

Continuous type

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Continuous Sensors and Introduction of Sensor This paper looks into the type of sensors referred to as continuous sensors, in the paper, a history of the sensor has been considered in reference to its invention, where the sensor has been used, and the improvement that has been realized in it. There is also an in depth discussion on how the sensor is used and the advantages and disadvantages of the sensor in an industrial setting. Given the role played by the sensors, it was also important that the mechanism of operation of the sensor is discussed. This is well explained under the subtopic " Theory behind the Sensor", finally, there is a conclusion that makes projection on the possible future improvements on the sensor.

Introduction The main role of the continuous sensor is to convert the physical phenomenon into those signals that are measurable. Sensors are classified into two broad categories; the analogue and the digital, in the analogue sensors, we expect ranges of values to be given while in the digital sensors, we only have true/false or on/off result. Analogue sensors measure the physical phenomenon and in this case, we can consider the devices that are used to record temperatures, that is, thermometer. These sensors are able to process the input information and interpret it into those standards that are familiar or required. The following are physical phenomenon that can be ascertained using sensors sound, pressure, angular and linear position, acceleration, temperature and the intensity of light. Notwithstanding, even with the fact that sensors are able to interpret physical phenomenon's and accounts for them in a measurable way, there are certain limitation associated with sensors, this includes accuracy, linearity, resolution, repeatability, range and precision (Bryan and Bryan 46). History of Sensor As indicated in the introductory parts, continuous sensors are classified as <https://assignbuster.com/continuous-type/>

analogue sensors because they measure a wide range of values. We will therefore consider thermometer as one of the continuous sensors, it was first invented in 1714, there were several version brought forth by the then inventors. Galileo Galilei was the first to come up with the most rudimental one in 1593, in 1612, another Italian inventor by the name Santorio Santorio came up with a thermometer that had numerical scales on it. In 1914, Daniel Gabriel Fahrenheit invented the modern mercury thermometer; later, Anders Celsius, and Lord Kelvin came up with other versions in terms of the reading scale (Bryan and Bryan 61). Who Invented the Sensor? There are several continuous sensor and not all the inventors can be enumerated in this paper. For this reason, we will consider the inventor of IR sensor who is William Kahl and that of the thermometer Daniel Gabriel Fahrenheit (Pratt 51), there are several other inventors of some of the continuous sensors in other related fields. How and where is it currently used in Industry? Continuous sensors are used in almost all industries, almost in all industries, there is the aspect of temperature recording, and this requires the use of sensor that can determine temperature. There are also those industries that would want to determine the stress that is exerted on the machines, these is mostly experience in busy ports where there is loading and offloading of heavy commercial goods. There is need to control the stress exerted on the pulleys that are used to deliver the loads, to avoid this, the physical strain on the pulleys have to be registered by the sensors to avoid exceeding the tolerable limit which can cause accidents. There are different physical phenomenons to be ascertained and this depends with the industry and how they use the interpreted results through the sensors. Theory behind Sensor/ how it works As indicated in the introductory part, there are several physical phenomenon <https://assignbuster.com/continuous-type/>

that are measured with the continuous sensors, it is therefore not possible to account for a single way in which the measurement is achieved because there are different phenomenon to be measured that requires different sensory mechanism. Even though the phenomenon are different, the mechanism used are the same that is why they are able to interprets the information of the various physical phenomenon and give readings related to them. The principle used in this case is that of the fact that, in the continuous sensors, transducers do convert the various signals from one form of energy to another and this makes it possible to be interpreted as per the established standards (Pratt 54). This is explained in the diagram below on how signals are converted from one form of energy to the other for interpretation; Again, the picture below shows Infra Red sensor (Transceiver) that is used to sense Infra red light, it is a type of continuous sensor

Conclusion of Sensor Project Continuous sensors are not new in place; they have been used for quite some time, the use of these sensors is of great need to many institutions, both learning and industrial, the sensors are not obsolete either and they will still be used with the generations to come. To add onto the improvement expected on them, the new models should have a high level of efficiency and reliability by making the sensors to be highly sensitive so that the information from them can be used as accurate and precise as possible. Works Cited Bryan, L. A., and E. A. Bryan. Programmable controllers: theory and implementation. Atlanta: Industrial Text Co., 2005. Print. Pratt, Ade. Sensors. New York: PowerKids Press, 2012. Print.