

1 Scope and purpose

This document applies to analog dc signals used in process control and monitoring systems to transmit information between subsystems or separated elements of systems.

Its purpose is to provide for compatibility between the several subsystems or separated elements of given systems.

This document need not apply to signals entirely used within a subsystem. When signals are to be transmitted to or received from subsystems or elements provided by different suppliers, they shall comply with the specified requirements for transmitters and receivers herein.

2 Definitions

(Reference: IEC publication 381.)

2.1 elements of process control systems:

elements which ensure the transducing, transmitting and processing of measured values, control quantities, controlled variables and reference variables (transmitters, indicators, controllers, recorders, computers, actuators, signal conditioners).

2.2 subsystems:

interconnected elements provided by a single supplier.

2.3 analog dc current signal:

a signal used for transmission which varies in a continuous manner according to one or several physical quantities.

2.4 measured value of an analog dc current signal:

the measured value of an analog dc current signal is its specified mean value during a stated duration.

2.5 range of an analog dc current signal:

the range of an analog dc current signal is determined by stating the lower and the upper limit of the signal current. (It is not intended that the output of the device be incapable of functioning beyond the limits stated in Clause 3.)

2.6 lower limit:

the lower limit of the signal current is the current corresponding to the minimum value of the dc current signal.

2.7 upper limit:

the upper limit of the signal current is the current corresponding to the maximum value of the dc current signal.

2.8 load resistance:

the load resistance is the sum of the resistances of all connected receivers and the connection lines.

2.9 ripple content:

the ripple content is the ratio between the peak to peak value of the ac part and the range of the dc current signal.

2.10 signal common:

the signal common shall refer to a point in the signal loop which may be connected to the corresponding points of other signal loops. It may or may not be connected to earth ground.