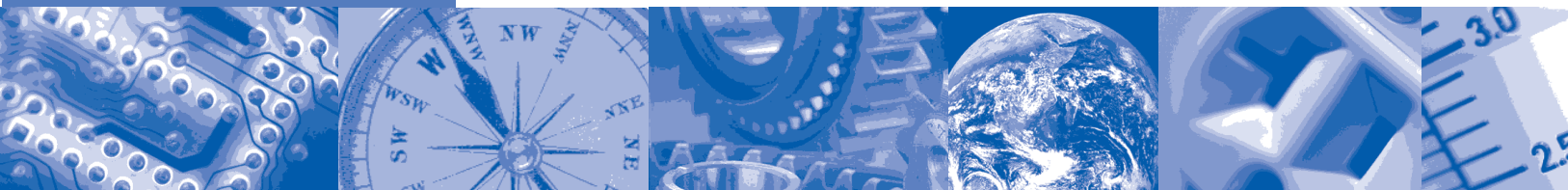


## **ISA-50.1-1982 (R1992)**

**Formerly ANSI/ISA-50.1-1982 (R1992)**



# **Compatibility of Analog Signals for Electronic Industrial Process Instruments**



**ISA—The Instrumentation,  
Systems, and  
Automation Society**

**Reaffirmed 13 July 1992**

ISA-50.1-1982 (R1992) — Compatibility of Analog Signals for Electronic Industrial Process Instruments

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## Preface

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## Contents

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<b>1 Scope and purpose</b> .....	<b>7</b>
<b>2 Definitions</b> .....	<b>7</b>
2.1 Elements of process control systems .....	7
2.2 Subsystems .....	7
2.3 Analog dc current signal .....	7
2.4 Measured value of an analog dc current signal .....	7
2.5 Range of an analog dc current signal .....	7
2.6 Lower limit .....	7
2.7 Upper limit .....	7
2.8 Load resistance .....	8
2.9 Ripple content .....	8
2.10 Signal common .....	8
2.11 Signal isolation .....	8
<b>3 Standard signals</b> .....	<b>8</b>
3.1 Polarity .....	8
3.2 Transmitters .....	8
3.3 Receivers .....	8
<b>4 Standard transmitters</b> .....	<b>8</b>
4.1 General .....	8
4.2 System compatibility .....	9
4.3 Classification .....	9
4.4 Load resistance specification .....	10
4.5 Electrical isolation .....	10
4.6 Ripple and noise content .....	13
<b>5 Standard receivers</b> .....	<b>13</b>
5.1 Inputs .....	13
5.2 Outputs .....	13
5.3 Isolation .....	14
<b>6 System</b> .....	<b>14</b>
6.1 Signal common .....	14
6.2 Power supplies .....	14
6.3 Transmitters .....	14
6.4 Receivers or signal processors .....	14
6.5 Test power sources .....	15
<b>7 Appendix</b> .....	<b>15</b>

This is a preview of "ISA 50.1-1982 (R1992...)". [Click here to purchase the full version from the ANSI store.](#)

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## 1 Scope and purpose

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This standard 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 standard 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.

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## 2 Definitions

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(Reference: I.E.C. 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 [Section 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.