

### OPTIONS

The following are options that can currently be added to the standard Scotiadatabox system. The Scotiadatabox system is modular in construction.

- Multichannel eight process signals. (01) • Ambient temperature indication. (02)
- Magnetic sensor type counter or flowmeter allows volume calculations to be performed. (03)
- Stroke counter input via microswitch allows volume calculations to be performed. (04)
- Rate of rise/fall indicator - where a test calls for a set rate this can be indicated for ease of operator control. (05)
- Onboard calculation and graphing of air inclusion (06) Requires option (03) to operate.
- Layering which allows consecutive graphed events to be compared by overlaying the graphs on each other(07)
- Variable logging rate whilst logging. (08) • Variable data print interval. (09)
- Export of Graph picture. (JPEG) (10) • Export text file of data at test finish. (11) • Hold period timer. (12)
- Test event log activate. (13) • Internal voltage free relay contact. (14) • Torque version. (24) • No other options available with this version.
- Review software. (25)

Database front end – can allow details to be entered such as customer order detail, part number or procedures, which can then be used to compile and print reports. (Specific to customer request)

See also SDAS for data acquisition using onboard PC.

### SPECIFICATIONS

Input Sensor	Any 4-20mA 2 wire transmitter. Scotia or customer supply, embedded serial device allows auto range and selection. Accuracy to customer requirement. Up to 8 channels.	Uncertainty in measurement	Sensor + 0.00088%
Excitation voltage	24V	Resolution	One part in 60000
Temperature probe	Pt100 (4 wire)	User interface	USB 1
Temperature resolution	0.1°C	Network connection	100baseT
Temperature accuracy	0.2°C	Alarm option	Internal voltage free relay contact
Logging interval	One second and upwards	Power supply	110V to 264Vac, 50 or 60Hz @ 5A
Uncertainty in input current	0.00088% of full scale	System operating temperature range	0°C to 40°C
		Case size	339 x 295 x 152mm 4.2kg
		Software	Scotia Data Acquisition System Database Program

Specification may change without prior notice.

The Scotiadatabox is designed and built by Scotia Instrumentation Ltd.

Software programme by Scotia Computing.

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This system overcomes the problems associated with traditional chart recorders where the only record of the event is the piece of paper produced at the time. Circular and linear charts are notoriously difficult to copy and file. Data analysis and retrieval is often a major issue.

The system requires the use of an external computer and is designed with mobility in mind. Using a laptop the engineer only requires a pressure or process sensor to complete the package. This relatively small system has all the features of the full Scotia SDAS but the benefits for use onsite, offshore or during overseas travel are obvious.

Most data acquisition systems are complicated for the operator to use, requiring training and the reading of instruction manuals. They often require setting up by a skilled technician when transmitters are changed. The Scotiadatabox can be set to auto sense the connected transmitter and set the scale accordingly. The operator can be gathering data with just five simple actions from switch on.

The Scotiadatabox records pressure (or any process variable) from a 4-20mA transmitter and temperature from a Pt100 probe. Digital inputs for flowmeters or stroke counters are included. It displays and stores the information both digitally and graphically. The graphs or data can be printed for witnessing or included in customer documentation packages. The standard printed chart provides a unique identifier, specific test notes, date and time of the test graph, your company name and client name with sections for test engineer and witness signature.

Data retrieval and review is assisted by sophisticated search facilities giving the operator easy access to previous test data.

The Scotiadatabox is a multi-channel system, which can record up to eight transmitters simultaneously as well as two temperatures. These channels are then displayed either by individual channel, selected groups or all channels. Data is gathered from all channels at the rate set regardless of the graphic display.

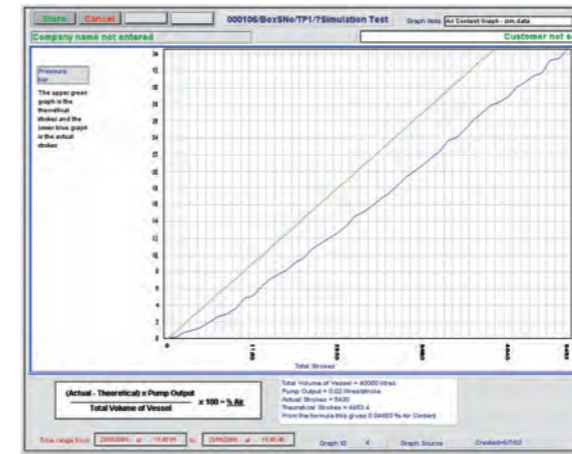
The Scotiadatabox can be used within a Scotia Business Database Solution collating such information as job tickets, technician work packs, customer reports, certification, delivery tickets and invoice generation. These modular systems can be used to reduce manual data entry at all stages of the process.

**SCOTIADATABOX Features**

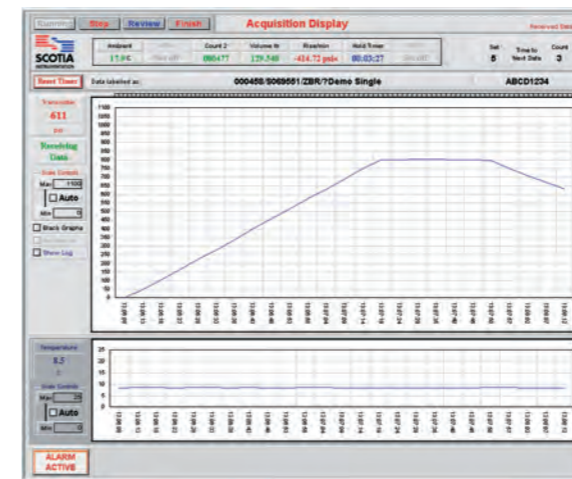
- Secure data collection that cannot be altered by the user in any way
- Simple steps to start data collection.
- Real time digital and graphic display of pressure and temperature
- Auto scale and auto range or operator set scaling, range and units
- Generates unique test identifier together with your specific reference
- Secure data review and transfer facility
- Industry leading operator menu interface for ease of use and data entry
- Quality assured with user password and electronic sensor recognition
- Sensor data stored for quick selection and certification integrity
- Available as standalone, networked and multi-channel versions
- Any 4-20mA two-wire transmitter can be used



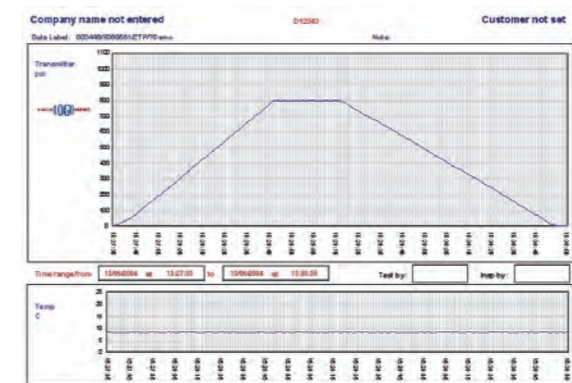
SCOTIA - the prime source of instrumentation technology



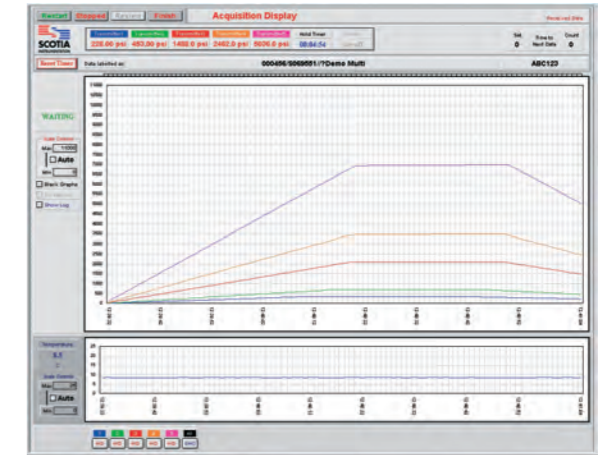
SCOTIADATABOX on-screen air content calculation



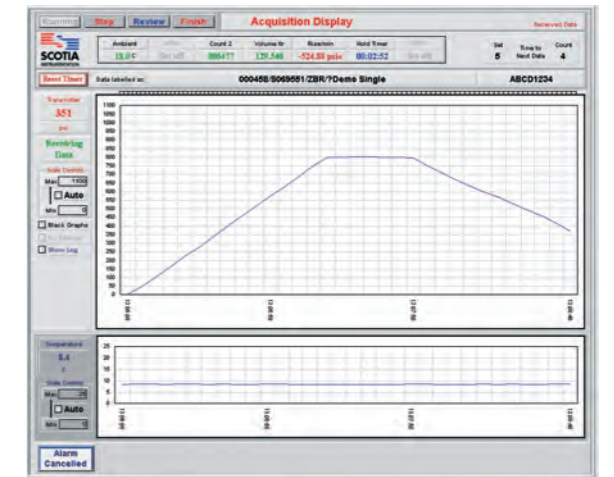
SCOTIADATABOX single with ambient, stroke, volume, rise rate, hold period and active alarm



SCOTIADATABOX printed graph



SCOTIADATABOX multi-channel with hold period timer



SCOTIADATABOX single with ambient, stroke, volume, rise rate, hold period and cancelled alarm

**Acquired Data Listing**

Data Label	User Reference ID	Date	Time	Pressure/Temperature
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:35	0 psi
Sim Data 15/05/02	Trans-02	77	0	-999.00 8.55 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:36	9
Sim Data 15/05/02	Trans-02	78	0	-998.00 8.52 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:37	14
Sim Data 15/05/02	Trans-02	79	0	-990.00 8.47 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:38	22
Sim Data 15/05/02	Trans-02	80	0	-990.00 8.46 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:39	39
Sim Data 15/05/02	Trans-02	81	0	-990.00 8.48 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:40	34
Sim Data 15/05/02	Trans-02	82	0	-996.00 8.46 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:41	39
Sim Data 15/05/02	Trans-02	83	0	-999.00 8.51 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:42	42
Sim Data 15/05/02	Trans-02	84	0	-998.00 8.49 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:43	55
Sim Data 15/05/02	Trans-02	85	0	-999.00 8.49 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:44	65
Sim Data 15/05/02	Trans-02	86	0	-998.00 8.45 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:45	75
Sim Data 15/05/02	Trans-02	87	0	-990.00 8.45 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:46	87
Sim Data 15/05/02	Trans-02	88	0	-990.00 8.54 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:47	95
Sim Data 15/05/02	Trans-02	89	0	-990.00 8.48 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:48	110
Sim Data 15/05/02	Trans-02	90	0	-998.00 8.53 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:49	122
Sim Data 15/05/02	Trans-02	91	0	-990.00 8.45 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:50	154
Sim Data 15/05/02	Trans-02	92	0	-990.00 8.48 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:51	148
Sim Data 15/05/02	Trans-02	93	0	-990.00 8.49 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:52	157
Sim Data 15/05/02	Trans-02	94	0	-998.00 8.47 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:53	167
Sim Data 15/05/02	Trans-02	95	0	-990.00 8.48 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:54	179
Sim Data 15/05/02	Trans-02	96	0	-990.00 8.54 C
000448/S066561/CT/P70/demo	D-1234	15/05/04	15:27:55	191

SCOTIADATABOX stored data printed values