

CR2010 Pro Series

CR2010 series of circular chart recorders are available in 4 different chart sizes i.e. 4", 5", 6" and 11". For enhanced readability in confined space, the 5" chart recorder is an ideal Choice. This chart recorder is specially tailored to work on both Universal Power supply and Battery as well as only Battery-operated options. These recorders are widely used in low temperature equipment, process and control applications. It takes direct inputs from RTD Pt-100 sensor. Standard chart speed available are 1 day/ 7 days/ 31 days per revolution. These recorders are microcontroller based. Crystal controlled chart drive ensures accurate chart speed. Stepper motors for both pen and chart drive, ensures no lag and no backlash. With a cutout of 138 x 138 mm and smallest depth, makes it very convenient to use. Transparent polycarbonate door makes the chart visible from distance. They come with universal power supply as a standard feature. The recorder comes with a built-in battery back up to ensure the proper working in case of power failure.

Features:

- 5" Chart Width
- Ink, Inkless pen options available
- Single Analog Input channel
- Direct Input Standard Pt-100 sensors
- Available chart speed of 1D, 7D, 31D / Rev
- Universal Power Supply 85-264 V AC, 47-63 Hz
- Battery Backup of more than 7 day
- Battery supply option available on request
- Battery Life more than 1 year*

*Battery life is calculated assuming process parameter does not vary more than 0.15 Deg/Min and recorder is not turned OFF or ON And the sensor input is not alarming condition. (Battery life depends on number of times recorder on/off and sensor input Variation and alarm condition.)

Specifications:

Pens

No. of Pens	1
Pen marking	Continuous
Pen Response Time	< 10 Sec (Full Scale)
Pen Resolution	Stepper Motor Controlled better than 0.1% FSD
Overshoot	None

Chart:

Chart Speed	In day mode — 1 day/ 7 days/ 31days per revolution
Chart Calibrated Radius/ Size	1.96 " (calibrated radius approx. 50mm) / Circular, 4.92" (125mm)
Chart Ranges	Refer Table 2

Display, Operator Panels and Input:

Display Type	None
Status Indicators	ALM LED – Red LED blinking indicates Alarm high/low condition BAT LED - Green LED blinking indicates Normal Operation Red LED blinking indicates Battery Low status Yellow LED blinking indicates Error condition
Panel Keys	Front panel Keyboard consisting of three keys for configuration and calibration
Analog Input (Sensor)	RTD (PT-100)
User Setting	Menu for selection of chart Range, Speed, Alarm Enable/Disable options Refer operating manual for details.
Sensor Type and Range	Refer to Table 1
Scan Rate	Battery Only: Continuous 1 reading per 7.6 Seconds for 1 Day chart speed 53 Seconds for 7 Days chart speed 4 minutes for 31 Days chart speed Mains + Battery: Continuous 1 reading per 2 seconds for 1 Day, 7 Days and 31 Days chart speed

Protection :

Input Impedance RTD	> 20 MΩ
CMRR	> 115 dB @ 50, 60 Hz at 20 sample per second
NMRR	> 88 dB @ 50, 60 Hz at 20 sample per second
Maximum Common Mode Voltage	5V AC
Isolation Channel-EARTH	NA
Input Protection	30V AC/DC Max



Environmental:

Temperature	(Operation) +5° C to +45° C (Limiting) 0° C to +50° C. (Storage) -20° C to +60° C
Humidity	(Operation) 10 to 80 % RH Non-Condensing (Storage) 5 to 90 % RH Non-Condensing
Altitude	< 2000 meter

Power Requirement:

Mains Supply + Battery Model	Power Supply: 85 to 264 VAC ,47-63 Hz. Battery: 2x1.5 VDC Ultimate Lithium Non rechargeable battery 3500 mAh
Battery Model	4x1.5 VDC Ultimate Lithium Non rechargeable battery 3500 mAh
Power Rating	3 V, 300 mA (Max) ; 1 W Max with maximum configuration
Fuse Type	None

Battery Backup:

Battery	2x1.5 VDC Ultimate Lithium Non rechargeable battery 3500 mAh
Battery Reverse Polarity	Protected
Battery backup	> 7 days**

Standards:

EMI-EMC	IEC 61000-6-2/6-3
Safety	IEC 61010-1
Pollution Degree	II
Installation Category	II
Vibration	2g Peak (10Hz-150Hz)
Shock	IEC 61010-1
IP Rating	IEC 60529: IP 30 (Door and Bezel Only)

Physical Characteristics:

Overall Dimensions Max	144 x 144 x 80 mm
L x W x D (mm)	
Panel Cutout	138 x 138 x 50 mm
L x W x D (mm)	
Bezel	144 x 144 mm
L x W (mm)	
Weight	Approx. 500 gms (with Sensor and battery)
Mounting	Panel Mount and Wall Mount Options

Table 1 - Sensor Type and Range

Sensor Type	Valid Input Range	Resolution Chart	Accuracy	Linearization Error
Pt-100 (RTD) [†]	-200 to 850 °C	1 %	± 0.5 % FSD	± 0.06 °C Max

α = 0.00385

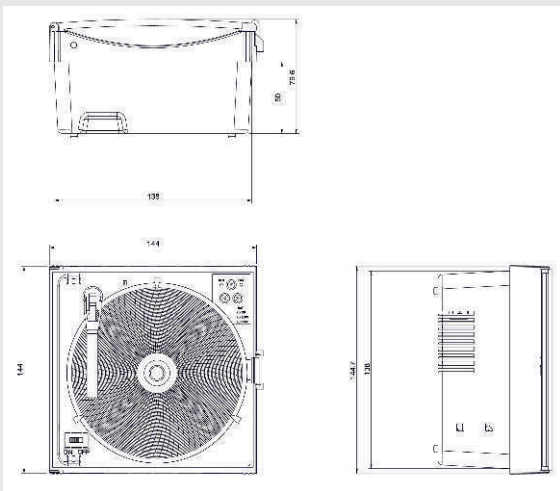
Table 2 - Available Chart(s) and their ranges

Chart Type (XX)	Range***	Part Description
85	-10 to +40	Chart W5 -10 +40
86	-35 to +15	Chart W5-35 +15
87	-35 to +15	Chart W5-35 +15 PS
88	+40 to -10	Chart W5+40 -10
89	-40 to +25	Chart W5-40 +25 PS
90	-115 to +50	Chart W5-115 +50 PS
Others, Please Specify		

*** First value in the chart range is at the center of the chart.

PS: Pressure Sensitive Chart

Overall Dimension:



Overall Dimensions(approx.) :

Dimensions L x W x D (mm)	144 x 144 x 80
Panel Cutout L x W x D (mm)	138 x 138 x 50
Bezel (mm)	144 x 144

*Actual specification may vary depending on the optional features installed.

**Refer to the back panel of the recorder for exact rating.

Select your ORDER Code: -

Example ORDER Code: 5 0 5 0 0 - X X 0 4 1

- Code : Recorder Type
5 : CR5- NU
- Code : Pen Type
0 : 1P ND
5 : 1PS[†] ND
Pressure sensitive pen
- Code : Power Supply
5 : 85-264V CE with 2x1.5AA battery
6 : 4x1.5V AA battery
- Code : Relay
0 : None
- Code : PC Interface
0 : None
- Code : Chart Type
XX : Refer Table for chart type
- Code : Range
0 : Programmable
1 : Fixed, Please specify
- Code : Chart Speed
0 : Programmable (24h, 7D, 31D)
3 : 24 hours/Rev
4 : 7 Days /Rev
6 : 31 Days /Rev
9 : Other
- Code : Sensor Type
1 : RTD (PT-100, DIN 43760, α = 0.00385)

Dealer / Representative

The specifications given above are an overview, and may be or may not be available in all product variants, or at an additional cost. The company reserves the right to change the specifications without prior notice, as the company follows a continual improvement philosophy for its products.



Manufacturers of :

- Circular Chart Recorders
- Inkless Recorders
- Paperless Recorders
- Scanners & Data Loggers
- Networked Data Loggers
- Application Software
- Web based DAQ
- Vaccine Series Data Loggers

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