HART
Loop Converter

Efficiently Convert Digital HART
Data into Reliable Analog Signals



Your automation, our passion.

PEPPERL+FUCHS

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KFD2-HLC-Ex1.D with four analog outputs



KFD2-HLC-Ex1.D.2W additionally with two changeover contacts

Numerous process plants use HART-compatible field devices that provide additional digital information beyond the 4 ... 20-mA measurement signal, including secondary values, device status, or diagnostic data. However, this valuable additional information often remains unused, as many control systems can only process the primary measured value.

The HART loop converter from Pepperl+Fuchs offers an elegant solution for tapping into this data. The compact device reads up to four HART variables from the communication signal and makes them available in parallel via three isolated 4 ... 20-mA outputs. The KFD2-HLC-Ex1.D.2W version offers two change-over contacts in addition to the current outputs. These can be programmed to function as limit values for the HART variables.

This allows additional process values to be integrated into existing automation structures easily and without system intervention.

Configuration is performed either via intuitive push-button operation or via an FDT/DTM-based software environment such as PACTware. Due to its space-saving design, the converter is suitable for installation in a switch cabinet as well as for use in the field. The HART loop converter is the only product of its kind with Ex approval for Intrinsic Safety.

Unlocking the Full Potential of Process Automation with Efficient Data Utilization

The HART loop converter allows digital field devices to be fully leveraged, without requiring additional hardware or major system changes. This enables improved monitoring through extended process data and supports informed decision-making based on comprehensive measurements.

HART Loop Converter Functions

- Provides digital process data from multifunctional HART field devices for analog controllers
- Ensures communication between HART-capable field devices and asset management systems
- Converts up to three digital HART variables into analog 4 ... 20-mA signals (optionally another digital value can be “passed through”)
- Functions simultaneously as a transmitter power supply
- Includes Ex protection via intrinsic safety

Product Highlights

- 1-channel isolated barrier
- Three current outputs (sink/source), optionally two change-over relay outputs
- Automatic scanning of a field device address
- Identifies configuration of a field device automatically
- Uses HART 7 protocol
- Display for setup and monitoring
- DTM for convenient parameterization

Flexible Communication Modes

- Burst mode: The field device sends the four HART variables periodically
- Command-and-answer mode: If the field device does not support burst mode, the HLC can communicate in the slower command-and-answer mode

Key Features and Benefits

- Access to additional measured values: retrieve extended data for improved process monitoring
- Status and diagnostics: provides essential information for maintenance and troubleshooting
- Supports asset management systems: seamlessly integrates with asset management systems for optimized operations
- Signal splitting: outputs the input signal to multiple outputs independently
- Limit value outputs: includes up to four limit value outputs for enhanced control
- No extra barriers or power supplies: eliminates the need for additional barriers or transmitter power supplies
- Utilizes existing infrastructure: operates within an existing 4 ... 20-mA system, requiring no additional hardware

For more information, visit
pepperl-fuchs.com/HLC

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