



## SERIES: 80E

- SINGLE, TWO OR THREE PEN
- $\pm 1\%$  ACCURACY
- T/C, RTD, mV, mA AND VOLTAGE INPUTS
- PNEUMATIC CONTROL OUTPUT (3-15 PSI)
- ONE, TWO OR THREE TERM CONTROLS (PROPORTIONAL, INTEGRAL, DERIVATIVE)
- ON/OFF OF DIFFERENTIAL GAP CONTROL
- ELECTRICAL CONTROL OPTION (RELAYS)
- PANEL OR SURFACE MOUNTING



### INTRODUCTION

The *80E Series* Pneumatic Recording Controllers are reliable and accurate instruments that record up to 3 electrical input signals from thermocouples, RTDs, strain gauges or any transducer producing a DC current or a voltage signal. The recording system consists of a high quality DC servo motor, pen arm(s), fiber-tipped pen(s) and a 9.5" (240 mm) round chart paper.

The *80E Series* provides continuous 3 to 15 psi control output(s), which can be ON/OFF, differential gap, proportional only (P), proportional + integral (P+I), proportional + derivative (P+D) or PID control. Optional 4-20 or 0-10 mA retransmission can be ordered for further processing of the signals.

Absolute or deviation alarm relays are optional and operate independent of the pen. They are "fail safe" and come either as absolute or deviation types. Absolute alarms can be set to any value within the range of the instrument, while deviation alarms operate with relation to the desired value, and can be set either above (positive) or below (negative) this value.

Optional Bourdon tube or diaphragm pressure measuring element can be fitted to a two-pen recorder for pressure inputs. The case is suitable for surface or panel mounting.

### SPECIFICATIONS

#### General

<b>Accuracy</b>	$\pm 1\%$ f.s.
<b>Dead Band</b>	0.5% f.s. maximum
<b>Response Time</b>	1.5 seconds typical (0-100%)
<b>Alarm Relay</b>	5A @ 30 VDC or 250 VAC
<b>Noise Rejection</b>	Variable filter having a 3 dB point variation, from 2.5 to 0.125 Hz with 20 dB decade roll off rate
<b>Case</b>	Glass filled polyester resin
<b>Protection Class</b>	IP-55
<b>Window</b>	Acrylic
<b>Chart</b>	Round, 240 mm (9.5 inch) dia. Synchronous electric; 24 hr or 7 day rotation; Other rotations are optional
<b>Pen</b>	Disposable fiber-tipped; 1st: Red 2nd: Blue 3rd: Green
<b>Power Supply</b>	110 or 220 VAC, 50 or 60 Hz 24 VAC or VDC are options
<b>Mounting</b>	Surface or flush panel
<b>Ambient Temp.</b>	-10...+55°C
<b>Weight</b>	Single pen: 7 kg (15.5 lb) Two pen: 8 kg (17.5 lb) Three pen: 9 kg (19.5 lb)

#### Pneumatic

<b>Air Supply Output</b>	20 psi (1.4 bar) 3...15 psi (0.2...1 bar); Direct or reverse acting
<b>Air Consumption</b>	4.5 liters per minute maximum
<b>Proportional Band</b>	3%...300%
<b>Integral Time</b>	0.5...32 minute
<b>Derivative Time</b>	0.25...12 minute

