

Contents

Introduction (informative)	7
1 Scope	9
1.1 General.....	9
1.2 Application to industries	9
1.3 Application to work activities	9
1.4 Application to classes of instrumentation and to instrument functions	10
1.5 Extent of loop and functional identification.....	11
1.6 Extent of symbolization	11
1.7 Inclusion and modification of this standard in user engineering and design documents.....	12
2 Normative references.....	12
3 Terms, definitions, and abbreviated terms.....	13
3.1 Definitions	13
3.2 Abbreviations – for terms not otherwise defined.....	20
4 Identification letters	20
4.1 Identification letters table	20
5 Graphic symbols	25
5.1 General.....	25
5.2 Tables to be used for common applications	26
5.3 Instrumentation device and function symbols.....	28
5.4 Measurement symbols	32
5.5 Line symbols	40
5.6 Final control element symbols	44
5.7 Functional diagramming symbols	52
5.8 Signal processing function block symbols	54
5.9 Binary logic symbols	62
5.10 Electrical schematic symbols	73
5.11 Instrument loop diagrams.....	78
6 Graphic symbol dimensions.....	79
6.1 Graphic symbols dimension tables	79
6.2 Measurement units.....	80
6.3 Dimensions for graphic symbol tables	80
6.4 Dimensions for measurement symbols.....	81
6.5 Dimensions for line symbols	84
6.6 Dimensions for final control elements	85
6.7 Dimensions for functional diagramming symbols	87
6.8 Dimensions for binary logic symbols.....	88
6.9 Dimensions for electrical schematic symbols	89

7	References	91
7.1	ISA publications	91
7.2	Other related information	91
	Annex A – Summary of changes to previous 2022 revision	93

Tables

Table 1	– Identification letters	21
Table 2	– Instrumentation device and function symbols	28
Table 3	– Instrumentation device or function symbols, miscellaneous	29
Table 4	– Measurement symbols: Primary elements and transmitters	32
Table 5	– Measurement symbols: Measurement notations	33
Table 6	– Measurement symbols: Primary elements	34
Table 7	– Measurement symbols: Secondary instruments	37
Table 8	– Measurement symbols: Auxiliary and accessory devices	38
Table 9	– Line symbols: Instrument to process and equipment connections	40
Table 10	– Line symbols: Instrument-to-instrument connections	41
Table 11	– Final control element symbols	44
Table 12	– Final control element actuator symbols	46
Table 13	– Self-actuated final control element symbol	49
Table 14	– Control valve failure and de-energized position indications	51
Table 15	– Functional diagramming symbols	52
Table 16	– Signal processing function block symbols	54
Table 17	– Binary logic symbols	62
Table 18	– Electrical schematic symbols	73
Table 19	– Instrument loop diagram symbols	78
Table 20	– Dimensions for Tables 2 and 3	80
Table 21	– Dimensions for Tables 4, 5, 6, 7, and 8	82
Table 22	– Dimensions for Tables 9 and 10	84
Table 23	– Dimensions for Tables 11, 12, 13, and 14	86
Table 24	– Dimensions for Table 15	87
Table 25	– Dimensions for Table 17	88
Table 26	– Dimensions for Table 18	90