

Benefits of DE and HART Communication In One Device

Both DE (Digital Enhanced) and HART (Highway Addressable Remote Transducer) Protocols are used in process applications but they're not always interchangeable. Older Honeywell DCS integrations (for example, the TDCS series) utilize DE Protocol while HART is widely shared with other vendors and compatible with traditional digital-over-analog overlay signal. Cross Company partner Azbil has developed a line of transmitters capable of covering both DE and HART5 Protocols within the same transmitter. They are the only vendor offering this level of flexibility, making them a go-to solution for operations requiring the flexibility of bilingual communication capabilities.



With Azbil, there's no need to have DE and HART transmitters separately. This provides significant flexibility for integration purposes, proving indispensable for operations requiring both. Additional benefits include enhanced interoperability, leveraging of protocol-specific strengths, backup communication, and simplified device management.

Enhanced Interoperability – having access to both DE and HART in the same device bridges proprietary and open systems. While DE is primarily used in Honeywell applications, HART is an open standard used across the manufacturing world. Having access to both allows the device to seamlessly integrate with both ecosystems. This also provides users with more options when it comes to designing automation architecture. Users are now able to choose the most suitable communication protocol based on specific system requirements unique to their application. Further, this also allows for easier upgrades and migrations, allowing operations to scale and prepare for the future.

Leveraging Protocol-Specific Strengths – if the specific application stands to benefit from the higher noise immunity and cable capacitance tolerance associated with DE, that protocol can be utilized for critical measurements within a Honeywell environment. And HART is able to offer significant diagnostic information, config capabilities, and access to secondary variables without interrupting primary analog signals. This is invaluable for maintenance, troubleshooting, and other data collection needs. Also, in certain applications, the ability of HART to provide a reliable 4-20 mA analog signal for primary control while simultaneously offering digital data for diagnostics and configuration can be invaluable.

Backup Communication – for more mission-critical application, leveraging two independent communication pathways can also provide a level of redundancy. As if one protocol is experiencing issues, the other protocol could still be available for basic monitoring or control.

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Simplified Device Management – A single device supporting both DE and HART protocols simplifies inventory management and reduces the need for different device types for different systems within the same facility.

In short, these Azbil transmitters provide a “best of both worlds” situation, offering flexibility in system integration, leveraging the specific unique advantages of each protocol, and enhancing the reliability and diagnostic capabilities of the device itself. All of this in turn leads to more adaptable and easy-to-manage process automation and management systems.

If this sounds like something that could benefit your operation, contact an expert at Cross Company’s Process Solutions group to learn more or to get started.