Thermo Scientific SmartView SV100A/SV10AC

100 mm Paperless Data Acquisition System

The Thermo Scientific[™] SmartView SV100A paperless data acquisition system streamlines the collection, distribution and analysis of critical process data. The Thermo Scientific™ SmartView SV10AC controlled program recorder is a SV100A system built in accordance with the 10 CFR 50 Appendix B Program. With regards to design, the controlled and commercial versions of the system are identical. With a 100 mm screen and capacity for up to 18 inputs, this compact, webenabled device helps to efficiently communicate data worldwide to ensure process optimization.

- Fast and easy access to process information electronically
- Real-time data accessed from a standard web browser



Thermo Scientific™ SmartView SV100A Data Acquisition System



The Thermo Scientific SmartView SV100A data acquisition system helps gather process data electronically in real-time from a variety of process sensors. Designed with the engineer in mind, the SV100A comes standard with both an RS232 and RS485 interface with Modbus protocol support. The SV100A also supports Ethernet TCP/IP, TCP and OPC Modbus. These communication features make the system easy to integrate into existing plant DCS, SCADA, LAN and WAN networks. After configuration, data from the SV100A system can be transferred to an assigned server via Ethernet with the File Transfer Protocol (FTP) functionality. Additionally, data can be viewed in real-time from a standard web browser.

The SV100A features a brilliant color, graphical display and touch screen control for the operator's functionality. The SV100A system provides a wide variety of userselectable display formats. The touch screen technology and Windows®-style menus allow the operator to easily program the unit and move from one display format to another, faster and easier than conventional and limited fixed push buttoms.. The touch screen also makes it very easy to view real-time data and historical data from internal memory or local storage media simultaneously.

Also taking into account the technician's needs, the SV100A design incorporates a front-access, removable chassis and removable circuit boards. This allows for easy maintenance and upgrades. In addition, the SV100A system features removable terminal blocks for easy installation. These enhanced design elements, make the SV100A data acquisition system easy to service and maintain.



Thermo Scientific SmartView SV100A/SV10AC

Inputs				
Number	6, 12 or 18 isolated inputs			
Туре	DC Voltage: Linear, log, and square root programmable to 10 VDC (50 mV, 100 mV, 200 mV, 1 V, 5 V and 10 V bipolar ranges) DC Current: Linear, square root and log programmable to 4-20 mA, 10-50 mA and dry contact. T/C: J, K, T, E, R, S, B, C, Nicrosil Nisil and Nickel/Nickel Moly RTD: 100 Cu, 1000 Pt 385, 5000 Pt 385, 1000 Pt 392, 2000 Pt 385, 2000 Pt 392 and 1200 Ni.			
Accuracy	Voltage: ±0.05% of programmed range; Current: ±0.1% using external shunt resistor. T/C: ±1.5°C for J, K, T, E, Nicrosil-Nisil and Nickel/Nickel Moly; ±3°C for R, S and C; ±4°C for B; RTD: ±0.5°C			
Resolution	0.012% of full scale			
Impedance	>10 M Ω			
Common Mode Voltage	300 VAC p-p			
Common Mode Noise Rejection	120 dB at 50/60 Hz			
Normal Mode Noise Rejection	60 dB at 50/60 Hz			
Scan Rates	15-bit: All points scanned every 250 msec; 14-bit: All points scanned every 125 msec			
Recording				
Storage Rates	User programmable, 1 sample/second to 1 sample/24 hours			
Format	ASCII or Compressed Binary			
Internal Memory	4 KB Battery Backed Memory for System Parameters			
Storage Media	Compact Flash card (1.0 GB or 2.0 GB)			
Data Saving Methods	Data may be saved to storage media as instantaneous, average, max or min values			
Data Saving Selection	Each screen may be saved to media based on a user-defined interval or trigger			
File Type	Data file (per screen basis), Alarm/Event file, Configuration file			
Display				
Туре	5.5-in Color Active Matrix TFT LCD (640 x 480)			
Modes	Up to 8 user defined screens (vertical & horizontal trend, vertical & horizontal bargraph, digital, overview, alarm/event summary)			
Colors	Up to 16 colors			
Update Rate	125 msec			
Data Update Rate	15-bit: 250 msec.; 14-bit: 125 msec			
Virtual Chart Speed	User programmable in inches or mm per hour			
Virtual Chart Scales	User programmable			
Math Package				
Formulas	Algebraic equations, conditional, moving average, hi/lo peak, timer, totalize, time average, programmable linearization curve, logarithmic, true moving average, hi/lo difference and gated timer			
Alarm Functions				
Number of Alarms	Up to 5 alarm set-points per point			
Types	High, low, rate, abnormal			
Contract Output/Input	6 digital inputs per card; 1.0 Amp @ 120 VAC or 2.0 Amp @ 24 VDC resistive; 0.5 Amp @ 230 VAC resistive; 0.4 Amp @ 250 VDC resistive; 1 common alarm (100 mA @ 250 VDC/VAC)			
Deadband/Failsafe/Reflash	Selectable			
Power				
Requirements	90-132/180-264 VAC (50/60 Hz)			
Consumptions	40 VA fully loaded			
Power Fail Protection	Programmed parameters stored in nonvolatile flash memory; Clock battery-backed			
Transmitter Power Supply Output	24 VDC at 120 mA (per input card)			

Ports	RS232 and RS485 communi	RS232 and RS485 communication with Modbus (RTU or ASCII); Front USB 2.0 Flash device for data transfer or		
Network Type	Ethernet (10/100 Base-T), TC Web-Enabled	Ethernet (10/100 Base-T), TCP/IP, TCP/IP Encapsulated Modbus, OPC/PI compliant, FTP Client, FTP Server, Web-Enabled		
Real-Time Monitoring & Da	ata Historian ProServer OPC and Modbus (ProServer OPC and Modbus (RTU and ASCII) support		
Environmental				
Operating Temperature	0°C to +70°C (32°F to +158°	0°C to +70°C (32°F to +158°F)		
Operating Humidity	0% to 90% RH non-condensi	0% to 90% RH non-condensing		
Dimensions	Bezel: 144 mm x 144 mm (5. Depth: 234 mm (9.25 in) Weight 3.4 kg (7.5 lb), estima	Bezel: 144 mm x 144 mm (5.7 in x 5.7 in) / Cutout: 138 mm x 138 mm (5.4 in x 5.4 in) Depth: 234 mm (9.25 in) Weight 3.4 kg (7.5 lb), estimate varies depending upon final model		
Qualifications				
Commercial	Seismic (IEEE 344-1987 & 34	Seismic (IEEE 344-1987 & 344-2004), EMI/RFI (EPRI TR-102323, Rev. 3)		
Nuclear (SV10AC)	Seismic (IEEE 344-1987 & 344-2004), E 10CFR 21,10CFR 50 Appendix B and IEE	EEE 344-1987 & 344-2004), EMI/RFI (EPRI TR-102323, Rev. 3), Software V&V (IEEE Std. 7-4.3.2-1993), ,10CFR 50 Appendix B and IEEE 323-2003 (mild environment)		
	(Ordering Information		
SmartView SV100A/SV Choose from the following	10AC - DIN size, 100 mm (6 in x 6 in) paperl g configurations/options to customize your own S	less data acqusition system V100A/SV10AC Data Acquisition System		
A. I/O Position 1: 1 - 6 inputs (mV, V, mA, TC) standard 2 - 6 inputs (mV, V, mA, TC) with 24 VDC transmitter power supply		E. Qualifications: 0 - None, standard 1 - Seismic (IEEE 344)		

- 3 6 inputs (mV, V, mA, TC & RTD)
- 4 6 inputs (mV, V, mA, TC & RTD) with 24 VDC transmitter power supply
- 5 6 contact outputs and 6 digital inputs

B,C. I/O Position 2 & 3:

0 - None, standard

Communications

- 1 6 inputs (mV, V, mA, TC)
- 2 6 inputs (mV, V, mA, TC) with 24 VDC transmitter power supply
- 3 6 inputs (mV, V, mA, TC & RTD)
- 4 6 inputs (mV, V, mA, TC & RTD) with 24 VDC transmitter power supply
- 5 6 contact outputs and 6 digital inputs

D. Power Requirements:

- 1 90-132 or 180-260 VAC, 60 Hz, standard
- 2 90-132 or 180-260 VAC, 50 Hz

- 2 EMI/RFI (EPRI TR-102323)
- 3 Software V&V (IEEE 7-4.3.2-1993)
- 4 Seismic & EMI/RFI
- 5 Seismic, EMI/RFI & Software V&V
- A Seismic, EMI/RFI, Software V&V & IEEE-323 (mild environment), required for SV10AC

F1. Shunts:

- 0 None, standard
- 1 50 ohm shunt (required for 4-20 mA inputs)
- 2 100 ohm shunt (required for 10-50 mA inputs)

F2. Number of Shunts: One shunt resistor required for each current input

G. Historical Data Storage:

- 1 1.0 GB Compact Flash Card & USB Port, standard
- 2 2.0 GB Compact Flash Card & USB Port

H. Accessories:

1 - Assy, 8 foot long power cord, lugged

To maintain optimal product performance, you need immediate access to experts worldwide, as well as priority status when your equipment needs repair or replacement. We offer comprehensive, flexible support solutions for all phases of the product life cycle. Through predictable, fixed-cost pricing, our services help protect the return on investment and total cost of ownership of your Thermo Scientific products.

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This product is manufactured in a plant whose quality management system is ISO 9001 certified.

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