



104 EDDL

Standards

Certification

Education & Training

Publishing

Conferences & Exhibits

Electronic Device Description Language (EDDL) is an integral technology in HART®, FOUNDATION™ fieldbus, and PROFIBUS® protocols enabling configuration/setup, diagnostics, and monitoring of devices from different manufacturers.

ISA Standards

ISA Standards help automation professionals streamline processes and improve industry safety, efficiency, and profitability. Over 150 standards reflect the expertise from over 4,000 industry experts around the world. The IEC 61804 standard adopted by ISA104 was cooperatively designed by the best industrial experts in the world, to make sure that it fully meets the needs of the end user.

ISA SP104 Committee

The scope of the committee is to adopt and promote the IEC61804 standard that specifies a generic language to describe the properties of automation system components. The specified language is capable of describing:

- device parameters and their dependencies
- device functions
- graphical representations, for example charts
- interactions with control devices

The ISA 104 committee works closely with the International Electrotechnical Commission's Committee SC65E Working Group 7 on any enhancements made in IEC 61804.

IEC 61804 Standard

EDDL enhances interoperability by enabling devices such as transmitters, analyzers, valve positioners, variable speed drives, motor starters, and bus diagnostics modules to be managed from the same single tool.

Since 1992, EDDL has provided support for several million devices and is now standardized internationally by IEC and in the USA as:

- ANSI/ISA-61804-3 (104.00.01)-2007 - Function Blocks (FB) for Process Control - Part 3: Electronic Device Description Language (EDDL)
- ANSI/ISA-TR61804-4 (104.00.02)-2007 - Function Blocks for Process Control - Part 4: EDD Interoperability Guideline.

EDDL technology

EDDL is a text-based language for describing the digital communication characteristics of sophisticated field instrumentation and equipment parameters: device status, diagnostic data, and configuration details. Because EDDL files are operating system (OS)-independent, they are not affected by OS version changes, and they do not force OS or software version changes, thus protecting system investment. Similarly, because EDDL is user interface (UI)-independent, it works in anything from handheld field communicators to laptops, DCS, and multi-user device management software as part of asset management solutions.

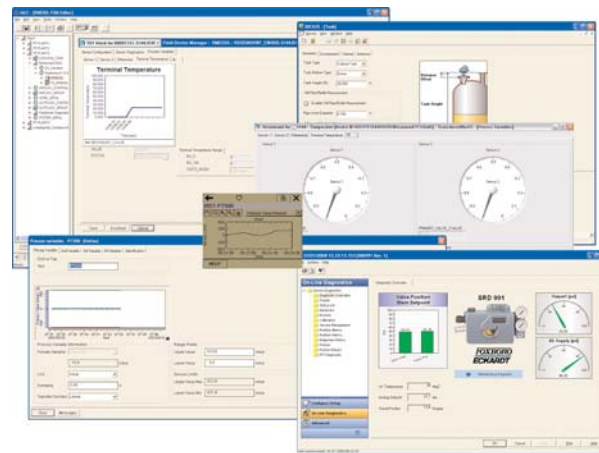


Today, EDDL enables users to access the full functionality of their simple and complex devices. Enhancements include:

- improved data visualization and display capabilities, such as images, gauges, trend charts, table grids, and waveforms for valve signatures
- a standardized method to access historic measurement or device performance information
- enhanced tools for display and use of high-level information such as algorithmic relationships for complex device parameters and "wizards."

As a stable but evolving standard, EDDL promotes innovation by providing full access to new device functionality and faster adoption of new OS versions while maintaining backward compatibility.

Each device manufacturer completely controls the unique content and structure of the information displayed, making setup, calibration, and advanced diagnostics easy. The device manufacturer also provides step-by-step wizards and expert know-how such as images and help text for full interoperability. At the same time, the look and feel come from the system, ensuring that display and interaction are consistent for all devices regardless of type, manufacturer, or protocol, making it a more intuitive tool. The description also provides support for audit trail, database comparison, printing, export to Excel, and automatic configuration of OPC servers, etc., to make device data widely accessible.



Many hosts support EDDL with enhancements

Moreover, they do not conflict with other devices or software and are, therefore, sufficiently robust to be loaded on the DCS itself. So, device diagnostics can be done from a dedicated maintenance station and from the operator station in an integrated system. Integrated diagnostics as in NAMUR NE 91 makes predictive maintenance a natural part of daily work practices.



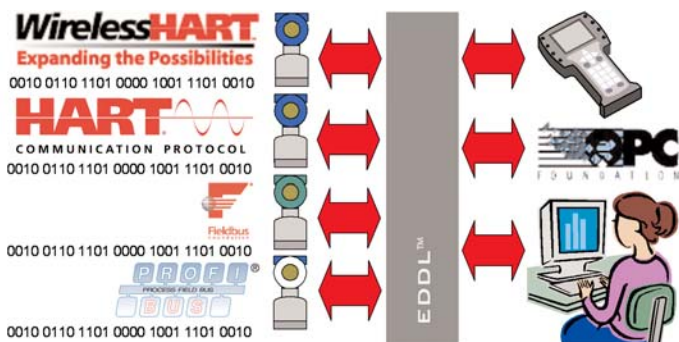
The EDDL files are independently tested by the respective protocol organizations together with the device, ensuring interoperability. Look for EDDL files in devices,

systems, and software for seamless integration. Millions of devices, of hundreds of device types, from hundreds of manufacturers and leading device management software and integrated systems support EDDL.

With the new enhancements, EDDL technology is sufficiently powerful to be used on its own, providing a solution meeting NAMUR NE 105, which is not practical when mixed with technologies not meeting NAMUR NE 105.

NAMUR is an association of process control technology users in chemical and pharmaceutical industries.

- NE 105 "Specification for integrating fieldbus devices in engineering tools for fieldbus devices"
- NE 91 "Requirements for Online Plant Asset Management Systems."



Because EDDL files are not programs and each version of each device type has its own file, they can easily be loaded by a simple copy and paste, not requiring software installation. New types and versions of devices are easily integrated into the system and coexist with earlier versions. There are no license keys for devices.



ISA
67 Alexander Drive
P.O. Box 12277
Research Triangle Park, NC 27709
PHONE (919) 549-8411
FAX (919) 549-8288
E-MAIL info@isa.org
www.isa.org

Founded in 1945, ISA (www.isa.org) is a leading global, nonprofit organization that is setting the standard for automation by helping over 30,000 worldwide members and other professionals solve difficult technical problems, while enhancing their leadership and personal career capabilities. Based in Research Triangle Park, North Carolina, ISA develops standards; certifies industry professionals; provides education and training; publishes books and technical articles; and hosts the largest conference and exhibition for automation professionals in the western hemisphere. ISA is the founding sponsor of the Automation Federation (www.automationfederation.org).