

TABLE 430.97(D) Minimum Spacing Between Bare Metal Parts

Nominal Voltage	Opposite Polarity Where Mounted on the Same Surface		Opposite Polarity Where Held Free in Air		Live Parts to Ground	
	mm	in.	mm	in.	mm	in.
Not over 125 volts, nominal	19.1	$\frac{3}{4}$	12.7	$\frac{1}{2}$	12.7	$\frac{1}{2}$
Not over 250 volts, nominal	31.8	$1\frac{1}{4}$	19.1	$\frac{3}{4}$	12.7	$\frac{1}{2}$
Not over 600 volts, nominal	50.8	2	25.4	1	25.4	1

Where a grounded conductor is provided, the motor control center shall be provided with a main bonding jumper, sized in accordance with 250.28(D), within one of the sections for connecting the grounded conductor, on its supply side, to the motor control center equipment ground bus.

Exception No. 2: High-impedance grounded neutral systems shall be permitted to be connected as provided in 250.36.

430.96 Grounding. Multisection motor control centers shall be connected together with an equipment grounding conductor or an equivalent equipment grounding bus sized in accordance with Table 250.122. Equipment grounding conductors shall be connected to this equipment grounding bus or to a grounding termination point provided in a single-section motor control center.

430.97 Busbars and Conductors.

(A) Support and Arrangement. Busbars shall be protected from physical damage and be held firmly in place. Other than for required interconnections and control wiring, only those conductors that are intended for termination in a vertical section shall be located in that section.

Exception: Conductors shall be permitted to travel horizontally through vertical sections where such conductors are isolated from the busbars by a barrier.

(B) Phase Arrangement. The phase arrangement on 3-phase horizontal common power and vertical buses shall be A, B, C from front to back, top to bottom, or left to right, as viewed from the front of the motor control center. The B phase shall be that phase having the higher voltage to ground on 3-phase, 4-wire, delta-connected systems. Other busbar arrangements shall be permitted for additions to existing installations and shall be marked.

Exception: Rear-mounted units connected to a vertical bus that is common to front-mounted units shall be permitted to have a C, B, A phase arrangement where properly identified.

(C) Minimum Wire-Bending Space. The minimum wire-bending space at the motor control center terminals and minimum gutter space shall be in accordance with 312.6.

(D) Spacings. Spacings between motor control center bus terminals and other bare metal parts shall not be less than specified in Table 430.97(D).

(E) Barriers. Barriers shall be placed in all service-entrance motor control centers to isolate service busbars and terminals from the remainder of the motor control center.

430.98 Marking.

(A) Motor Control Centers. Motor control centers shall be marked according to 110.21, and the marking shall be plainly visible after installation. Marking shall also include common power bus current rating and motor control center short-circuit current rating.

(B) Motor Control Units. Motor control units in a motor control center shall comply with 430.8.

430.99 Available Fault Current. The available fault current at the motor control center and the date the available fault current calculation was performed shall be documented and made available to those authorized to inspect, install, or maintain the installation.

A motor control center is required to be marked with its short-circuit current rating per 430.98. The requirement in 430.99 requires the motor control center to be marked with the available short-circuit current. This provides a means to easily compare the equipment rating with the available fault current and to confirm compliance with 110.10.

Part IX. Disconnecting Means

430.101 General. Part IX is intended to require disconnecting means capable of disconnecting motors and motor controllers from the circuit.

430.102 Location.

Δ (A) Motor Controller. An individual disconnecting means shall be provided for each motor controller and shall disconnect the motor controller. The disconnecting means shall be located in sight from the motor controller location.