

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

Benefits

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

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

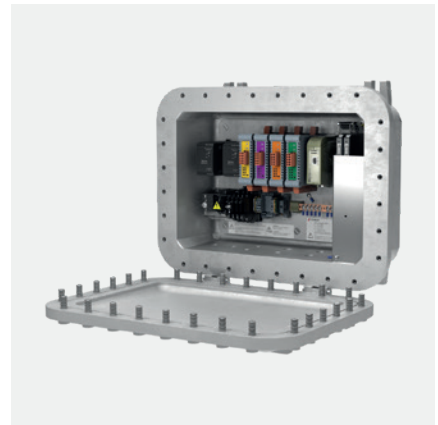
For applications in which the modules potentially are field-mounted in an area where there may be explosive atmospheres, the I/O modules, power supplies, solid-state relays, and intrinsic safety barriers for the JISKOOT CanWeigh* sample receiver weighing system are packaged together in a single explosion-proof 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.

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 [0.66] (including connectors)	Approximately 50 [110]
Operating temperature, degF [degC]	-4°F to +158°F [-20°C to +70°C]	AC: -4°F ≤ Ta ≤ +140°F [-20°C ≤ Ta ≤ +60°C] DC versions without I.S. barriers DC: -4°F ≤ Ta ≤ +122°F [-20°C ≤ Ta ≤ +50°C] for all other versions
Power supply	DC: 24V DC ± 10%	100-240 V AC 50/60 Hz, or 24 V DC ± 10%
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 1, Division 1, Groups B, C and D, T6 US only: Class I, Zone I, Group IIB +H2, T6 ATEX/IECEX With intrinsic safety (IS) barriers: II 2 (1) G Ex db [ia Ga] IIB +H2 T6 Gb Without IS barriers: II 2 G Ex db IIB +H2 T6 Gb
Enclosure material	Plastic	Corrosion resistant, copper free aluminum with tumblast finish

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