581 measuring force balancer is not used. By using a measuring force balancer (option), it is possible to reduce the measuring force to a minimum of 0.3N. The measuring force will be constant regardless of spindle position.

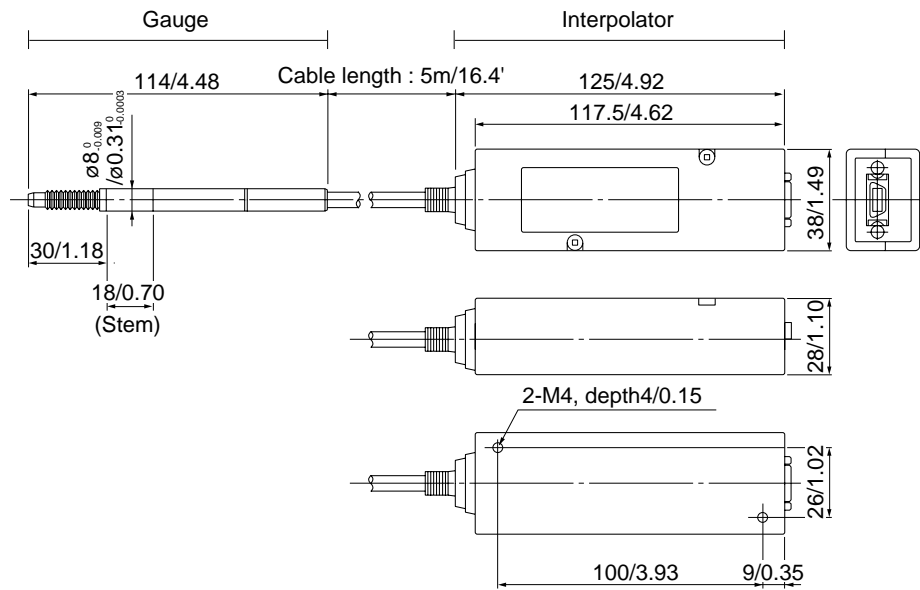
Specifications (Interpolator)

| Model | DG-M | DG-E |
|-----------------------------------|---|---|
| Power supply voltage | DC 5 V \pm 5 % (Correspond to remote sensing function) | DC 11 V to 28 V (Correspond to remote sensing function) |
| Power consumption | 300 mA (Maximum) | 150 mA (Maximum) |
| Output interface | Based on EIA-422 (Line driver:AM 26C31 or equivalent) | |
| Output signal | A/B quadrature signal | |
| Resolution | 0.5,1,2,5,10 μ m (0.00025",0.0005",0.001",0.0025",0.005") selectable | |
| Maximum response speed | 1 m/s | |
| Minimum phase difference | 200 ns | |
| Alarm | The output phase difference varies with the measuring speed. | |
| | A/B quadrature output of this probe turns to high impedance for 10 to 20 ms when excessive speed or cable disconnection alarm occurs. | |
| | If the cause is removed, the alarm signal is automatically reset. | |
| Output connector | MDR10214-52A2JL (3M) | |
| Dimensions | 125 x 28 x 28 (mm) (not including projecting parts) | |
| Operating temperature | 0 to 40/ 32 °F to 104 °F | |
| Storage temperature | -20 to 60/ -4 °F to 140 °F | |
| Mass (excl. cable and gauge part) | 150 g | |

Digital Gauge

DG-M/E Series

Dimensions



Unit : mm/inch

