

PHOTOCELL

Install photocells in close co-ordination with the Technical Delegate and/or the Race Jury. It is strongly recommended that the finish area be made as level as possible.

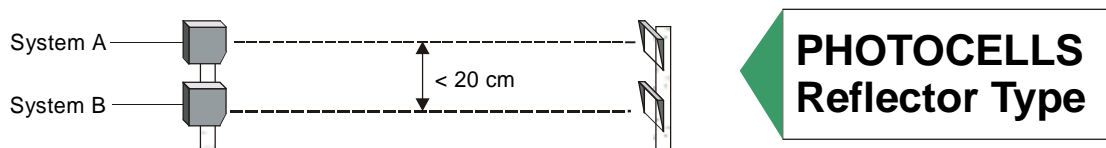
System A and B must be always completely separate (also separate case and fixing).

Only photocells homologated by the FIS are allowed to use for the finish (see section of homologated timing equipment in this booklet).

There are two categories of cells:

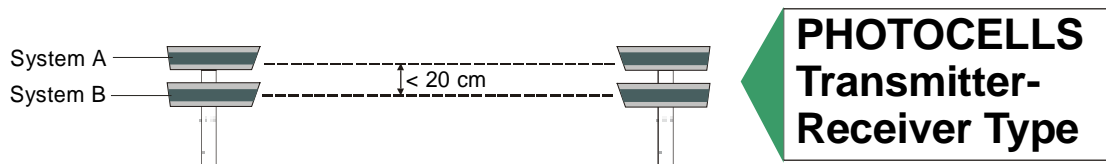
1. Reflector-Type:

The photocell has the transmitter and receiver in the same case. A reflector on the opposite side of the finish is used to reflect the photocell beam.



2. Transmitter-Receiver Type:

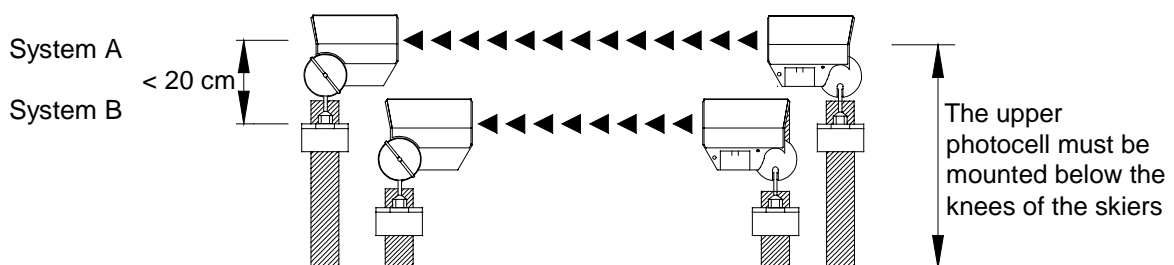
The transmitter is on one side of the finish, and the receiver on the other side.



Photocells for the Finish:

It is necessary to have two independent photocells for the finish, one for System A and one for B.

The photocells must be set up parallel to the finish on top of each other. The max. vertical separation of the beams may not exceed 20 cm (8").



The Transmitters of the photocell can be either on the same side or opposite side (see manufacturer specifications).

For Reflector-Type-Photocells the reflectors for system A and B should be on the same side.

The photocells must be connected to the timing devices by wire. No radio transmission is allowed for the finish photocells.

Photocells for Intermediate Time:

There are no requirement to have a back up photocell for the intermediate time.

If you use photocells install them in close co-ordination with the Technical Delegate and/or the Race Jury for safety reasons.

To avoid the photocells (if used) being triggered by anyone other than the competitors, it is recommended that the person responsible for that intermediate timing point use a push-button to arm the photo cells only when a competitor crosses the line.

Technical Specifications for the Photocell

The technical concept of the photocell is not restricted by the FIS, although it must be assured that the photocell is not influenced by any other light, waves or mobile reflectors with photocells reflector type.

The photocell must meet the standards for electronic devices in which it is sold.

- Reaction Time (Accuracy):**
- ☞ The delay of impulses is not allowed to be higher than 0.01 sec.
 - ☞ The delay of impulses must be constant, the range must be less than 5/10.000 sec.
- Operating Distance:**
- ☞ The photocell must work over a distance of minimal 17 m. The maximal size of the lens or reflector is 100 mm (in all directions).
- Triggering Object:**
- ☞ A 8 mm wide stick moving with a speed of 10 km/h is not allowed to trigger the photocell (measured at a distance of 2 m from lens of the receiver).
 - ☞ A 100 mm stick moving with a speed of 200 km/h must trigger the photocell (measured at a distance of 2 m from lens of the receiver).
- Temperature Range:**
- ☞ -25 to 50°C (for colder weather you should prepare a cover so the photocell will still work).
- Power Supply:**
- ☞ If the photocell is supplied by the timing device (same cable as the impulse) it needs no external power supply.
 - ☞ If there is a battery as power supply used (external or internal) the Photocell must work for four (4) hours at -10°C.