

Potentiometric Single Pen Recorder

Series : 3210



Recording your Process and Electrical Parameters



General Conformity
IS : 9319 - 1979

Introduction

Adept Strip Chart recorder is an economical, all-purpose recorder that can handle a variety of Process or Electrical parameters.

A variety of options such as Square Rooting, 2 Wire Transmitter Power Supply, Alarms allow you to select the recorder that best meets your needs.

Salient Features

- Robust, Reliable
- Modular Construction
- Simple principle of operation
- Z fold chart for ease of reading of previous record
- Disposable Fibre Tip Pen
- Std. DIN packaging 144 x 144 mm

Applications

- Recording trends of Process Variables
- Recording of Electrical Quantities
- Petrochemical Industry
- Synthetic Fibre Industry
- Fertilizer Industry
- Power Plants, Steel Plants
- Cement Plants
- Boiler Houses, Process Houses

Specifications

Input Range	: As specified in Ordering Information
Scale Marking	: As specified
Chart Width	: 120mm
Chart Track Width	: 100mm
Chart Length	: 10 meters, fan hold @ 40mm
Chart Speed	: $\pm 2\%$ at 25°C with nominal voltage at 50Hz
Accuracy	: Less than 1 second
Step Response Time	: $\pm 0.5\%$ of Span at 25°C (for DC Current or Voltage)
Accuracy	: $\pm 1\%$ of Span at 25°C (for others)
Ambient Conditions	: 0 - 50°C, 10 - 90%, RH Noncondensing
Effect of Temperature	: Less than $\pm 0.5\%$ of Span per 10°C
Alarm/Control	: Rated at 1A, 240 V AC
Contacts (Optional)	: Resistive Load
Common Mode Rejection	: $\pm 0.5\%$ Span error max for 240V AC rms 50 Hz
Series mode Rejection	: $\pm 0.5\%$ Span error max for 100% rms 50 Hz
Power Consumption	: 7.5 VA
Insulation Resistance	: More than 50 Mohms at 500V DC between all terminals shorted & the case.
Dielectric Strength	: 2kV, 50 Hz for 1 minute between all terminals shorted and the case.

For T/C and PT-100 inputs, open sensor indication-Upscale standard.
For T/C input cold junction compensation is provided

Ordering Information

POWER SUPPLY :

- 1) 110 \pm 15% V AC, 50 Hz
- 2) 240 \pm 15% V AC, 50 Hz

For DC/AC Operation consult Factory

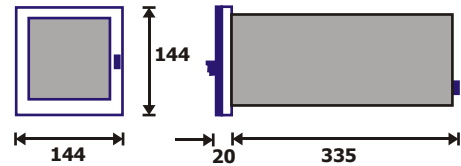
CHART SPEED :

- 1) 15, 30, 60 mm/hr
 - 2) 30, 60, 120 mm/hr
 - 3) 60, 120, 240 mm/hr
- 15 mm/hr = 27 days, 30 mm/hr = 13.5 days
60 mm/hr = 6.5 days, 120 mm/hr = 3 days,
240 mm/hr = 1.5 days

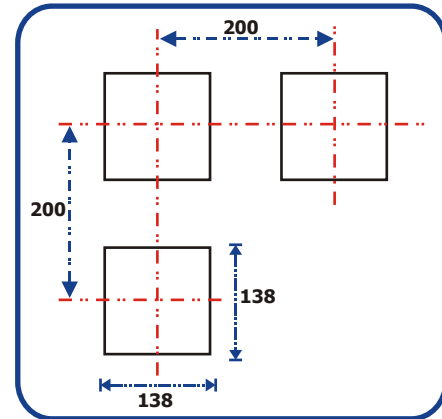
INPUTS AND RANGES :

- 1) **DC VOLTAGE** : Specify Scale marking / Engg. Unit
 - a) 0-1 V, 100 Kohms
 - b) 0-10 V, 100 Kohms,
 - c) 1-5 V, 100 Kohms
- 2) **DC CURRENT** : Specify Scale marking / Engg. Unit
 - a) 0-1 mA, 1000 ohms
 - b) 0-5 mA, 200 ohms,
 - c) 0-10 mA, 100 ohms
 - d) 0-20 mA, 75 ohms
 - e) 4-20 mA, 75 ohms
 - f) Special, Please specify
- 3) **DC VOLTAGE** : Specify Scale marking / Engg. Unit
 - a) 0-10 mV, 100 Kohms
 - b) 0-100 mV, 100 Kohms,
 - c) Special, Please specify
- 4) **PT-100 3 WIRE CONNECTION** :
 - a) 0-50 $^{\circ}$ C
 - b) 0-100 $^{\circ}$ C
 - c) 0-200 $^{\circ}$ C
 - d) 0-300 $^{\circ}$ C
 - e) 0-400 $^{\circ}$ C
 - f) 0-500 $^{\circ}$ C
 - g) Special, Please specify
- 5) **J TYPE (IRON-CONSTANTAN) THERMOCOUPLE** :
 - a) 0-200 $^{\circ}$ C
 - b) 0-400 $^{\circ}$ C
 - c) 0-600 $^{\circ}$ C
 - d) Special, Please specify
- 6) **K TYPE (CHROMEL-ALUMEL) THERMOCOUPLE** :
 - a) 0-200 $^{\circ}$ C
 - b) 0-400 $^{\circ}$ C
 - c) 0-600 $^{\circ}$ C
 - d) 0-800 $^{\circ}$ C
 - e) 0-1000 $^{\circ}$ C
 - f) 0-1200 $^{\circ}$ C
 - g) Special, Please specify
- 7) **R TYPE (PT-PT/RH 13%) THERMOCOUPLE** :
 - a) 0-1500 $^{\circ}$ C
 - b) 1000-1600 $^{\circ}$ C
 - c) Special, Please specify
- 8) **S TYPE (PT-PT/RH 10%) THERMOCOUPLE** :
 - a) 0-1500 $^{\circ}$ C
 - b) 1000-1600 $^{\circ}$ C
 - c) Special, Please specify
- 9) **AC VOLTAGE** : Specify Scale marking
 - a) 0-10 V
 - b) 0-50 V
 - c) 0-75 V
 - d) 0-125 V
 - e) 0-150 V
 - f) 0-250 V
 - g) 0-300 V
 - h) 0-500 V
 - i) 0-600 V
 - j) 50-75 V
 - k) 85-135 V
 - l) 150-300 V
 - m) 175-275 V
 - n) 300-500 V
 - o) Special, Please specify

Dimensional Drawing



Panel Cutout



All dimensions are in mm

- 10) **AC CURRENT** : Specify Scale marking
 - a) 0-1 A
 - b) 0-5 A
 - c) Special, Please specify
- 11) **LINE FREQUENCY** : Range 45-55 Hz, Input Voltage (\pm 15%)
 - a) 63.5 V
 - b) 110 V
 - c) 240 V
 - d) 415 V
 - e) Special, Please specify

SPECIAL REQUIREMENTS :

- 1) **ALARM / TRIP CONTACTS** :
 - a) One High
 - b) One Low
 - c) Both High
 - d) Both Low
 - e) One High, One Low
 - f) Nil
- 2) 24 V DC Transmitter Power Supply
- 3) Square Rooting on Input Signal
- 4) Customisation as per your requirement

NOTES :

- 1) Chart marking suitable to your requirements, if available from our standard Chart library, will be informed by us (Standard 0 - 100 % marking)
- 2) For quantity requirement of non-standard chart markings, consult factory for availability and pricing.

START UP SPARES : (Supplied with the Recorder)

- 1 Set of 5 Disposable Fibre Tip Pens
- 1 Z Fold Chart
- 1 Pair of Panel Mounting Bracket
- 1 Instruction Manual

Continuous efforts for product development may necessitate changes in these details without notice.

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