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Human Machine Interfaces for Process Automation Systems

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Introduction

Purpose

The purpose of this standard is to address the philosophy, design, implementation, operation, and maintenance of Human Machine Interfaces (HMIs) for process automation systems, including multiple work processes throughout the HMI lifecycle. It is also intended to help users to understand the basic concepts as a way to better and more readily accept the style of HMI that the standard is recommending.

The standard defines the terminology and models to develop an HMI and the work processes recommended to effectively maintain the HMI throughout the lifecycle. Use of this standard should:

a) provide guidance to design, build, operate and maintain HMIs to achieve a safer, more effective, and more efficient process control system under all operating conditions.

b) improve the user's abilities to detect, diagnose, and properly respond to abnormal situations.

The HMI is the collection of hardware and software used to monitor and interact with the control system and ultimately with the process.

The target audiences are end users, designers, developers, and implementers of HMI systems.

Organization

This standard is organized into nine clauses. The first three clauses are introductory in nature. Clause 4 presents the lifecycle model for the HMI. Clauses 5 through 9 provide additional details to support the lifecycle. The main body of the standard (Clauses 4-9) presents mandatory requirements and non-mandatory recommendations as noted. If a clause contains mandatory requirements, it is noted at the beginning of the clause.

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