

Linear Gage LGF

SERIES 542 — 0.1μm, 0.5μm or 1μm Reading

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Technical Data

Accuracy: Refer to the list of specifications
Resolution: 1μm, 0.5μm or 0.1μm
Inch Resolution: Refer to the applicable counters
Length standard: Photoelectric linear encoder
Max. response speed: 1500mm/s, (400mm/s: **542-181, 542-182**)
Contact point: ø3mm carbide
Stem: ø8mm or ø15mm
Bearing type: Stroke ball bearing
Measuring force: Refer to the list of specifications
Output signal: 90° phase difference, differential square wave (RS-422A equivalent)
Signal pitch: 4μm (**542-161, 542-162, 542-163**), 2μm (**542-171, 542-172, 542-173**) or 0.4μm (**542-181, 542-182**)
Cable length: 80"/2m
Dust/Water protection level: IP66

Applicable Counters

EH counter (**542-075A, 542-071A**)
EG counter (**542-015**)
EB counter (**542-092-2**)
EV counter (**542-063**)

SPECIFICATIONS

Range	Order No.	Resolution	Accuracy*	Measuring force**	Stem dia.	Remarks
10mm (.4")	542-181	0.0001mm	(0.8+L/50)μm	1.2N / 1.1N / 1.0N	8mm	—
10mm (.4")	542-171	0.0005mm	(1.5+L/50)μm	1.2N / 1.1N / 1.0N	8mm	—
10mm (.4")	542-161	0.001mm	(1.5+L/50)μm	1.2N / 1.1N / 1.0N	8mm	—
25mm (1")	542-182	0.0001mm	(0.8+L/50)μm	4.6N / 4.3N / 4.0N	15mm	—
25mm (1")	542-172	0.0005mm	(1.5+L/50)μm	4.6N / 4.3N / 4.0N	15mm	—
25mm (1")	542-162	0.001mm	(1.5+L/50)μm	4.6N / 4.3N / 4.0N	15mm	—
25mm (1")	542-612	0.005mm	(7.5+L/50)μm	4.6N / 4.3N / 4.0N	15mm	—
50mm (2")	542-173	0.0005mm	(1.5+L/50)μm	5.7N / 5.3N / 4.9N	15mm	—
50mm (2")	542-163	0.001mm	(1.5+L/50)μm	5.7N / 5.3N / 4.9N	15mm	—
50mm (2")	542-613	0.005mm	(7.5+L/50)μm	5.7N / 5.3N / 4.9N	15mm	—

*L = Measured length (mm) **Posture of gage: Upward (♀) / Horizontal (♂) / Downward (♂)

Optional Accessories

238772: Rubber boot (10mm)
962504: Rubber boot (25mm)
962505: Rubber boot (50mm)
902434: Extension cable (5m*)
902433: Extension cable (10m*)
902432: Extension cable (20m*)
02ADB680: Thrust stem set (for 10mm range models)
02ADB690: Thrust stem set (for 25, 50mm range models)
02ADE230: Air lifting units (10mm range)
02ADE250: Air lifting units (25mm range)
02ADE270: Air lifting units (50mm range)
*not available for **542-181** and **542-182**

DIMENSIONS AND MASS

