

Communication and Software

Communication

FOUNDATION Fieldbus

Overview

Today, distributed automation solutions based on open field buses are state-of-the-art in large areas of the process engineering industry. It is only with field buses that the functional benefits of digital communication can be put to full use, e.g. better resolution of measured values, diagnosis options and remote parameterization.

Like PROFIBUS PA, the FF bus (FOUNDATION Fieldbus) is an open field bus with a large installed base for a wide range of application. Standardization to IEC 61158 / EN 50170 provides you with future protection for your investment.

Benefits

- A uniform modular system from the sensor to the connection to the control level enables new plant concepts
- Networking of transmitters, valves, actuators etc.
- Implementation of intrinsically safe applications through use of the field bus in hazardous areas
- Easy installation of 2-wire cables for joint energy supply and data transfer
- Reduced cabling costs through savings of material and installation time.
- Reduced configuration costs through central, simple engineering of the field devices, also cross-vendor
- Fast and error-free installation
- Lower service costs thanks to simpler wiring and plant structure plus extensive diagnosis options
- Greatly reduced commissioning costs through simplified loop check
- Scaling/digitizing of the measured values in the field device already, hence no rescaling necessary in SIMATIC PCS 7

Application

The transfer technology of the FOUNDATION Fieldbus is tailored to the needs of the process industry. Interoperability between field devices from different manufacturers and remote parameterization of the field devices during operation are guaranteed by the standardized communication services.

FOUNDATION Fieldbus can just as readily be used in standard environments as in hazardous areas. For use in hazardous areas, FOUNDATION Fieldbus and all connected devices have to be designed with type of explosion protection Ex [i].

Function

FOUNDATION Fieldbus enables the direct connection of actuators and sensors.

FOUNDATION Fieldbus is based on a transfer optimized for intrinsically safe application. The transfer technology is internationally standardized in IEC 61158.

For FOUNDATION Fieldbus the data and energy supply for the field devices can be directed through a 2-wire cable.

FOUNDATION Fieldbus enables device-to-device communication ("control in the field").

Integration

Siemens field devices for process automation which are listed in this catalog and can be controlled using Foundation Fieldbus:

Measuring instruments for pressure

SITRANS P300

SITRANS P DS III

SITRANS P410

Measuring instruments for temperature

SITRANS TH400

Electropneumatic positioners

SIPART PS2

Flowmeters

SITRANS F M MAG 6000

SITRANS F M MAG 6000 I / I Ex

SITRANS F C MASS 6000

Level meters

SITRANS LR250

SITRANS LR560