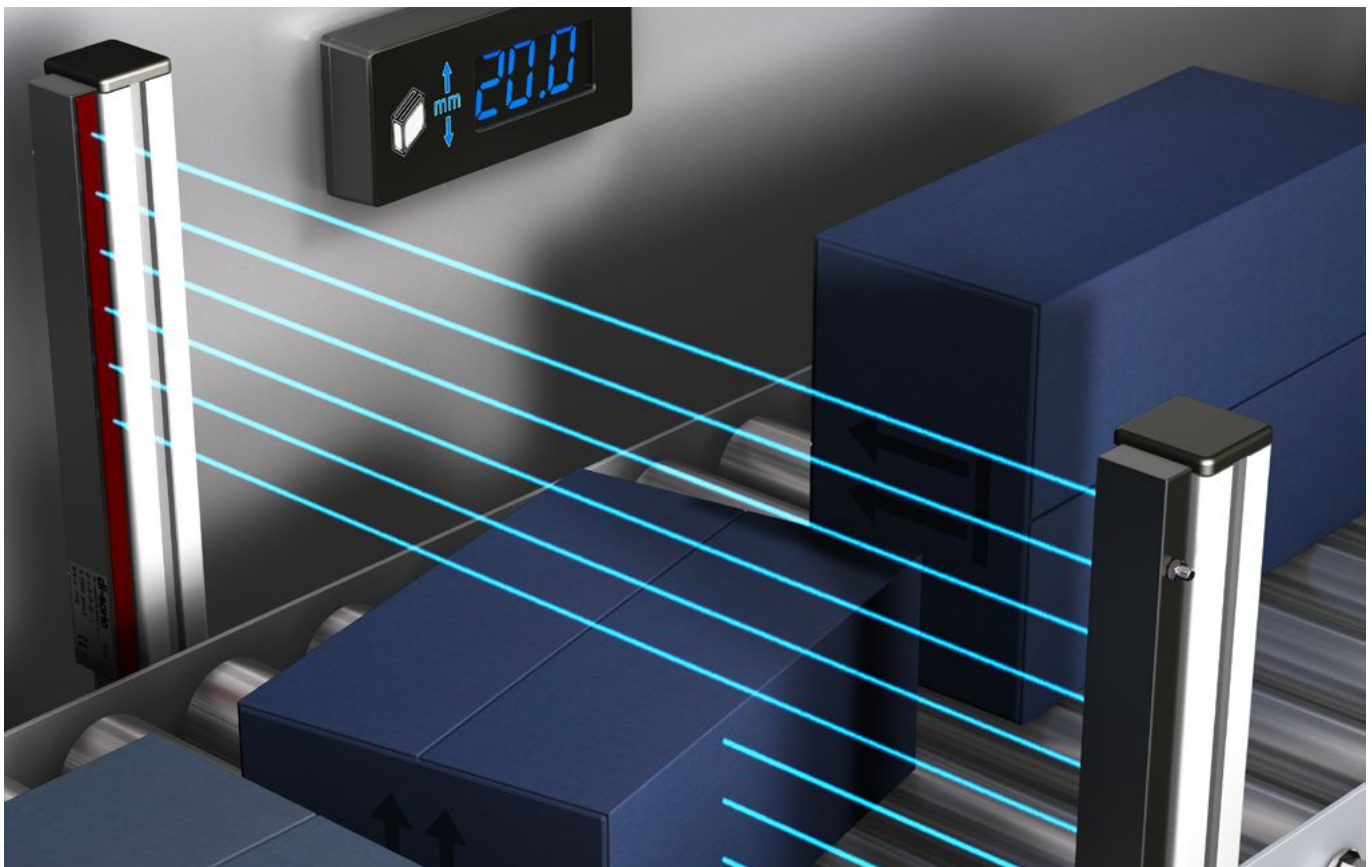


## Light curtains



 **di-soric**

Our light curtains detect and measure objects in a large detection or measuring field. The light curtain systems operate on the principle of multiple through-beam sensors whose output signals are either interlinked (switching light curtains) or evaluated individually (measuring light curtains). Through different resolutions and elevations, they can be used in many applications.

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## LA SWITCHING



The area of application of the LA switching light curtains is object detection. The devices were designed in a cost-optimized manner for simple applications. Slim construction, integrated switching outputs and quick commissioning are their distinguishing features.



Technical data (typ.)	+20°C, 24 VDC
Range	0.7 to 4.0 m / set to 4.0 m at the factory
Number of beams	8 to 112
Beam separation	12.5/25/50/112 mm
Monitoring height	88 to 2571 mm
Emitted light	Infrared light, 880 nm, clocked
Service voltage	20.4 to 28.8 V DC
Outputs	Transistor pnp (switching output and alarm output)
Current-carrying capacity	200 mA, short-circuit proof
Ambient temperature	-10 to +45 °C
Protection class	IP 54, optionally IP 65
EMC directives	EN 61000-6-3:2001/EN 61000-6-1:2001
Housing material	Aluminum bar profile

Beam separation (mm)	Number of beams	Monitoring height H (mm)	Profile length L ca. (mm)	Design	Number of threaded bolts	Dimension A (mm)	Dimension B (mm)	Dimension X (mm)	Dimension Y (mm)	Light switching	Dark switching	Product description	Product description			
<b>LA Switching</b>												<b>Horizontal beam evaluation</b>	<b>Diagonal beam evaluation</b>			
12.5	8	88	260	I	2	30	200	13.5	153.5	■		LA 8-12.5-88-260 I-H	LA-D 8-12.5-88-260 I-H			
													■		LA 8-12.5-88-260 I-D	LA-D 8-12.5-88-260 I-D
	16	188	360		2	30	300			■		LA 16-12.5-188-360 I-H	LA-D 16-12.5-188-360 I-H			
													■		LA 16-12.5-188-360 I-D	LA-D 16-12.5-188-360 I-D
	24	288	460		2	80	300			■		LA 24-12.5-288-460 I-H	LA-D 24-12.5-288-460 I-H			
													■		LA 24-12.5-288-460 I-D	LA-D 24-12.5-288-460 I-D
	32	388	560		2	80	400			■		LA 32-12.5-388-560 I-H	LA-D 32-12.5-388-560 I-H			
													■		LA 32-12.5-388-560 I-D	LA-D 32-12.5-388-560 I-D
	40	488	660		2	80	500			■		LA 40-12.5-488-660 I-H	LA-D 40-12.5-488-660 I-H			
													■		LA 40-12.5-488-660 I-D	LA-D 40-12.5-488-660 I-D
	48	588	760		2	30	700			■		LA 48-12.5-588-760 I-H	LA-D 48-12.5-588-760 I-H			
													■		LA 48-12.5-588-760 I-D	LA-D 48-12.5-588-760 I-D
56	688	860	2	80	700	■		LA 56-12.5-688-860 I-H	LA-D 56-12.5-688-860 I-H							
										■		LA 56-12.5-688-860 I-D	LA-D 56-12.5-688-860 I-D			
64	788	960	3	80	400	■		LA 64-12.5-788-960 I-H	LA-D 64-12.5-788-960 I-H							
										■		LA 64-12.5-788-960 I-D	LA-D 64-12.5-788-960 I-D			
72	888	1,060	3	130	400	■		LA 72-12.5-888-1060 I-H								
										■		LA 72-12.5-888-1060 I-D				
80	988	1,160	3	80	500	■		LA 80-12.5-988-1160 I-H								
										■		LA 80-12.5-988-1160 I-D				
88	1,088	1,260	3	30	600	■		LA 88-12.5-1088-1260 I-H								
										■		LA 88-12.5-1088-1260 I-D				

Beam separation (mm)	Number of beams	Monitoring height H (mm)	Profile length L ca. (mm)	Design	Number of threaded bolts	Dimension A (mm)	Dimension B (mm)	Dimension X (mm)	Dimension Y (mm)	Light switching	Dark switching	Product description	Product description	
LA Switching											 Horizontal beam evaluation	 Diagonal beam evaluation		
12.5	96	1,188	1,360	I	3	80	600	13.5	13.5	■		LA 96-12.5-1188-1360 I-H		
										■		LA 96-12.5-1188-1360 I-D		
	104	1,288	1,460		3	130				400	■		LA 104-12.5-1288-1460 I-H	
											■		LA 104-12.5-1288-1460 I-D	
	112	1,388	1,560		4	30				500	■		LA 112-12.5-1388-1560 I-H	
											■		LA 112-12.5-1388-1560 I-D	
25	8	175	360	2	30	300	20	160	■		LA 8-25-175-360 I-H	LA-D 8-25-175-360 I-H		
									■		LA 8-25-175-360 I-D	LA-D 8-25-175-360 I-D		
	16	375	560	2	80	400			■		LA 16-25-375-560 I-H	LA-D 16-25-375-560 I-H		
									■		LA 16-25-375-560 I-D	LA-D 16-25-375-560 I-D		
	24	575	760	2	30	700			■		LA 24-25-575-760 I-H	LA-D 24-25-575-760 I-H		
									■		LA 24-25-575-760 I-D	LA-D 24-25-575-760 I-D		
	32	775	960	3	80	400			■		LA 32-25-775-960 I-H	LA-D 32-25-775-960 I-H		
									■		LA 32-25-775-960 I-D	LA-D 32-25-775-960 I-D		
	40	975	1,160	3	80	500			■		LA 40-25-975-1160 I-H	LA-D 40-25-975-1160 I-H		
									■		LA 40-25-975-1160 I-D	LA-D 40-25-975-1160 I-D		
	48	1,175	1,360	3	80	600			■		LA 48-25-1175-1360 I-H	LA-D 48-25-1175-1360 I-H		
									■		LA 48-25-1175-1360 I-D	LA-D 48-25-1175-1360 I-D		
	56	1,375	1,560	4	80	500			■		LA 56-25-1375-1560 I-H	LA-D 56-25-1375-1560 I-H		
									■		LA 56-25-1375-1560 I-D	LA-D 56-25-1375-1560 I-D		
	64	1,575	1,760	4	130	500			■		LA 64-25-1575-1760 I-H	LA-D 64-25-1575-1760 I-H		
									■		LA 64-25-1575-1760 I-D	LA-D 64-25-1575-1760 I-D		
	72	1,775	1,960	4	80	600			■		LA 72-25-1775-1960 I-H			
									■		LA 72-25-1775-1960 I-D			
80	1,975	2,160	5	80	500	■		LA 80-25-1975-2160 I-H						
						■		LA 80-25-1975-2160 I-D						
88	2,175	2,360	5	140	520	■		LA 88-25-2175-2360 I-H						
						■		LA 88-25-2175-2360 I-D						

Beam separation (mm)	Number of beams	Monitoring height H (mm)	Profile length L ca. (mm)	Design	Number of threaded bolts	Dimension A (mm)	Dimension B (mm)	Dimension X (mm)	Dimension Y (mm)	Light switching	Dark switching	Product description	Product description			
<b>LA Switching</b>											 <b>Horizontal beam evaluation</b>	 <b>Diagonal beam evaluation</b>				
50	8	350	560	I	2	80	400	20	185	■		LA 8-50-350-560 I-H	LA-D 8-50-350-560 I-H			
													■		LA 8-50-350-560 I-D	LA-D 8-50-350-560 I-D
	16	750	960		3	80	400			■		LA 16-50-750-960 I-H	LA-D 16-50-750-960 I-H			
													■		LA 16-50-750-960 I-D	LA-D 16-50-750-960 I-D
	24	1,150	1,360		3	80	600			■		LA 24-50-1150-1360 I-H	LA-D 24-50-1150-1360 I-H			
													■		LA 24-50-1150-1360 I-D	LA-D 24-50-1150-1360 I-D
	32	1,550	1,760		4	130	500			■		LA 32-50-1550-1760 I-H	LA-D 32-50-1550-1760 I-H			
													■		LA 32-50-1550-1760 I-D	LA-D 32-50-1550-1760 I-D
112	8	783	1,050	I	3	125	400	20	245	■		LA 8-112-783-1050 I-H	LA-D 8-112-783-1050 I-H			
													■		LA 8-112-783-1050 I-D	LA-D 8-112-783-1050 I-D
	16	1,677	1,950		4	75	600			■		LA 16-112-1677-1950 I-H	LA-D 16-112-1677-1950 I-H			
													■		LA 16-112-1677-1950 I-D	LA-D 16-112-1677-1950 I-D



10x27 mm

**LA ... Q**

Light curtains in the LA ... Q housing design are optionally available upon request



## LI MEASURING

The LI measuring light curtains are used in object measurement and for challenging measuring and detection tasks. The most important features are high resolution and a short response time, as well as their slim construction for simple integration. An additional evaluation unit is required to use them.






Technical data (typ.)	+20 °C, 24 VDC
Range	0.25 to 6.0 m can be adjusted using the evaluation electronics
Number of beams	8 to 344
Beam separation	5/10/12.5/25/50/112 mm
Monitoring height	35 to 2375 mm
Emitted light	Infrared light, 880 nm
	200 mA, short-circuit proof
Ambient temperature	-10 to +45 °C
Protection class	IP 54, optionally IP 65 (EN 61000-6-3:2001/EN 61000-6-1:2001)
Housing material	Aluminum bar profile

Beam separation (mm)	Number of beams	Monitoring height H (mm)	Profile length L ca. (mm)	Design	Dimension X (mm)	Dimension Y (mm)	Product description
LI Measuring							Horizontal or diagonal beam evaluation
	5	35	70	T	17.5	17.5	LI 8-5-35-70 T
		16	110				LI 16-5-75-110 T
		24	150				LI 24-5-115-150 T
		32	190				LI 32-5-155-190 T
		40	230				LI 40-5-195-230 T
		48	270				LI 48-5-235-270 T
		56	310				LI 56-5-275-310 T
		64	350				LI 64-5-315-350 T
		72	390				LI 72-5-355-390 T
		80	430				LI 80-5-395-430 T
		88	470				LI 88-5-435-470 T
		96	510				LI 96-5-475-510 T
		104	550				LI 104-5-515-550 T
		112	590				LI 112-5-555-590 T
		120	630				LI 120-5-595-630 T
		128	670				LI 128-5-635-670 T
		136	710				LI 136-5-675-710 T
		144	750				LI 144-5-715-750 T
		152	790				LI 152-5-755-790 T
		160	830				LI 160-5-795-830 T
		168	870				LI 168-5-835-870 T
		176	910				LI 176-5-875-910 T
		184	950				LI 184-5-915-950 T
		192	990				LI 192-5-955-990 T
		200	1,030				LI 200-5-995-1030 T
		208	1,070				LI 208-5-1035-1070 T
		216	1,110				LI 216-5-1075-1110 T
		224	1,150				LI 224-5-1115-1150 T
		232	1,190				LI 232-5-1155-1190 T
		240	1,230				LI 240-5-1195-1230 T
		248	1,270				LI 248-5-1235-1270 T
		256	1,310				LI 256-5-1275-1310 T
		264	1,350				LI 264-5-1315-1350 T
		272	1,390				LI 272-5-1355-1390 T
280	1,430	LI 280-5-1395-1430 T					
288	1,470	LI 288-5-1435-1470 T					
296	1,510	LI 296-5-1475-1510 T					
344	1,750	LI 344-5-1715-1750 T					

	Beam separation (mm)	Number of beams	Monitoring height H (mm)	Profile length L ca. (mm)	Design	Number of threaded bolts	Dimension A (mm)	Dimension B (mm)	Dimension X (mm)	Dimension Y (mm)	Product description	
	<b>LI Measuring</b>  <b>Horizontal or diagonal beam evaluation</b>											
	10	8	70	130	I	I	2	20	90	13.5	38.5	LI 8-10-70-130 I
		16	150	210			2	55	100			LI 16-10-150-210 I
		24	230	290			2	45	200			LI 24-10-230-290 I
		32	310	370			2	35	300			LI 32-10-310-370 I
		40	390	450			2	75	300			LI 40-10-390-450 I
		48	470	530			2	65	400			LI 48-10-470-530 I
		56	550	610			2	105	400			LI 56-10-550-610 I
		64	630	690			2	45	600			LI 64-10-630-690 I
		72	710	770			2	35	700			LI 72-10-710-770 I
		80	790	850			2	75	700			LI 80-10-790-850 I
		88	870	930			2	65	800			LI 88-10-870-930 I
		96	950	1,010			3	105	400			LI 96-10-950-1010 I
		104	1,030	1,090			3	145	400			LI 104-10-1030-1090 I
		112	1,110	1,170			3	85	500			LI 112-10-1110-1170 I
		120	1,190	1,250			3	125	500			LI 120-10-1190-1250 I
		128	1,270	1,330			3	65	600			LI 128-10-1270-1330 I
		136	1,350	1,410			3	105	600			LI 136-10-1350-1410 I
		144	1,430	1,490			4	145	400			LI 144-10-1430-1490 I
	152	1,510	1,570	4	35	500	LI 152-10-1510-1570 I					
	160	1,590	1,650	4	75	500	LI 160-10-1590-1650 I					
	12.5	8	88	140	I	I	2	25	90	13.5	38.5	LI 8-12.5-88-140 I
		16	188	240			2	70	100			LI 16-12.5-188-240 I
		24	288	340			2	70	200			LI 24-12.5-288-340 I
		32	388	440			2	70	300			LI 32-12.5-388-440 I
		40	488	540			2	70	400			LI 40-12.5-488-540 I
		48	588	640			2	70	500			LI 48-12.5-588-640 I
		56	688	740			2	70	600			LI 56-12.5-688-740 I
64		788	840	2			70	700	LI 64-12.5-788-840 I			
72		888	940	2			70	800	LI 72-12.5-888-940 I			
80		988	1,040	3			120	400	LI 80-12.5-988-1040 I			
88		1,088	1,140	3			70	500	LI 88-12.5-1088-1140 I			
96		1,188	1,240	3			120	500	LI 96-12.5-1188-1240 I			
104		1,288	1,340	3			70	600	LI 104-12.5-1288-1340 I			
112		1,388	1,440	3			120	600	LI 112-12.5-1388-1440 I			
120		1,488	1,540	4			170	400	LI 120-12.5-1488-1540 I			
128		1,588	1,640	4			70	500	LI 128-12.5-1588-1640 I			
136		1,688	1,740	4			120	500	LI 136-12.5-1688-1740 I			
144		1,788	1,840	4			170	500	LI 144-12.5-1788-1840 I			

**Light curtains with greater monitoring height H (max. 196 beams)**

Available on request!

	Beam separation (mm)	Number of beams	Monitoring height H (mm)	Profile length L ca. (mm)	Design	Number of threaded bolts	Dimension A (mm)	Dimension B (mm)	Dimension X (mm)	Dimension Y (mm)	Product description	
	<b>LI Measuring</b>											
	  <b>Horizontal or diagonal beam evaluation</b>											
	25	8	175	240	I	I	2	70	100	20	45	LI 8-25-175-240 I
		16	375	440			2	70	300			LI 16-25-375-440 I
		24	575	640			2	70	500			LI 24-25-575-640 I
		32	775	840			2	70	700			LI 32-25-775-840 I
		40	975	1,040			3	120	400			LI 40-25-975-1040 I
		48	1,175	1,240			3	125	500			LI 48-25-1175-1240 I
		56	1,375	1,440			3	120	600			LI 56-25-1375-1440 I
		64	1,575	1,640			4	70	500			LI 64-25-1575-1640 I
		72	1,775	1,840			4	170	500			LI 72-25-1775-1840 I
		80	1,975	2,040			4	120	600			LI 80-25-1975-2040 I
		88	2,175	2,240			5	120	500			LI 88-25-2175-2240 I
	96	2,375	2,440	5	165	520	LI 96-25-2375-2440 I					
	50	8	350	440	I	I	2	70	300	20	70	LI 8-50-350-440 I
		16	750	840			2	70	700			LI 16-50-750-840 I
		24	1,150	1,240			3	120	500			LI 24-50-1150-1240 I
		32	1,550	1,640			4	70	500			LI 32-50-1550-1640 I
		40	1,950	2,040			4	120	600			LI 40-50-1950-2040 I
		48	2,350	2,440			5	180	520			LI 48-50-2350-2440 I
	112	4	336	490	I	I	2	95	300	20	130	LI 4-112-336-490 I
		8	783	940			2	70	800			LI 8-112-783-940 I
		12	1,230	1,380			3	90	600			LI 12-112-1230-1380 I
		16	1,677	1,830			4	165	500			LI 16-112-1677-1830 I
		20	2,124	2,280			5	175	500			LI 20-112-2124-2280 I



10x27 mm

**LI... Q**

Light curtains in housing design LI... Q are optionally available upon request

**EVALUATION ELECTRONICS FOR LI SERIES**



Technical data (typ.)		at +20 °C, 24 VDC	
Range	0.4 to 6.0m, autocalibration	LED display	Status indicator/ error indicator
Number of beams	See Light curtains LL...	Ambient temperature	0to+40 °C
Switching frequency	10Hz	Protection class	IP 54
Switching capacity	250VDC, 250W 400V AC, 2000VA	Protection class	III, operation on protective low voltage
Output function	Light switching	EMC directives	EN 61000-6-1: 2001
Beam evaluation	Multiplexing		EN 61000-6-3: 2001
Cycle time per light beam	down to 0.08 ms/beam (Depending on range)	Housing material	ABS gray

	Number of light curtains being operated	Switching output (relay 10Hz)	Analog outputs	Service voltage (VDC)	Profibus interface D-Sub, 9-pin (address adjustable)	Ethernet / IP	Profinet	Dimensions LxWxH (mm)	Product description
<b>Evaluation electronics LVB ..., switching</b>									
	1	1		19 to 30				57.5 x 120 x 200	LVB-24VDC
	1	1		230 (+5/-10%)				57.5 x 120 x 200	LVB-230VAC

Technical data (typ.)		at +20 °C, 24 VDC	
Range	0.25 to 6.0m, adjustable	LED display	Error indicator
Number of beams	max. 500	Ambient temperature	0to+40 °C
Service voltage	20 to 26 V DC	Protection class	IP 00
Outputs	See the graphic above		IP 65 with optional outer housing
Switching capacity	250mA	Protection class	III, operation on protective low voltage
Beam evaluation	Parameters can be configured horizontally / diagonally	EMC directives	EN 61000-6-1: 2001 EN 61000-6-3: 2001
Cycle time per light beam	0.05ms (depends on configuration and range of light curtain)	Housing material	Plastic
		Output function	Configurable

	Number of light curtains being operated	Configurable inputs (24 VDC, 12mA, 3,000 Hz)	Outputs (24 VDC, 0.25A, PNP)	Analog outputs (0 to 10 V)	3 combined I/Os	RS 232	Configuration by means of Dip series	CANopen interface	Profibus interface D-Sub, 9-pin (address adjustable)	Ethernet / IP	Profinet	Dimensions LxWxH (mm)	Product description	
<b>Evaluation electronics LVE .../ LVX ..., measuring</b>														
1	1	1										88 x 126 x 60	LVE <sup>1)</sup>	
		1							■			163 x 126 x 60	LVE-PBI <sup>1)</sup>	
		1				■	■	■		■		130 x 126 x 60	LVE-ENI <sup>1)</sup>	
		1									■		163 x 126 x 60	LVE-PNI <sup>1)</sup>
		1	2										124 x 126 x 60	LVE-ALX <sup>1)</sup>
		17											147 x 126 x 60	LVE-016 <sup>1)</sup>
2	1	3										125 x 126 x 60	LVX <sup>1)</sup>	
		3							■			200 x 126 x 60	LVX-PBI <sup>1)</sup>	
		3				■	■	■			■	200 x 126 x 60	LVX-PNI <sup>1)</sup>	
		3	2									161 x 126 x 60	LVX-ALX <sup>1)</sup>	
		19											184 x 126 x 60	LVX-016 <sup>1)</sup>

<sup>1)</sup> The evaluation electronics are configured at the factory using the customer's application.