

Upgrade your Westronics, M11E Multipoint Recorder with the Series 3200 Multicolor Multipoint Data Recorder. And, you can do it without the expense of altering panel cutouts or wiring.

Westronics Series 3200 Recorder has been designed as a direct replacement for your existing M11E Recorder. This recorder not only maintains many of the M11E features, but also adds many "powerful" features from our advanced technology Recorders. As with all of Westronics configurable recorders, this instrument will function as a data logger, multipoint recorder, alarm annunciator, or a digital indicator.

The Series 3200 Recorder is available in three direct input configurations: 12, 24, or 48. All three provide a maximum of 99 total points. Any combination of Thermocouples, RTD's, current, and voltage can be accepted by the instrument.

The recorder also features a wide roll chart and easy-to-replace color ribbon cartridge. Options include fluorescent chart illumination, 64-point alarm status indicator, contact outputs, and computer interface.

The Series 3200 Recorder is the instrument for your current needs and your future needs. As your application requirements change, the Series 3200 Recorder provides the versatility to grow with you.

For more information, contact your local Westronics Representative or call the Sales Office at (281) 348-1800.



Features

- Fits existing M11E Recorder panel cutout for easy upgrade
- Up to 10 programmable color traces and six color coded scales enhance chart visibility
- On-board capability to do self-diagnostics
- Available in 12, 24, and 48 point capacity configurations
- On-board capabilities to do mathematical calculations including arithmetic, group and moving averages, absolute differences, square root extractions, peak/valley and selectable time averages
- 6, 12, and 24 Form C (EMI hardened) alarm contact outputs available
- Switch selectable 20mA, RS232C, RS485, or RS422 communication available

Modes of Operation . . .

The Series 3200 Recorder integrates the functions of a multipoint recorder, data logger, alarm annunciator, and a digital indicator into a single instrument. Two different modes of operation support these capabilities:

Trend Mode — Graphically trends points (trend by point, trend by group, or trend by alarm) on chart paper at the selected chart speed.

Log Mode— Automatically prints Alarm status log (see sample) and any preprogrammed Time-of-day or Interval Logs for monitoring.

Program Key . . .

The Program Key provides two separate programming modes: Start Up and Options. These two modes provide the user with the functions required to configure the instrument for final initial start-up operation and redefine existing parameters to meet specific applications.

Start-up Mode — This mode includes the following basic configuration parameters required for start up operation: Date/Time, Program Point Chart Speed, Chart Scales, Chart Calibration, and Learn.

Options Mode — This mode includes the following configuration parameters required to enhance or redefine operating parameters:

Color Assignment - With Auto Assign Mode On, each point is assigned one of 10 colors. Turning Auto Assign Off, point colors are individually assigned.

Trend/Log Control - Configures recorder to either trend recorder or data logger.

Group Assignment - Assigns up to 99 points of any of eight groups.

Chart Zones - Configures individual chart zones for each programmed chart scale.

User Tables - Defines custom linearization tables for input types not supported by standard software.

Alarm Check - Activates or disables alarm check function.

Rate Alarm Check - Activates or disables rate alarm check function.

Scan Interval - Defines how often inputs are measured.

***	STATUS CHANGE	28:35:31	14	28.6 PCT.	LO	UNIT 2 OPACITY	***
***	STATUS CHANGE	28:27:00	14	18.6 PCT.	LO	UNIT 2 OPACITY	***
***	STATUS CHANGE	28:26:30	14	18.0 PCT.	LL	UNIT 2 OPACITY	***
***	STATUS CHANGE	28:18:15	14	28.0 PCT.	LO	UNIT 2 OPACITY	***
***	STATUS CHANGE	28:12:58	16	29.4 PCT.		AVERAGE OPACITY	***

All status changes with alarm notations are printed in red

Sample Log Mode Alarm Status Log Printout

SYSGEN - Enables user to define the following system profile parameters:

- Database Control
- Measure Control
- Thermocouple Control
- Chart Control
- SIO Control
- Contact Control
- Display Control
- Access Control

Unit Identification - Enables programming custom unit ID.

Utilities - Enable self-check diagnostics and calibration of printer subsystem and other functions.

Interval Logs - Enables interval logs to be printed at programmed time intervals.

Alarm/TOD Logs - Allows a Log of Alarms and Time-of-Day (TOD) logs to be configured to print automatically in either Trend or Log Mode.

Calibrate ADC - Provides menu driven prompts to calibrate ADC.

Zone Mode - Establishes a zone to reduce trace clutter when assigned points have similar processed values.

Event Messages - With optional hardware, up to sixteen 20-character messages can be printed for eight contact outputs.

Print Key . . .

In the Trend or Log Mode, the print key allows the user to access the following menu items for information to be burst printed on the chart:

ALLPOINTS - Burst prints a four column All Points Log with header and title. Points in alarm will be printed in red.

ALARMS - Burst prints all points in alarm in red.

GROUP - Prints all points assigned to the selected Group (1-8) under title of "Log Group__" and time and date.

MESSAGE - Prints any one of 16 programmed 20-character Event messages or prints a unique message programmed under PRINT key menu.

PROGRAM - Burst prints a table listing all programmed parameters of each point in database.

PROFILE - Log profile consists of all SYSGEN program parameters.

CANCEL - Cancels printing of any log currently in progress.

Display Key . . .

The Display Key enables the selection of any one of several menu functions to be displayed on the Vacuum Fluorescent display. Operating in either the Trend or Log Mode, the following menu functions can be selected:

POINT? - Point Number selected is displayed and updated at the programmed display rate.

TIME - Displays time and date in 24 hour format.

ALARMS - Sequentially scrolls through alarm points at display rate.

GROUP - All points programmed to the selected group will be sequentially scrolled at display rate.

LEGEND - Displays 20-character legend of selected point.

SETPOINTS - Programmed alarm setpoints and Rate Alarm of selected point is displayed.

CHART SCALE - Current operating speed is displayed.

VERSION - Software number, base version, release number and date of release is displayed.

Function Key . . .

The Function Key enables the user to change certain previously programmed parameters without reprogramming the unit. These include: SELECT CHART SPEED, RESET A POINT, ACTIVATE A POINT, BYPASS A POINT and SELECT SCALE SET.

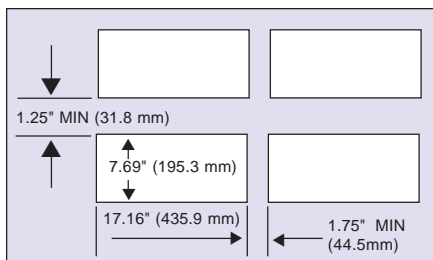
Options . . .

The Series 3200 Recorder has available an extensive list of options that will enhance operation to best meet your specific application requirements. Many of these options are available as field installable kits. These options include:

- ◆ 24 or 48 inputs
- ◆ Special 10 ohm Cu RTD Inputs
- ◆ 64-Point Alarm Status Indicator
- ◆ Automatic Chart Reroll
- ◆ Relay Contact Outputs
 - One common with 6, 12, or 24 EMI-Hardened Contact Outputs
- ◆ Remote Package
 - Alarm Acknowledge
 - Alarm Reset
 - Chart Printer On/Off (High/Off/On)
 - Event Markers
 - Scale Set
- ◆ Communication
 - RS232C with 25-pin Connector
 - RS422 with Terminal Block
 - RS485 with Terminal Block
 - 20mA Current Loop with 25-pin Connector
- ◆ 1/2 Door
- ◆ Fluorescent Lighting with or without Nonglare window
- ◆ Power Cord (117Vac only)
- ◆ 36Vdc Power Output (100mA)
- ◆ 50 ohm shunt (4 to 20 & 10 to 50 mA inputs)
- ◆ Stainless steel tag
- ◆ Stainless steel nameplate
- ◆ Carrying handles (2)
- ◆ Simulator Option
- ◆ Seismic (IEEE 344) Package

Other Options Available . . .

- ◆ Remote Programmer Software
- ◆ Historian Translator Software



Panel Cutout Dimensions

Enhanced Math Package - Option . . .

The Enhanced Math Package for the Series 3200 Recorder will provide several additional math point types including *powers*, *roots*, *log*, *anti-log*, and *re-scaling*. Logarithmic sensors

inputs will be linearized for trending on the chart. New floating point math will provide greater arithmetic accuracy and the display and logging of very large or small numeric values.

How to order...

In order to determine the Series 3200 model configuration that you need, choose one item from each group (A through O) of the Model Selection Chart and write the selected number on the appropriate line in the Model Number Summary below. However, it is recommended that you contact Westronics Sales Office for specific order information before placing an order.

Model Selection Chart

A	1	12 Inputs (99 Total Points)	Point Capacity
	2	24 Inputs (99 Total Points)	
	3	Future Use	
	4	48 Inputs (99 Total Points)	
	5	24 Inputs/ RS24 Multiplexer	
	6	48 Inputs/RS24 Multiplexer	
B	1	Voltage, Current, RTD & Thermocouple Inputs	Operating Software
	2	Special 10 ohm Cu (RTD, volt, current & T/C inputs	
	3	Enhanced Math Package	
C	1	117Vac/60Hz	Power Input Selection
	2	117Vac/50Hz	
	3	230 Vac/50 Hz	
	4	230Vac/60Hz	
D	0	No	Alarm Indicator
	1	Yes	
E	1	One Common Alarm (CA)	Relay Contact Output/ Remote Package
	2	One CA + 6 EMI Hardened Contact Outputs (EMI-HCO)	
	3	One CA + 12 EMI-HCO	
	4	One CA + 6 EMI-HCO with Remote Package	
	5	One CA + 12 EMI-HCO with Remote Package	
	6	One CA + 24 EMI-HCO (Form A or B)	
	7	One CA + 24 EMI-HCO (Form A or B)/Remote Pack.	
F	0	None	Communication Interface
	1	RS232C/25-Pin "D" Connector	
	2	RS422/Terminal Block	
	3	RS485/Terminal Block	
G	0	Customer Data Base	Point Programming
	1	Factory Data Base	

H	1	Full Door	Option Group 1
	2	1/2 Door	
I	0	None	Option Group 2
	1	Fluorescent Lighting	
	2	Nonglare Window with Fluorescent Lighting	
J	0	None	Option Group 3
	1	Power Cord, (117Vac only)	
	2	36Vdc Power Output	
	3	Items 1 and 2	
K	0	None	Option Group 4
	1	50 ohm Current Shunt	
L	0	None	Option Group 5
	1	Stainless Steel Tag (RTP)	
	2	Stainless Steel Name Plate	
	3	Carrying Handles (2)	
	4	Items 1 and 2	
	5	Items 2 and 3	
	6	Items 1 and 3	
7	Items 1, 2, and 3		
M	0	None	Option Group 6
	1	Automatic Reroll	
	2	Simulator Option	
N	0	None	Option Group 7
	1	Seismic (IEEE 344) Package	
O	0	None	Option Group 8
	X	Special	

Model Number Summary

3200 - _ _ _ - _ _ _ - _ _ _ - _ _ _ - _ _ _ - _ _ _ - _ _ _ - _ _ _
 A B C D E F G H I J K L M N O

Specifications

OPERATING

Input Signals Voltage: $\pm 1\text{mV}$ to $\pm 10\text{Vdc}$ (50mV, 100 mV, 200mV, 1V, 5V, and 10V ranges)
 Current 4 to 20mA; 10 to 50mA standard
 Thermocouple: J, K, T, E, R, S, B, C, Nicrosil -Nisil and Nickel-Nickel Moly
 RTD: 10 ohm Cu, 100, 200, and 500 ohm Pt, and 120 ohm Ni
 Contact: N.O. or N.C. dry contacts
 User Programmable Linearizations

Accuracy Voltage: $\pm 0.05\%$ for 50mV to 10Vdc
 Current: $\pm 0.1\%$ for 1mA to 200mA including shunt resistance
 RTD: $\pm 0.5^\circ\text{C}$
 Thermocouple

THERMOCOUPLE TYPE	MEASUREMENT ACCURACY	CONFORMANCE TO IPTS-68	COMPENSATION ACCURACY
J, K*, T*, E*, N, Ni-Ni Moly	$\pm 0.25^\circ\text{C}$	$\pm 0.25^\circ\text{C}$	$\pm 1^\circ\text{C}$
R, S, C	$\pm 2.25^\circ\text{C}$		
B	$\pm 3.75^\circ\text{C}$		

*Accuracy specifications for T, K, & E T/C's are for temperatures above -140°C .
 For accuracy specifications below -140° , contact factory

Input Impedance >10 megohms for T/C and 50mV, 100mV, 200mV, 1V and 5V ranges; 110K ohms for 10V range
Input Capacity 12, 24, or 48 direct inputs (any mix of T/C's, RTD's, mV, V, or current)
Scan Rate Up to 20 points/second (nominal)
Common Mode Voltage 300 V peak-to-peak maximum
Common Mode Noise Rejection >120 dB at 50/60 Hz with 1K ohm source imbalance at 300 V peak-to-peak CMV
Normal Mode Noise Rejection >60 dB at 50/60 Hz

PRINTER AND CHART

Writing System Impact dot matrix with color ribbon cartridge
Number of Printer Colors Ten: Green, red, blue, black, violet, orange, olive, brown, dark blue, and dark green
Chart Speed Programmable from 0.5"/hr to 60"/hr in 0.25" increments and 5 to 1500mm/hr in 5mm increments
 Normal and alarm chart speeds are separately programmable
Chart Paper 75 ft. of roll paper

POWER

Power Requirements 117Vac $\pm 10\%$, 50/60 Hz; 230Vac $\pm 10\%$, 50/60 Hz
Power Consumption 60 VA idle: 120 VA printing

ENVIRONMENTAL

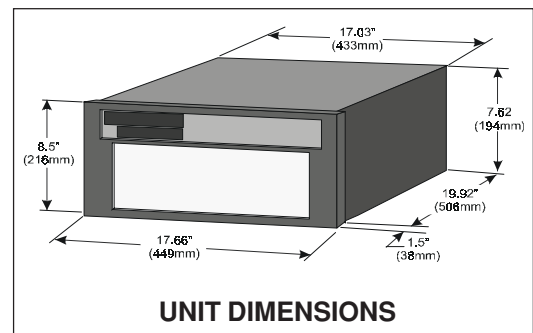
Operating Temperature 32° to 122°F (0° to 50°C)
Operating Humidity 10 to 90% RH, noncondensing
Storage Temperature -4° to 158°F (-20° to 70°C)
Storage Humidity 0 to 100% RH, noncondensing

WEIGHT

Approximately 55 lbs. (24.9 kg.)

OUTPUT

Alarm Contact Alarms 6 or 12 Form C with the following contact ratings:
 EMI Hardened: 3A at 117/230Vac or 26Vdc, 0.2A at 125 Vdc for resistive loads
Communication Interface Switch selectable 20mA, RS232C, RS422 (modified), RS485, or custom



Westronics implementation of new developments and product improvements may result in specification changes in this document.

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