



InSpec

Sampler Controller

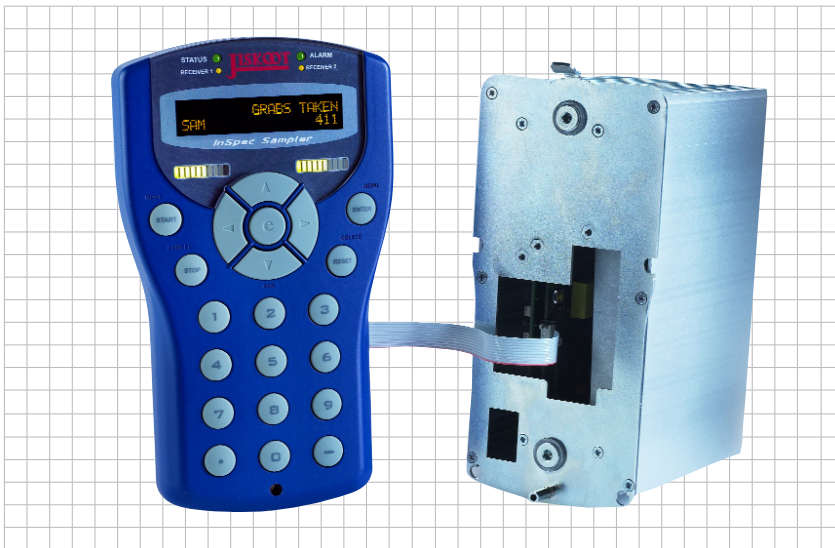
The InSpec is an API/ISO/EI(IP) compliant sampler controller. It can operate samplers either flow or time proportionally in single or repeated batch modes.

The unit has dedicated multi-colour LEDs, user-configurable 'bar-graph' indicators and a simple user-friendly interface with operator prompting and configurable 'hot-keys' to display key parameters or alarms.

Operators can be 'prompted' for the batch information or this data can be downloaded from a supervisory system and control commands issued via a Modbus link. Standard configurations can be saved and loaded.

The controller can be configured for single or dual receiver systems operating





in single, duty/standby or infinite (continuous) modes.

The InSpec features access security with password protection and visual announcement of alarms with a hardware output.

The controller front panel can be remotely mounted up to 1km from the main instrument and additional remote displays can be connected to the serial ports.

The InSpec controller can be supplied with the following options.

ISO/API/EI performance factor and CanWeigh option

This options allows the use of a Jiskoot CanWeigh/Volume Sensor system with the controller to provide sampling system performance factor monitoring (PF factors) to validate the representivity of the sample in accordance with the API/EI/ISO sampling standards. The instrument LEDs bar-graph show the 'percentage full' for each sample receiver and dedicated indicators show which receivers are filling, available or unavailable.

Line-fill sampling functions option

For use in applications where there is a

“line-fill” volume between the sampler and the custody transfer point. The line-fill volume can either be sampled into a separate sample receiver or allowed to pass unsampled. The main batch sample collection commences automatically along with a receiver change-over, if required, when the line-fill volume has passed.

Sample grab sensing and alarms option

Allows the output from a 'grab sensing' device to provide feedback to the system that a sample grab has been taken.*

Print option

This enables the print-out of a pre-configured report at the end of the batch. The report is stored in the controller and is accessible until the next batch is finished when it is overwritten. A data log can also be generated throughout the batch duration, logging up to 8 parameters.

Auxiliary control option

Provides automated control of a mixing or fast loop pump or auxiliary equipment actuated by flow or system status.

Modbus networking option

Enables full remote access operation as

a Modbus slave device supporting commands 03, 06 and 16.

Compatible Systems

- Sampling and analysis system
- Bypass loop sampling system
- CoJetix sampling system
- Probe sampling system
- Gas sampling system

Equipment applications

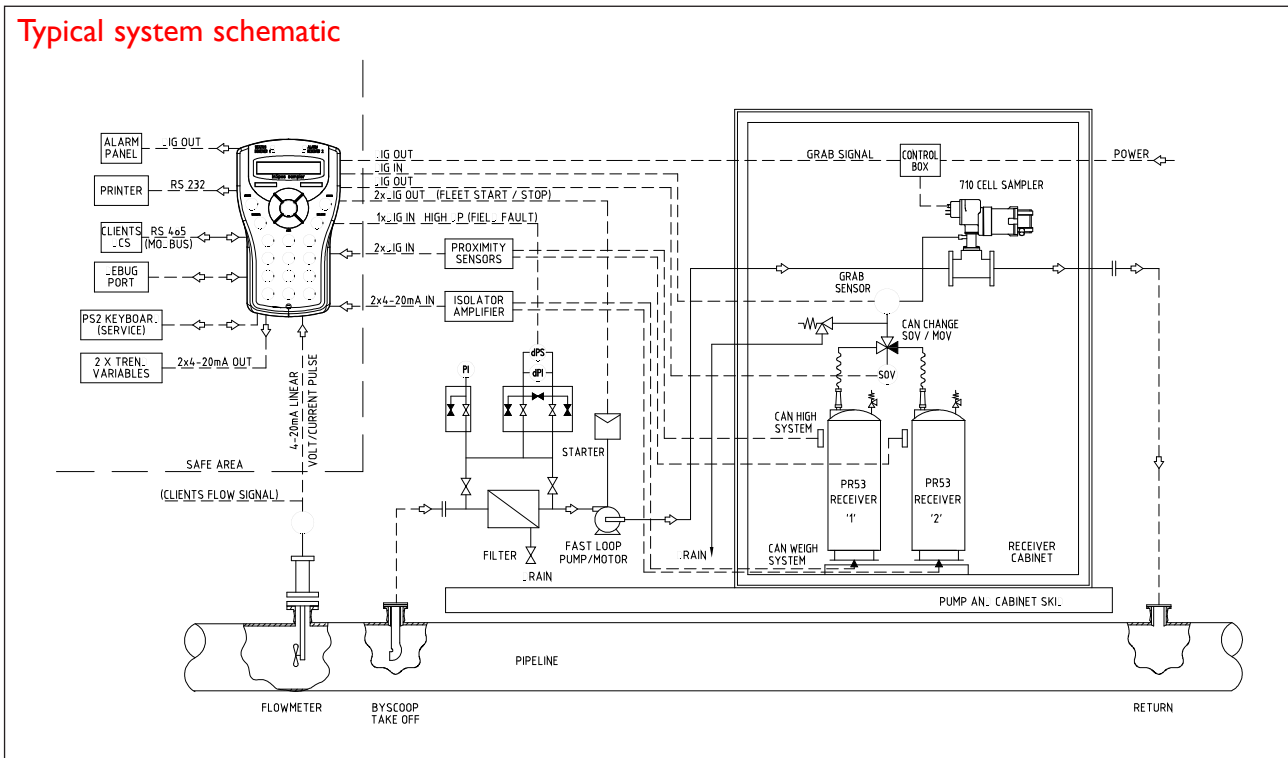
- Crude oil sampling
- Condensate sampling
- LNG and LPG sampling
- Refined product sampling
- Bunker fuel sampling
- Gas sampling
- Multiphase sampling

Features

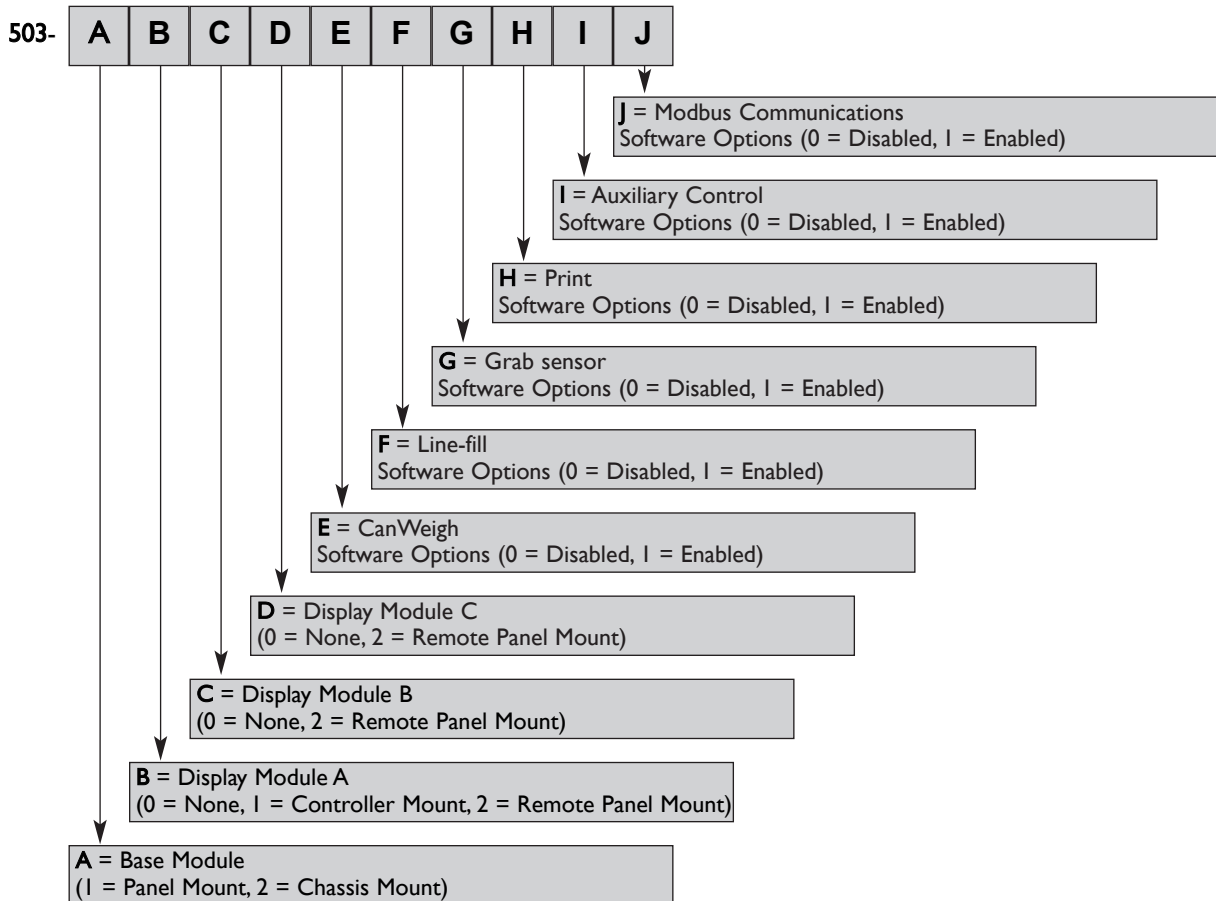
- Full ISO/API/EI (IP) and ASTM compliant sampler controller
- Easy to read scrolling display with configurable bar-graphs
- Simple to use ergonomic controller
- Front panel can be remotely mounted
- Simple menu-driven wizard for ease of use and configuration
- PC based configuration backup and restore feature
- Operator and engineer security passwords
- Flow or time proportional sampling
- Integrated remote auxiliary control
- Configurable for use with any vendors samplers or receivers

* Note, does not ensure ISO/API/IP(EI) compliance as performance factor is required.

Typical system schematic



InSpec sampler controller ordering information scheme





Specifications

Physical	Size:	130mm x 220mm x 170mm (W x H x D) Approx
	Weight:	1.8kg
	Wire Connections:	IEC Socket: 3 x 2.5mm ² (3 x 12 AWG) max. Other: 0.08mm ² to 2.5mm ² (20 - 12 AWG)
	Front IP rating:	IP42
Operating Environment	Installation Category:	II
	Pollution Degree:	2
	Operating Temperature:	5°C to 40 °C (41°F to 104°F)
	Relative Humidity:	80% up to 31°C decreasing linearly to 50% at 40°C
Power Supply	Voltage, Frequency:	AC: 100 to 240 VAC, 50/60 Hz OR DC: 24V DC ± 10%
	Power Consumption:	15 Watts Max
Relay Outputs	Quantity:	4
	Installation Category:	III
	Contact Form:	SPST - NO
	Max. Switching Voltage:	250VAC, 30VDC
	Max. Switching Current:	2 Amps
Over voltage Protection:	Yes	
Digital I/O Points	Quantity:	4
	I/O Protection:	Over voltage (Outputs also have over current protection)
	<i>When configured as an output</i>	
	Contact Form:	Solid State Relay
	Load Voltage:	24V DC
	Continuous Load:	Current 0.12A
<i>When configured as an input</i>		
Input Type:	Volt-free contact	
Analogue Outputs	Quantity:	2
	Output Type:	4-20mA Current Source - active output
	Accuracy:	±0.05% of FSD (12-bit resolution)
	Output Protection:	Over voltage
Analogue Inputs	Quantity:	3
	Input Type:	4-20mA
	Accuracy:	±0.05% of FSD (12-bit resolution)
	Input Protection;	Over voltage
Pulse Inputs	Quantity;	2
	Input Type:	0 - 24V DC Voltage Pulse or 4 - 20mA DC Current Pulse Max. Frequency 10kHz
	Accuracy:	± 1 count in any given sampling period
	Input Protection:	Over and reverse voltage protection
Communications	Quantity:	5
	Type:	1 off PS2 port for a compatible Keyboard 1 off RS422 port for User interface 2 off configurable RS232/422/485 ports 1 off dedicated Shell Port
	Input Protection:	ESD and over voltage

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