

HIGH RESPONSE SENSITIVITY AND POLLUTION COMPENSATION

A classic example of the use of high-performance light barriers are car washes or so-called gantry car washes. In particular, the main cleaning brushes and dryer fans of such systems, which travel over the car body during cleaning and drying, require a sensitive light barrier that is also capable of detecting vehicle glass (e.g. front and rear windows) in order to control the corresponding pressure of the brushes or the distance of the dryer fan according to the vehicle contours. In addition, the brushes for the wheel rims can also be controlled via a light barrier. In such systems, the optics of the high-performance light barriers are exposed above all to contamination from the washing water and the impurities detached from the vehicle. Depending on the regions in which the car wash is operated, the water may also contain lime, so that lime residues can also be deposited on the optics.

Other environmental conditions typical of such washing systems include cleaning agents and foam. As already mentioned, a solution with high response sensitivity is required here, which can simultaneously compensate for the contamination to which the optics of the transmitter and receiver are exposed. Since a light barrier with a fixed setting of the transmitting power is not able to cope with these basically opposite requirements, solutions such as the single-channel amplifiers with automatic mode of operation had to be developed. Due to the reduction of the transmitting power to a safe minimum level, they enable a high response sensitivity of the light barrier, but are also capable of automatically re-adjusting the transmitting power in case of increasing contamination of the optics. Another advantage is that such a system solution outputs a signal before the connection amplifiers reach their control limits due to contamination of the optics of the high-performance light barrier, so that the transmitter and receiver can be cleaned in good time or as scheduled.

