

Photoelectric sensors

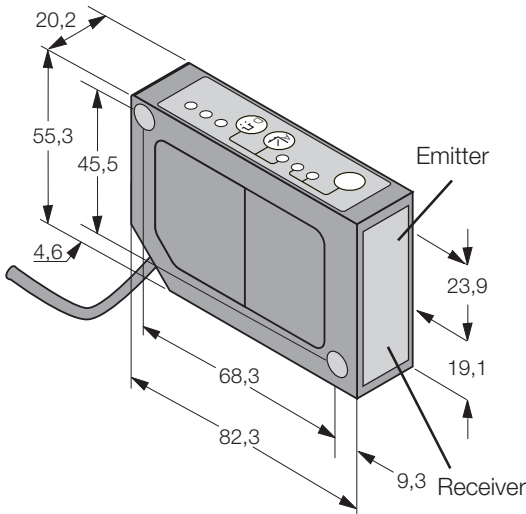


L-GAGE™ LG5 and LG10 series

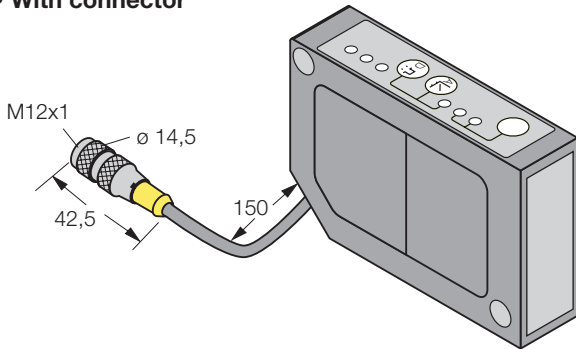
Laser measuring system

Dimensions [mm]

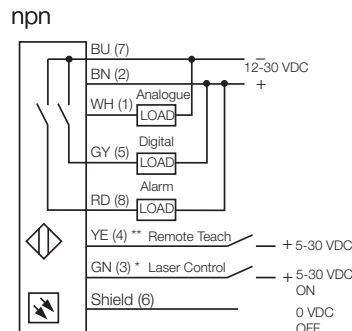
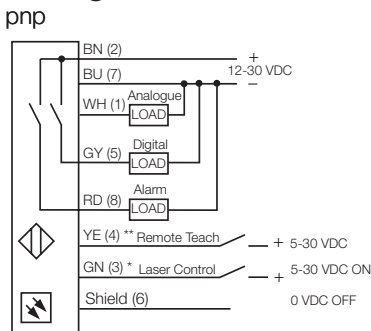
• With cable



• With connector



Wiring



*) Beam enable: connect to +

**) Remote programming

Wave length

Red 670 nm
Laser protection class II (EN 60825, IEC 60825)

Adjustment

window limit (analogue or digital output)

Supply

Supply voltage 12...30 VDC
Ripple V_{PP} $\leq 10\%$
No load current ≤ 50 mA
Delay upon power up 1250 ms

Protection

reverse polarity
output overload
transient voltage

Outputs

Analogue output current/max. load 4...20 mA/1 k Ω
Digital output continuous load current ≤ 100 mA
Voltage output voltage/min. load 0...10V/2,5 k Ω
Alarm output continuous load current ≤ 100 mA

Resolution (analogue)

Fast	LG5...	0,08 % sensing distance (< 40 μ @ 50 mm)
Medium	LG5...	0,02 % sensing distance (< 12 μ @ 50 mm)
Slow	LG5...	0,01 % sensing distance (< 3 μ @ 50 mm)
Fast	LG10...	0,15 % sensing distance (< 150 μ @ 100 mm)
Medium	LG10...	0,05 % sensing distance (< 50 μ @ 100 mm)
Slow	LG10...	0,01 % sensing distance (< 10 μ @ 100 mm)

Material

Housing zinc die-cast (black finish)
Cover aluminium
Lens acrylic
Protection class IP67 (IEC 60529/EN 60529)
Temperature range -10...+50 °C
Cable 2 m, PVC 7 x 0,34 mm² and screen *eurocon*

Connector

Accessories

Brackets

SMBLG	30 558 15	mounting bracket
SMBLGA	30 559 06	mounting bracket for precision alignment

Connector

WAK8-2/800	80 07 025	straight type
MQDC-830	30 57 595	straight type

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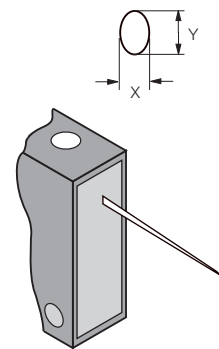
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Laser measuring system

	Range [mm]	Focal distance [mm]	Output function- digital	Output function- analogue	Connection	Type	Ident number
	45..60	70	pn-p	current	cable	LG5A65PI	30 540 89
	45..60	70	pn-p	current	connector	LG5A65PIQ	30 540 90
	45..60	70	np-n	current	cable	LG5A65NI	30 540 86
	45..60	70	np-n	current	connector	LG5A65NIQ	30 540 87
	45..60	70	pn-p	voltage	cable	LG5A65PU	30 575 65
	45..60	70	pn-p	voltage	connector	LG5A65PUQ	30 575 66
	45..60	70	np-n	voltage	cable	LG5A65NU	30 575 71
	45..60	70	np-n	voltage	connector	LG5A65NUQ	30 575 72
	45..60	53	pn-p	current	cable	LG5B65PI	30 559 66
	45..60	53	pn-p	current	connector	LG5B65PIQ	30 559 69
	45..60	53	np-n	current	cable	LG5B65NI	30 559 64
	45..60	53	np-n	current	connector	LG5B65NIQ	30 559 68
	45..60	53	pn-p	voltage	cable	LG5B65PU	30 575 68
	45..60	53	pn-p	voltage	connector	LG5B65PUQ	30 575 69
	45..60	53	np-n	voltage	cable	LG5B65NU	30 575 74
	45..60	53	np-n	voltage	connector	LG5B65NUQ	30 575 75
	75..125	180	pn-p	current	cable	LG10A65PI	30 540 95
	75..125	180	pn-p	current	connector	LG10A65PIQ	30 540 96
	75..125	180	np-n	current	cable	LG10A65NI	30 540 92
	75..125	180	np-n	current	connector	LG10A65NIQ	30 540 93
	75..125	180	pn-p	voltage	cable	LG10A65PU	30 575 80
	75..125	180	pn-p	voltage	connector	LG10A65PUQ	30 575 81
	75..125	180	np-n	voltage	cable	LG10A65NU	30 575 77
	75..125	180	np-n	voltage	connector	LG10A65NUQ	30 575 78

L-GAGE™ sensing beam dimensions

Type	LG5A...	LG5B...	LG510A...
Focus distance	70 mm	53 mm	180 mm
Distance [mm]	45 53 60	45 53 60	75 100 125
Spot width [mm] (X)	0,6 0,4 0,3	0,3 0,1 0,3	1,1 0,8 0,6
Spot Height [mm](Y)	0,9 0,6 0,4	0,5 0,1 0,5	1,5 1,1 0,8



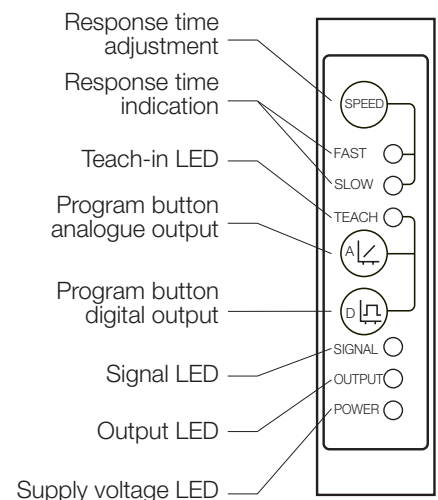
Linearity, colour sensitivity and temperature drift

Type	LG5	LG10
Linearity* of analogue output/sensing range	±60 µ / 45...60 mm ±10 µ / 49...51 mm	± 200 µ / 75...125 mm ± 20 µ / 95...100 mm
Colour sensitivity (typical)	< 75 µ / for white to dark grey ceramic target	< 100 µ / for white to dark grey ceramic target
Temperature drift	7 µ per °C	25 µ per °C

*resolution and linearity specified at 24 Vdc, 22°C, using a white ceramic test surface

Response time

Response time	Digital output	Analogue output (-3db)
Fast	2 ms ON/OFF	450 Hz
Medium	10 ms ON/OFF	45 Hz
Slow	100 ms ON/OFF	4,5 Hz



Subject to changes without notice • Edition rev 06.02 • P/N ED038



IMPORTANT SAFETY WARNING! These sensors do NOT include the self-checking redundant circuitry necessary to allow their use in personnel safety applications. A sensor failure or malfunction can result in either an energised or de-energised output condition. These products should not be used as sensing devices for personnel safety.