

Abstract:

TOF distance sensor and method for operation thereof

A TOF distance sensor is proposed, for measuring a distance from an object, comprising an electronics apparatus for generating a modulation signal and for generating 4 correlation signals, which are phase shifted with respect to one another and which have the same period as the modulation signal; a radiation source for emitting radiation, which is modulated by the modulation signal; a reception apparatus, which has a predetermined spatial relationship with respect to the radiation source, for receiving radiation reflected by the object; a correlation apparatus for correlating the received radiation or a corresponding variable with respectively one of the 4 correlation signals in order to form 4 corresponding correlation values; a difference-forming apparatus for forming 2 difference correlation values from the difference between respectively 2 of the correlation values; a calculation apparatus embodied to calculate the distance with a predetermined linear dependence on the 2 difference correlation values.

(Figure 1)