

Title (en)
EVALUATION OF SCATTERED LIGHT SIGNALS IN AN OPTICAL ALARM SYSTEM AND EVALUATING BOTH A WEIGHTED SMOKE DENSITY SIGNAL AND A WEIGHTED DUST/STEAM DENSITY SIGNAL

Title (de)
AUSWERTEN VON STREULICHTSIGNALEN BEI EINEM OPTISCHEN GEFAHRENMELDER UND AUSGEBEN SOWOHL EINES GEWICHTETEN RAUCHDICHTESIGNALS ALS AUCH EINES GEWICHTETEN STAUB-/DAMPFDICHTE-SIGNALS

Title (fr)
ÉVALUATION DE SIGNAUX DE LUMIÈRE DIFFUSÉE DANS UN AVERTISSEUR OPTIQUE DE DANGER ET ÉMISSION TANT D'UN SIGNAL PONDÉRÉ DE DENSITÉ DE FUMÉE QUE D'UN SIGNAL PONDÉRÉ DE DENSITÉ DE POUSSIÈRE/VAPEUR

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Abstract (en)
[origin: WO2013045446A1] The invention relates to a method for evaluating two scattered light signals (IR, BL) in an optical alarm system (1) operating according to the scattered light principle. The particles with light, which are to be detected, are irradiated in a first and second wavelength range. The light scattered by the particles is converted into a first and a second non-standardized scattered light signal (IR', BL'). The two scattered light signals (IR', BL') are standardized with respect to one another in such a way that their amplitude profile for relatively large particles such as dust and steam approximately corresponds. Furthermore, the two standardized scattered light signals (IR, BL) are transformed into, in each case, a polar angle and in each case a distance as a polar coordinate of a polar coordinate system. Finally, in each case a smoke density signal (R) and a dust/steam density signal (SD) are formed from a current distance value (L), wherein for this purpose the respective current distance value (L) is weighted as a function of a current polar angle value (alpha), in opposite directions to one another. Finally, the weighted smoke density signal (R) and the weighted dust/steam density signal (SD) are output for a possible further evaluation with respect to fire detection variables. The invention also relates to a corresponding optical alarm system.

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