

DX200

WIDE CASE EXPANDABLE MODEL

DAQSTATION



Designed to replace obsolete Westronics DIIE, MIIE, and 3200 series paper recorders, the DX200 wide case models can now handle applications that require up to 230 inputs.

Bulletin 04L02A01-S124E-A

DX200

WIDE CASE EXPANDABLE MODEL

The DX200 Wide Case model can now function as a front-end Data Acquisition and Display Station for large systems with up to 230 input channels. This is achieved by combining rear panel measurement inputs with up to 200 external inputs that can be sourced from any hardware platform that supports MODBUS RTU serial communications such as Yokogawa's DARWIN DA100 system.

New DX200 option /S124 specifies a multitude of enhancements that greatly increase the input capacity and functionality of the DX200 Wide Case models, allowing users to build powerful and scalable data acquisition systems. With this option, 170 additional logical input channels are dedicated for assignment to external inputs via the serial communication interface. These logical channels read data from almost any external hardware platform wired to the DX200 serial interface using MODBUS RTU slave protocol. Up to 30 additional inputs can be assigned to math channels when /M1 math option is specified, yielding a capacity of 200 external input channels. A DX230 can support up to 230 channels in this manner.

Users can now enjoy Yokogawa quality and reliability in a full-feature system with the following advantages:

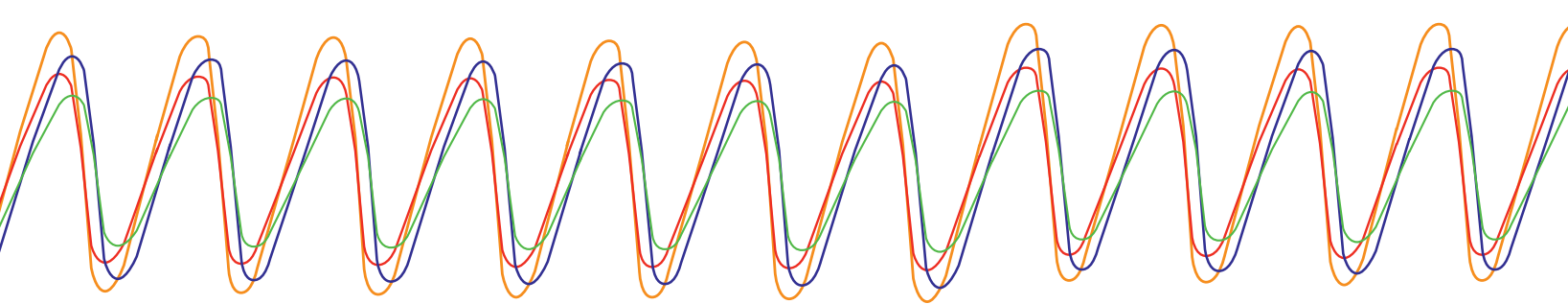
- On-board data storage and trending for up to 230 channels
- Scaling, engineering units, tag names and up to 4 alarms can be assigned to all channels
- High-resolution color display screens with superb trending functions that require no integration work
- Displays include Horizontal or Vertical Trend, Bar Graph, Digital, Overview, and Information
- Built-in high capacity ZIP or ATA flash media for stand-alone archiving, with FIFO selection
- Standard Ethernet interface with built in web server and email functions, automatic FTP file transfer to PC servers, and OPC software connectivity to plant historian systems

The /S124 option includes a number of display mode and other functional enhancements that give the DX200 wide ranging ability to meet special user requirements. This includes Trend display configurations that can emulate common pen recorder scales, satisfying human factors requirements for nuclear power applications. DX200 /S124 provides many of the benefits of a custom SCADA/HMI system in a package that requires no custom software development or expensive integration work.

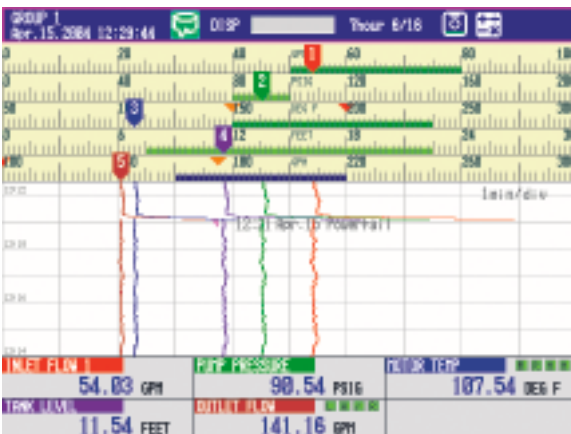
In addition to all standard DX200 features, /S124 option includes the following enhancements:

DISPLAY FUNCTIONS

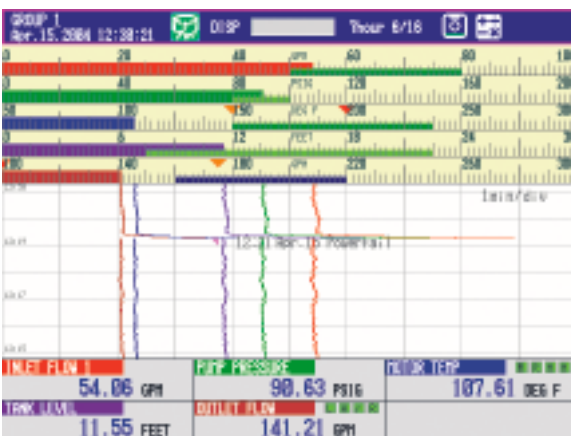
- 23 Display Groups with enable/disable function; freely assign up to 10 channels per group
- Power failure message
- Color-coded trend scale bar indicator; selectable choice of bar or standard pen pointer. Color matches channel color
- Alarm set point arrows in trend scale when scale bar is enabled. All 4 alarms are indicated; green no alarm, red in alarm
- Green scale banding defined by Zone Low and Zone High setting range. Red scale and bar graph pointer for Alarms 1 & 4. Amber pointers for Alarms 2 & 3
- Black trend color choice.
- Jump to Trend History from Trend Display by pressing DISP/ENTER twice
- Jump to user-defined default display after a pre-set time
- 4 Panel view with trend scale



Group 1-23 selection



Trend display with scale pointers, zone bands and alarm arrows



Trend display with scale bands, zone bands and alarm arrows

CLOCK FUNCTIONS

- Automatic Daylight Savings Time change; calculated automatically every year from one-time settings
- Time Synchronization with SNTP network servers. Clocks on all networked DX200s are set to precisely match a standard network time source

INPUT TYPES

New RTD types:

- 50 and 100 ohm Platinum
- 100 and 120 ohm Nickel
- 53 and 100 ohm Copper

MATH

- 120 character length for math expressions

TEXT MESSAGING

- 56 pre-set messages; 16 characters each
- 8 free text messages; 16 characters each

LOGIC, MEMORY & TREND UPDATE SPEED CHANGE

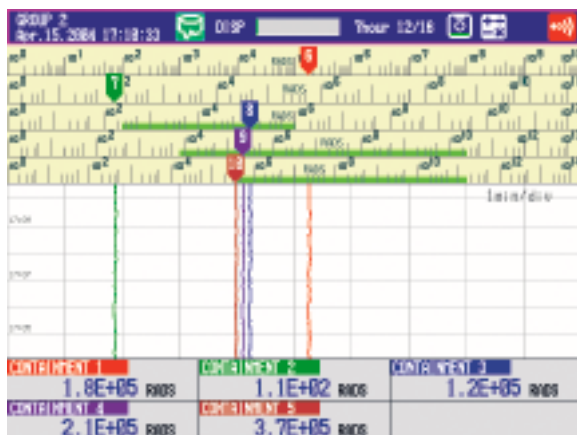
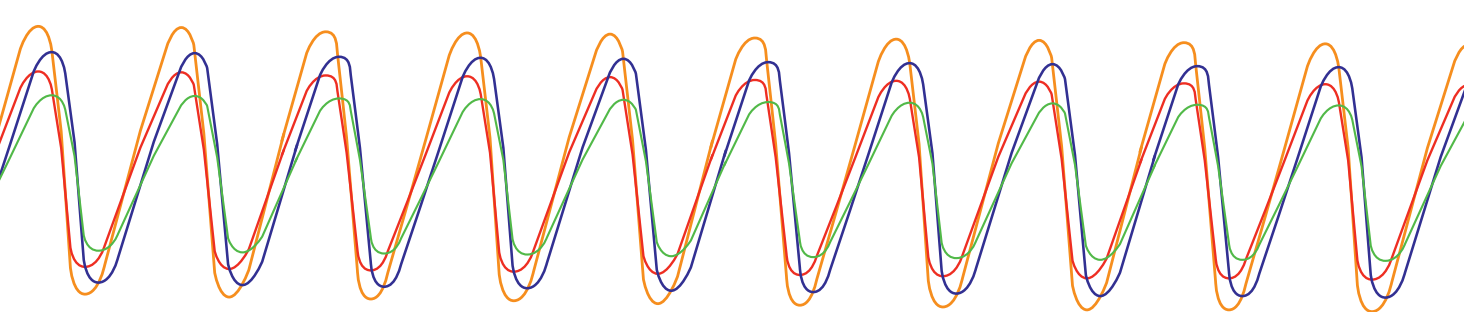
- Alarm-activated software relays that trigger useful logic functions such as messages and start/stop
- 2 speed Time/Div settings
- First In/First Out (FIFO) media overwrite choice

LOGARITHMIC SCALE AND EXPONENTIAL DISPLAY

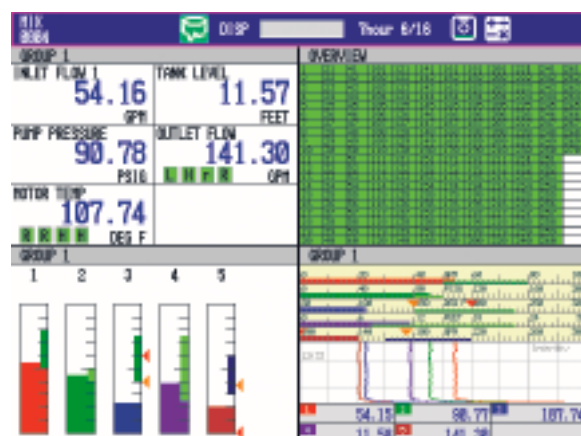
- For internal measure channels only; useful for input sources with wide dynamic ranges such as radiation monitoring
- Displays a 1-15 decade log scale for pen pointers on Trend display
- Scale setting span; 1.0E-15 to 1.0E+15
- Process values are expressed as an exponent
- 2 or 3 digit exponent mantissa selection
- Math supported on non-log channels with /M1 option

SIMULATOR FUNCTIONS (WITH /R1 REMOTE OPTION)

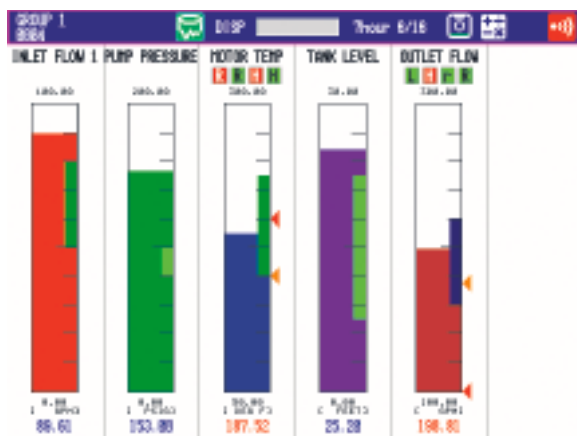
- Contact input freezes all display functions including clock; pauses DX for exercise review. Clock resumes correct time on release
- Contact input clears data memory; readies DX for next class. Configuration settings are not affected



Trend display with log scales and exponential data



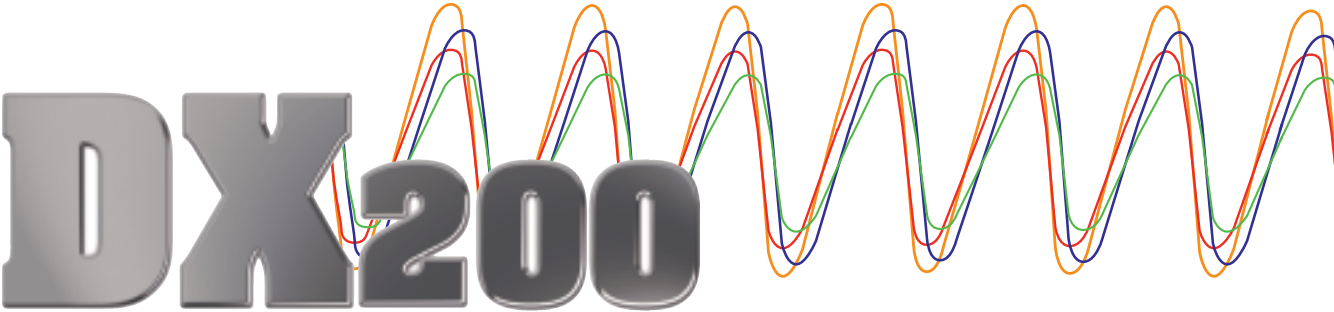
4 panel display with trend scales and all-channel overview



Bar display with zone bands and alarm arrows



Above: specify MODBUS communications module DT300-31/S6 (left) for any DARWIN product when used as an external input source for DX200-S124. The required DX200/C3 MODBUS option is shown at right.

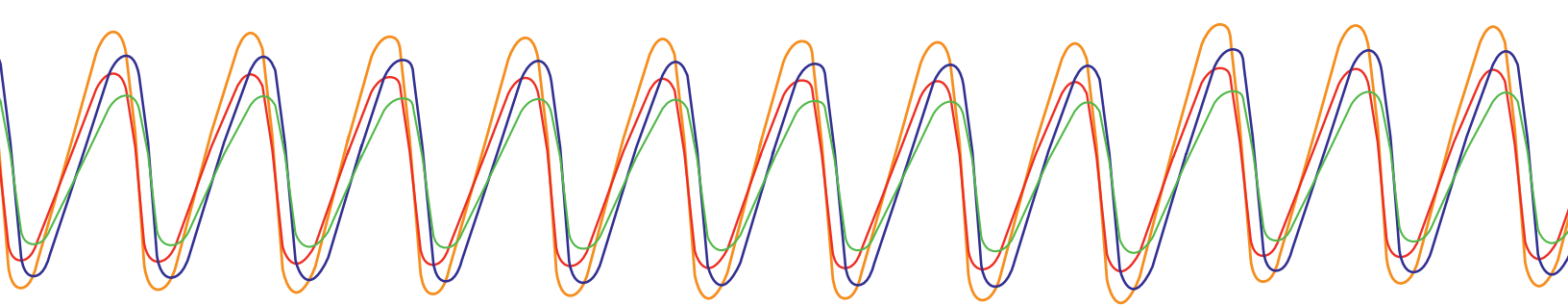


ORDERING INFORMATION

To order the DX200 Wide Case Expandable Model, specify option code /S124 for DX210, DX220, or DX230 base models. The table below describes model combinations and corresponding input capacity.

See the DX200 GS sheet for complete option code information.

MODEL CODES; S124	DESCRIPTION	NOTES
DX210-x-2/S124*	10 rear panel inputs plus 170 external input support via serial communications. 180 total input capacity.	*/C2 RS-232C or /C3 RS-422/485 serial interface option is required in addition to /S124. Always specify /C3 when this model is used with a Yokogawa DARWIN system.
DX210-x-2/S124/M1*	As above plus 30 math computation channels that can hold additional inputs. 210 total input capacity.	
DX220-x-2/S124*	20 rear panel inputs plus 170 external input support via serial communications. 190 total input capacity.	
DX220-x-2/S124/M1*	As above plus 30 math computation channels that can hold additional inputs. 220 total input support.	
DX230-x-2/S124*	30 rear panel inputs plus 170 external input support via serial communications. 200 total input support.	
DX230-x-2/S124/M1*	As above plus 30 math computation channels that can hold additional inputs. 230 total input support.	



ADDITIONAL DOCUMENTS

Complete DAQSTATION functions and specifications can be found in the following documents available from your local Yokogawa representative or on-line at www.us.yokogawa.com:

Description

Part Number

DX100 & DX200 Bulletin

04L01A02-00E

DX200 /S124 General Specifications

GS DX200-S123E

DX200 /S124 General Specifications

GS 04L02A01-00E

Yokogawa Corporation of America

2 Dart Road, Newnan, GA 30265-1094, USA

Phone: 8008886400 Fax: 7702540928

www.us.yokogawa.com



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