



# TYPE DESIGNATION CODE FOR PHOTOELECTRIC SENSORS





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# GUIDE · BRIEF INFORMATION

Type	Brief information	See type code
<b>AIR®</b>	Active infrared scanner	Doors, Gates, Elevators
<b>AL</b>	Elevator light grid	Light grids
<b>BL10-...</b>	Thru-beam slab light beam switch	Customer-specific products
<b>DAD</b>	Optical data coupler	Data transmission
<b>DF</b>	Print mark color scanner	Print mark and color sensors
<b>DFE</b>	Print mark color scanner stainless steel housing	Print mark and color sensors
<b>DK</b>	Print mark color scanner	Print mark and color sensors
<b>DKE</b>	Print mark color scanner in stainless steel housing	Print mark and color sensors
<b>EDM</b>	Distance measurement device	Distance measurement
<b>FLT</b>	Area scanner	Doors, Gates, Elevators
<b>FW</b>	Thread watch	Customer-specific products
<b>GD/GV</b>	Thru-beam cylindrical sensor	Cylindrical housings
<b>GL</b>	Fork type sensor	Fork type and slot grid sensors
<b>GLE</b>	Fork type sensor	Fork type and slot grid sensors
<b>GLV</b>	Threaded sensor or scanner	Cylindrical housings
<b>GLV...-LL</b>	Fiber optic amplifier	Cylindrical housings
<b>KLE</b>	Thru-beam plastic fiber optic cable	Fiber optics
<b>KLEF</b>	Thru-beam plastic fiber optic cable with fiber bundle	Fiber optics
<b>KLR</b>	Diffuse mode plastic fiber optic cable	Fiber optics
<b>KLRF</b>	Diffuse mode plastic fiber optic cable with fiber bundle	Fiber optics
<b>KS/KSE</b>	Thru-beam sensor, miniature	Cylindrical housings
<b>KSU</b>	Fiber optic amplifier for glass fiber optic cables	Power units
<b>KT</b>	Diffuse mode sensor, miniature	Cylindrical housings
<b>L/LK and LA/LK</b>	Thru-beam sensor, AC or AC/DC voltage	Rectangular housings
<b>L/LV and LD/LV</b>	Thru-beam sensor, DC voltage	Rectangular housings
<b>LC</b>	Loop detector	Doors, Gates, Elevators
<b>LCE</b>	Thru-beam glass fiber optic cable with PVC sheathing	Fiber optic cables
<b>LCR</b>	Diffuse mode glass fiber optic cable with PVC sheathing	Fiber optic cables
<b>LG</b>	8 or 16 beam light grid	Light grids
<b>LLE</b>	Thru-beam glass fiber optic cable with metal-silicone sheathing	Fiber optic cables

## GUIDE · BRIEF INFORMATION

Type	Brief information	See type code
<b>LLR</b>	Diffuse mode glass fiber optic cable with metal-silicone sheathing	Fiber optic cables
<b>LME</b>	Thru-beam glass fiber optic cable with metal sheathing	Fiber optic cables
<b>LMR</b>	Diffuse mode glass fiber optic cable with metal sheathing	Fiber optic cables
<b>LS...-DA</b>	Optic data coupler	Data transmission
<b>LSE</b>	Thru-beam glass fiber optic cable with silicone sheathing	Fiber optic cables
<b>LSR</b>	Diffuse mode glass fiber optic cable with silicone sheathing	Fiber optic cables
<b>LT</b>	Diffuse mode sensor	Customer-specific products
<b>LT2</b>	Infrared scanner for DC	Doors, Gates, Elevators
<b>LTK2</b>	Infrared scanner for AC/DC	Doors, Gates, Elevators
<b>M/MV</b>	Thru-beam miniature sensors	Rectangular housings
<b>ML/MLV</b>	Miniature sensors or scanners	Rectangular housings
<b>ML19</b>	Slot sensor	Fork type sensors
<b>OBE</b>	Thru-beam sensor	Type code standard sensors 3
<b>OBH</b>	Diffuse mode sensor with Background suppression	Type code standard sensors 3
<b>OBS</b>	Retroreflective sensor	Type code standard sensors 3
<b>OBT</b>	Diffuse mode sensor	Type code standard sensors 3
<b>PLVScan</b>	Profile light grid	Light grids
<b>PLV-PLP</b>	Profile light grid	Light grids
<b>Proscan</b>	Energy light scanner	Doors, Gates, Elevators
<b>PR</b>	Light grid	Light grids
<b>PRS</b>	Paper break detection	Customer-specific products
<b>PS1</b>	Power supply	Power unit
<b>RAL</b>	Slot grid sensor	Fork type and slot grid sensors
<b>RL</b>	Diffuse mode sensor or retroreflective sensor, DC voltage	Rectangular housings
<b>RL5-LL</b>	Print mark contrast scanner for fiber optics	Print mark and color sensors
<b>RL-UV</b>	Print mark contrast scanner with UV light source	Print mark and color sensors
<b>RLF</b>	Diffuse mode sensor or retroreflective sensor in special housing	Rectangular housings
<b>RLK</b>	Diffuse mode sensor or retroreflective sensor, AC or AC/DC voltage	Rectangular housings

Type	Brief information	See type code
<b>RMS</b>	Radar motion sensor	Doors, Gates, Elevators
<b>RST</b>	Remission scanner	Customer-specific products
<b>SC</b>	Safety control unit	Safety control units
<b>SB</b>	Safety control unit SafeBox	Safety control units
<b>SL</b>	Safety thru-beam sensor for control units	Safety Thru-beam sensors
<b>SLA</b>	Safety thru-beam sensor for control units	Safety Thru-beam sensors
<b>SLC</b>	Safety light curtain	Safety light curtains
<b>SLCS</b>	Safety light curtain	Safety light curtains
<b>SLCT</b>	Safety light curtain	Safety light curtains
<b>SLP</b>	Safety light grid for ext. control units	Safety light grids
<b>SLPC</b>	Safety light grid with integrated control unit	Safety light grids
<b>SLPCM</b>	Safety light grid with integrated control unit and muting	Safety light grids
<b>SLVA</b>	Safety control unit	Safety control units
<b>SU10</b>	Signal transformer	Power units
<b>SU11</b>	Signal transformer	Power units
<b>SU14</b>	Fiber optic amplifier	Rectangular housings
<b>SU15</b>	Fiber optic amplifier	Rectangular housings
<b>Topscan</b>	Active infrared scanner	Doors, Gates, Elevators
<b>C-Box</b>	Connector box	Power units
<b>VCS</b>	Color sensor	Color/Contrast sensors
<b>VL</b>	Retroreflective cylindrical sensor	Cylindrical housings
<b>VS/VSE</b>	Thru-beam cylindrical photoelectric sensor	Cylindrical housings
<b>VS-Ga</b>	Power supply	Power units
<b>VT</b>	Diffuse cylindrical sensor	Cylindrical housings
<b>VOS</b>	Vision sensor	Vision sensors
<b>VDM</b>	Distance measurement device	Distance measurement
<b>WTS</b>	Welding cap sensor	Customer-specific products

Are you already familiar with VISO+, the quality standard for phototelectric sensors from Pepperl+Fuchs?

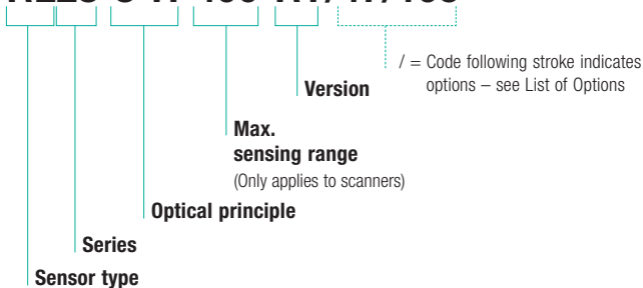
The phototelectric sensors of the new generation lead the way in providing the highest possible flexibility, interference immunity, and comfort!



## The decisive advantages:

- ✚ Super bright LEDs
- ✚ Green LED for POWER-ON, short circuit and low voltage
- ✚ Not sensitive to ambient light
- ✚ Protected against mutual interference
- ✚ Modern complementary push-pull output

# RL28-8-H-400-RT/47/105



## Sensor type

<b>L/LK</b>	Thru-beam sensor, AC or AC/DC voltage (transmitter/receiver)
<b>LA/LK</b>	Thru-beam sensor, AC or AC/DC voltage (transmitter/receiver)
<b>L/LV</b>	Thru-beam sensor, DC voltage (transmitter/receiver)
<b>LD/LV</b>	Thru-beam sensor, DC voltage (transmitter/receiver)
<b>M/MV</b>	Miniature photoelectric sensor, thru-beam (transmitter/receiver)
<b>ML</b>	Miniature photoelectric sensor
<b>MLV</b>	Miniature photoelectric sensor
<b>RL</b>	Diffuse or retroreflective mode sensor, DC voltage
<b>RLF</b>	Diffuse or retroreflective mode sensor
<b>RLK</b>	Diffuse or retroreflective mode sensor, AC or AC/DC voltage
<b>SU</b>	Fiber optic amplifier
<b>WTS</b>	Welding cup sensor

## Series

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Numbering system to distinguish product sizes

## Optical principles

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- 6** Polarized retroreflective sensor
- 6-G** Retroreflective sensor
- 8** Diffuse mode sensor
- 8-H** Background suppression sensor
- 8-HW** Background evaluation sensor
- 8-HS** Background suppression and evaluation sensor
- 8-HGU** Background blanking sensor
- 54** Polarized retroreflective sensor
- 54-G** Retroreflective sensor for clear object detection (polarized)
- 55** Polarized retroreflective sensor – long range
- LL** Fiber optic amplifier

## Versions

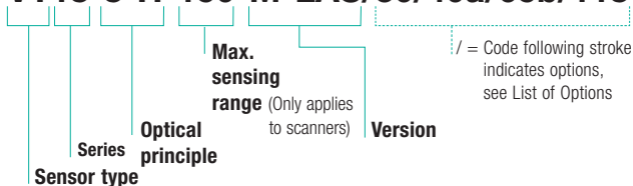
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- B3B** AS-Interface compatibility (2.1)
- Ex** Intrinsically safe
- E** Stainless steel version for food industry
- V** Foreground suppression (close range)
- Z** Integral timer
- LL** Fiber optic amplifier
- IR** Infrared light source
- RT** Visible red light source
- LAS** Laser light source
- UV** Ultraviolet light source
- K** Fiber optic amplifier for plastic fiber optic cable
- G** Fiber optic amplifier for glass fiber optic cable
- IO** Sensor with I/O Link Interface
- FFP** Rack fine positioning
- F1....F4** Different transmitter frequencies
- PCB** Special version for printed board detection



# TYPE DESIGNATION CODE STANDARD THREADED HOUSINGS

## VT18-8-H-150-M-LAS/30/40a/65b/118



### Sensor types

<b>KS/KSE</b>	Miniature thru-beam sensor (transmitter/receiver)
<b>KT</b>	Miniature diffuse mode sensor
<b>SU10</b>	Signal converter for miniature light scanner KS/SE10; KT10
<b>SU11</b>	Signal converter for miniature light scanner KS/SE10; KT10
<b>GD/GV</b>	Thru-beam photoelectric sensor (transmitter/receiver)
<b>GLV</b>	Diffuse or retroreflective mode sensor
<b>VL</b>	Retroreflective photoelectric sensor
<b>VT</b>	Diffuse photoelectric sensor
<b>VS/VSE</b>	Thru-beam photoelectric sensor (transmitter/receiver)

### Series

Numbering system to distinguish product sizes

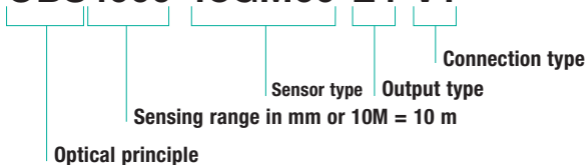
### Optical principles

<b>-6</b>	Retroreflective sensor
<b>-8</b>	Diffuse mode sensor
<b>-8-H</b>	Diffuse mode with background suppression
<b>-54</b>	Polarized retroreflective sensor, short range
<b>-LL</b>	Fiber optic amplifier

### Designs

<b>-M</b>	Metal housing
<b>-MS</b>	Metal housing – right-angled
<b>-S</b>	Plastic housing – right-angled
<b>-LAS</b>	Laser light source
<b>-IR</b>	Infrared light source
<b>-RT</b>	Visible red light source
<b>-IO</b>	Sensors with I/O Link Interface

# OBS4000-18GM60-E4-V1



## Optical principles

<b>OBE</b>	Thru-beam sensor
<b>OBH</b>	Background suppression sensor
<b>OBS</b>	Retroreflective sensor
<b>OBT</b>	Diffuse mode sensor

## Sensor types

<b>-18GM60</b>	18 mm diameter cylindrical, 60 mm long
<b>-L2</b>	Varikont-L with LED
<b>-M1K</b>	Varikont-M with terminal compartment base
<b>-M1A</b>	Varikont-M – AS-Interface model

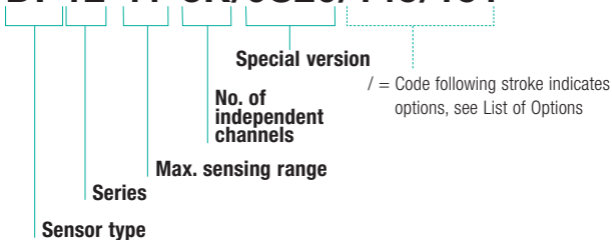
## Output types

<b>-A0</b>	2 NPN, complementary	<b>-E01</b>	1 NPN, light on/dark on
<b>-A2</b>	2 PNP, complementary	<b>-E23</b>	1 PNP, light on/dark on
<b>-B3</b>	AS-Interface	<b>-N2</b>	1 NAMUR, light on/dark on
<b>-E0</b>	1 NPN (NO)		
<b>-E2</b>	1 PNP (NO)		
<b>-E4</b>	1 NPN (NO/NC)		
<b>-E5</b>	1 PNP (NO/NC)		

## Connection types

<b>without</b>	fixed cable
<b>-V1</b>	M12x1 connector

# DF 12-11-3K/9S20/145/151



## Sensor types

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<b>DK</b>	Print mark contrast scanner
<b>DKE</b>	Print mark contrast scanner with stainless steel housing
<b>DF</b>	Print mark color scanner
<b>DFE</b>	Print mark color scanner with stainless steel housing
<b>VCS</b>	Color sensor
<b>RL5-LL</b>	Print mark contrast scanner for fiber optic cable
<b>RL-UV</b>	Print mark contrast scanner with UV-light source

## Series

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Numbering system to distinguish product sizes

## Contrast sensor special versions

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<b>A</b>	Light spot is perpendicular to housing
<b>B</b>	Circular light spot
<b>8S50</b>	Galvanic drop out time relay 50 ms
<b>9S20</b>	Impulsed drop out time relay 20 ms
<b>9S50</b>	Impulsed drop out time relay 50 ms

## **GL20-RT/32/40a/98**

/ = Code following stroke indicates options,  
see List of Options or special version  
numbers (VBV)

**RT** = Visible red light source

**IR** = Infrared light source

**LAS** = Laser light source

**U** = Special housing type

**L** = Special housing type

**P** = Special housing type

**T** = Special housing type

### **Fork width in mm**

**GL** = Fork type sensor

**GLE** = Fork type sensor in stainless steel housing

**RAL** = Slot grid sensor

**GLD** = Fork type sensor for label detection

## PLVScan P16-0640-42/47/139

/ = Code following stroke indicates options, see List of Options

Instead of options, special versions are followed by a VBv number (four-digit)

Light beam distance in mm

Field height in mm

Number of single beams (straight)

P = Pair; T = Emitter; R = Receiver

Sensor types – PLVScan = Profile light grid  
– PLV-PLP = Profile light grid

## TYPE DESIGNATION CODE STANDARD LIGHT GRIDS

# LG8-G-30-K-2-F-F

### Connection type

F = Fixed cable ; S = Connector

### Calibration

F = Fixed in memory

W = After switching on again

### Sensitivity steps 1 – 4

### Beam evaluation

K = Crossed ; P = Parallel

### Range

30 = 300 mm ... 550 mm

80 = 550 mm ... 800 mm

150 = 550 mm ... 1500 mm

### Number of beams

Sensor type – Light grid LG

– Light grid PR

## TYPE DESIGNATION CODE STANDARD

### LIGHT GRIDS SERIES AL (DOORS, GATES, AND ELEVATORS)

# AL2109-P-2000/49/76a

/ = Code following stroke indicates options, see List of Options

### Detection range in mm

P = Pair (Emitter + Receiver);

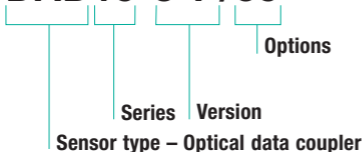
T = Emitter; R = Receiver

### Profile width in mm

### Number of beams

Elevator light grid

# DAD15-8-P/35



## Sensor types

Sensor types	Series
<b>DAD</b> Optical data coupler	<b>10-8</b> } 8-bit bidirectional parallel
<b>LS ...-DA</b> Optical data coupler	<b>15-8</b> } output
	<b>30</b> } Series
	<b>230</b> }
	<b>600</b> }

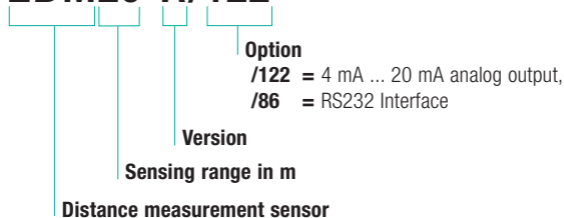
## Versions

<b>-PNP</b>	PNP output
<b>-P</b>	PROFIBUS compatible
<b>-P-1.5</b>	PROFIBUS compatible data transmission up to 1.5 Mbit/s
<b>-IBS</b>	INTERBUS compatible
<b>-RT</b>	Visible red light
<b>-GUF</b>	Low temperature version to $-35\text{ }^{\circ}\text{C}$
<b>-W</b>	Wide operating angle version
<b>-NPN</b>	NPN output

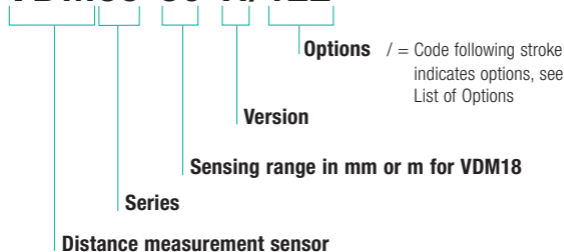
## Options

<b>/35</b>	Increased range
<b>/F1</b>	Center frequency F1
<b>/F2</b>	Center frequency F2

## EDM20-R/122



## VDM35-30-R/122

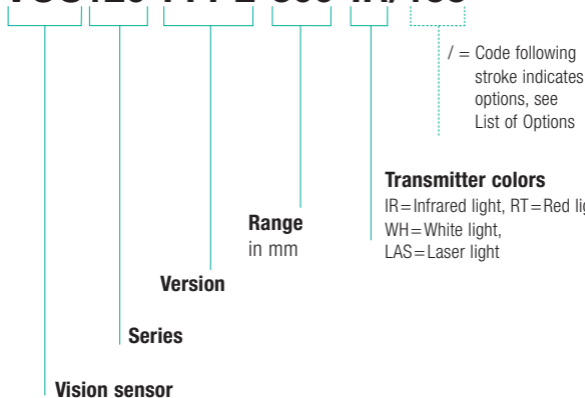


### Versions

<b>-R</b>	Retroreflective mode
<b>-L</b>	Diffuse mode
<b>-P</b>	PROFIBUS Interface
<b>-SSI</b>	SSI Interface
<b>-IBS</b>	INTERBUS Interface
<b>-EHB</b>	Version for electro monorail systems



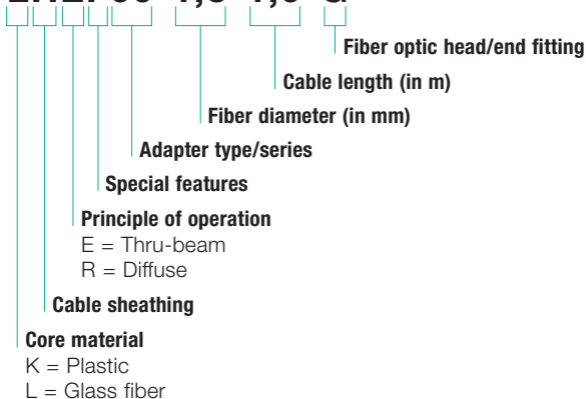
# VOS120-FFPL-300-IR/153



## Versions

- FFP Rack fine positioning
- FFPL Rack fine positioning, index hole
- FFPK Rack fine positioning, edge
- TBP Tobacco leaf positioning
- MPE Double sheet detection
- BIS Sheet verification
- SE Weld seam detection

# LHEF00-1,3-1,0-G



## Core and sheath material

<b>KL</b>	Plastic fiber optic cable with PVC/PE sheathing
<b>LH</b>	Glass fiber optic cable with highly flexible sheathing (bending radius < 10 mm)
<b>LC</b>	Glass fiber optic cable with PVC/PE sheathing
<b>LS</b>	Glass fiber optic cable with silicone sheathing
<b>LL</b>	Glass fiber optic cable with metal-silicone sheathing
<b>LM</b>	Glass fiber optic cable with metal sheathing

## Special features

-	= Optically separate (standard)
<b>F</b>	= Statistically mixed fiber bundle
<b>A</b>	= Array
<b>C</b>	= Coaxial

## Adapter types / photoelectric sensor series

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<b>00</b>	=	SU15-K / SU15.1-K / SU16 / SU17 / SU18 / SU19
<b>04</b>	=	MLV40-LL
<b>05</b>	=	VCS110
<b>06</b>	=	SU15-G
<b>17</b>	=	ML17-LL
<b>18</b>	=	VL18LL / -M1K / -M1A / OBT-
<b>18/30</b>	=	GLV30-LL
<b>30</b>	=	RL5-LL
<b>41</b>	=	MLV41-LL

## End fittings / fiber optics heads

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<b>Threaded</b>	G, K2, K3, K4, K5, K6, K70, K71, K73, K74, K75, K76, K78, K100, K102, K103, K104, K112, K113
<b>Cylindrical</b>	Z0, Z1, K1, K7, K8, K72, K77, K79, K80, K81, K101, K105, K106, K107, K108
<b>Right-angled, smooth</b>	WC, WR, K9, K10
<b>Right-angled, threaded</b>	K11, K12
<b>Side light outlet</b>	QW
<b>Array</b>	K82, K83, K109, K110, K111
<b>Flexible peak</b>	K13, K14



**KSU** \_\_\_\_\_ Signal converter

**VS-Ga** \_\_\_\_\_ Power Supply

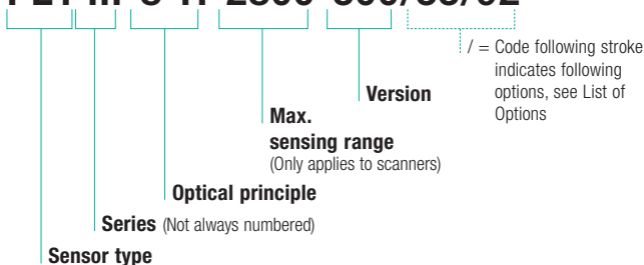
**PS1** \_\_\_\_\_ Power supply

**SU10** \_\_\_\_\_ Signal converter for series 10

**SU11** \_\_\_\_\_ Signal converter for series 11

**C-Box** \_\_\_\_\_ Connection box

**FLT ...-8-H-2800-300/33/92**



## Sensor types

<b>AIR®</b>	Active infrared scanner
<b>FLT</b>	Area scanner
<b>FLT...-CLS</b>	Area scanner, counting sensor
<b>LA/LK</b>	Thru-beam sensor, AC or AC/DC
<b>LT2</b>	Active infrared scanner, – DC
<b>LTK2</b>	Active infrared scanner, AC/DC – AC/DC
<b>LC</b>	Loop detector
<b>LA/LK</b>	Thru-beam sensor
<b>Proscan</b>	Energy light scanner
<b>RMS</b>	Radar motion sensor
<b>RL</b>	Retroreflective sensor, DC
<b>RLK</b>	Retroreflective sensor, AC or AC/DC
<b>Topscan</b>	Active infrared scanner
<b>MLV12-54-2463</b>	Retroreflective sensor with polarization filter, fire protection

## Optical principles

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<b>-6</b>	Retroreflective sensor
<b>-54</b>	Retroreflective sensor with polarization filter
<b>-55</b>	Retroreflective sensor with polarization filter – long range
<b>-8-H</b>	Background suppression scanner
<b>-8-HW</b>	Background evaluation scanner
<b>-8-HS</b>	Background suppression and evaluation sensor

## Versions

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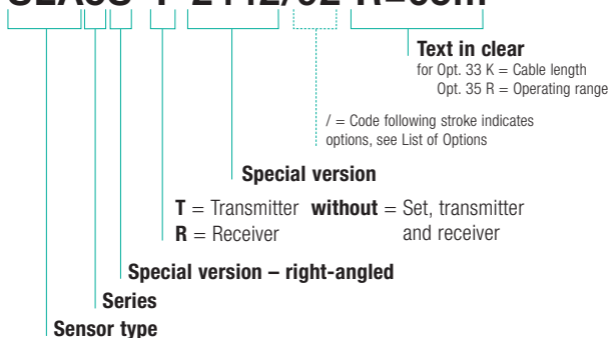
<b>-D</b>	Dynamic scanner
<b>-G</b>	Gate version
<b>-M</b>	Mono version
<b>-T</b>	Traffic version – in accordance with automobile and rail standards
<b>-P</b>	Pair (consisting of transmitter and receiver)
<b>-S</b>	Safety version
<b>-50</b>	Scanning field dimensions 500 mm x 50 mm
<b>-300</b>	Scanning field dimensions 500 mm x 300 mm
<b>-500</b>	Scanning field dimensions 500 mm x 500 mm
<b>-CLS</b>	Counting sensor with scanning field 500 mm x 300 mm
<b>-1-P</b>	1 channel with potentiometer setting
<b>-2-P</b>	2 channels with potentiometer setting
<b>-1-D</b>	1 channel with DIP switch setting
<b>-2-D</b>	2 channels with DIP switch setting
<b>-M2S</b>	1 master/ 2 slave modules
<b>-M5S</b>	1 master/ 5 slave modules
<b>-RC</b>	Remote control
<b>-CAN</b>	With CAN interface
<b>-FC</b>	Safety equipment for fire protection closings (fire control)
<b>-FRW</b>	Escape and rescue routes in accordance with AUTSCHR
<b>-FM</b>	Flush mount
<b>-F1...F4</b>	Different frequencies from standard



## TYPE DESIGNATION CODE SPECIAL CUSTOMER-SPECIFIC PRODUCTS

<b>BL10</b>	_____	Single path slab light beam switch
<b>FW</b>	_____	Thread watch
<b>WTS</b>	_____	Welding cap sensor
<b>RST</b>	_____	Remission scanner
<b>LT6</b>	_____	Diffuse mode sensor
<b>PRS</b>	_____	Page break detection, light grid
<b>MS</b>	_____	Motion sensor

# SLA5S-T-2442/92 R=65m



## Sensor types

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<b>SLA</b>	Safety thru-beam sensor Cat. 4
<b>SL</b>	Safety thru-beam sensor Cat. 2

## Series

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Numbering system to distinguish product sizes

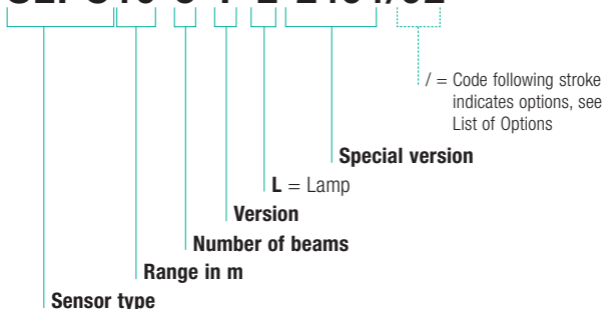
## Special versions

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<b>S</b>	Right-angled
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# SLPC10-3-T-L-2464/92



## Sensor types

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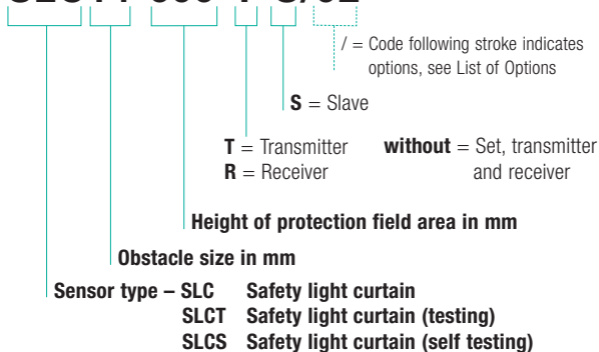
- SLP** Safety light grid for external control units
- SLPC** Safety light grid with integrated control unit
- SLPCM** Safety light grid with integrated control unit, with muting

## Versions

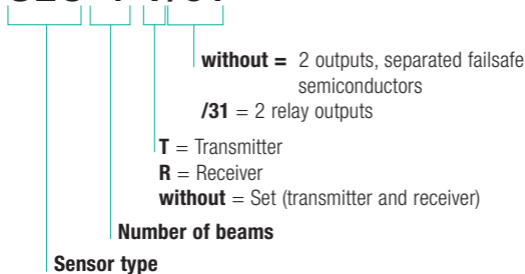
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- T** Transmitter
- R** Receiver
- A** Transmitter and receiver
- M** Mirror
- without** Set (transmitter and receiver)

## SLC14-600-T-S/92



## SLC-4-T/31



## SLC-1600-M



**SB4-OR-4CP-xx**

**SafeBox**

Assembly slot 3 to 8  
variable

Assembly slot 2, sensor module  
4 channels (with CPU)

Assembly slot 1, basic module

**Type:**

**SB4 -SAFEBOX category 4**

SB4 housing: backplane provides 2 ... 8 slots for the plug-in cards.

Supplies the individual modules with voltage

Connects the modules mechanically and electrically

**Modultypen:**

- OR** Basic module
- 4CP** Sensor module with processor for 4 sensors (2 wire)
- 4CG** Sensor module with processor for 4 sensors (2 wire) and support of group formation
- 4C** Sensor module without processor for 4 sensors (2 wire)
- 6C** Sensor module without processor for 6 sensors (2 wire)
- 4XP** Sensor module with processor for 4 sensors (3 wire)
- 4XG** Sensor module with processor for 4 sensors (3 wire) and support of group formation
- 4X** Sensor module without processor for 4 sensors (3 wire)
- 4M** Muting module for 2, 4, or 2x2 muting sensors
- 4MD** Muting module for 2, 4, or 2x2 muting sensors with continuous muting
- 2E** Function module with functions: Group opening (from 2nd group); STOP 0; STOP 1; central Emergency Stop  
Pre-setting: Group opening and STOP 0

## SLVA-8K 115VAC-RI/7b

/ = Code following stroke indicates options, see List of Options

### Operating mode

**RI** = Start/Restart Interlock

**RM** = Relay monitor

Connection voltage

Max. number of channels

Sensor type:

**SLVA** Safety control unit – cat. 4 (EN 61496)

**VSL** Safety control unit – cat. 2 (EN 61496)

## SC4-8 24VAC/DC

Connection voltage

Max. number of channels

Safety category according to EN 61496

**2** = Category 2

**4** = Category 4

Sensor type – Safety control unit

## Reflectors:

# REFLECTOR H116HT

**Type**  
Reflector

### Version

- G** For use with retroreflective red light source sensors to detect glass and foil.
- HT** For use in high/low temperature applications
- SR** Scratch and damage resistant
- F** Chemical resistant

### Reflector area

### Reflector type

- H** Thru-hole mounting
- A** Self-adhesive
- C** Round, thru-hole mounting
- S** Mounting stud
- Clip** Snap-in mounting
  
- MH** Microstructure, thru-hole mounting
- MA** Microstructure, self adhesive
- MS** Microstructure, mounting stud
- MClip** Microstructure, snap-in mounting

# OFR-100/100

**Foil dimensions**

**Type**  
Reflective tape

## Option No. Explanation

/9	Dynamic drop out time delay, adjustable
/10	Pull in time delay, adjustable
/11	Dynamic pull in and drop time delay, adjustable
/12	Pull in and drop out time delay, adjustable
/20	2 PNP Outputs, Independently
/21	2 NPN Outputs, Independently
/24	On/off pulse suppression
/25	Light switching
/28	2 NPN complementary outputs, not short-circuit proof, open collectors
/30	1 NPN output, short circuit proof, open collector, 0.2 A/30 V DC
/31	SPDT relay output
/32	1 PNP output, short circuit proof, open collector, 0.2 A/30 V DC
/33	Non standard cable length
/35	Increased operating range
/38	Low current relay output
/40	Light/Dark selector switch <b>a)</b> mechanical <b>b)</b> electrical
/43	2 PNP complementary outputs, not short-circuit-proof, open collectors
/47	2 PNP complementary outputs, short-circuits-proof, open collector
/48	2 NPN complementary outputs, short-circuits-proof, open collector
/49	1 PNP and NPN simultaneous outputs, short-circuit-proof, open collectors
/59	Dark switching
/65	Adjustable scanning range for background suppression scanners <b>a)</b> mechanical <b>b)</b> electrical
/70	Metal connector type 712, 5 pole
/71	Metal connector type 711, 4 pole
/72	Metal connector type 712, 4 pole
/73	Plastic connector type ELST 412, 4 pole
/74	Plastic connector type 714, 4 pole
/76	With connection for test input <b>a)</b> + 24 V DC <b>b)</b> 0 V DC <b>c)</b> + 24 V DC or open input
/78	Metal connector type 712, 5 pole
/79	Analogue output increasing <b>a)</b> 0 ... 10 V <b>b)</b> 0.3 ... 10 mA (RL > 600 Ohm) <b>c)</b> 1 – 5 V DC

## Option No. Explanation

/80	Control output decreasing <b>a)</b> 10 ... 0 V DC <b>b)</b> 10 ... 0.3 mA (RL > 600 Ohm)
/82	Function reserve output PNP <b>a)</b> Output active when function reserve too low <b>b)</b> Output inactive when function reserve too low <b>c)</b> Without time delay, output active when function reserve too low <b>d)</b> Without time delay, output inactive when function reserve too low <b>e)</b> Time delay < 1.5 s output inactive when function reserve too low <b>f)</b> Dynamical pre-fault indicator (alarm) <b>g)</b> Dynamical Output dependent on degree of pollution
/84	SSI interface
/85	20 mA current loop interface
/86	RS232 interface
/87	RS422 interface
/88	RS485 interface
/90	25 pin D sub miniature plug
/92	Metal connector M12, 4 pole
/95	Metal connector M8, 4 pole
/98	Metal connector M8, 3 pole
/100	7 valvet connector (plastic)
/101	1 PNP- und NPN simultaneous outputs, short-circuit-proof, open collector, 0.2 A/48 V DC
/102	1 NPN output, short-circuit-proof, open collector, 0.1 A/30 V DC <b>a)</b> 0.1 A/12 ... 24 V DC
/103	1 PNP output, short-circuit-proof, open collector, 0.1 A/30 V DC <b>a)</b> 0.1 A/12 ... 24 V DC
/105	Flange plug connection, 5 pin flange plug M 12
/106	Heated front lens
/108	Synthetic material lens
/110	Push-pull output; short-circuit-proof, 0.1 A/30 V DC
/115	Fixed cable
/115a	Fixed cable with M8-connector
/115b	Fixed cable with M12-connector
/115c	Fixed cable with AC Micro-style connector
/115d	Fixed cable with valve connector. 7-pin
/116	Screw terminals in a terminal box
/118	Plug Vario-Quick, 4 pole
/119	1 PNP output, over voltage protected, short-circuit-proof, open collector, 0.1 A/48 V DC

# OPTIONS FOR PHOTOELECTRIC SENSORS

Option No.	Explanation
/119a)	0.2 A/48 V DC
/120	2 PNP complementary outputs, short-circuits-proof, open collector, 0.1 A/30 V DC
/120a)	0.2 A/48 V DC
/120b)	0.1 A/12 ... 24 V DC
/122	Analog output 4 ... 20 mA
/123	External Teach-In
/124	Metal connector M12, 5 pole
/125	2 PNP-transistors complementary; 1 NPN transistor, short-circuit-proof, open collector, 0.2 A/30 V DC
/126	Function reserve output NPN <b>a)</b> Output active when function reserve too low <b>b)</b> Output inactive when function reserve too low <b>c)</b> Without time delay, output active when function reserve too low <b>d)</b> Without time delay, output inactive when function reserve too low <b>e)</b> Time delay < 1.5 s output inactive when function reserve too low <b>f)</b> Dynamical predefault indicator (alarm) <b>g)</b> Dynamical Output dependent on Degree of pollution
/127	2 NPN complementary outputs, short-circuits-proof, open collector, 0.1 A/30 V DC
/127b)	0.1 A/12 ... 24 V DC
/128	Push-pull output; short-circuit-proof, 0.2 A/30 V DC
/129	With relay monitor
/130	Reduced response time
/131	Micro AC connector, 1/2" (inch) diameter, 3 pin, dual-key
/132	2-wire AC/DC solid state output, 200 mA maximum
/133	Ex-Zone 2
/134	Scratch resistant glass pane <b>a)</b> plastic pane
/135	5-pin male Mini-style connector, metal connector with 7/8" (Inch) thread
/136	2 Push-pull outputs; short-circuit-proof, 0.1 A/30 V DC
/137	Adjustable potentiometer secured
/138	2 displays for switching state
/139	Separate outputs for high level (PNP)
/140	Manual focus adjustments by laser light beam switches
/141	3-pin male Mini-style connector, metal connector with 7/8 " (Inch) thread
/142	AC Thyristor output
/143	Plastic connector M8, 4 pole
/144	Switch able Background suppression / Background analysis
/145	3 Push-pull outputs; short-circuit-proof



# OPTIONS FOR PHOTOELECTRIC SENSORS

## Option No. Explanation

/146	Extended temperature range
/147	1 NPN and 1 PNP output, short-circuit proof, max. 0.15 A, 30 V DC
/148	1 NPN output, not short-circuit proof
/149	1 PNP output, not short-circuit proof
/150	1 PNP- or NPN simultaneous outputs, short-circuit-proof, open collector, 0.1 A/30 V DC
/151	Connector M12, 8 pole
/152	Muting lamp LED, 24 ... 28 V DC
/153	1x NPN Phototransistor output, not short-circuit proof
/154	Tamper-proof, without external adjustments
/155	Flat pin connector, 4 pole
/156	Plastic connector M8, 3 pole
/157	Bidirectional Input/Output
/158	Interface CAN-Bus
/159	Connector, M12, 3 pole (compatible with M12, 4 spole)
/160	Connector M16, 12 pole
/161	NPN FET Output (NPN field effect transistor)
/162	Non standard light spot
/163	Voltage output
/164	Frequency output PNP
/165	Connection spring terminals

## Contact

Pepperl+Fuchs GmbH  
Königsberger Allee 87  
68307 Mannheim · Germany  
Tel. +49 621 776-4411 · Fax +49 621 776-27-4411  
E-Mail: [fa-info@de.pepperl-fuchs.com](mailto:fa-info@de.pepperl-fuchs.com)

## Worldwide Headquarters

Pepperl+Fuchs GmbH · Mannheim · Germany  
E-Mail: [fa-info@de.pepperl-fuchs.com](mailto:fa-info@de.pepperl-fuchs.com)

## USA Headquarters

Pepperl+Fuchs Inc. · Twinsburg · USA  
E-Mail: [fa-info@us.pepperl-fuchs.com](mailto:fa-info@us.pepperl-fuchs.com)

## Asia Pacific Headquarters

Pepperl+Fuchs Pte Ltd · Singapore  
E-Mail: [fa-info@sg.pepperl-fuchs.com](mailto:fa-info@sg.pepperl-fuchs.com)

[www.pepperl-fuchs.com](http://www.pepperl-fuchs.com)

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