

Remote I/O Modules for JISKOOT InSpec System Controllers

Expandable remote I/O for maximum control and scalability

APPLICATIONS

- Expansion of existing JISKOOT InSpec* sampling system controllers and JISKOOT InSpec EX* hazardous-area sampling controllers
- Expansion of JISKOOT InSpec Blender* blending system controllers and JISKOOT InSpec EX Blender* hazardous-area sampling controllers
- Facilitated replacement of JISKOOT InSight Sampler* safe-area sampling controller and JISKOOT InSight Blender* safe-area system controller when coupled with JISKOOT InSpec sampling system controller or JISKOOT InSpec Blender blending system controller
- New installations of JISKOOT InSpec controllers that require a broad range of inputs and outputs

ADVANTAGES

- Scalable solution
- Easy integration with JISKOOT InSpec controllers that requires no additional programming
- Cost-effective procurement and installation

Expandable I/O functionality

The remote I/O modules extend the input/output capabilities of JISKOOT InSpec controllers for sampling and blending control applications. With four DIN rail-mounted module types available (digital I/O, pulse input, analog input, and analog output), this scalable and flexible design can be configured to provide the control solution for any sampling or blending application.

Each I/O module features standard connections for power, Ethernet, and field I/O, along with LEDs indicating the operational status and the status of each connection.

Explosion-proof enclosure

For applications in which the modules potentially are field-mounted in an area where there may be explosive atmospheres, the I/O modules, power supplies, solid-state relays, and intrinsic safety barriers for the JISKOOT CanWeigh* sample-receiver weighing system are packaged together in a single explosion-proof enclosure. This explosion-proof hub has earned CE, ETL, ATEX, and IECEx approvals for use in hazardous areas.

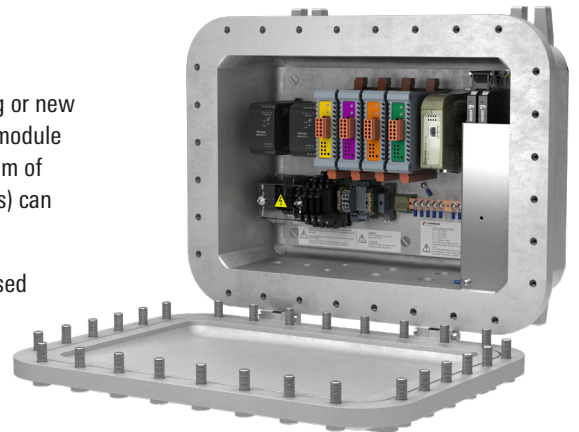
Easy integration and connectivity

The remote I/O modules are bundled and configured for integration into an existing or new JISKOOT InSpec sampling system. Each module provides eight channels of I/O. A maximum of four modules (in various I/O combinations) can be packaged in a hazardous-area hub.

The JISKOOT InSpec controller's web-based interface makes it easy to configure, calibrate, and perform simple diagnostic tests on each module. Only an Ethernet connection and IP address are needed to connect to the controller.



A wiring diagram is conveniently located on the side of each remote I/O module.



All components for the remote I/O module are packaged in an explosion-proof hub for application in hazardous areas.

Remote I/O Modules for JISKOOT InSpec System Controllers

Specifications

	Remote I/O Module	Explosion-Proof Hub Package
Size, mm [in]	Approximately 134 × 33 × 110 [5.3 × 1.3 × 4.3] (excluding connectors)	Approximately 440 × 565 × 240 [17.3 × 22.2 × 9.4]
Weight, kg [lbm]	Approximately 0.3 [66] (including connectors)	Approximately 50 [110]
Operating temperature, degC [degF]	–20 to 70 [–4 to 158]	AC: –20 to 50 [–4 to 122] DC: –20 to 60 [–4 to 140]
Power supply	DC: 24-V DC ± 10%	AC-DC ancillary supply for powering modules, transmitter, and solenoid valves
Communications	Two Base 10/100 Ethernet LAN RJ-45 connector Supported protocols: Modbus TCP	One Base 10/100 Ethernet LAN RJ-45 connector Supported protocols: Modbus TCP
Safety approvals	CE ETL mark	CE ETL mark Class I, Division I, Groups C and D T6 US only: Class I, Zone I, Group IIB +H2 T6 ATEX/IECEx With intrinsic safety (IS) barriers: Ex II 2(1) G Ex d[ia Ga] IIB +H2 T6 Gb Without IS barriers: Ex II 2 G Ex d IIB +H2 T6 Gb

Analog I/O

	Input	Output
Type	Current (4–20 mA) Differential input	Current (4–20 mA) Sourcing
Accuracy	±0.05% of full scale at calibrated temperature	±0.05% of full scale at calibrated temperature
Temperature effect	±0.25% of full scale over full operating temperature range	±0.25% of full scale over full operating temperature range
Input impedance	110 ohm Max.: 500 ohm	Max. per bank: 2,000 ohm per bank (channels 1–4 and 5–8) Max. per channel: 1,000 ohm
Calibration	Via web interface	Via web interface: zero and full scale

Software-Configurable Digital I/O

Digital output

Type	Sourcing
Contact form	Solid-state relay: SPST-NO
Load voltage	Max.: 26.4-V DC
Continuous-load current	Max.: 0.12 A
Overcurrent protection	Cutoff current: 160 to 240 mA

Digital input

Type	Sinking
Input voltage	Max.: 26.4-V DC
Input current	<1 mA at 24-V DC

Pulse input

Type	Voltage Differential input
Input frequency	Max.: 10 kHz (50:50 duty cycle)
Input voltage range	0- to 26.4-V DC
Input threshold	Programmable per channel: approximately 0- to 24-V DC
Input impedance	10,000 ohm
Accuracy	±1 count in a sampling period

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