



FOUNDATION Fieldbus System

Catalog Numbers 9308-RSFB64ENE, 9308-RSFB256ENE, 9308-RSFB1024ENE, 1757-FFLD2, 1757-FFLD4, 1757-FFLDC2, 1757-FFLDC4



FOUNDATION Fieldbus System

Introduction

This section explains the components of a typical FOUNDATION Fieldbus system and the integral roles that RSFieldbus configuration software and the Rockwell Automation linking devices (catalog numbers 1757-FFLD and 1757-FFLDC) contribute to process control.

Through the FOUNDATION Fieldbus protocol, the 1757-FFLD and 1757-FFLDC linking devices provide connectivity for fieldbus devices to Logix controllers, such as ControlLogix and CompactLogix. The linking devices bridge RSFieldbus host to Fieldbus Foundation H1 segments for high-speed transmission of process data.

The 1757-FFLD linking device connects H1 segments to Fieldbus Foundation's High-speed Ethernet (HSE) running over the EtherNet/IP network. The 1757-FFLDC linking device bridges from the ControlNet network to fieldbus devices on H1 segments.

Both linking devices can have either two or four H1 segments, with each segment supporting the recommended maximum 8...10 devices, and a maximum of 64 publisher and 64 subscriber VCR connections.

Fieldbus Standards

The term fieldbus refers to an all-digital, two-way communication system that connects control systems to instrumentation.

The Fieldbus Foundation organization developed the FOUNDATION Fieldbus protocol to create a fieldbus network based on the principles of the ISA and IEC standards (ISA S50.0 and IEC61158). Today, this protocol is widely accepted as the standard for pure digital communication with 'smart' (microprocessor-based) field devices. Devices connected by a FOUNDATION Fieldbus network are used for sophisticated, highly-distributed process control.

FOUNDATION Fieldbus technology has been integrated into the PlantPAx Process Automation System based on Rockwell Automation's Integrated Architecture through Fieldbus Foundation linking devices (catalog numbers 1757-FFLD and 1757-FFLDC).