

ELEMENTARY DIAGRAM:

The diagram illustrates the electrical connections for the EF-C640 unit. It is divided into two main sections: the upper section shows the power supply and control circuitry, while the lower section shows the terminal connections for the unit.

Power Supply and Control Circuitry:

- Power Supply:** The unit is powered by a 24 VDC supply from CP-M826. The power is distributed through a series of relays (CR1, CR2, CR3, CR4, CR5) and fuses (FU1A, FU1B, FU2) to the unit's internal components.
- Control Circuitry:** The unit features a Schneider Electric TLM R (TLM R) relay and a Schneider Electric TLM E (TLM E) relay. The TLM R relay is connected to the power supply and the TLM E relay. The TLM E relay is connected to the power supply and the TLM R relay.
- Terminal Connections:** The unit has 24 terminals (1-24) for power and control signals. The connections are as follows:
 - Terminal 1: 24 VDC FROM CP-M826
 - Terminal 2: TB02 12P 0.5A
 - Terminal 3: TB02 13P 0.5A
 - Terminal 4: TB02 14P 0.5A
 - Terminal 5: TB02 15P 0.5A
 - Terminal 6: TB03 7P 0.5A
 - Terminal 7: TB04 2C 1.0A
 - Terminal 8: TB02 12P 0.5A
 - Terminal 9: TB02 13P 0.5A
 - Terminal 10: TB02 14P 0.5A
 - Terminal 11: TB02 15P 0.5A
 - Terminal 12: TB03 7P 0.5A
 - Terminal 13: TB04 2C 1.0A
 - Terminal 14: TB02 12P 0.5A
 - Terminal 15: TB02 13P 0.5A
 - Terminal 16: TB02 14P 0.5A
 - Terminal 17: TB02 15P 0.5A
 - Terminal 18: TB03 7P 0.5A
 - Terminal 19: TB04 2C 1.0A
 - Terminal 20: TB02 12P 0.5A
 - Terminal 21: TB02 13P 0.5A
 - Terminal 22: TB02 14P 0.5A
 - Terminal 23: TB02 15P 0.5A
 - Terminal 24: TB03 7P 0.5A

Terminal Connections:

- Terminal 1: 24 VDC FROM CP-M826
- Terminal 2: TB02 12P 0.5A
- Terminal 3: TB02 13P 0.5A
- Terminal 4: TB02 14P 0.5A
- Terminal 5: TB02 15P 0.5A
- Terminal 6: TB03 7P 0.5A
- Terminal 7: TB04 2C 1.0A
- Terminal 8: TB02 12P 0.5A
- Terminal 9: TB02 13P 0.5A
- Terminal 10: TB02 14P 0.5A
- Terminal 11: TB02 15P 0.5A
- Terminal 12: TB03 7P 0.5A
- Terminal 13: TB04 2C 1.0A
- Terminal 14: TB02 12P 0.5A
- Terminal 15: TB02 13P 0.5A
- Terminal 16: TB02 14P 0.5A
- Terminal 17: TB02 15P 0.5A
- Terminal 18: TB03 7P 0.5A
- Terminal 19: TB04 2C 1.0A
- Terminal 20: TB02 12P 0.5A
- Terminal 21: TB02 13P 0.5A
- Terminal 22: TB02 14P 0.5A
- Terminal 23: TB02 15P 0.5A
- Terminal 24: TB03 7P 0.5A

The diagram illustrates the electrical wiring for a control panel, showing connections between various components and their respective wiring specifications.

Components and Connections:

- MCC-M730E.MS-C640:**
 - Terminal Block 1: T1 (C640-T1), T2 (C640-T2), T3 (C640-T3).
 - Terminal Block 2: 1 (C640-1), 1 (C640-1), 1 (C640-1), 2 (C640-2), 2A (C640-2A), 3 (C640-3), 4 (C640-4), 5 (C640-5), X2 (C640-X2), 8A (C640-8A).
 - Terminal Block 3: 1 (C640-1), 1 (C640-1), 1 (C640-1), 2 (C640-2), 2A (C640-2A), 3 (C640-3), 4 (C640-4), 5 (C640-5), X2 (C640-X2), 8A (C640-8A).
- Wiring Specifications:**
 - C-C640-1: 3C, 12 AWG, RW90 IN CONDUIT BND, 12 AWG, RW90 IN CONDUIT.
 - CA-C6401-4: 2C, 14 AWG, RW90 600V IN CONDUIT.
 - CA-C6401-1: 6C, 14 AWG, RW90 IN CONDUIT.
 - CA-C6401-2: 8C, 14 AWG, RW90 IN CONDUIT.
 - CA-C6401-3: 12C, 16 AWG, CIC, 300V.
 - CA-C6401-5: 2C, 14 AWG, RW90 600V IN CONDUIT.
- Other Components:**
 - DS-C640 (3): 3C, 12 AWG, RW90 BND, 12 AWG, RW90 IN CONDUIT.
 - EF-C640: 1.1 kW (1.5 HP).
 - XV-C6401: ON/OFF DAMPER SPRING RETURN.
 - JBA-C6401: 3C, 12 AWG, RW90 BND, 12 AWG, RW90 IN CONDUIT.
 - CP-M826 HVAC CONTROL PANEL: TB02, TB03, TB04.
 - FS-C6402: 2C, 14 AWG, RW90 600V IN CONDUIT.

Legend:

- 1: 12P
- 2: 13P
- 3: 14P
- 4: 15P
- 5: 7P
- 6: 2
- 7: 2C

- 1 PROVIDE OVERLOAD RELAY BASED ON MOTOR FLA AND NAMEPLATE DATA.
- 2 JUNCTION BOX TO BE LOCATED WITHIN 10 FEET OF DAMPER ACTUATOR.
- 3 CONTRACTOR TO PROVIDE DISCONNECT COMPLETE WITH AUXILIARY CONTACT FOR READY SIGNAL.

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						DRAWN BY: B. WILKS	APPROVED BY: V. ELIMBAN
						SCALE: NTS	ISSUED FOR CONSTRUCTION BY: M. SKINNER
						DATE: 2023/08/16	DATE: 2025/04/30
00	ISSUED FOR TENDER AND CONSTRUCTION			2025/04/30	VE	VE	CONSULTANT NO.:
NO.	REVISIONS			DATE	DESIGN	CHECK	

CITY DRAWING NUMBER	SHEET	REV.	SIZE
1-0630M-E0079	001	00	A1

1-0630M-A0072	PANEL LAYOUT, DAMPER ACTUATOR JUNCTION BOXES
1-0630M-A0057	HVAC CONTROL PANEL CP-M826, DISCRETE OUTPUTS RACK 0, MODULE 4
1-0630M-A0056	HVAC CONTROL PANEL CP-M826, DISCRETE OUTPUTS RACK 0, MODULE 3
1-0630M-A0055	HVAC CONTROL PANEL CP-M826, DISCRETE INPUTS RACK 0, MODULE 2
1-0630M-A0054	PANEL LAYOUT, HVAC CONTROL PANEL CP-M826
1-0630M-E0025	ELECTRICAL SINGLE LINE DIAGRAM, MCC-M730E ESSENTIAL MCC

DRAWING NUMBER	REFERENCE DRAWINGS
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