

SECTION 16180

EQUIPMENT WIRING

PART 1 - GENERAL

1.01 WORK INCLUDED

- A. Electrical Connections to Equipment Specified under Other Sections Or Furnished by Owner, Including but Not Limited to: Exhaust fans, air handling units, air-conditioning units, circulators, heating system pumps, burner, water heaters.
- B. All line voltage wiring including final branch circuit connections to disconnects, motor controllers, Variable Frequency Drives (VFD), Isolation transformers, and motors. See Equipment Schedules on Drawings for wiring and plans for equipment locations.
- C. Fused and non-fused disconnect switches for the equipment, except disconnect switches specifically provided with the equipment.
- D. Except as specifically noted, motors, variable frequency drives (VFD), isolation transformers for VFD, magnetic or manual starters and thermal overload protection will be furnished with the equipment for installation under Section 16180.
 - 1. Single pole switches, switch and pilots, and light/fan switches shall be provided and installed under section 16180. Coordinate with equipment schedules on H&V Drawings.
- E. Temperature Control Wiring: Provided and installed under Section 15975 - Automatic Temperature Controls (ATC).
- F. Roof Top Equipment: Whether shown or not on the Drawings, provide a weather proof GFCI service receptacle at units per code requirements. Provide home run to nearest 120 volt, 20A, 1pole spare breaker. Label and show on as-built drawings.

1.02 RELATED SECTIONS

- A. Division 15.
- B. Section 16010: Basic Electrical Requirements.

1.03 REFERENCES

- A. NEMA Standards.
- B. NFPA 70 (N.E.C.) Latest Edition.
- C. U.L. Standards.
- D. ANSI Standards.

1.04 PERFORMANCE REQUIREMENTS

- A. Conform to requirements of ANSI/NFPA 70. (N.E.C.)
- B. Furnish products listed and classified by Underwriters' Laboratories, Inc. (U.L.) as suitable for purpose specified and shown.

- C. Drawings do not show all required disconnect servicing switches. Furnish and locate as required by N.E.C.
- D. Size fuses and thermal elements per N.E.C. and manufacturer's recommendations.
- E. Connect motors for correct voltage, phase and rotation.

1.05 SUBMITTALS

- A. None.

PART 2 - PRODUCTS

2.01 DISCONNECT SWITCHES

- A. Specified under Section 16440.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Verify that equipment is ready for electrical connection, wiring, and energization.

3.02 PREPARATION

- A. Review equipment submittals prior to installation and electrical rough-in. Verify location, size, and type of connections. Coordinate details of equipment connections with supplier and installer.

3.03 INSTALLATION

- A. Use wire and cable with insulation suitable for temperatures encountered in heat-producing equipment, but in no case less than the wire specified under Section 16123, Wire and Cable.
- B. Conduit Connections to Equipment: Dry locations, use flexible conduit. Damp or wet locations, use flexible liquidtight Type UA conduit with approved liquidtight fittings. Maximum length two feet (2').
- C. Install pre-finished cord set where connection with attachment plug is indicated or specified, or use attachment plug with suitable strain-relief clamps.
- D. Provide suitable strain-relief clamps for cord connections to outlet boxes and equipment connection boxes.
- E. Provide matching receptacle for each cord and plug.
- F. Make wiring connections in wiring compartment of prewired equipment in accordance with manufacturer's instructions.
- G. Install disconnect switches, controllers, control stations, temperature switches as indicated or required.

3.04 EQUIPMENT CONNECTION SCHEDULE

- A. See Drawings.

END OF SECTION