
1 Purpose

1.1 The purpose of this Standard is to provide a method of logic diagramming of binary interlock and sequencing systems for the startup, operation, alarm, and shutdown of equipment and processes in the chemical, petroleum, power generation, air conditioning, metal refining, and numerous other industries.

1.2 The Standard is intended to facilitate the understanding of the operation of binary systems, and to improve communications among technical, management, design, operating, and maintenance personnel concerned with the systems.

2 Scope

2.1 The Standard provides symbols, both basic and non-basic, for binary operating functions. The use of symbols in typical systems is illustrated in appendices.

2.2 The Standard is intended to symbolize the binary operating functions of a system in a manner that can be applied to any class of hardware, whether it be electronic, electrical, fluidic, pneumatic, hydraulic, mechanical, manual, optical, or other.

3 Use of symbols

3.1 By using the symbols designated as "basic," logic systems may be described with the use of only the most fundamental logic building blocks. The remaining symbols, not basic, are more comprehensive and enable logic systems to be diagrammed more concisely. Use of the non-basic symbols is optional.

3.2 A logic diagram may be more or less detailed depending on its intended use. The amount of detail in a logic diagram depends on the degree of refinement of the logic and on whether auxiliary, essentially non-logic, information is included.

As an example of refinement of detail: A logic system may have two opposing inputs, e.g., a command to open and a command to close, which do not normally exist simultaneously; the logic diagram may or may not go so far as to specify the outcome if both the commands were to exist at the same time. In addition, explanatory notes may be added to the diagram to record the logic rationale.

Non-logic information may also be added, if desired, e.g., reference document identification, tag numbers, terminal markings, etc.

In these ways, the diagram may provide the level of detail appropriate, for example, for communication between a designer of pneumatic circuits and a designer of electric circuits, or may provide a broad-view system-description for a plant manager.