

SECTION 40 94 33

OPERATOR INTERFACE UNITS

PART 1 - GENERAL

1.1 DESCRIPTION

A. Work included

1. Furnish and install Operator Interface Units (OIU)

B. Related sections:

1. Section 40 95 13 Process Control Panels and Hardware
2. Section 40 96 35 Process Control Software Programming

1.2 SUBMITTALS

A. Submittals shall be made in accordance with Section 01 33 00 and Section 40 90 00

B. The Contractor shall furnish submittals for approval as outlined below:

1. Product data.

1.3 DELIVERY, STORAGE AND HANDLING

A. Operator Interface Units shall be fully installed in the control panel prior to shipping to the site from the factory.

1.4 REFERENCES

A. Applicable codes and standards: design, fabricate, assemble, and test equipment so that upon installation and operation in accordance with manufacturer's recommended procedures for this application the equipment will conform with all applicable codes and standards. The date of issue or version shall be the current version at time of bid.

1. NFPA Standard 70 National Electrical Code
2. IEEE Standard 472 Electrical Surge Protection
3. EIA Standard RS-232-C Interface between data terminal equipment and data communication equipment employing serial binary data interchange
4. NEMA ICS6 Enclosures for Industrial Controls and Systems

1.5 JOB CONDITIONS

A. Environmental

1. Ambient temperature range: 0 to +47 degrees Celsius.
2. Ambient humidity range: 5% - 95% RH non-condensing
3. Atmosphere: No corrosive gases

PART 2 - PRODUCTS

2.1 FILTER CONTROL CONSOLE

A. COMPUTER / MONITOR – DISTRICT FURNISHED

1. The following components will be furnished by EBMUD for use in 239-FWS-LOCS-014 and 239-FWS-LOCS-016
 - a. Industrial Flat Panel Monitor .
 - 1) Depth behind panel: 3” or less
 - 2) Outside Dimensions: 19.5” wide x 16” high or smaller
 - 3) Cutout Dimensions: 18” wide x 15” high or smaller
 - b. Small Form Factor PC, Keyboard, and Mouse
 - 1) Maximum Dimensions: 12.5” high x 3.75” wide x 13.5” deep or smaller

B. OIU MOUNTING SYSTEM

1. The OIU Mounting System shall have the following features and characteristics:
 - a. Shall include a height-adjustable monitor mount.
 - b. Monitor mount shall be VESA 75 x 75 mm and 100 x 100 mm compatible.
 - c. Monitor mount shall support a minimum tilt of +/- 15 degrees, a maximum extension of 26 inches, and shall support up to 25 pounds.
 - d. System shall include a height-adjustable, flip-up keyboard tray.
 - e. Keyboard tray shall support up to 10 pounds and be extendable to 39 inches.

- f. Monitor mount and keyboard tray shall be independently adjustable.
- g. Shall include a CPU mount capable of holding a up to a 40 pound CPU of 7.5 inches deep by 19 inches high.
- h. This unit shall support the District furnished Filter Control Console – Computer / Monitor specified in this section.
- i. Acceptable products: Chief Professional Mounting Solutions KWT110 All-in-one Workstation Mount with (2) additional KSA1003 Extension Arms or equal as approved by Engineer.

2.2 OPERATOR INTERFACE UNIT (OIU)

A. The OIU shall have the following features and characteristics:

- 1. Shall include any runtime software and licenses necessary to implement the design included in these specifications and drawings.
- 2. Shall include a licensed development package. The PanelView Plus family line is exempt from this requirement.
- 3. Displays Supported: 25 Displays
- 4. Tag Count: 100 tags
- 5. Alarm Messages: Minimum of 200 alarm messages
- 6. Display Size: 10.4 inches.
- 7. Display Type: Color Active Matrix , TFT 18 bit color touch screen.
- 8. Network Communications: Ethernet, RS-232, USB.
- 9. Protocols Supported: Modbus RTU
- 10. Data Log Capabilities: Support 300,000 data records
- 11. Operating Temperature: 0 to 50 degree Celsius
- 12. NEMA 4 enclosure
- 13. Power: 18 to 30 Vdc
- 14. Acceptable products:
 - a. Allen-Bradley PanelView Plus Compact Catalog No. 2711PC- T10C4D1 Development software not necessary.

- b. Advantech's Powered by Wonderware Operator Panel C-TPC1070H-PBW01.
- c. Or equal as approved by the Engineer

PART 3 - EXECUTION

3.1 FACTORY QUALITY CONTROL

A. General:

- 1. Process Control System Supplier service personnel shall perform all factory tests, inspections, and adjustments as specified in section 40 80 00.

END OF SECTION