

Light sensors
LI04... LI65...

Thermokon
Sensortechnik GmbH

Terminal Connection Plan

External Sensor (only LDF):

S1: br
S2: shield
S3: ws

Measuring Range



SPAN Potentiometer

To adjust the output level to different environments
NOTICE: Use will change the factory setting!



DIP-Switches - Select Measuring Range

2kLux SW1:ON SW2:OFF SW3:OFF
20kLux SW1:OFF SW2:ON SW3:OFF
100kLux SW1:OFF SW2:OFF SW3:ON

DIP-Switches - Select Device

Device LDF SW4:ON
Device LI65/LI04 SW4:OFF

Output 0...10V:

1: 15-24V=/24V~
2: GND
3: Out

Output 4...20mA:

1: 24V=
2: GND

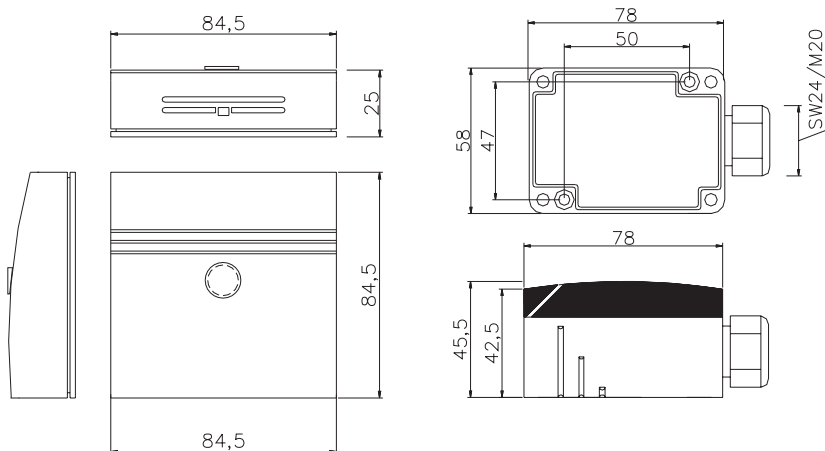
Output LON:

1: 15-24V=/24V~
2: GND
3: Net A
4: Net B

Dimensions (mm)

LI04 LRA/LRV/LON

LI65 LRA/LRV/LON



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18200... 18570...



LI04



LI65

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Application

Sensor for light measurement in rooms and offices (model LI04, specially for wall mounting) or in outdoor areas (model LI65). Designed for locking-on control and display systems. The sensors have an integrated colour filter (green filter) which is adapted to the sensitivity of human eyes.

Types available

Model	Type	Method of measurement (output)
LI04	LRA	active, 4...20mA
	LRV	active, 0...10V
	LON	active, FT10
LI65	LRA	active, 4...20mA
	LRV	active, 0...10V
	LON	active, FT10

Norms and Standards

Product :	EN60730-1 Automatic electr. control devices for domestic use and similar application
EMV:	EN60730-1 (2000) Interference resistance EN60730-1 (2000) Emitted interference
CE-Conformity:	89/336/EWG Electromagnetic compatibility

Technical Data

Type LRA:

Measuring element:	BPW21
Measuring range¹⁾:	LRA1: max. 2kLux LRA2: max. 20kLux LRA3: max. 100kLux
Accuracy²⁾:	Typ. +/-5% of measuring range
Operating voltage:	15-24V=
Power consumption:	max. 20mA
Load:	<500 Ohm
Clamps:	2pole (two-wire), terminal strip max. 1,5mm ²
Housing:	LI04: ABS, colour white similar to RAL9010 LI65: (78mm) Polyamide, colour white
Tmax³⁾:	<70°C
Protection:	LI04: IP20 LI65: IP65
Cable entry :	LI65: Single entry, M20 for wire conductor D=8mm

Type LRV:

Measuring element:	BPW21
Measuring range¹⁾:	LRV1: max. 2kLux LRV2: max. 20kLux LRV3: max. 100kLux
Accuracy²⁾:	Typ. +/-5% of measuring range
Operating voltage:	15-24V=/24V~
Power consumption:	max. 15mA/24V=
Load:	min. 5kOhm
Clamps:	3pole (three-wire), terminal strip max. 1,5mm ²
Housing:	LI04: ABS, colour white similar to RAL9010 LI65: (78mm) Polyamide, colour white
Tmax³⁾:	<70°C
Protection:	LI04: IP20 LI65: IP65
Cable entry:	LI65: Single entry, M20 for wire conductor D=8mm

Type LON:

Measuring element:	BPW21
Measuring range¹⁾:	LRL1: max. 2kLux LRL2: max. 20kLux LRL3: max. 60kLux
Accuracy²⁾:	Typ. +/-5% of measuring range
Operating voltage:	15-24V=/24V~
Power consumption:	max. 30mA/24V=
Clamp:	4pole (four-wire), terminal strip max. 1,5mm ²
Housing:	LI04: ABS, colour white similar to RAL9010 LI65: (78mm) Polyamide, colour white
Tmax³⁾:	<70°C
Protection:	LI04: IP20 LI65: IP65
Cable entry:	LI65: Single entry, M20 for wire conductor with max. D=8mm, Double entry, M20 for 2-wire conductor with max. D=7mm

¹⁾ Sensitivity of sensor without prism. Adjustable by means of DIP-switch on the transducer.

²⁾ Accuracy of transducer without prism. Manufacturer's calibration is made in the 2kLux range. Operating voltage 24V= and 21°C (+/-5K) ambient temperature. Please take care that the transducer should generally be operated in the measuring range centre, as increased deviations could occur on the measuring range end points. In addition the ambient temperature of the transducer electronics should be kept constant.

³⁾ Maximum permissible ambient temperature housing, humidity (without dew permeation) <80%r.F.

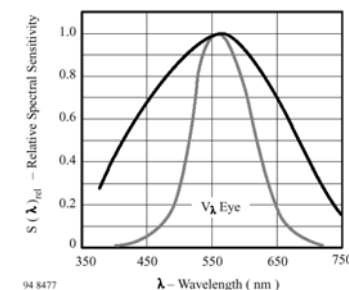
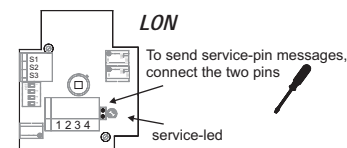


Figure 5. Relative Spectral Sensitivity vs. Wavelength

Mounting Advice



The sensor is fixed by means of screws. With LI04, an installation on standard ISO boxes is possible. Tightening material is not included in delivery range.

Please also not the general remarks in our INFORMATION SHEET THK.

Optional Accessories

(D+S)	1 set (each 2 pcs.) raw plugs and screws
(DE)	Design frames optional in the transparent colours green, blue, orange