

(PREVIEW)

Indian Standard

CAPABILITY OF DETECTION

PART 1 TERMS AND DEFINITIONS

Scope

This part of ISO 11843 specifies terms and definitions relating to the detection of a difference between an actual state of a system and its basic state.

The general concepts laid down in this part of ISO 11843, critical value of the response variable critical value of the net state variable and minimum detectable value of the net state variable (see definitions Nos. 9 to 11) apply to various situations such as checking the existence of a certain substance in a material, the emission of energy from samples or plants or the geometric change in static systems under distortion.

Critical values can be derived from an actual measurement series so as to assess the unknown states of systems included in the series, whereas the minimum detectable value of the net state variable as a characteristic of the measurement method serves for the selection of appropriate measurement processes. In order to characterize a measurement process, a laboratory or the measurement method, the minimum detectable value can be stated if appropriate data are available for each relevant level. i.e. a measurement series, a measurement process, a laboratory or a measurement method. The minimum detectable values may be different for a measurement series, a measurement process, a laboratory or the measurement method.

ISO 11843 applies to quantities measured on scales that are fundamentally continuous. It applies to measurement processes and types of measurement equipment where the functional relationship between the expected value of the response variable and the value of the state variable is described by a calibration function. If the response variable or the state variable is a vectorial quantity, the concepts of ISO 11843 apply separately to the components of the vectors or functions of the components.

NOTE- Definitions Nos. 6 and 11 refer to theoretical quantities which in reality remain unknown. Estimates of these theoretical quantities can be determined from experimental results.