

LS43 or LS44

Alternating light sensor

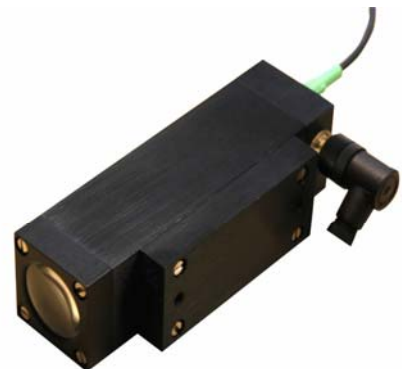
Data Sheet

Function:	Alternating light sensor with external light source
Mechanical design:	Aluminium case incl. electronics and optics
Connection:	4-pole plug-type connector and 3-pole plug-type connector for LID43 connection
Dimensions/Weight:	HxWxL 60x75x162 mm Weight: approx. 1 kg (without clamp type joint)

Application

Alternating light sensors of the LS43/44 series are used in strip guiding systems for non-contact sensing of the strip edges. The strip material must be impervious to light. Alternating light sensors are designed as photoelectric edge sensors with large distance coverage between the light emitter and the measuring receiver. The alternating light largely eliminates the influence of d.c. light and thereby ambient light. LS43 is used as measuring receiver, LS44 as reference receiver.

View



Functional description

Alternating light emitted by an external source (2kHz) is transmitted via the front lens to a photoelectric element. The internal electronics generates an output voltage proportional to the incident light. Almost proportional to the ingress of one strip edge into the light beam, the zero-potential output voltage U_A is changed. Light sensor and light emitter are physically separated and must be on one optical axis. Depending on the distance between light emitter and light sensor, the output voltage U_A can be adjusted to the desired nominal value using the internal potentiometer R1 (e.g., 10V in the case of an open light beam for LS43 and 5V for LS44). An LIC or LID43 may be used as external alternating light emitter.

Block diagram

