

Datasheet

Subject to technical alteration
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» APPLICATION

The brightness sensor for ceiling installations detects indoor and outdoor light levels in living rooms, offices or at workplaces depending on the type of prism. The sensor is adapted to the spectral sensitivity of the human eye and serves together with control systems for an on-demand light or sun protection control. The remote sensor is connected to the enclosure via conventional RJ45 cables, making it easy to install in hardly accessible places. If two sensors are used, the individual values, the mean, minimum or maximum value can be provided through both output signals (configurable via Thermokon USEapp). Together with the relay option, two 2-point controllers or a 2-stage controller can be realized.

» TYPES AVAILABLE

Ceiling sensor light – active 0..10 V <ul style="list-style-type: none"> LDF+ V L1500 straight prism 1x 0..10 V LDF+ V L1500 diagonal prism 1x 0..10 V 	Ceiling sensor light – active 4..20 mA <ul style="list-style-type: none"> LDF+ A L1500 straight prism 1x 4..20 mA LDF+ A L1500 diagonal prism 1x 4..20 mA
Ceiling sensor light – active 0..10 V Relay <ul style="list-style-type: none"> LDF+ V L1500 straight prism relay 1x 0..10 V + Relais LDF+ V L1500 diagonal prism relay 1x 0..10 V + Relais 	
Dual- Ceiling sensor light – active 2x 0..10 V <ul style="list-style-type: none"> LDF+ Dual VV 2xL1500 straight prism 2x 0..10 V LDF+ Dual VV 2xL1500 diagonal prism 2x 0..10 V 	Dual Ceiling sensor light – active 2x 4..20 mA <ul style="list-style-type: none"> LDF+ Dual AA 2xL1500 straight prism 2x 4..20 mA LDF+ Dual AA 2xL1500 diagonal prism 2x 4..20 mA
Dual- Ceiling sensor light – active 2x 0..10 V Relay <ul style="list-style-type: none"> LDF+ Dual VV 2xL1500 straight prism relay 2x 0..10 V + Relais LDF+ Dual VV 2xL1500 diagonal prism relay 2x 0..10 V + Relais 	

» SECURITY ADVICE – CAUTION

The installation and assembly of electrical equipment should only be performed by authorized personnel.



The product should only be used for the intended application. Unauthorised modifications are prohibited! The product must not be used in relation with any equipment that in case of a failure may threaten, directly or indirectly, human health or life or result in danger to human beings, animals or assets. Ensure all power is disconnected before installing. Do not connect to live/operating equipment.

Please comply with

- Local laws, health & safety regulations, technical standards and regulations
- Condition of the device at the time of installation, to ensure safe installation
- This data sheet and installation manual

» PRODUCT TESTING AND CERTIFICATION



Declaration of conformity

The declaration of conformity of the products can be found on our website <https://www.thermokon.de/>

» NOTES ON DISPOSAL



As a component of a large-scale fixed installation, Thermokon products are intended to be used permanently as part of a building or a structure at a pre-defined and dedicated location, hence the Waste Electrical and Electronic Act (WEEE) is not applicable. However, most of the products may contain valuable materials that should be recycled and not disposed of as domestic waste. Please note the relevant regulations for local disposal.

» CONFIGURATION



The Thermokon bluetooth dongle with micro-USB is required for communication between USEapp and USE-M / USE L (Item No.: 668262). Commercial bluetooth dongles are not compatible.



Application-specific reconfiguration of the devices can be performed using the Thermokon USEapp. The configuration can be performed only when the device is powered.



The configuration-app and the app description can be found in the Google Play Store or in the Apple App Store.

» APPLICATION NOTICE



The Bluetooth dongle snaps into the socket easily. When removing, please fix the plug-in card (option PCB) so that it is not unintentionally pulled out.

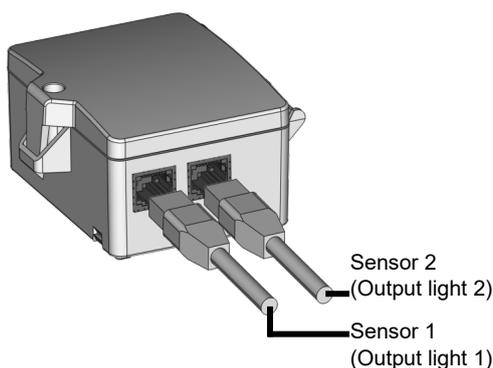
» MOUNTING ADVICES

The ceiling flush mounted sensor is installed in a 26 mm diameter hole.

It is important to mount the light sensor in a suitable position for daylight regulation.

It should be positioned where an average daylight level will be reached. (center of the room or in the vicinity of the light control to be measured). The sensor should not be positioned too close to window surfaces or too far in the room. Ideally, the sensor should be positioned over the measuring surface, such as the work surface of a desk. In contrast to the straight prism, the version with oblique prism can be individually positioned in the room.

The measurement area should preferably have a medium reflectance. Reflecting objects such as glass or polished metal surfaces should not be present. The influence of extraneous light sources, eg lights, windows, skylights must be excluded or reduced as much as possible.



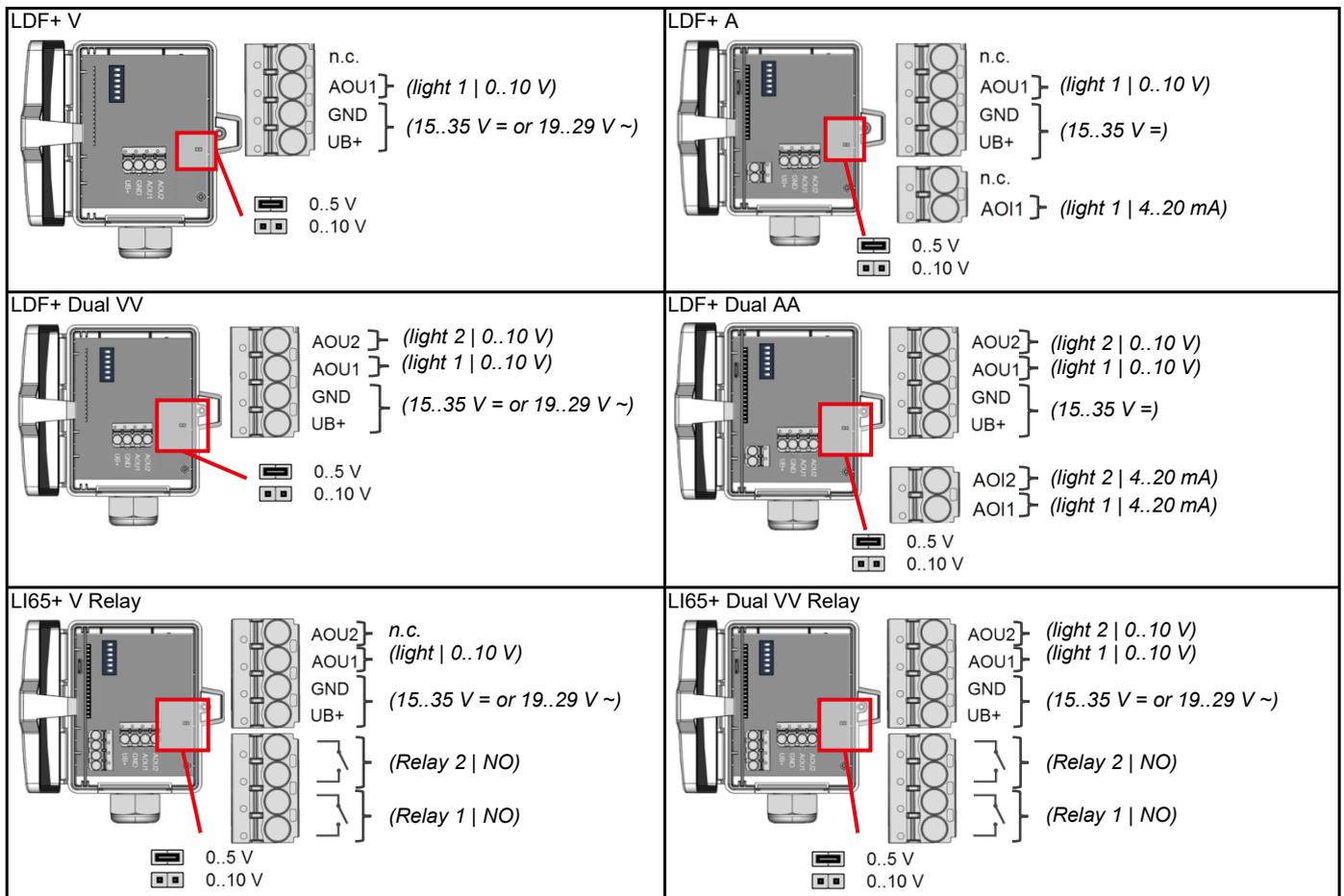
Two RJ45 sockets are integrated in the enclosure, this allows 2 light sensors to be connected with a shielded RJ45 cable of up to 10 m in length.

To properly detect the sensors, they must be connected before the unit is powered up.

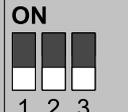
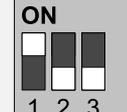
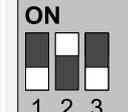
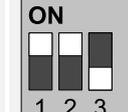
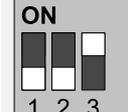
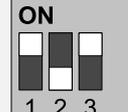
» TECHNICAL DATA

Measuring values	light	
Output voltage	1x/2x 0..10 V or 0.5 V (adjustable via jumper; live-zero configuration via Thermokon USEApp), min. load 10 kΩ	
Output ampere <i>(type-dependent)</i>	A AA 1x/2x 4..20 mA, max. load 500 Ω	
Output switch contact <i>(type-dependent)</i>	Relay 2x floating contact NO for 24 V ~ or 24 V = / 3 A, (optional)	
Power supply	V VV 15..35 V = or 19..29 V ~ SELV	A AA 15..35 V =
Power consumption	typ. 0,6 W (24 V =) 1,5 VA (24 V ~)	
Measuring range light	0..200 Lux 0..1000 Lux (default) 0..2 kLux 0..10 kLux 0..20 kLux 0..50 kLux, selectable at the device	
Accuracy light	±5% of measuring range	
Sensor	Ambient light sensor with precise optical filtering similar to the human eye	
Prism <i>(optional)</i>	acrylic glass clear, straight	acrylic glass clear, diagonal
Enclosure	enclosure USE-M, PC, pure white	
Protection	IP65 according to EN 60529	
Cable entry	V VV A AA Flextherm M20, for wire Ø=4,5..9 mm, removable	Relay M25 with fourfold cable entry for wire with max. Ø=7 mm, removable
Connection electrical	removable plug-in terminal, max. 2,5 mm ² , sensor wire length=1,5 m (default), max. 10 m, plug RJ45	
Ambient condition	Enclosure -30..+70 °C, max. 85% rH short term condensation	

» CONNECTION PLAN

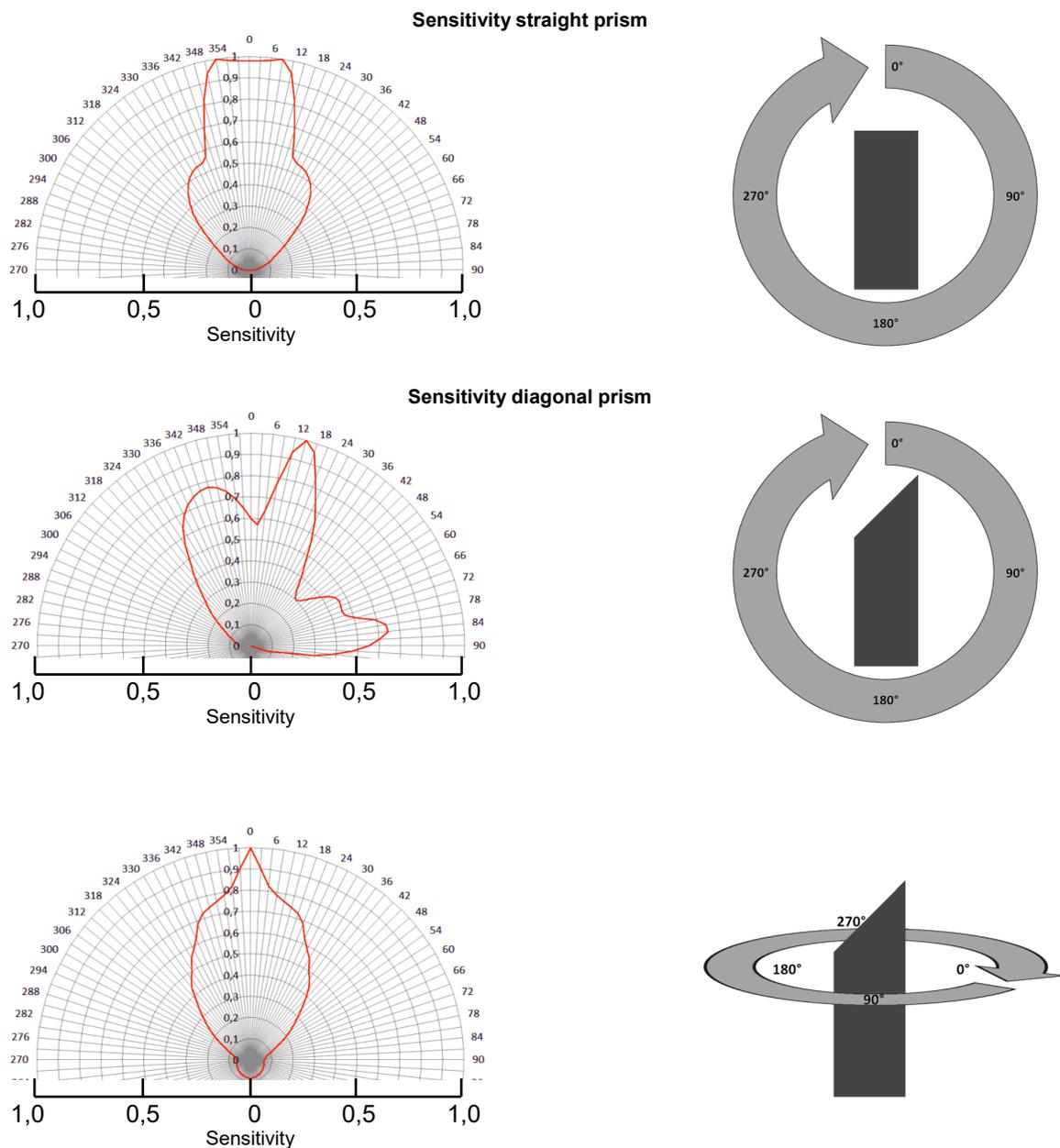


» **DIP SWITCH CONFIGURATION**

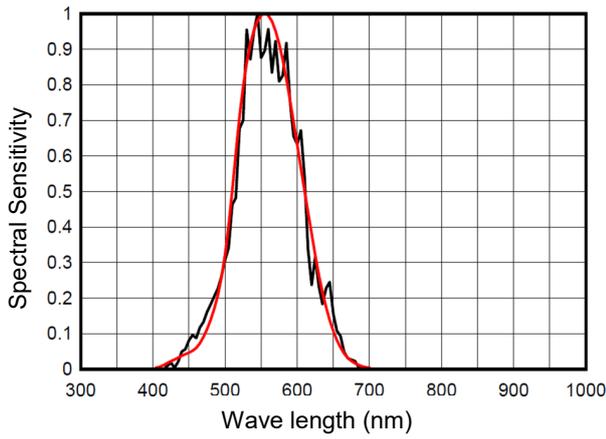
Measuring range light - DIP 1..3						
SI = 0..1 kLux * IMP = 0..100 fc ON 	SI = 0..0,2 kLux IMP = 0..20 fc ON 	SI = 0..2 kLux IMP = 0..200 fc ON 	SI = 0..10 kLux IMP = 0..1000 fc ON 	SI = 0..20 kLux IMP = 0..2000 fc ON 	SI = 0..50 kLux IMP = 0..5000 fc ON 	
DIP 4,5			System of units - DIP 6			
Reserved * ON 			SI * ON 			IMP ON 

*factory default

» **ANGLE-DEPENDENT SENSITIVITY**



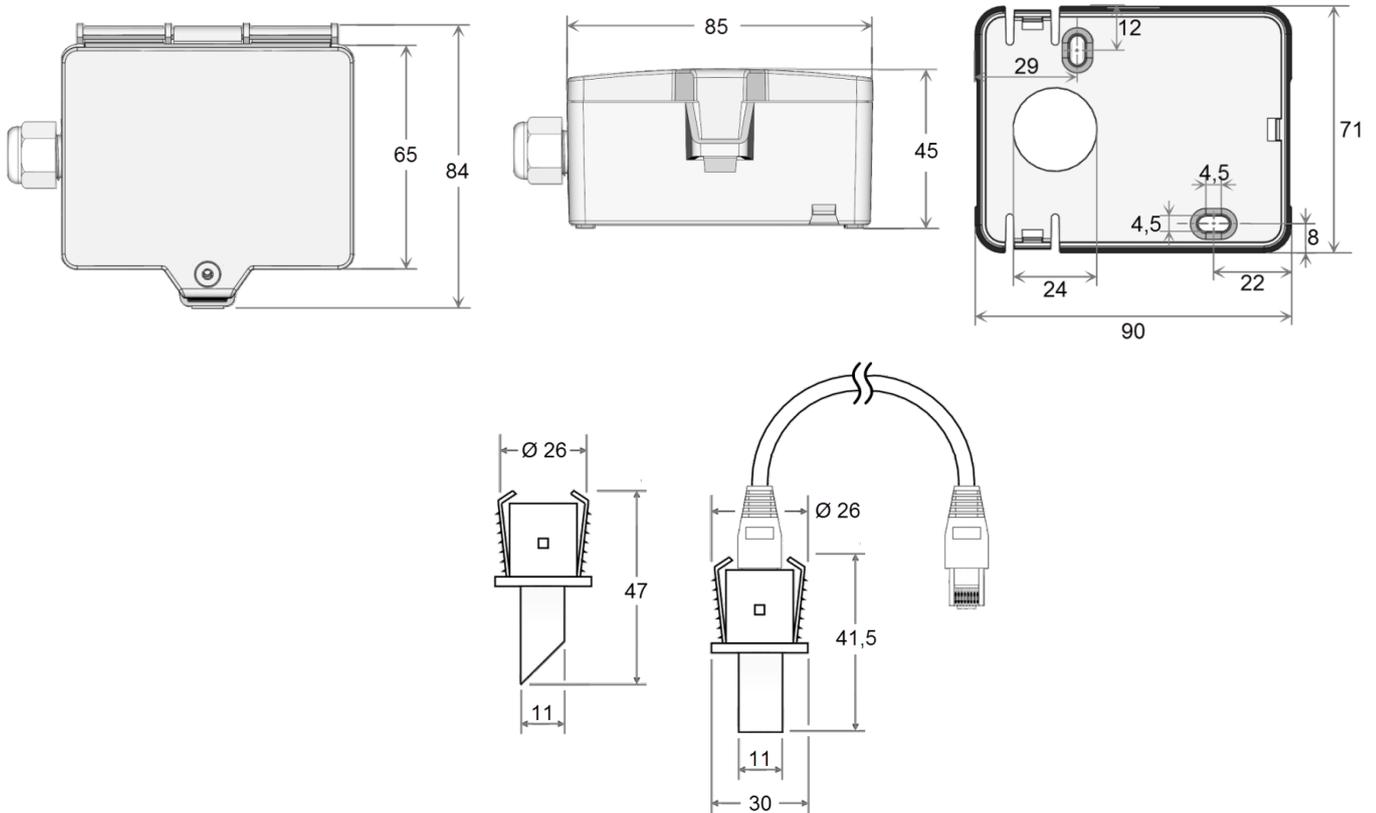
» SPECTRAL SENSITIVITY



— Human Eye
 — LDF+

The adjacent graph shows the sensitivity curve of the human eye - also known as the V-lambda curve - and the spectral sensitivity of an LDF + sensor. The human eye perceives radiation of about 400 to 700nm as light. At about 555nm, the eye is most sensitive.

» DIMENSIONS (MM)



» ACCESSORIES (INCLUDED IN DELIVERY)

Mounting base
 Mounting kit universal
 • Cover screw + screw cover • 2 Rawplugs • 2 Screws (countersunk head) • 2 Screws (rounded head)

Item No. 631228
 Item No. 698511

» ACCESSORIES (OPTIONAL)

Bluetooth dongle
 Cable entry M25 USE white, sealing insert 4x Ø=7 mm (4 pcs)

Item No. 668262
 Item No. 641364