

16 Channel Analog Input Data Logger

ScanLog 16C

16 Universal Analog Input Channels
21 CFR Part 11 Compliant Web Based PC Software
CSV Formatted Pen-Drive Interface
Built-in Huge Record Storage Capacity

Process Precision Instruments

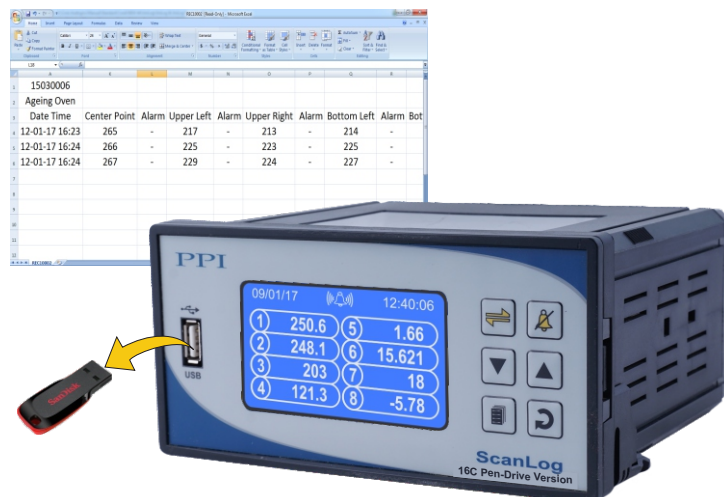
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PC Interface 21 CFR Part 11 Compliant Software



Pen-Drive Interface CSV Formatted Records



GRAPHICS



16 BIT



ALARM



LOGGING



MODBUS



21 CFR



USB PORT



CSV DATA

Salient Features

- 160 X 80 Monochrome Graphic Display & 6 Tactile Keys
- 16 Universal Analog Channels
- Independent Jumper-less Input Type Selection : Thermocouples, RTD Pt100, mV, V, mA
- Fast Channel Update Rate : 250 mS per Channel
- 4 Programmable Soft Alarms per Channel
- 4 Common Relay Outputs for Alarms
- Optional, 5V or 24V DC Excitation Voltage Output
- User Assigned Channel Names for Easy PV Identification
- Huge Data Storage Capacity : Appx. 38,56,000 Records
- Date / Time Stamped Process Value (PV) & Alarm Status Recording with Programmable Recording Interval
- Event Generated Records : Power-up, Alarm Toggle, RTC / Recording Interval Changed
- Continuous or Batch Recording
- Free 21 CFR Part 11 Compliant Web-based Software with PC Interface Version
- Easy Data Transfer to PC in Excel Format for Pen-Drive Interface Version
- Supply Voltage : 85 to 264 VAC, 50/60 Hz
- Size (mm) : 80 (H) X 160 (W) X 144 (D)

General Information

Product Type Universal 16 Channels Composite Data Logger with PC / Pen-Drive Interface

Ordering Code

Interface	PD : Pen-Drive PC : Personal Computer
Excitation Voltage	0 : None 5 : 5VDC @ 15 mA 24 : 24VDC @ 40 mA
Alarm Relay	0 : None 4 : 4 Relay

Example Code : ScanLog 16C-PD-24-4

Interface : Pen-Drive
Excitation Voltage : 24VDC @ 40 mA
Alarm Relay : 4 Relay

Quantity	1 Unit
Accessories	(Optional) USB to RS485 Converter
Similar Products	ScanLog 96 UniLog Ultra UniLog Plus UniLog Pro Plus

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Operator Interface

Display	160 X 80 STN Monochrome Graphic LCD
Keys	6 Tactile Switches PAGE, DOWN, UP, ENTER, ALARM ACK/VIEW, SCROLL

Channel Specifications

Number of Channels	16 Universal Analog Inputs
Input Types	Thermocouples : J, K, T, R, S, B, N RTD : Pt100, 3-Wire DC mV : 0 to 80 mV DC Volts : 0 to 1.25V, 0 to 5V, 1 to 5V, 0 to 10V DC mA : 0-20 mA, 4-20 mA
Accuracy	Thermocouples Measurement : $\pm 0.25\%$ of Measured Value ± 1 LSD (Excluding CJC Error) Cold Junction : $\pm 2.5^\circ\text{C}$ (Specified over 18 to 37°C Ambient) RTD Pt100 $\pm 0.25\%$ of Measured Value ± 1 LSD (Lead-Resistance compensated up to 5Ω in each Lead) DC mA / mV / V $\pm 0.20\%$ of Measured Value ± 1 LSD
Resolution (Settable)	Thermocouples & RTD : 0.1 / 1 ($^\circ\text{C}$) DC Linear Volts / Current : 0.001 / 0.01 / 0.1 / 1 (Counts)
Range	Thermocouple & RTD Pt100 : Refer Table-1 DC Volts / Current : Programmable within -30000 to +30000 Counts
Zero Offset	User Adjustable over Full Range for Each Channel
ADC	16 Bit ($\pm 32,768$ Counts), Sigma-Delta ($\Sigma\Delta$)
Channel Update Time	4 Seconds for 16 Channels (250 mS per Channel)
Input Impedance	Greater than 10 M Ω 249 Ω Precision Shunt Resistor for 0-20 mA & 4-20 mA Input
Signal Conditioning	First Order Low-Pass RC Filter. Cutoff Frequency at 55Hz (3dB at 55Hz with roll-off rate of 20dB/decade)
Input Protection	ESD : 8KV EFT : 2KV Surge : 1KV

Alarms

Numbers	4, Independent for Each Channel
Programmable Parameters	Type : Process Low, Process High Logic : Normal, Reverse Hysteresis : 1 to 3000 Unit Counts Inhibit : No, Yes
Outputs (Optional)	Relay Change-over Contacts Relay-1 : Common for Alarm-1 of All Channels Relay-2 : Common for Alarm-2 of All Channels Relay-3 : Common for Alarm-3 of All Channels Relay-4 : Common for Alarm-4 of All Channels

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Outputs

Relay	Contact Type	: Potential-free Change-over Contacts
	Contact Rating	: 5A @ 250 VAC / 30 VDC (Resistive Load)
	Contact Life	: > 5,00,000 Operations at Rated Voltage / Current

Data Logging

Storage Capacity	2 GB Flash Memory (Approx. 38,56,000 Records)
Recording Mode	Continuous, Batch
Recording Interval	Programmable from 00 : 00 : 01 to 02 : 30 : 00 (Hour : Minutes : Seconds)

Power Supply

Type	Switch Mode (SMPS)
Line Voltage	85 to 264 VAC, 50/60Hz
Consumption	7VA Max

Physical

Mounting	Plug-in with Panel Mounting Clamps
Overall Dimensions	80 (H) X 160 (W) X 144 (D), mm
Panel Cutout	78 (H) X 154 (W), mm
Terminals	Pluggable Terminal Blocks
Weight	600 Grams, Max.

Environmental

Operating Ambient	0 to 55°C & 5 to 90%RH Non-condensing
Storage Temperature	-10 to +70°C
Atmospheres	Not Suitable for use in Corrosive or Explosive Atmospheres. The Panel in which the Instrument is Mounted must be free of Electrically Conductive Pollution.

PC Interface

Device Serial Port	Port	: RS485, 2-wire, Half Duplex, Start-Stop Synchronized
	Slave ID	: 1 to 127
	Max. Units per Loop	: 31
	Max. Distance	: 1200 Meters

Pen-Drive Interface

Pen-Drive Support	USB 2.0, Format : FAT, Socket : Type A
File Operation	Read <i>Set.txt</i> file Write <i>.csv</i> files (Data Records)

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ProLog WEB PC Software (USFDA 21 CFR Part 11 Compliant)

Supported Operating Systems (OS)	• Non-Server System : Windows 10/11 & later • Server System : Windows 2012 & later • Linux : Ubuntu 20.04 & later	
Minimum PC Configuration Requirements	• Intel Core i5 (8th Generation) or Equivalent AMD Processor • 256 GB SSD • 4 GB RAM	
Features	• Real-Time Monitoring & Visualization • Graphical & Tabular Online Display • Historical Data Analysis & Reports • Device Configuration & Management • User Access Control with Audit Logs • Color-Coded Status Display • Role-Based Access & Authorization Levels • Custom Report Headers/Footers/Themes • 21 CFR Part-11 Compliance Support with Electronic Signatures, Audit Trails, etc. • Manual & Automated Data Backup • Audit Trail with History of Actions	• Web Access from Any Modern Browser • Mobile-Friendly Interface • Supports Windows / Mac / Linux • Install on Own PC / Server • Mobile Alerts (SMS / Email) • Mobile App Based Notification Alerts • Cloud-Ready Architecture • Live Dashboard (Customizable) • Automatic Periodic Report Scheduling • Digital Signing & Report Approval • Batch Reporting & Templates • Simultaneous Application Access

TABLE 1

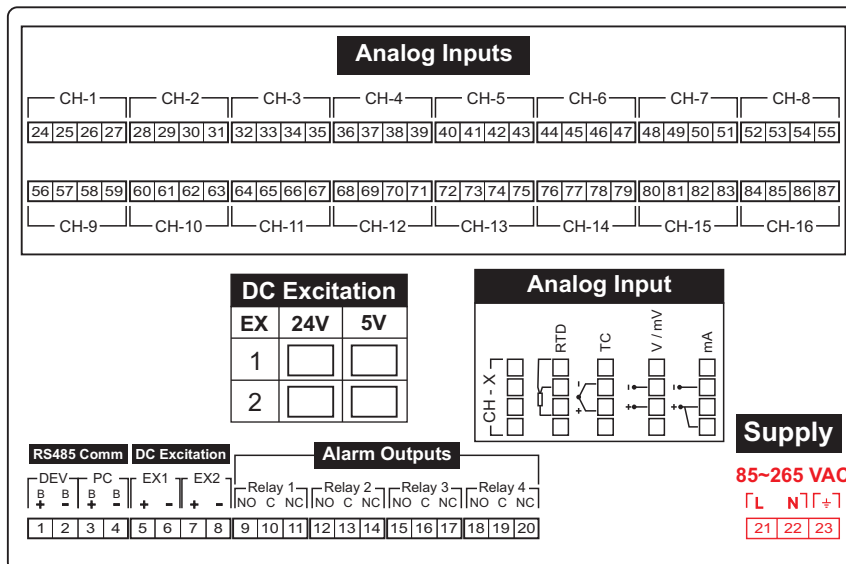
Input Type	Range (Min. to Max.)
2 / 3-wire, RTD Pt100	-200 to +600°C
Type J Thermocouple (Fe-K)	0 to +960°C
Type K Thermocouple (Cr-Al)	-200 to +1376°C
Type T Thermocouple (Cu-Con)	-200 to +387°C
Type R Thermocouple (Pt / Pt-Rh13%)	0 to +1771°C
Type S Thermocouple (Pt / Pt-Rh10%)	0 to +1768°C
Type B Thermocouple (Pt-Rh6% / Pt-Rh30%)	0 to +1826°C
Type N Thermocouple (NiCrSi / NiSi)	0 to +1314°C

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PPI
The Perfection Experts

Electrical Connections



Process Precision Instruments (An ISO 9001 : 2008 Company)

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