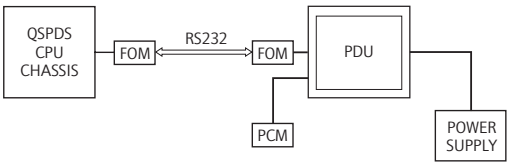
Flat Panel Display System (FPDS)

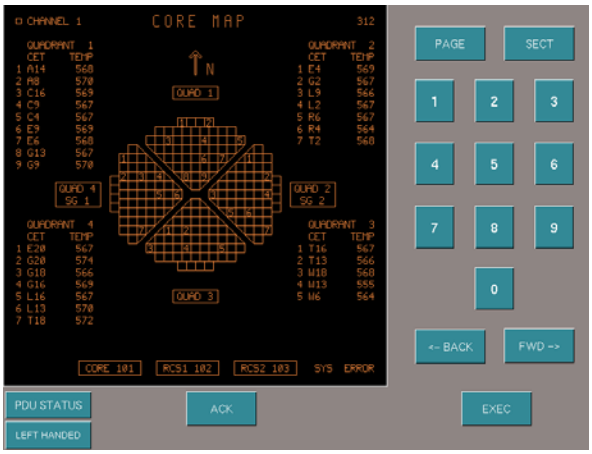
Repair, Replacement, and Automation Services

Background

The Westinghouse Common Qualified (Common Q) platform Flat Panel Display System (FPDS) replaces the plasma display units (PDUs) used in existing Intel-based Qualified Safety Parameter Display Systems (QSPDS). The QSPDS is a Class 1E safety-related alarm and display system, consisting of two separate channels of equipment, each channel consisting of one or more central processing unit (CPU) chassis and a PDU.



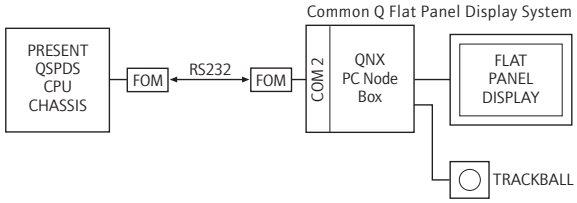
Legacy QSPDS block diagram



PDU replacement FPDS display and node box

Benefits

The FPDS upgrades the present QSPDS with a new display system without replacing or modifying the QSPDS CPU chassis. The FPDS can interface directly with any QSPDS without any additional application-specific hardware or software configuration effort, because the replacement display is not based on any plant-specific QSPDS configuration. As a result, FPDS upgrades require minimum upgrade effort.



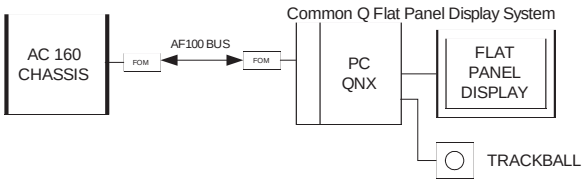
QSPDS with replacement Common Q FPDS

Upgrading to a Common Q FPDS also facilitates possible future migration to an entire AC160-based System.

(Continued on back)

For more information, call your local Westinghouse Electric Company sales representative.

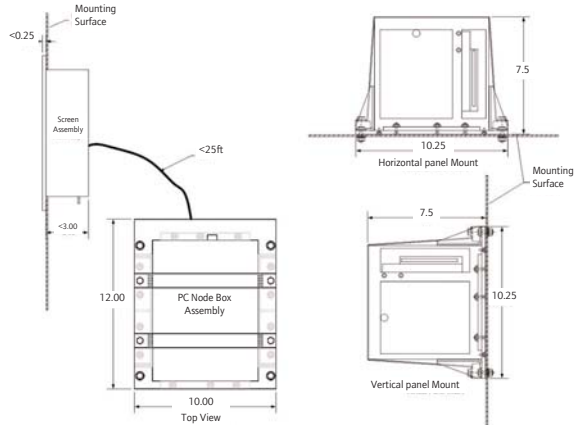
Westinghouse



Complete migration to AC160

FPDS Hardware

The Class 1E qualified display hardware is used in new safety-related applications and legacy plant upgrades throughout the Westinghouse fleet. The PDU replacement hardware includes a standard back-lighted FPD with a touch-sensitive screen, a PC node box with an RS232 interfacing port, and a trackball or pointing device, all of which are standard Common Q components. The display can be mounted up to 25 feet from the PC node box, and need not be accessible for normal system operation.



FPDS and PC node box dimensions and mounting

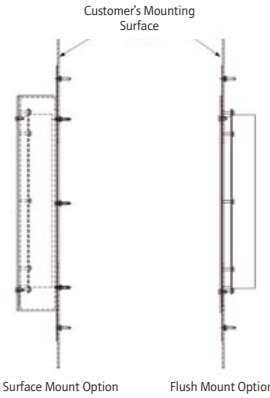
A kit can be supplied that allows the FPD to be mounted in the same mounting holes as the existing PDU. Alternately, the control board can be modified to fit the FPD mounted flush to the mounting surface.

Power requirements: 1.4 amperes at 120 Vac, 60 Hz

Input Range: 90-132 Vac and 47-63 Hz

Weight: 21.55 lbs (PC node box), 20 lbs (18-inch display only)

The standard FPDS display size is 18-inches (15.75-inches high by 19.00-inches wide). Display sizes of 12.1 (12.0 inches X10.0 inches) and 15 (15.0 inches X 12.0 inches) are also available if the end user wants a smaller size. Control board cutout must be sized accordingly.



FPD PDU mounting methods

The FPDS has the same display capability as that of the existing QSPDS, as defined in *QSPDS Functional Design Specification*, NPROD-ICE-3201, Rev. 03. The QSPDS CPU chassis transmits draw commands via an RS232 data link to the FPDS, which correctly draws the display. The FPDS also transmits page control module (PCM) commands from the touch-screen keypad to the QSPDS CPU chassis via this same link. FPDS resolution is 800 X 600 pixels. QSPDS display area resolution is 512 X 512 pixels. The remaining display area includes PCM replacement icons.

Data transfer is via a serial link between the QSPDS CPU chassis and the FPDS. The FPDS can be configured for baud rates ranging from 1200 baud to 19.2K baud.

FPDS hardware & display layout

Westinghouse Electric Company
Box 355
Pittsburgh, PA 15230

www.westinghousenuclear.com

February 2006

NS-RRAS-0050 (75823)