

### Photocell PR1aW

The photocell PR1aW is a masterpiece of precision and power in a small package.

The transmitter of the photocell sends a modulated infrared beam. The receiver checks the infrared beam and makes an impulse for each interruption.

The photocell has a built in radio module (2.4 GHz) and therefore a wireless impulse transmission is possible. It is compatible with the WTN-family (Wireless Timing Network). Up to 15 different radio channels and 5 impulse channels are adjustable. Of course you can connect the photocell as well by cable with the timing device.

To use the photocell universally it is possible to switch between 3 different functions: Reflection-Photocell, Photocell Transmitter and Photocell Receiver.



#### Photocell PR1aW:

- Impulse accuracy up to 1/10,000 seconds
- Different functions with one photocell:
  - Refection-Photocell with Reflector
  - Separate Transmitter-Unit and Receiver-Unit for long distance use
- Long distance range
  - Reflection-Photocell about 25 m
  - Through-Beam-Photocell over 150 m (500 feet)
- Variable power supply for the photocell
  - Battery operation
  - Power supply from ALGE-timing device
  - External power supply from 4 to 18 VDC
- Built in radio module for wireless impulse transmission
- Impulse transmission by cable is possible as well
- Battery indication with LED (green, yellow, red)
- Indication of photocell adjustment with LED (green, yellow, red)
- Synchronisation of two photocells (main and backup) to prevent interference
- Adjustment of delay time (20 ms to 2 seconds (factory adjustment = 20 ms)



Photocell PR1AW with extendable cover to protect the lenses from rain or snow!

#### Photocell Sets:

##### Reflection-Photocell PR1aW-R:

If one photocell is used with a reflector we call it a Reflection-Photocell. The function of the reflector is like a mirror, which reflex the beam sent from the transmitter back to the receiver.

*Photocell range:* about 25 m (80 ft)

*Photocell set:* 1 x PR1aW, 1 x PR1a-Ref, 2 x BBG, 1 x 001-10 (10 m / 33 ft)

##### Reflection-Photocell PR1aW-RT:

As PR1a-R supplied with tripod (instead of fastening bracket BBG) and 30 m (100 ft) photocell cable.

*Photocell range:* about 25 m (80 ft)

*Photocell set:* 1 x PR1aW, 1 x PR1a-Ref, 2 x TRI128, 1 x 001-30 (30 m / 100 ft)



Reflection-Photocell

##### Through-Beam-Photocell PR1a-dT:

As PR1aR-d supplied with tripod (instead of fastening bracket BBG) and 30 m (100 ft) photocell cable.

*Photocell range:* over 150 m (500 ft)

*Photocell set:* 1 x PR1aR, 1 x Pr1a, 2 x TRI128, 1 x 001-30 (30 m/100 ft)



Through-Beam-Photocell

### Photocell PR1aW

#### Photocell Accessory:

Photocell PR1aR



Reflector PR1a-Ref



Case for Photocell  
KS-PR1a



Fastening Bracket BBG



Fastening Bracket B-S1



Tripod TRI128



Cable 001-10 or 001-30



#### Technical Data:

Range with Reflector:	0.5 to 25 Meter
Range with Transmitter and Receiver:	0 to over 100 Meter
Impulse Output:	NPN transistor, open collector, active low
Reaction Time:	300 $\mu$ s, 1 ms fix adjusted
Impulse Length:	20 to 2000 ms (adjustable delay time)
Radio Frequency:	2,4 GHz band, 16 adjustable teams
Radio Power:	10 mW or 10 to 100 mW (adjustable)
Timing Channels:	5 different adjustable channels (c0 (start), c1 (finish) c2,c3, c4)
Measurements PR1A (without swivel head):	about 118 x 87 x 44 mm
Weight PR1A:	about 0.3 kg
Weight PR1a-Ref:	about 0.2 kg
Switches:	On/Off switch for battery Three position switch for modes (Norm, TX, RX) Rotation switch for team adjustment (radio frequency) Rotation switch for impulse adjustment (impulse channel)
Power Supply:	from ALGE timer: 5 VDC stabilized external power supply: 4 - 18 VDC internal Battery: 2 x AA-Battery
Power Consumption:	from Battery with 2,5 VDC: 20 - 46 mA from timing device 5 V <sub>stab</sub> : 9 - 20 mA
Running Time with Internal Batteries:	the measurements are given at a temperature of 22°C (72F) and with 1 impulse per minute <i>Without Radio</i> Alkalkaline AA-batteries: 77 hours NiCd AA rechargeable batteries: 70 hours <i>With Radio</i> Alkalkaline AA-batteries: 38 hours NiCd AA rechargeable batteries: 35 hours

