Mounting

1) When installing the sensor, make sure that the maximum range is not exceeded and – if two sensors are mounted close to each other make sure that cross talk is avoided.
2) Mount the reflector at the wanted position, reflective surface pointing towards the sensor. Adjust the sensor horizontal and vertical so the sensor points at the center of the reflector. Adjust if necessary the sensing distance depending in opaque or transparent objects. (see fig. 1)
3) The sensor must be mounted in an appropriate way in order to avoid mechanical as well as electrical damages or fire.
4) Do not apply power the sensor before all wires are connected correctly.
5) Apply power to the sensor terminal 1+2 and the yellow led must light up if installed correctly and no object blocks the light beam, if the light beam is interrupted the yellow LED is switched off.

Automatic doors

Europe:

1) The sensor must be mounted in accordance with EN13241-1, EN 12445 and EN12453
2) For all outputs that are used for safety-relevant purpose "ESPE type 2", the application controller has to check at least once during each opening or closing cycle that the sensor has the correct function (See Fig. 2):
a. the outputs are closed before activating the "mute input" of the sensor and
b. the output is opened during activation of the "mute input" (test intervals according to risk analysis or EN 12453)
3) Cross talk from another sensor must be avoided
4) For each application according to EN 23453 the mounting must be verified according the mirror test described in EN 61496-2 in order to avoid false reflections from close surfaces."
5) When mounted in outdoor applications, the sensor must be protected *against impact from the top and sides. For instance by embedding the* sesnsor in the door frame or by using protection cap.

USA:

1) The sensor must be mounted in accordance with UL325
2) For all outputs that are used for safety-relevant purpose, the application controller has to check at least once during each opening or closing cycle that the sensor has the correct function:
a. the outputs are closed before activating the "mute input" of the sensor and
b. the output is opened during activation of the "mute input" (test intervals according to risk analysis or UL325). (See Fig. 2).
3) Cross talk from another sensor must be avoided
4) For each application according to UL325 the mounting must be verified according the mirror test described in IEC 61496-2 in order to avoid false reflections from close surfaces.

Specifications

Rated operating dist. (S_n) (0 to 5,000 lux)		12 m with reflector type ER 4, ref. target
Blind zone		≤ 0.15 m
Sensitivity		Fixed
Temperature drift		≤ 0.4 %/°C
Differential travel (H) Hysteresis		3 to 20%
Rated operational volt. (U_B) AC: 45 to 65 Hz		24 VDC ± 20% 24 VAC ± 20%
Rated operational power (relay ON)		≤ 1 W (1.2 VA)
Output		
Contact ratings (AgCdO)		µ (micro gap)
Resistive loads	AC 1	3 A/250 VAC
	DC 1	3 A/30 VDC
Small inductive loads	AC 15	2 A/250 VAC
	DC 13	3 A/30 VDC
Mechanical life (typical)		40 x 10^6 operations
Electrical life (typical) 360 impulses/h		5 x 10^5 operations at 220 VAC - 3 A resistive load:
Dielectric voltage		2,000 VAC (rms) (cont./supply)
Light source		GaAlAs, LED, 660 nm
Light type		Visible, modulated
Optical angle		± 1.5Y
Light spot size		280 mm at 4 m
Ambient light		Max. 5'000 lux
Operating frequency		20 Hz
Response time (object related)		
OFF-ON (t_{ON})		≤ 20 ms
ON-OFF (t_{OFF})		≤ 30 ms
Power ON delay (t_v)		≤ 300 ms (typ. 100 ms)
Output function		Switch selectable, make or break switching
Mute function		Switch selectable
Make on		≥ 4 VDC/VAC
Response time output off		< 20 ms
Make off		< 2 VDC/VAC
Response time output on		< 45 ms
Break on		≤ 2 VDC/VAC
Response time output off		< 45 ms
Break off		> 4 VDC/VAC
Response time output on		< 20 ms