

Installation- and Operating Instructions

photocell LS 40



photocell LS40:

transmitter/receiver photocell LS 40

- for 12 or 24V direct current (DC) or alternating current (AC)
- range: 8 metres
- simple mounting



General characteristics

the special features of LS40 are its extremely small external dimensions (depth of 28mm), as well as the simple and fast mounting. The attachment on the wall is made with three bolts.

The tousek LS40 photocell is a transmitter/receiver photocell for 12V as well as for 24V usage.

The transmitter and receiver are built in the plastic housing. The housing caps are made of a special material which works as a filter against external influence from sunlight. There are also lens inside the covers to ensure the operational reliability. Inside the receiver there is a LED-display which shows the functionality of the photocell and there are also 2 measuring points designated on the board. With these and with the help of a voltmeter the photocell can be adjusted for optimal reception.

As special feature the TOUSEK LS40 has an **Sync Circuit** built inside. **The Sync function is only available with AC current (alternating current)**. It is then possible to install 2 light barriers/photocells in parallel without interaction. Both transmitters and receivers are mounted on the same side. The reliability and security is optimised through the sync circuit. Inside the transmitter you will find a jumper to deactivate the sync circuit function.

Operation

The operation works with modulated infrared light. An interruption of the infrared light beam causes the switching of a potential-free contact in the receiver.

Technical data

Type	supply voltage	max. power consumption at 12/24V a.c.	max. power consumption at 12/24V d.c.	nominal range	operating temperature	max. contact load	signal	wave length	Article-Nr.
photocell with SYNC-function									
LS 40	12 od. 24V a.c./d.c.	57mA	63mA	8m	-20° to +70°C	30W, 24V	infrared, modulated	880nm	13510110
vandalism-safe housing				for LS 40					silver: 13500200
metal column				for LS 40, heigth approx. 500mm					silver: 13500170

Mounting

- a) define the mounting positions for transmitter and receiver: the mounting positions for transmitter and receiver should be opposed, with the same axis and on the same level/height (H). The height H aims at conditions and requirements provided by the customer. **The valid directives for power-operated gates have to be respected.**
- b) For mounting of the transmitter (receiver) housing you have to remove first the screw on the socket of the frontal cover. After having removed the cover, the positions of mounting holes can be assigned. Then 3 holes have to be drilled.
- c) The cables have to be inserted in the corresponding openings and the socket has to be mounted on the wall. (avoid spare cable)
- d) If **SYNC-function** is desired (only with AC possible) → **remove the jumper SYNC on the transmitter.**
When installing 2 photocells/light barriers the SYNC function helps prevent interaction. When using direct current (DC) then transmitter and receiver have to be mounted diagonally.
- e) Before making the positioning and adjustment works the cover has to be placed on the transmitter. The integrated lens enables optimal adjustment.
- f) Now the transmitter and receiver can be supplied with 12 or 24 V AC or DC → **LED PW (transmitter) illuminates**
→ **LED PW (receiver) illuminates (only, when no signal from transmitter is received)**

With **LED TP-L** receiver) positioning, alignment and connection of the LS40 can be checked:

LED TP-L illuminates → connection and orientation are correct (the better the adjustment, the stronger the light intensity of the LED)

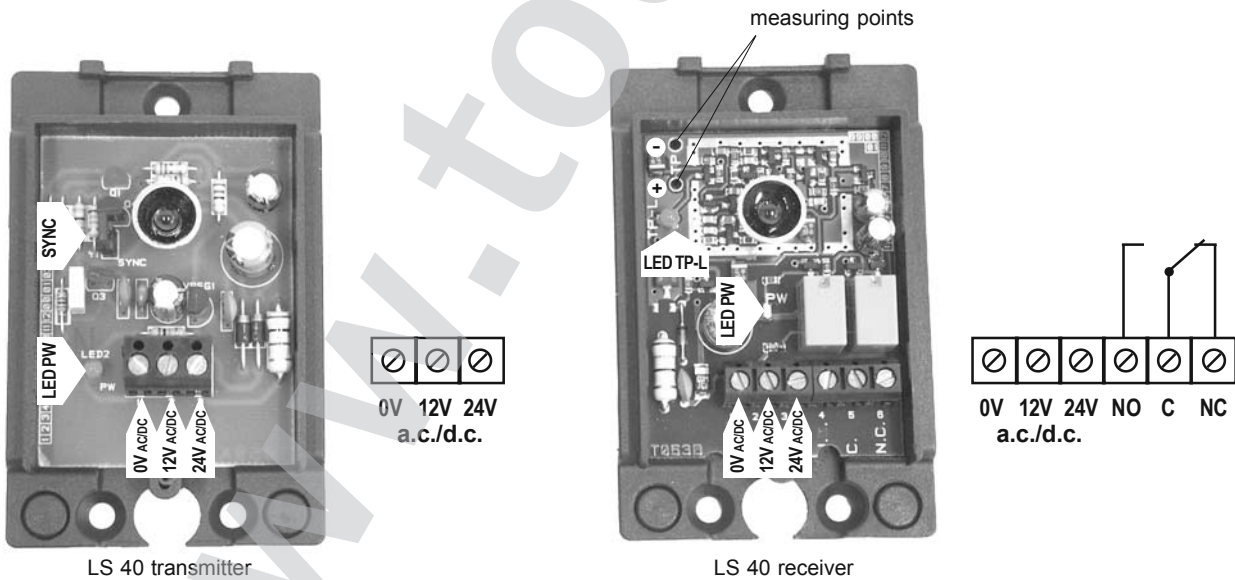
LED TP-L does not illuminate → wrong connection or orientation/adjustment (or the beam is discontinued)

Now interrupt the infrared beam several times in order to check the response of the relays.

With each interruption of the light beam the **LED PW on the receiver should illuminate and the LED TP-L extinguish.**

Attention: with a voltmeter the optimal setup should be made at the **measuring points (+, -)** of the receiver (next to lens). **The measured value should be 1,8-2,0V** direct current. (with cover on transmitter mounted)

- g) The remaining covers have to be attached and fixed with screws. Now interrupt the stream several times again to check the response of the relays.



transmitter

- PW Led** display power supply
- SYNC** jumper SYNC-function:
removed → SYNC-function on (only with AC)
set → SYNC-function off
- power supply** 12V or 24V AC/DC

receiver

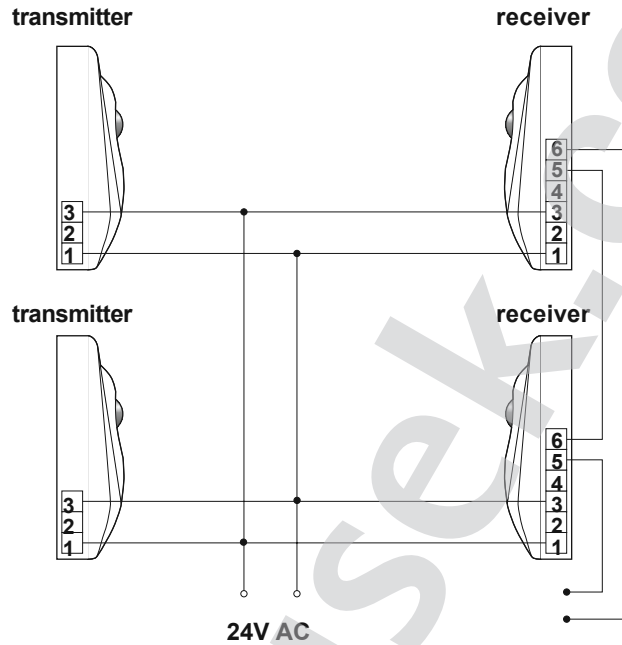
- PW Led** display power supply (illuminates, when there is no signal from transmitter)
- TP-L Led** display signal reception (power of luminance corresponds to signal strength)
- power supply** 12V or 24V AC/DC

Attention: use of 2 pairs of photocells

1) Use with alternating current (AC)

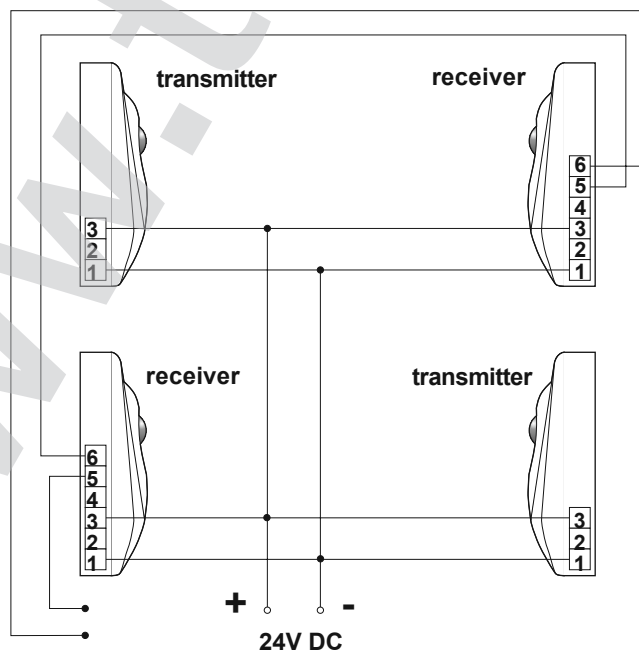
When using the photocells with alternating current (AC) then the **SYNC-function** can be activated by removing the plugin-jumpers in both receivers. With the SYNC-function activated both transmitters and receivers respectively can be mounted on one side without interaction.

Important: the connection of the AC supply voltage has to be made exactly as shown on the graph below.

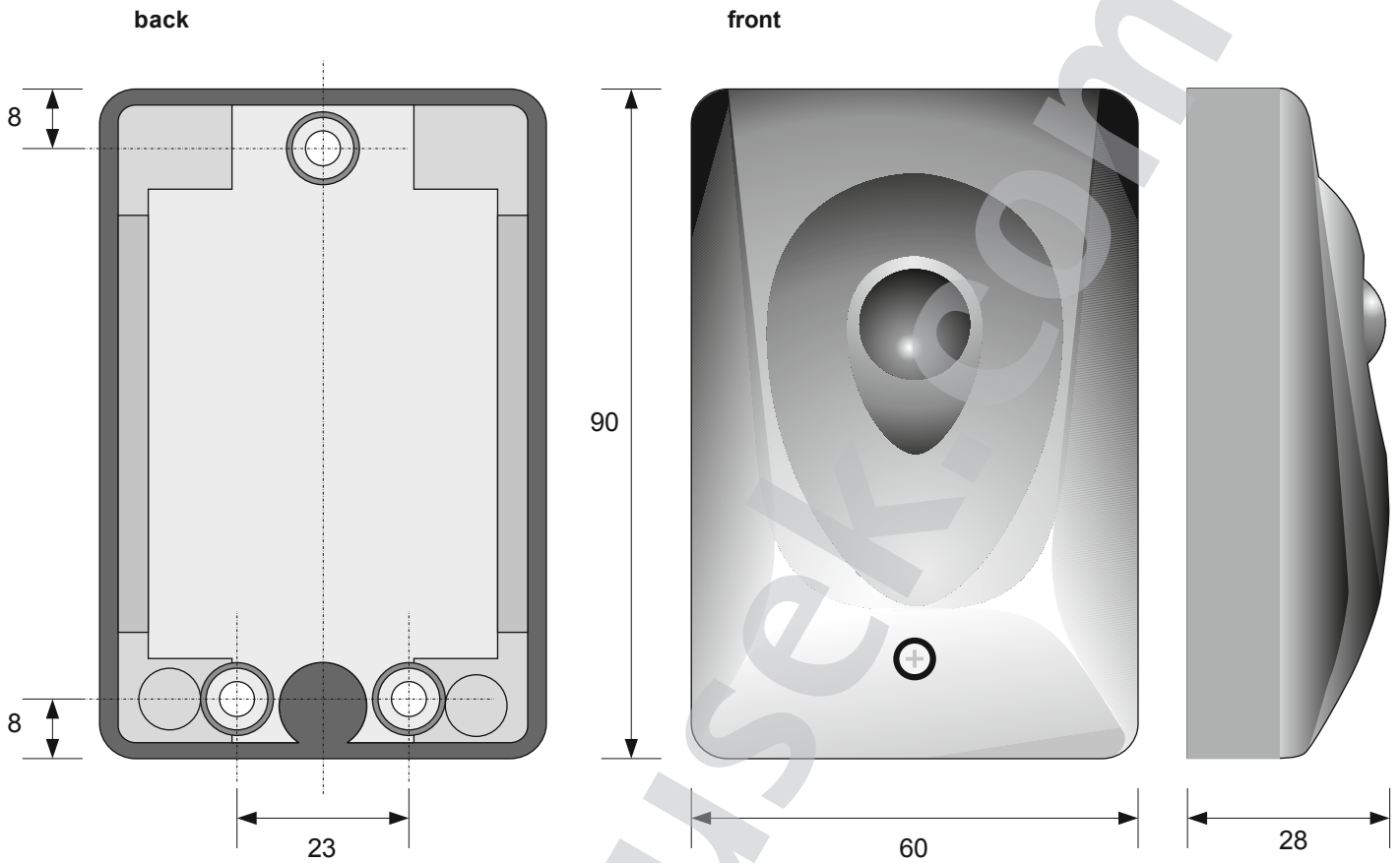


2) Use with direct current (DC)

Should the power supply only be possible with direct current (DC) then the SYNC-function is not possible. In this case the transmitter and receiver have to be mounted diagonally (as shown on graph below)

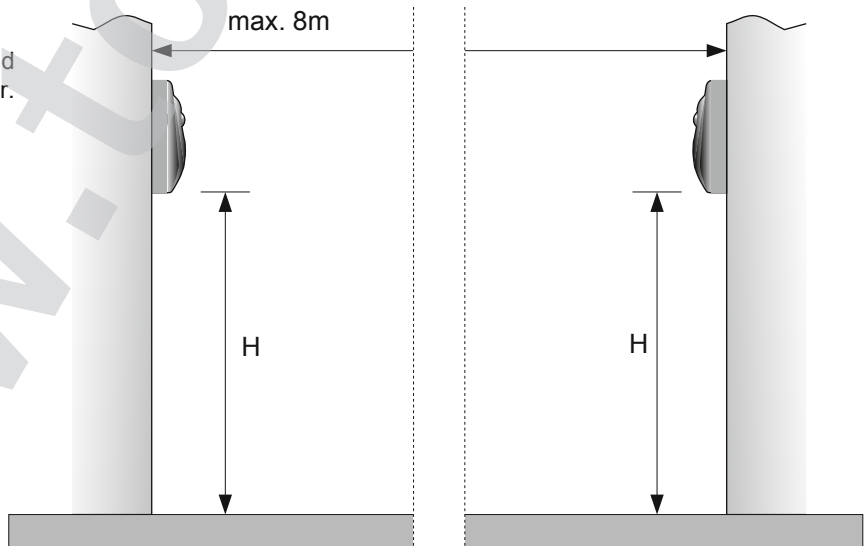


Dimensioned sketch of Tousek LS40
 dimensions in mm



mounting positions

The height **H** aims at conditions and requirements provided by customer. The valid directives for power-operated gates have to be respected.



We reserve the right to change dimensions and technical specifications without prior notice.

tousek PRODUCTS

- sliding gate operators
- cantilever systems
- swing gate operators
- garage door operators
- folding door operators
- traffic barriers
- carpark management system
- window operators
- domelight operators
- sliding door operators
- electronic controls
- radio remote controls
- key operated switches
- access control
- safety devices
- accessories

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