

# RIEGL LD90-3EHS-FLP-GF extremely high-speed distance meter

Laser Distance Meter for use with or without reflectors which, because of its high-speed and its "First & Last Pulse"<sup>1)</sup> facility, is especially well suited for scanner applications.

<b>LD90-3100EHS-FLP-GF</b> <i>equipped with optical head MK36(-Z65)<sup>2)</sup>:</i>	Measuring range depending on the reflection coefficient $\rho$ of the target	
	for natural targets, $\rho \geq 80\%$	2 m up to 150 m <sup>3)</sup>
	for natural targets, $\rho \geq 10\%$	5 m up to 50 m <sup>3)</sup>
	for retroreflecting targets <sup>4)</sup>	10 m up to 350 m @ 25mm resolution 10 m up to 700 m @ 50mm resolution

**Extremely High-Speed,**  
highly accurate distance meter  
for scanner applications

Minimum distance between two targets, typically	5 m
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Measurement accuracy <sup>5)</sup>	typically $\pm 25$ mm
Measurement resolution (selectable)	25 mm or 50 mm
Measurement rate <sup>6)</sup>	up to 12 000 Hz
Laser wavelength	typ. 0.9 $\mu$ m (near infrared)
Beam divergence <sup>7)</sup>	3.2 mrad

Laser product classification according to IEC60825-1:2007

The following clause applies for instruments delivered into the United States:  
Complies with 21 CFR 1040.10 and 1040.11 except for deviations pursuant to Laser Notice No. 50, dated June 24, 2007.



Interface	Parallel interface, ECP standard (extended capabilities port)
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<b>LD90-3300EHS-FLP-GF</b> <i>equipped with optical head MK42<sup>2)</sup>:</i>	Measuring range depending on the reflection coefficient $\rho$ of the target	
	for natural targets, $\rho \geq 80\%$	5 m up to 300 m <sup>3)</sup>
	for natural targets, $\rho \geq 10\%$	5 m up to 100 m <sup>3)</sup>
	for retroreflecting targets <sup>4)</sup>	10 m up to 700 m @ 50mm resolution 10 m up to 350 m @ 25mm resolution

**Extremely High-Speed**  
distance meter for long-range  
scanner applications

Minimum distance between two targets, typically	5 m
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Measurement accuracy <sup>5)</sup>	typically $\pm 50$ mm
Measurement resolution (selectable)	25 mm or 50 mm
Measurement rate <sup>6)</sup>	up to 12 000 Hz
Laser wavelength	typ. 0.9 $\mu$ m (near infrared)
Beam divergence <sup>7)</sup>	approx. 4.7 mrad

Laser product classification according to IEC60825-1:2007

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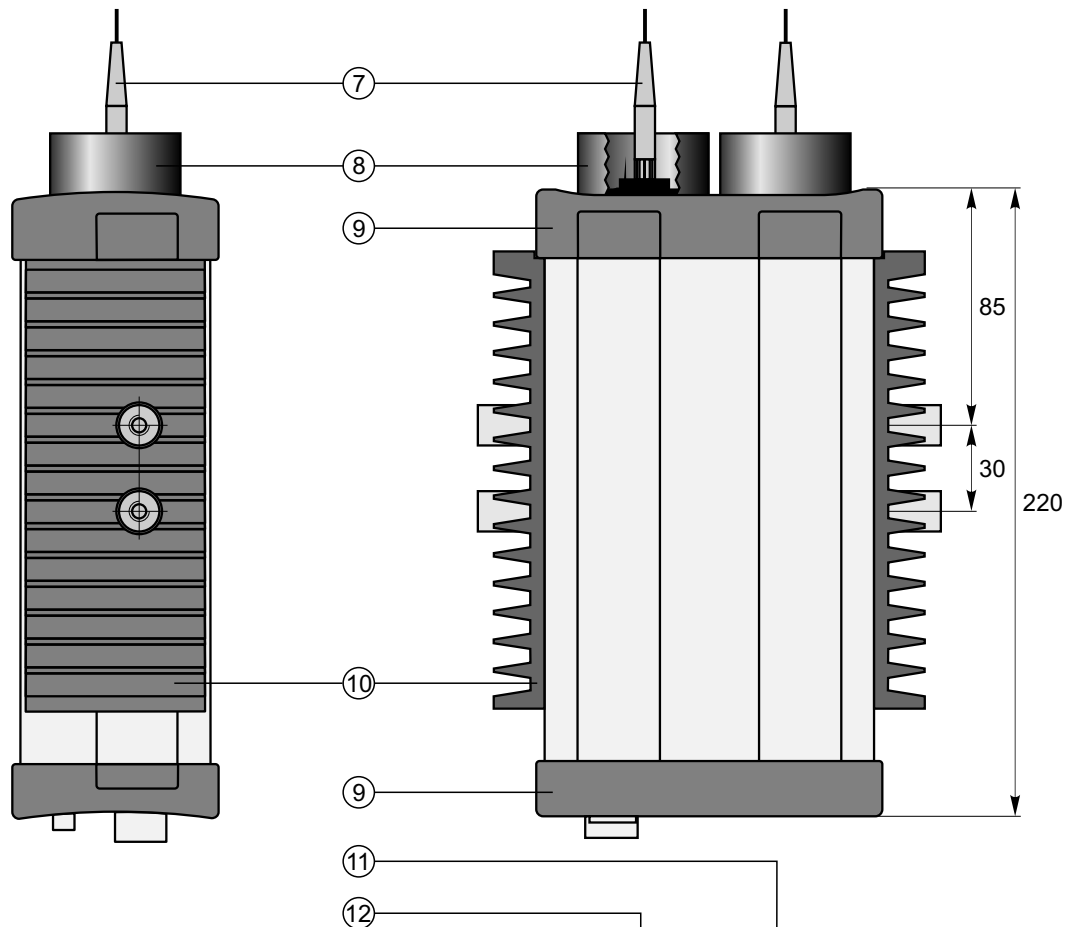
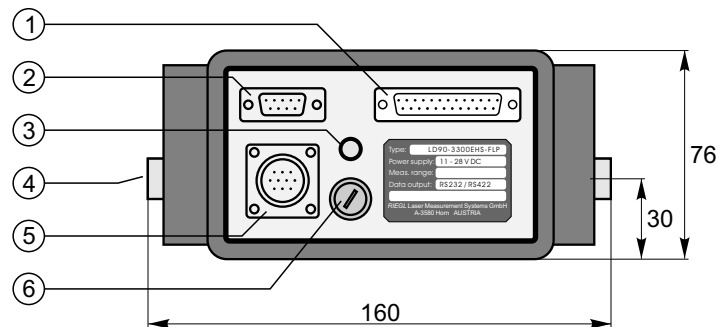
Interface	Parallel interface, ECP standard (extended capabilities port)
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- 1) First, Last, or First&Last Target alternatively selectable
- 2) glass-fiber cable length max. 4 m
- 3) Typical values for average conditions. In bright sunlight, the operational range is considerably shorter than under an overcast sky. At dawn or at night the range is even higher.
- 4) reflecting foil 3M DG4090 or equivalent, minimum dimensions 0.45 x 0.45 m<sup>2</sup>
- 5) standard deviation, plus distance depending error  $\leq 20$  ppm
- 6) adjustable in steps by software command; up to max. 12019 Hz ( $\pm 2$  Hz)
- 7) 1 mrad corresponds to 10 cm increase of beamwidth per 100 m of distance

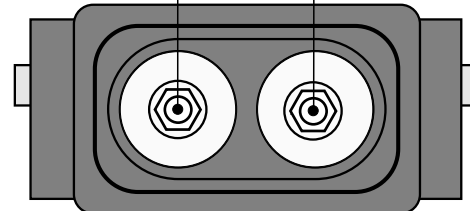
General technical data as given in our general data sheet LD90-3-GF series.

# RIEGL LD90-3EHS-FLP-GF dimensional drawings

- (1) ECP interface
- (2) 9pole socket for RS232 / RS422 data interface
- (3) LED "POWER ON"
- (4) 4xM6 threads on both sides for mounting the instrument
- (5) 10 pole socket for power supply
- (6) Fuse holder



- (7) SMA glass-fiber connectors
- (8) Protecting for glass-fiber socket
- (9) Rubber-armoured front and rear panel
- (10) Cooling block
- (11) SMA glass-fiber socket for receiver
- (12) SMA glass-fiber socket for transmitter



Information contained herein is believed to be accurate and reliable. However, no responsibility is assumed by RIEGL for its use. Technical data are subject to change without notice. Data sheet RIEGL LD90-3EHS-FLP-GF, 25/03/2010



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