

Single / Dual Channels Process Data Logger

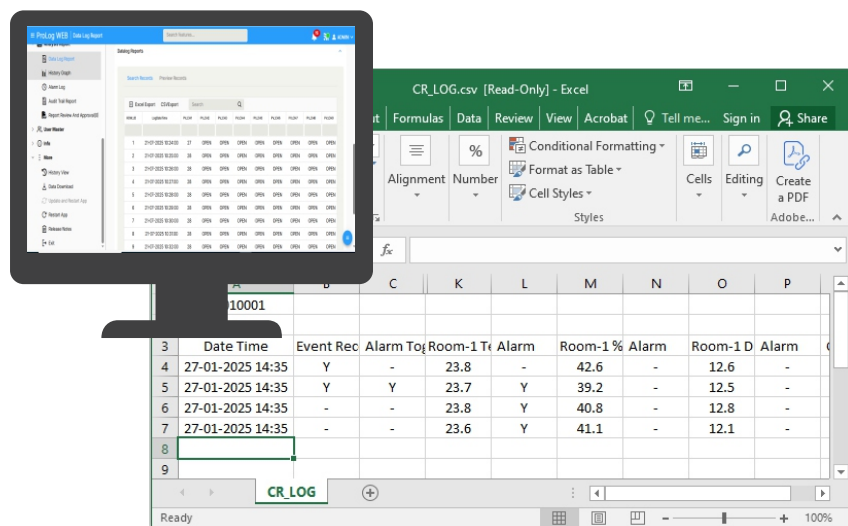
ARC 0102R

Single / Dual Universal Analog Input Channels
Huge Built-in Memory : 2,29,376 Records
Selectable PC / Pen-Drive Record Transfer Options
4 Rows of 20 Characters LCD Display with Back-Light LED
¼ DIN (96 x 96) Compact Enclosure

Process Precision Instruments

Vasai Road (E), Dist. Palghar - 401210,
Maharashtra, India

www.ppiindia.net



Salient Features

- 4x20 Characters LCD Display & 4 Tactile Keys
- Single / Dual Universal Analog Channels
- Independent Jumper-less Input Type Selection :
Thermocouples, RTDs, mV, V, mA
- 5V/12V/24V DC @ 50 mA Excitation Voltage Outputs
- Fast Channel Update : Less than 0.5 Sec (approx 400 mSec)
- 4 Programmable Soft Alarms per Channel with 2 Relay Outputs
- User Assigned Channel Names for Easy Identification
- Huge Record Storage Capacity : Approx. 2,29,376 Records
- Date / Time Stamped Process Value (PV) & Alarm Status Recording with Programmable Recording Interval
- Event Generated Records : Power-up, Alarm Toggle, RTC Modified, Recording Interval Changed
- Continuous or Batch Recording
- 21 CFR Part 11 Compliant WEB-based PC Software
- Front Panel USB Port for Record Transfer to Pen-Drive in CSV Format
- Supply Voltage : 85 to 264 VAC, 50/60 Hz
- Size (mm) : 96 (H) X 96 (W) X 84 (D)

General Information

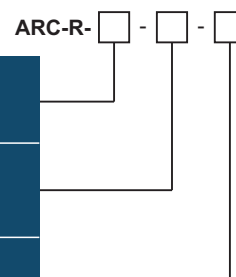
Product Type Universal Single / Dual Channels Composite Data Logger with PC / Pen-Drive Interface

Ordering Code

Channels
1 : Single Universal Analog
2 : Dual Universal Analog

Excitation
05 : 5VDC 12 : 12VDC
24 : 24VDC (Standard)

Power Supply
AC : 85~265 VAC
DC : 20 to 32 VDC



Example Code 1 : ARC-R-1-24-AC

Channels : Single Universal Analog
Excitation Output : 24VDC
Power Supply : 85 ~ 265 VAC

Example Code 2 : ARC-R-2-05-DC

Channels : Dual Universal Analog
Excitation Output : 5VDC
Power Supply : 20 to 32 VDC

Quantity 1 Unit

Accessories (Optional) USB to RS485 Converter

Similar Products ARC 0408R

Display	4 Rows of 20 Characters LCD Display with Back-Light LED
Keys	4 Tactile Switches PAGE, DOWN, UP, ENTER

Number of Channels	Single / Dual		
Input Types	Thermocouples : J, K, T, R, S, B, N, E RTD : Pt100, Pt1000 (3-Wire) DC mV : 0 to 80 mV, 0 to 160 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 : ± 0.2% of Reading for J, K, T, E (Excluding CJC) ± 0.4% of Reading for R, S, B, N (Excluding CJC) CJC : ± 1.5 °C (Specified over 18 to 37 °C) RTDs : ± 0.2% of Reading. Lead Resistance Compensation : Maximum 5Ω per Lead for 3-wire RTD. DC Linear mV / V / mA : ± 0.1% of Reading		
Thermal Drift	0.01% of Span per °C		
Resolution (Settable)	Thermocouples & RTDs : 0.1 / 1 (°C) DC Linear Volts / Current : 0.001 / 0.01 / 0.1 / 1 (Counts)		
Range	Thermocouple & RTDs : 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 (± 32,768 Counts), Sigma-Delta ($\Sigma\Delta$)		
Channel Update Time	Less than 0.5 Sec (approx. 400 msec) for both Single / Dual Channels		
Input Resistance	> 8 MΩ for Thermocouples, RTDs & mV Inputs > 47 KΩ for Voltage Input 249 Ω Precision Shunt for mA Input		
Common Mode Rejection	> 100dB at 50/60 Hz		
Input Protection	ESD : 8KV	EFT : 2KV	Surge : 1KV
Input Conditioning	First Order Analog R-C Low-Pass Filter + Programmable IIR Digital Filter		

Ratings	5/12/24 VDC ($\pm 10\%$) @ 50 mA (24 VDC as Standard) (Available on two separate terminals for Channel-1 & Channel-2)
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Single / Dual Channels Process Data Logger

Alarms

Numbers	4, Independent for Each Channel		
Programmable Parameters	Type	:	Process Low, Process High
	Setpoint	:	Adjustable over Full Range
	Hysteresis	:	1 to 3000 Unit Counts
	Inhibit	:	No, Yes
Outputs	Relay Change-over Contacts (Common / NO)		
	Relay-1 : Common for Alarm-1 & Alarm-3 of both Channels		
	Relay-2 : Common for Alarm-2 & Alarm-4 of both Channels		

Outputs

Relay	Contact Type	:	Potential-free Change-over Contacts (Common / NO)
	Contact Rating	:	5A @ 250 VAC / 30 VDC (Resistive Load)
	Contact Life	:	> 50,000 Operations at Rated Voltage / Current

Data Logging

Storage Type	Serial NOR Flash Memory (128M bits)		
Storage Capacity	2,29,376 Records		
Recording Mode	Continuous, Batch		
Recording Interval	Periodic : Programmable from 00 : 00 : 01 to 02 : 30 : 00 (Hour : Minutes : Seconds)		
	Zoom : 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 (Standard)	20 - 32 VDC (Optional)
Consumption	9VA Max	

Physical

Mounting	Plug-in with Panel Mounting Clamps		
Overall Dimensions	96(H) X 96(W) X 84(D), mm		
Panel Cutout	92(H) X 92(W), mm		
Terminals	Pluggable Terminal Blocks		
Weight	400 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.		

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PC Interface

Serial Port	Port	: RS485, 2-wire, Half Duplex, Start-Stop Synchronized
	Slave ID	: Settable : 1 to 127
	Baud Rate	: 9600 bps
	Data Format	: 8E1 (8 bit data, Even parity, 1 Stop bit)
	Max. Units per Loop	: 31
	Max. Distance	: 1200 Meters

Pen-Drive Interface

Pen-Drive Support	USB 2.0, Format : FAT32, Socket : Type A
File Operation	Read <i>Set.txt</i> file Write .csv files (Data Records)

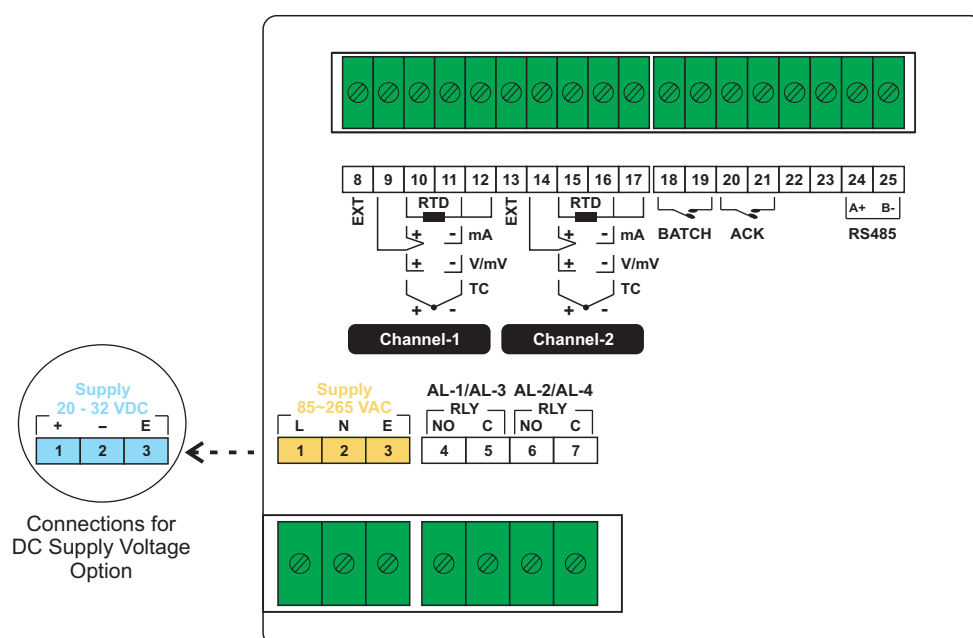
ProLog WEB PC Software (USFDA 21 CFR Part 11 Compliant)

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	-199.9 to +850.0 °C
2 / 3-wire, RTD Pt1000	-199.9 to +850.0 °C
Type J Thermocouple (Fe-K)	0.0 to +960.0°C
Type K Thermocouple (Cr-Al)	-200.0 to +1376.0°C
Type T Thermocouple (Cu-Con)	-200.0 to +387.0°C
Type R Thermocouple (Pt / Pt-Rh13%)	0.0 to +1771.0°C
Type S Thermocouple (Pt / Pt-Rh10%)	0.0 to +1768.0°C
Type B Thermocouple (Pt-Rh6% / Pt-Rh30%)	0.0 to +1826.0°C
Type N Thermocouple (NiCrSi / NiSi)	0.0 to +1314.0°C
Type E Thermocouple (NiCr / Con)	-200.0 to +1000.0°C

Back Panel Termination



Process Precision Instruments (An ISO 9001 : 2008 Company)

101, Diamond Industrial Estate, Navghar, Vasai Road (E), Dist. Palghar - 401210, Maharashtra, India
 Sales : 8208199048 / 8208141446 Support : 07498799226 / 08767395333
 sales@ppiindia.net www.ppiindia.net