

Linear Gauge LG100 Series



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The LG100 is a very robust and economical linear gauge for in-line use and automatic machines, in combination with the EJ Counter. EH-counters can be used as well.

- The advanced construction of the plunger guidance assembly makes it very resistant to external shocks and vibrations.
- Its differential square-wave signal output allows for a wide range of applications.
- Long-lasting due to linear ball-bearings in the spindle unit.
- Repeatability of 0,3 µm.
- Narrow range accuracy: 0,5 µm (20 µm range).
- Operation temperature range: 0 - 50°C.

Specifications

| | |
|--------------------------|---|
| Cable length | 2 m |
| Scale | Photoelectric linear encoder |
| Contact point | Ø3 mm carbide ball, thread: M 2,5 x 0,45 |
| Output signal | 90° phase difference, differential square wave (RS-422 equivalent) |
| Environmental conditions | 0°C to 50°C (20% to 80% rel. humidity, no condensation) |
| Bearing type | Linear ball bearing |
| Power supply | DC 5 V ±0,2 V ripple voltage 200 mVpp max |
| Minimum edge distance | 500 ns (1 µm type), 250 ns (0,5/0,1 µm type) |
| Scale reference point | 3 mm from the lowest rest point (10 mm type), 5mm from the lowest rest point (25/50 mm type) |

Optional accessories

| No. | Description |
|----------|---|
| 21HAA331 | HNBR Rubber Boot (for 10 mm range model), 10 mm model |
| 21HZA176 | HNBR Rubber Boot (for 25 mm range model), 25 mm model |
| 21HZA184 | HNBR Rubber Boot (for 50 mm range model), 50 mm model |
| 21HZA197 | Extension Cable 5 m (10P-10P) |
| 21HZA198 | Extension Cable 10 m (10P-10P) |
| 21HZA199 | Extension Cable 20 m (10P-10P) |
| 21HZA196 | Exchange Plug (for Z-Counter) |
| 21HZA261 | Exchange cable (for Z-Counter) |
| 21HZA195 | Exchange Plug (for P-Counter) |
| 21HZA260 | Exchange cable (for P counter) |
| 02ADE230 | Air Drive Unit for Linear Gauges 10 mm, 10 mm |
| 02ADE250 | Air Drive Unit for Linear Gauges 25 mm, 25 mm |
| 02ADE270 | Air Drive Unit for Linear Gauges 50 mm, 50 mm |
| 02ADB680 | Thrust Stem Set (for 10 mm model) |
| 02ADB681 | Thrust Stem (part) |
| 02ADB682 | Nut (part) |
| 02ADB683 | Spanner Wrench (for 02ADB682) |
| 02ADN370 | Thrust Stem Set (for 25 mm and 50 mm range model) |
| 02ADN371 | Thrust Stem (part), for 25 mm and 50 mm model |
| 02ADB692 | Nut (part) |
| 02ADB693 | Spanner Wrench (for 02ADB692) |
| 238772 | Silicone Rubber Boot (for 10 mm model) |
| 962504 | Silicone Rubber Boot (for 25 mm model) |
| 962505 | Silicone Rubber Boot (for 50 mm model) |
| 542-071D | Linear Gauge Counter EH, (need 21HZA195) |
| 542-075D | Linear Gauge Counter EH, (need 21HZA195) |
| 542-073D | Linear Gauge Counter EH, (need 21HZA196) |
| 542-080 | EJ-Counter -102N |
| 542-081 | EJ Counter-102NE |

Consumable spares

| No. | Description |
|--------|---|
| 901312 | Contact Element Ball Point, M2,5x0,45, 7,3 mm Length, Carbide, Metric |



LG100

| No. | Range [mm] | Accuracy | Measuring force | Resolution | Stem Ø | Mass [g] | Max. response speed [mm/s] | Signal pitch [µm] |
|---------|------------|--|--|------------|--------|----------|----------------------------|-------------------|
| 542-190 | 0 - 10 | (1,5+L/50) µm L=measured length in mm | 1,4 N with spindle down, 1,3 N with spindle horizontal, 1,2 N with spindle upwards | 0,001 µm | 8 mm | 260 | 1500 mm/s | 4 |
| 542-191 | 0 - 10 | (1,5+L/50) µm L=measured length in mm | 1,4 N with spindle down, 1,3 N with spindle horizontal, 1,2 N with spindle upwards | 0,0005 µm | 8 mm | 260 | 1500 mm/s | 2 |
| 542-192 | 0 - 10 | (0,8+L/50) µm L=measured length in mm | 1,4 N with spindle down, 1,3 N with spindle horizontal, 1,2 N with spindle upwards | 0,0001 µm | 8 mm | 260 | 400 mm/s | 0,4 |
| 542-193 | 0 - 25 | (1,5+L/50) µm L=measured length in mm | 4,6 N with spindle down, 4,3 N with spindle horizontal, 4 N with spindle upwards | 0,001 µm | 15 mm | 300 | 1500 mm/s | 4 |
| 542-194 | 0 - 25 | (1,5+L/50) µm L=measured length in mm | 4,6 N with spindle down, 4,3 N with spindle horizontal, 4 N with spindle upwards | 0,0005 µm | 15 mm | 300 | 1500 mm/s | 2 |
| 542-195 | 0 - 25 | (0,8+L/50) µm L=measured length in mm | 4,6 N with spindle down, 4,3 N with spindle horizontal, 4 N with spindle upwards | 0,0001 µm | 15 mm | 300 | 400 mm/s | 0,4 |
| 542-196 | 0 - 50 | (1,5+L/50) µm L=measured length in mm | 5,7 N with spindle down, 5,3 N with spindle horizontal, 4,9 N with spindle upwards | 0,001 µm | 15 mm | 400 | 1500 mm/s | 4 |
| 542-197 | 0 - 50 | (1,5+L/50) µm L=measured length in mm | 5,7 N with spindle down, 5,3 N with spindle horizontal, 4,9 N with spindle upwards | 0,0005 µm | 15 mm | 400 | 1500 mm/s | 2 |

if no EJ-Counter is used, an adapter is necessary (for all LG100 models)