

11" Circular Chart Recorder

CR2010 series

CR2010 series of circular chart recorders are available in 3 different sizes of the charts i.e. 4", 6" and 11". The 11" chart recorder is very useful when you want to monitor your processes unattended. These recorders are widely used in process industry for monitoring of various processes like incubation, curing, pasteurization etc. It takes direct inputs from RTD Pt-100 / Thermocouples / process inputs like 4-20mA / 0-20mA / 0-1V. Standard chart speed varies from 1 hour/revolution to 255 hours/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. A cutout of 319 x 323mm makes it a perfect fit for replacing any of your existing recorders of any make. Transparent polycarbonate door window makes the chart visible from distance. They come with universal power supply as a standard feature. Other power supply inputs are also available.

Features :

- 11" Chart Width
- One to Four Analog Input channels
- Universal Power Supply 85-264V AC, 47-63 Hz
- Other power supply inputs on request
- Direct Input standard Pt-100 / Thermocouple sensors
- Process Input through 4-20mA / 0-20mA / 0-1V
- 1-255 hrs of chart rotation
- Other chart rotation available on request

Specifications:

Pen

No. of Pens	1/2/3/4
Pen Marking	Continuous
Pen Response Time	<5Sec (Full Scale)
Pen Resolution	Stepper Motor Controlled better than 0.1% FSD
Overshoot	None

Chart :

Chart Speed	1 hour/rev to 255 hours/rev
Chart Calibrated Radius / Size	4.1" (approx. 107mm) / Circular 11" (approx. 270mm)
Chart Ranges	Standard Refer Table 2/ Customized*

Display, Operator Panels and Input :

Display Type	Digital, 8 digit ultra-bright LED Numeric / semi alphabetic
Display Height	0.3"
Status Indicator	Channel number and corresponding parameter values, prompts and messages displayed for ease of setup and programming.
Panel Keys	Front panel KB consisting of 3 keys for programming and calibration

Analog Input

Sensor Type and Range	RTD PT-100 / 4-20mA (External Shunt Resistance Of 50 Ω 0.1%) / TCJ-K-R-S-T/ 0-1V
Scan Rate	Refer to the Table 1 Continuous 1 reading per second

Protection :

Input Impedance	
RTD/VOLT/TC	> 20 MΩ
mA	50/3.3Ω Shunt External
CMRR	>100 dB@ 50, 60 Hz at 3 Sample per Second
NMRR	>50 dB@ 50, 60 Hz at 3 Samples per Second
Maximum Common Mode Voltage	5V AC
Isolation Channel – EARTH	1.5KV 1 minute
Input Protection	30V AC/DC Max
Termination	Non Interchangeable , Removable Plugs, Individual For Each Input
Transmitter Power Supply*	Non isolated 15V DC; 30mA max; un protected

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



4" / 6" / 11" - Complete Range of CCR

Power Requirement :

Supply Voltage (Mains Operated)	85-264VAC 47-63Hz
Battery backup	Yes
DC Adapter Operated	Yes
Power	10W Max With Maximum Configuration
Fuse Type	None

Battery Backup* :

Battery	12V 7Ah External Lead Acid battery
Battery Charger	Yes
Battery Reverse Polarity	Protected
Minimum Back up	>12 Hrs up to 2 Pen recorder

Communication RS232 / 485* :

Protocol	Proprietary
Baud Rate	4800 / 9600
Parity	None

Relay Output* :

Max. no of relays per recorder	4
Output Type	Potential free contact; 1 Form C
Configuration	High/Low/High-Low/On-Off (Hysteresis band settable)
Life expectancy	Mechanical: 10 ⁷ operations Electrical: 10 ⁵ operations
Load	1A, 230VAC resistive
Relay refresh rate	1Sec
Isolation Relay - Relay	2.5 KV 1 Minute
Isolation Relay Contact- GND	1.5 KV 1 Minute

Safety :

EMI-EMC	IEC 61326-1 Class A
Safety	IEC 61010-1
Pollution Degree	II
Installation Category	IV
Vibration	2g Peak (10 Hz-150Hz)
Shock	IEC 61010-1
IP Rating	IP 50 (Door and Bezel only)

Table 1 Sensor Type, Range, Accuracy, And Resolution

Input Type	Valid Input	Resolution	Accuracy	Display Range
PT-100(RTD)#	-100 to 600°C	0.1	± 0.5% FSD ± 1 digit	-2000.0 to +2000.0
mA	4-20mA/0-20mA			
mV	-1000.0 to +1000.0			
TC-J (Fe-CuCN)	0 to 400°C			
TC-K (NiCr-NiAl)	0 to 1200°C			
TC-R (Pt13Rh -Pt)	0 to 1750°C			
TC-S (Pt10Rh-Pt)	0 to 1750°C			
TC-T (Cu-CuCN)	-100 to + 400°C			

#DIN 43760: a= 0.00385 *optional

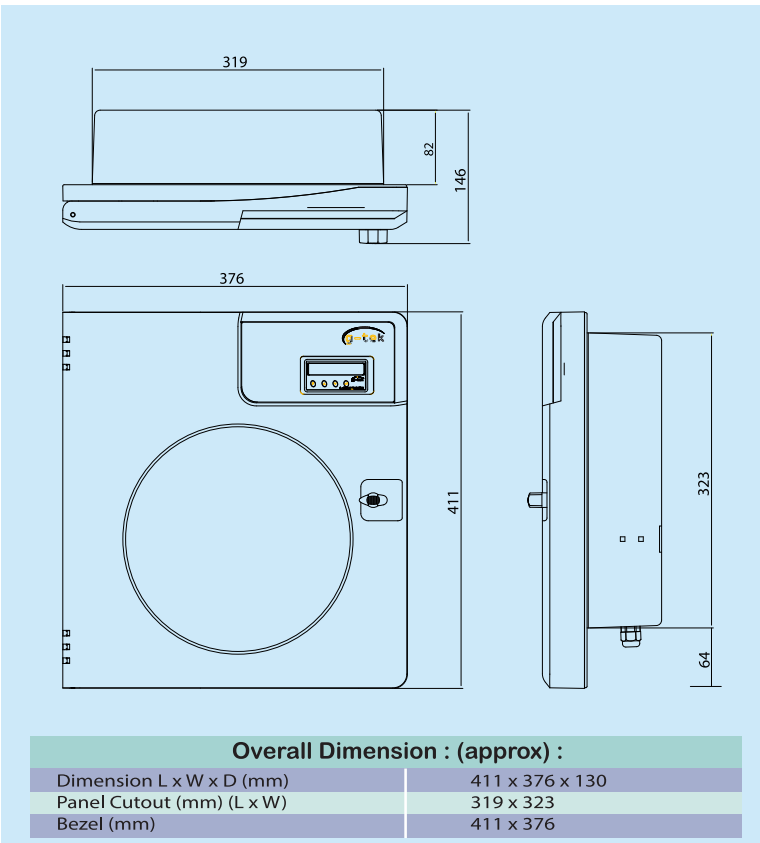
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• Your Ordering Code : mail to sales@gtek-india.com

Table 2 Standard Available Chart Ranges

Chart Type XX	Range**	Speed	Part Number	Part Description
51	0 to 100	24hrs/rev	301001	D110100
52	0 to 150	24hrs/rev	301008	D110150
53	0 to 200	24hrs/rev	301013	D110200
54	0 to 300	24hrs/rev	301017	D110300
55	0 to 1200	24hrs/rev	301007	D1101200
56	-50 to +50	24hrs/rev	301033	D11-50+50
57	0 to +150 & -1 to + 5	24hrs/rev	301011	D1101150/-1+5 Dual Range
58	0 to +250 & 0 to +100	24hrs/rev	301015	D110250/0100 Dual Range
59	0 to +100 & 0 to 400	24hrs/rev	301004	D110100/0400 Dual Range
60	0 to +100 & -40 to 60	24hrs/rev	301005	D110100/-40+60 Dual Range
61	0 to +80 & 0 to +160	24hrs/rev	301022	D11080/0160 Dual Range
62	0 to +100	7days/rev	302001	W110100
63	-100 to +50	7days/rev	302011	W11-100+50
64	-50 to +50	7days/rev	302012	W11-50+50
65	0 to +200	24hrs/rev	301041	D110+200 - OP3418
66	0 to 100	24hrs/rev	301046	D110100 (9/D/132/X)
68	+ 40 to -10	7days/rev	302013	W1140-10
80	Other please specify			

** First range is at the center of the chart



Select your ORDER Code: -

Example ORDER Code: 3 2 0 0 0 - 51 0 0 0

Code : Recorder Type
3 : CR11 NU

Code : Pen Type
1 : 1Pen with Display
2 : 2Pen with Display
3 : 3Pen with Display
4 : 4Pen with Display

Code : Power Supply
0 : 85-264 V AC 47-63 Hz
1 : 12-15V DC 1Amp
4 : 85-264V AC, 47- 63 Hz with BB*
5 : 85-264V AC, 47- 63 Hz With TS**
7 : 85-264V AC, 47- 63 Hz - BB* and TS**
8 : 24V DC 1Amp
*BB=Battery Backup,
**TS=Transmitter Supply, 13-17V DC @ 30mA (max)

Code : Relay
0 : None
1 : 1 Relay
2 : 2 Relay
3 : 3 Relay
4 : 4 Relay

Code : PC Interface
0 : None
1 : RS-232
2 : RS-485

Code : Chart Type
XX : Refer Table 2

Code : Range
0 : Programmable
1 : Fixed, Same as chart type

Code : Chart Speed
0 : Programmable
1 : 4 Hr/Rev
2 : 8 Hr/Rev
3 : 24 Hr/Rev
4 : 7 days/Rev
9 : Other, Please specify

Code : Sensor Type
0 : Universal
1 : RTD Pt 100 DIN 43760; $\alpha=0.00385$
2 : 4 - 20 mA
3 : 0 - 20 mA
4 : 0 - 1 Volt DC
5 : TC - J
6 : TC - K
7 : TC - R
8 : TC - S
9 : TC - T
A : 0 - 10V DC
B : 0 - 5V DC

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
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 - Scanners & Data Loggers
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