High-performance Light Barriers

LX series with digital interface
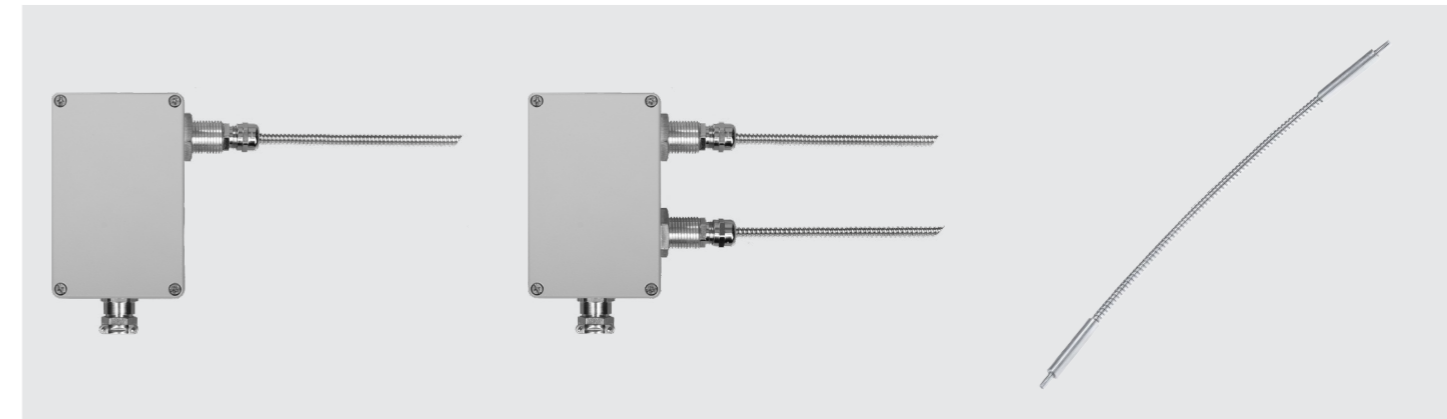
detection of hot and cold material

Proxitron — SENSORS MADE IN GERMANY
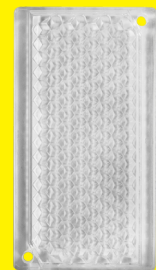
High-performance Light Barriers – LX Series
compact devices
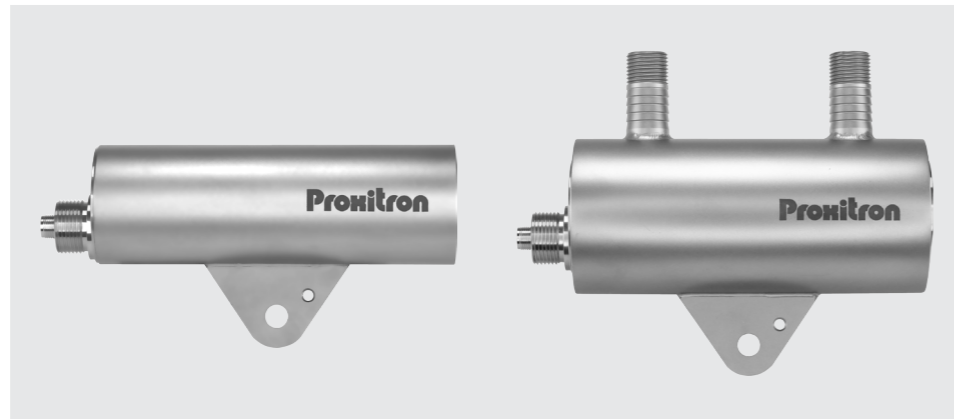
High-performance Light Barriers – LX Series
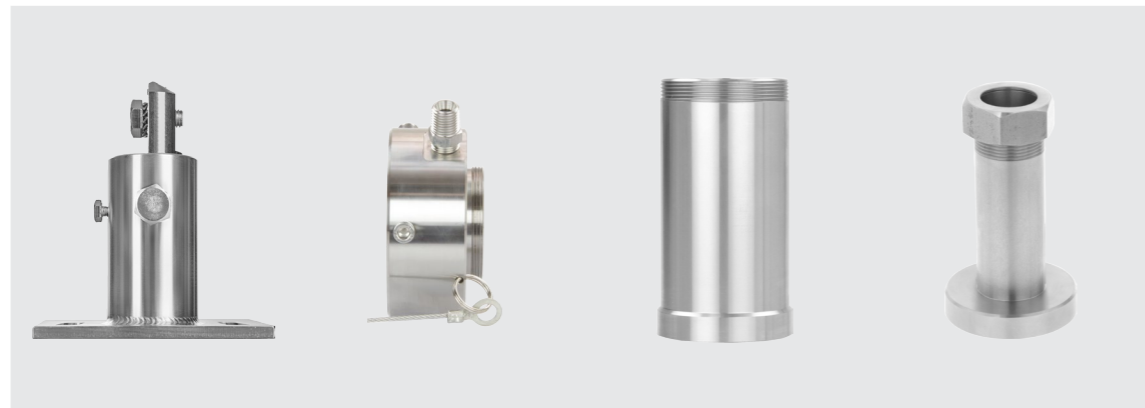With fiber optic cable and separate electronics

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|	70 °C	200 °C with water cooling	electronics up to 70 °C	electronics up to 70 °C	fibre optic cable up to 290 °C
Ambient temperature	**70 °C**	**200 °C with water cooling**	**electronics up to 70 °C**	**electronics up to 70 °C**	**fibre optic cable up to 290 °C**
Housing [mm]	Ø57 x 170	Ø76 x 170	125 x 150 x 55	125 x 150 x 55	Ø6 x length (2, 4, 5, 6, 8, 10, 15, 20 m)
Housing material	stainless steel	stainless steel	aluminium	aluminium	stainless steel
Through-beam sensor transmitter type	**LXAA 600.3 S4**	**LXAB 600.3 S4**	**LXAD 600.3**		**LLK (2, 4, 5, 6, 8, 10, 15, 20)**
Through-beam sensor receiver type	**LXSA 600.3A GV S8**	**LXSB 600.3A GV S8**	**LXSD 600.3A GV**		**LLK (2, 4, 5, 6, 8, 10, 15, 20)**
Max. sensing range / operating range	2500 m / 1500 m	2500 m / 1500 m	750 - 150 m / 600 - 120 m***		
Universal light barrier with through-beam, retroreflective and diffuse function	**LXUA 600.3A GV S8**	**LXUB 600.3A GV S8**		**LXUD 600.3A GV**	**2x LLK (2, 4, 5, 6, 8, 10, 15, 20)**
Retroreflective * max range / operation	65 m / 35 m	65 m / 35 m		35 m / 25 m	
Diffuse function ** max range / operation	6 m / 4,5 m	6 m / 4,5 m		1,8 m / 1 m	
Through-beam max range / operation				100 m / 40 m	

*The max range of the retroreflective sensor is referred to the OR 03 reflector
** The max range of diffuse sensor is referred to a Kodak grey card 90% remission

***Through-beam light barriers with fibre optic cable can be combined with different optics or even with a compact device (transmitter or receiver) of the 600 series. The achievable range varies accordingly.

Accessories for High-performance Light Barriers
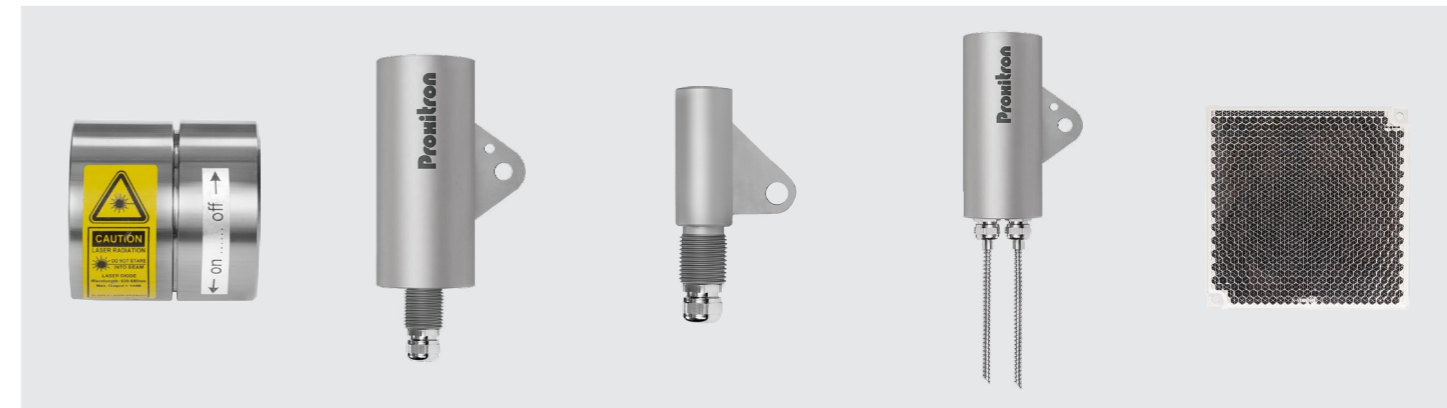
Accessory	**Swivel stand**	**Air purge adapter**	**Protection tube**	**Tube**	**Laser pointer**	**large optics for LLK**	**small optics for LLK**	**double optics for LLK**	**reflector**
Function	mounting	pollution control	maximize air purge effect, protect against sparks	detection of small parts, protect against IR radiation	Alignment	through-beam light barrier	through beam light barrier constricted space	retroreflective or diffuse sensor	retroreflective sensor
Material	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel	stainless steel	plastics/glass
Type	**HM 2**	**OL 34**	**OL 37**	**OL 19**	**DAK 308**	**OAA 154**	**OACF 154**	**OADF 154**	**OR 03**
Description	massive swivel stand	for Ø57	length 100 mm	for Ø57	Laser	up to +150 °C	up to +290 °C	for retroreflective sensor	up to +60 °C
Type	**HM 4**	**OL 35**	**OL 38**	**OL 21**	**OL 26**	**OAA 154 H**	**OACF 154 H**	**OATF 154**	**OR 04**
Description	light mounting bracket	for Ø76	length 150 mm	for Ø76	adapter for Ø57	up to +290 °C	up to +600 °C	for diffuse sensor	up to +150 °C
Type	**HM 6**	**OL 44**		**OL 36**	**OL 27**		**OACF 671**	**OACF 672H**	**OR 05**
Description	mounting unit for mirror	for optic OACF		for air purge adapter	adapter for Ø76		fibre optic cable only	fibre optic cable only	up to +500 °C
Type					**OL 28**				**OR 09**
Description					adapter for OACF				chemical resistant

Additional accessories, as for ex. dedicated furnace windows, are available for industrial furnaces applications

more reflectors available.

Light Barriers LX Series - General Information

Proxitron light barriers of the LX series, with a number of functions and extremely high range, are ideal for the detection of hot and cold objects even under difficult environmental conditions. The sensors can be adjusted via software and teach function to the most different working conditions. The front optic lights up for simple installation over large distances and the alarm function provides warning against pollution and excessive temperature. An on- and off-delay can be adjusted to easily suppress occasional disturbances caused by water or steam. The sensors robust design guarantees safe operation also in case of vibrations. The lens is made of high-quality, temperature-resistant glass and withstands radiated heat. For higher ambient temperatures housing variants with cooling jacket are available, as well as systems with fibre optic cable, optics and remote electronics.

- detection of hot and cold objects
- material tracking in drying ovens
- jam detection
- prevention of obstruction caused by collapsed material
- material tracking on conveyors in hot areas
- feeding control in high temperature processes
- vehicle height monitoring in outdoor conditions
- object detection in dense environment (dust, vapour, water, smoke)
- detections of parts on conveyor belts in areas with spraying mist
- extremely high pollution resistance
- Individual settings for three switching outputs
- Alarm for excessive temperature or pollution
- Tech and test function
- extremely fast (0,5 ms/1000 Hz)
- robust and maintenance-free
- wide range of accessories

Common technical features	
Light type	invisible infrared light
Supply voltage	12 - 55 V DC
Switching output	3 x PNP normally open / normally closed (can be parameterized)
On / off delay adjustable	0 – 60000 ms
Response time / switching frequency	≤ 0,5 ms / 1000 Hz
Adjustment aid	optical with LED, software
Alarm function	pollution, overtemperature
Digital communication	RS 485 MODBUS RTU
Software functions	operating mode, configuration of switching outputs, on/off delay, alarm function, status display, teach-in, internal temperature

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