

GENERAL SPECIFICATION

INSTRUMENTATION

GS EP INS 102

Instrumentation identification

06	10/2012	Update following the EP reorganization, March 2011
05	01/2011	As per marking
04	10/2009	As per marking
03	10/2007	As per marking
00	10/2002	First issue
Rev.	Date	Purpose of the revision

Owning entity: DEV/TEC	Managing entity: DEV/TEC/INS
------------------------	------------------------------

General Specification		GS EP INS 102
Instrumentation identification		
Rev.: 06	Effective date: 10/2012	Page: 2 of 14

Contents

1. Scope	3
2. Reference documents.....	3
3. Deviations from the reference documents.....	4
3.1 Deviations from section 4 of ISA-5.1	4
3.2 Deviations from section 5 of ISA-5.1	9
3.3 Differences from section 6 of ISA-5.1	13
Bibliography.....	14

General Specification		GS EP INS 102
Instrumentation identification		
Rev.: 06	Effective date: 10/2012	Page: 3 of 14

1. Scope

This document specifies:

- The coding or tag, numbering system for instruments and instrumented functions
- The symbolic representation of instruments and functions on Piping and Instrument Diagrams (P&ID's) and other drawings
- The use of the coding system for the computerized creation and administration of lists of instruments and functions.

2. Reference documents

The reference documents listed below form an integral part of this General Specification.

External Documents

Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published at the effective date of this document.

Reference	Title
ANSI/ISA-5.1	Instrumentation Symbols and Identification

Total General Specifications

Unless otherwise stipulated, the applicable version of these documents, including relevant appendices and supplements, is the latest revision published in the applicable yearly collection.

Reference	Title
Not applicable	

General Specification		GS EP INS 102
Instrumentation identification		
Rev.: 06	Effective date: 10/2012	Page: 4 of 14

3. Deviations from the reference documents

The services provided shall conform to the reference document, amended by the differences, choice of options and complementary information specified below.

ISA-5.1 section	Title	Comments
1	Purpose	Fully applicable
2	Scope	Fully applicable
3	Definitions	Fully applicable
4	Outline of the Identification System	Adaptation of ISA-5.1 for the computerized creation and administration of instrument lists
5	Tables	Definition of identification fields left as "user's choice" by ISA-5.1 + special features
6	Drawings	Additional symbols

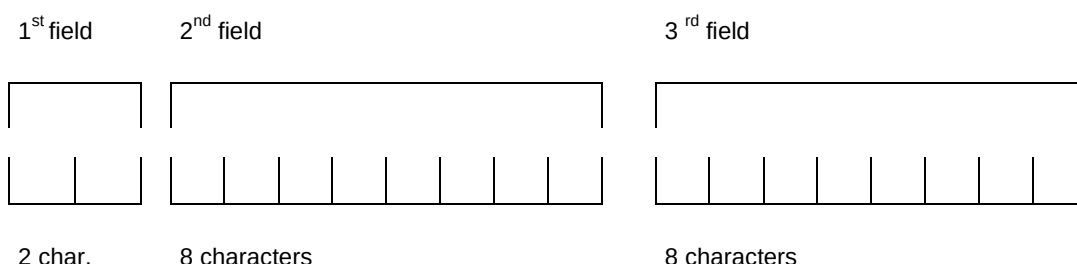
3.1 Deviations from section 4 of ISA-5.1

Sections 3.1.1 to 3.1.9 of this document supplement and replace section 4 of ISA-5.1.

Principle: An instrument is identified by its functions and not by its type or its operating principles, except in exceptional circumstances detailed later.

3.1.1 Code structure

The alphanumeric code system used to identify instrumentation loops comprises three fields:



1st field: **Plant or construction** (optional, not displayed if blank): Two alphanumeric characters.

2nd field: **Function or instrument:** Up to eight alphanumeric characters. The first character, which must be a letter, represents the initiating variable (process measured variable or, exceptionally, the first letter of a group of letters with a special meaning).

3rd field: **Instrument loop and extension loop serial number:** Up to eight alphanumeric characters. A loop can be defined as the whole instruments and functions related to the same measured variable.

General Specification		GS EP INS 102
Instrumentation identification		
Rev.: 06	Effective date: 10/2012	Page: 5 of 14

The code structure set out above represents a maximum. It is important to ensure that the control system and computer design tools support its use.

3.1.2 First field encoding principles

This code is the same as the one used at process level. It uses the plant numbering system.

3.1.3 Second field encoding principles

The detailed meaning of the codes used for the second field for instruments or functions must be indicated on a project P&ID cover page.

The code system for instruments or functions complies with the ISA specifications, apart from the differences and additions listed in the table in section 3.2.1. The code comprises a group of letters plus an extension where necessary (prefix or suffix).

The first letter must represent the initiating variable, except in the case of electrical equipment (section 3.1.5) or valves. The subsequent letters define the function or instrument, in the order set out in section 3.2.2.

Within a particular loop, there can be several instruments or functions with the same second field code (split range valves, dual scale instruments). If the instruments are interchangeable, the extension shall comprise a separator "/" followed by a letter. In all other cases, the extension shall comprise a number followed by the separator "/".

Examples:

1 st field		2 nd field				3 rd field			
6	4	F	V	1	/	1	0	0	4
6	4	F	V	2	/	1	0	0	4

1 st field		2 nd field				3 rd field			
6	4	L	T	/	A	1	0	3	0
6	4	L	T	/	B	1	0	3	0

3.1.4 Third field encoding principles

All instruments or functions of a particular loop share the same number.

The first two digits represent a section of the installation. The subsequent digits should, wherever possible, be in a chronological order representative of the direction of flow of the fluids defined in the P&ID's.

Two loops can have the same number if their respective initiating variables are different.

Instruments on identical process lines may have the same code. They shall be distinguished by an extension of the third field. This extension comprises the "/" separator and the literal or numeric code used to identify the equipment.