

# **IMPULSE DEVICES**

# **Photocell PR1a and PR1aW**

The photocell PR1a is a masterpiece of precision and can be used universally as a reflection photocell, as a transmitter photocell or a receiver photocell.

The photocell emits a modulated light beam in the infrared range, which is monitored by the receiver for interruptions. If the receiver detects an interrupt, it triggers an impulse. If both, the transmitter and receiver are in the same housing, it is called a reflection photocell. The infrared beam is direct-ed from the transmitter to a reflector. The reflector functions like a mirror and reflects the infrared beam back to the receiver. Should longer distances be necessary, one can use a photocell as transmitter, and another as a receiver photocell.



# Photocell PR1a

- · impulse accuracy 1/10,000 s
- · variety of types:
  - reflection photocell
  - through-beam photocell for long distances
- · wide photocell range: over 150 m possible
- $\cdot$  variable power supply of the photocell:
  - battery operation
  - power supply from the ALGE-TIMING timing device
  - external power supply from 4 to 18 VDC
- · battery status indication with LED (green, yellow, red)
- · indicates photocell status with LED (green, yellow, red)
- · synchronization of two photocells (main and backup), in order to avoid interference
- $\cdot$  setting of the delay time (approx. 20 ms to 2 s/factory setting = 20 ms)
- $\cdot$  very long operating time



# Photocells PR1aW

The PR1aW photocell has an integrated radio module (2.4 GHz), in addition to all characteristics of the PR1a. The impulse transmission can be carried out by radio and is compatible with the WTN series. 15 different radio-teams and 5 different impulse channels can be set. If required, the PR1aW can also be connected to a timing device via cable.

#### **Additional Functions**

- · integrated radio module for wireless impulse-transmission
- · impulse transmission also possible by cable
- · up to 38 hours of operating time with battery



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# **Photocell PR1a and PR1aW**

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# **Photocell Sets**

#### Reflection Photocell PR1a-R

Reflection photocell with mounting bracket BBG and 10 m cable 001-10 Scope of delivery:  $1 \times PR1a$ ,  $1 \times PR1a$ -REF,  $2 \times BBG$ ,  $1 \times 001-10$ 

#### Reflection Photocell PR1a-RT

Reflection photocell with tripod TRI128 and 30 m cable 001-30 Scope of delivery:  $1 \times PR1aW$ ,  $1 \times PR1a$ -REF,  $2 \times TRI128$ ,  $1 \times 001$ -30

## Through-Beam Photocell PR1a-d

Consists of separate transmitter and receiver. The photocell beam is directed from transmitter direct to receiver (distance over 100 m possible); Scope of delivery:  $2 \times PR1a$ ,  $2 \times BBG$ ,  $1 \times 001$ - $10 \times 100$  (10 m)

# Through-Beam Photocell PR1a-dT

Same as the PR1a-d through-beam photocell, but without the BBG mounting bracket and with tripods and 30 m long photocell stop cable. Scope of delivery: 2xPR1a, 2xTRI128, 1x001-30 (30 m)

### Radio Reflection Photocell PR1aW-R (like PR1a-R, but with radio)

Scope of delivery: 1xPR1aW, 1xPR1a-REF, 2xBBG

## Radio Reflection Photocell PR1aW-RT (like PR1a-RT, but with radio)

Scope of delivery: 1xPR1aW, 1xPR1a, 2xTRI128

### Radio Through-Beam Photocell PR1aW-dT (like PR1a-dT, but with radio)

Scope of delivery: 1xPR1aW, 1xPR1a, 2xTRI128













### **Technical Data**

Range: 0.5 to over 25 meters (with reflector)

0 to over 150 meters (transmitter and receiver)

Impulse length: 20 to 2,000 ms can be set

Output: NPN transistor, open collector, active low

Dimensions: approx. 118 x 87 x 44mm

Weight: approx. 0.3 kg

Operating time: approx. 77 hours (PR1a)

approx. 38 hours (PR1aW)



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# **Photocell RLS3c**

# The RLS3c Triple Photocell

The triple photocell has a range of 2 to 15 m and consists of three photocells, which are built into one housing. It is equipped with a complete transceiver unit, a reflector, 2 tri-pods and a 30 m cable.







Switchable between the following functions:

# Photocell area:

Application for athletics; only if all three photocells are triggered an impulse will be generated. This prevents the triggering by arms or legs and the unofficial time of the photocell time corresponds with the "official winner's time". This photocell should be used when the time is shown on a display board.

# Single photocells:

All three photocells operate independently, i.e. if one of the three photocells is triggered, an impulse is generated (e.g. for canine sports agility).



# **Technical Data**

Range: 5 to 15 m (distances under 5 m on request)
Output: NPN transistor, open collector, active low

Impulse length: 20 to 1400 ms can be set
Dimensions: 200 x 370 x 120 mm
Weight: 2 kg (RLS3c with reflector)

# **Photocell Accessory**

# **Photocell Accessory:**



#### Reflector PR1a-REF

standard reflector for photocells PR1a and PR1aW



#### Reflector REF-L

simple reflector for photocell PR1a and PR1W



### **Reflector REF3**

standard reflector for photocell RLS3



#### **Reflector REF-C**

reflector for photocells with long distances



# **Mounting Bracket BBG**

chain holder for fixing the photocell or reflector to posts



## **Mounting Bracket B-S1**

screw-on mounting bracket for mounting the photocell or the reflector



# Mounting Bracket B-P40

Mounting bracket that can be mounted on poles with a diameter of up to 40 mm using screws, in order to mount the photocell or the reflector.



### **Tripod TRI128**

professional tripod with a max. height of 1.2 m to mount the photocell or reflector



#### **Tripod TRI-S5**

simple tripod with max. height of 106,5 cm



# Case KL-PR1a

for the potocell and reflector including tripods TRI128  $\,$ 



#### Case KS-PR1

for photocells PR1a and PR1aW and other accessories



#### Case KL-RLS3

for the photocell RLS3c with tripod TRI128  $\,$ 



### **Cables for Photocells**

start cable with power supply: 002-01, 002-10, 002-30Stop cable with power supply:001-01, 001-10, 001-30Banana cable:000-01, 000-02, 000-05, 000-10



# **Synchronization Cable 163-5**

to synchronize two photocells PR1a and /or PR1aW





Radio Photocell PR1aW

