

Product Information Note

Experion Universal Process I/O



Universal Process I/O improves your project’s performance by simplifying your process control system infrastructure. Honeywell’s innovative I/O solution provides enhanced flexibility in the design & implementation of control systems, while reducing system footprint, wiring, spares and delays due to late changes in an easy and cost effective manner. Experion® PKS - The Knowledge to Make it Possible.

The introduction of the Universal Process IO module adds another key capability to Honeywell’s innovative, award-winning & proven Series C technology. Experion’s Universal Process I/O leverages Honeywell’s experience in process control technology with more than 25 million channels in operation across the globe.

Universal Channel Technology

Honeywell is the first to use Universal Channel Technology to completely liberate safety and process I/O, as well as the control cabinets from channel type dependency. This concept offers flexibility in I/O type, eliminating the need for custom hardware alignment with different I/O configurations. Universal Cabinets, enabled by Universal Channel Technology allow the cabinets to be standardized, since any field signal can be connected to any I/O channel.

Universal Cabinet designs significantly reduce engineering cost and schedule when applied broadly across a project. Our approach reduces or eliminates marshalling, but most importantly, allows immediate configuration – without the need for additional hardware. It simplifies engineering and configuration during the design stage of a project, and can save up to 33% of the installation costs. Late configuration changes can be done through remote access (rather than having someone manipulating hardware in the field), so they can be handled in minutes rather than days. In addition, Honeywell’s Universal I/O can be deployed to be fully redundant to help protect vital systems from going down.



It also supports on-process migration to enable easy access to valuable new capabilities without unnecessary downtime and lost production.

Universal Benefits

- Allows for prepackaged solutions for faster project execution
- Adapts to I/O changes late in the design, mitigating schedule risks
- Supports remote location deployment thereby reducing cables and cabinets
- Offers a DIN RAIL mount option
- Reduces the spares needed on site and makes maintenance easy
- Allows for process and safety I/O to be located in same cabinet, saving on infrastructure costs



Universal Features

Universal Process I/O provides all the benefits of the Series C I/O family and introduces the following new features:

- 32 Universal Channels per module
- Each channel individually configurable as AI, AO, DI or DO
- HART 7 support for AI & AO
- True soft configuration with no additional hardware needed to switch I/O configuration
- Full optional I/O redundancy
- Local and remote deployment capability
- Cabinet & DIN RAIL mounting options
- Extended temperature range (-40 to +70 Deg C)

Reducing / Eliminating Marshalling

The Honeywell Universal Process I/O solution re-defines the way to design, engineer, install and commission a process control system. Universal I/O brings the futuristic trend of virtualization (in this case by insulating the interface between the control system and the plant instrumentation) for the first time at the control system I/O level, making implementation a more flexible experience and reducing overhead costs.

The Universal I/O solution delivers this high level of flexibility by enabling continuous changes in system design at the software level with no additional hardware requirements or changes at any stage in the project.

With this new way of I/O deployment, field wires can now be terminated on any Universal I/O module / channel regardless of signal type. This eliminates the scrambling needed in conventional marshalling approaches, thus reducing the hardware complexity around installation, commissioning and maintenance of the system, resulting in savings on marshalling cabinets, inter-panel wiring, cabinet space, power requirements and the traditional time needed to deploy these.

SMART Engineering

Universal I/O and Universal Cabinets take engineering efficiency to its next level. They combine standard packaging options with standard hardware drawings which are repeatable with no need to create separate cabinet layouts, wiring diagrams, and power and heat calculations. This approach can save precious hardware engineering hours, reduces errors by delivering a standard design and substantially reduces acceptance testing, while providing the flexibility to change the I/O configurations at any stage of the project.

Effectively, Universal I/O also allows delaying the design freeze dates, without impacting the project schedule, bringing the best of both worlds together – standardization & flexibility.

For More Information

Learn more about how Honeywell's Experion can improve project performance, visit our website www.honeywellprocess.com or contact your Honeywell account manager.

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Quick Install and Commission

Installation and commissioning is the most dynamic and challenging time in a project's lifecycle due to late changing requirements and fixed project deadlines and budgets.

Honeywell's Universal I/O provides much-needed flexibility to any project, and allows for any changes in cable schedule or field instrument schedule during the commissioning stage without the need to change terminations on the I/O modules.

This approach reduces the schedule risk and helps accelerate the commissioning toward early start-up for early returns, despite late changes.

Easy Maintenance

Maintenance departments are under ever increasing pressure to reduce their budgets year over year. The Universal I/O module reduces equipment needs because there is no need for custom hardware with different I/O configurations. The Universal I/O module replaces four conventional I/O modules (AI, AO, DI & DO). The obvious result is significant savings related to spares inventory and associated holding costs. It also greatly reduces the complexity for maintenance personnel during repairs with only one module to choose.

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