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Installation

The Micro Expansion Unit connects to a 28-point Micro PLC to provide additional I/O points (8 inputs and 6 outputs). Up to four Expansion Units can be connected in series to one Micro PLC.

The Expansion Unit can be mounted on a wall or panel using screws, or on a DIN rail. The Expansion Unit must be mounted on a vertical surface. Do not mount it on a horizontal surface.

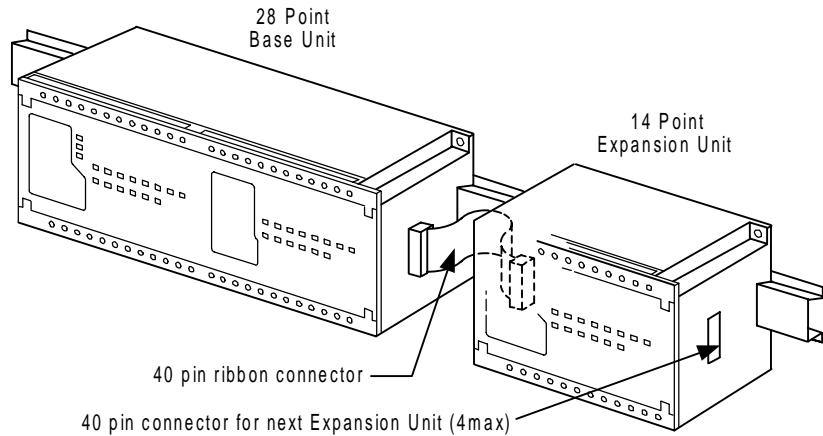


Figure 1. Micro PLC Base and Expansion Units

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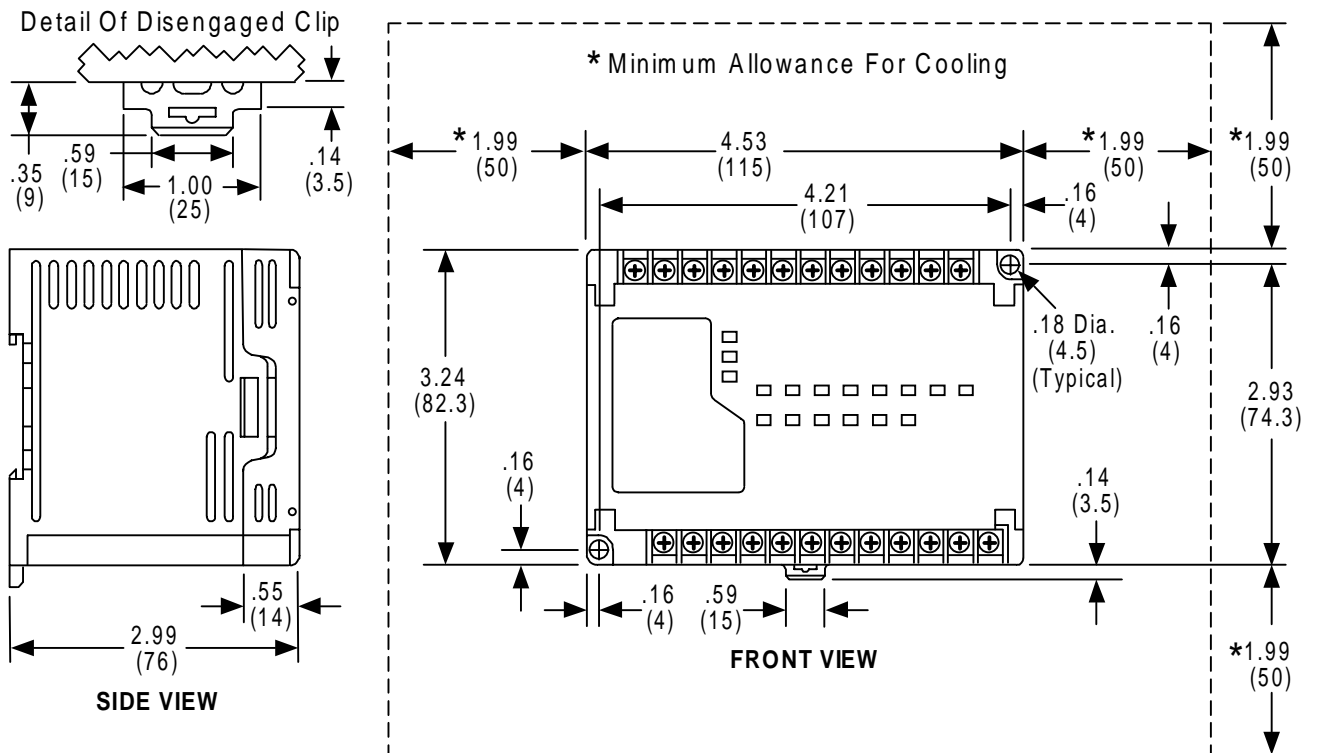


Figure 2. Mounting Dimensions and Spacing Requirements

Dimensions in inches (millimeters in parentheses)

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Caution

Power down the Micro PLC before connecting the Expansion Unit. Connecting the Expansion Unit with the Micro PLC powered up could damage the expansion unit or cause the base unit to malfunction.

Caution

The Expansion Unit's input expansion port must be connected to the output expansion port of the base Micro PLC (or another expansion unit). Connecting the unit in the reverse position (as shown in Figure 3) could damage the Expansion Unit.

Caution

The 40-pin ribbon cable provided with the Expansion Unit has keyed connectors to prevent incorrect connection. Powering up the system with the cable improperly installed could damage the Expansion Unit.

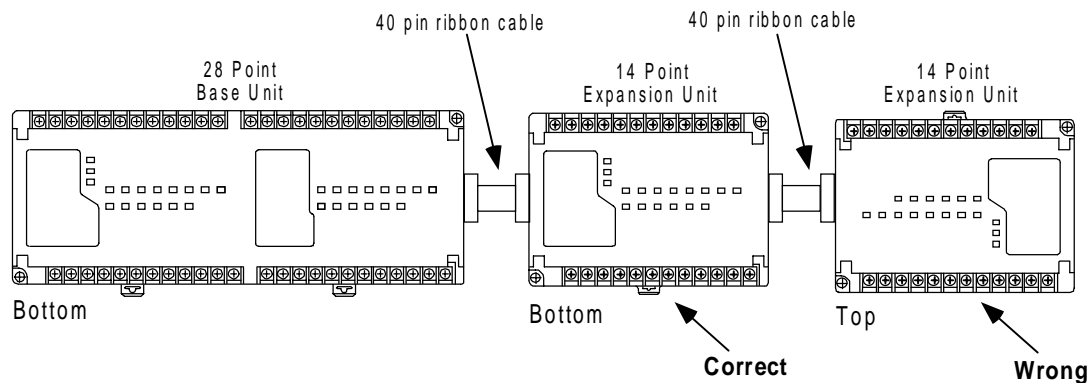


Figure 3. Expansion Unit Orientation

Field Wiring

Information for power supply and I/O wiring connections for the Micro Expansion Unit is detailed below and in Figure 4. Each terminal can accept solid or stranded wires. However, the wires into any given terminal should be of the same type and size.

Warning

The Micro PLC must be grounded to minimize electrical shock hazard. Failure to do so could result in injury to personnel.

Warning

You should calculate the maximum current for each wire and observe proper wiring practices. Failure to do so could cause injury to personnel or damage to equipment.

Caution

When connecting stranded conductors, insure that there are no projecting strands of wire. These could cause a short circuit, damaging equipment or causing it to malfunction.

- Use copper conductors rated for 75°C (167 °F) for all wiring. You can use one AWG #14 (2.1mm²) copper conductor or two smaller copper conductors — AWG #16 (1.3mm²) through AWG #22 (0.36mm²) — per terminal.
- The suggested torque for all terminal connections is 5 in-lbs (5.76 kg-cm).
- Turn off power to the PLC before connecting field wiring.
- All low-level signal wires should be run separately from other field wiring.

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- AC power wiring should be run separately from DC field wiring.
- Field wiring should not be routed close to any device that could be a potential source of electrical interference. If severe noise problems are present, additional power supply filtering or an isolation transformer may be required.
- Label all wires to and from I/O devices

Note

All DC inputs can be connected as either positive or negative logic.

You should provide suppression across each inductive load controlled by the Micro PLC. Figure 5 illustrates typical circuits for AC and DC inductive loads.

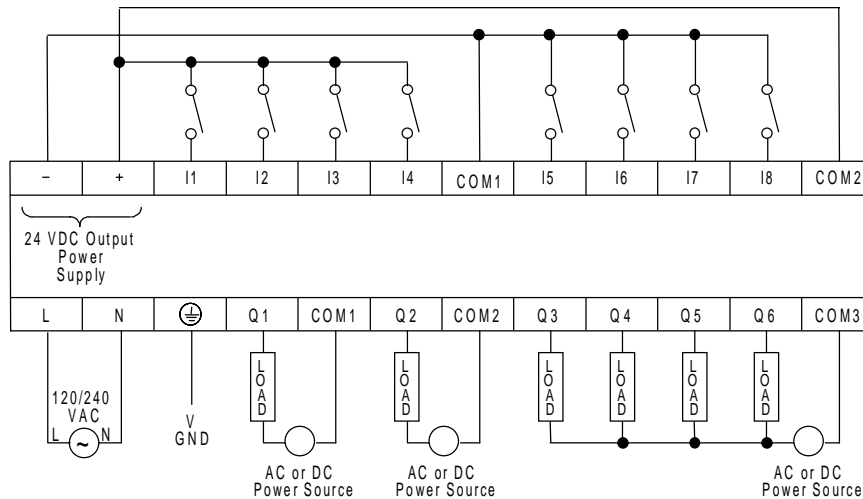


Figure 4. Field Wiring Diagram (IC693UEx001)

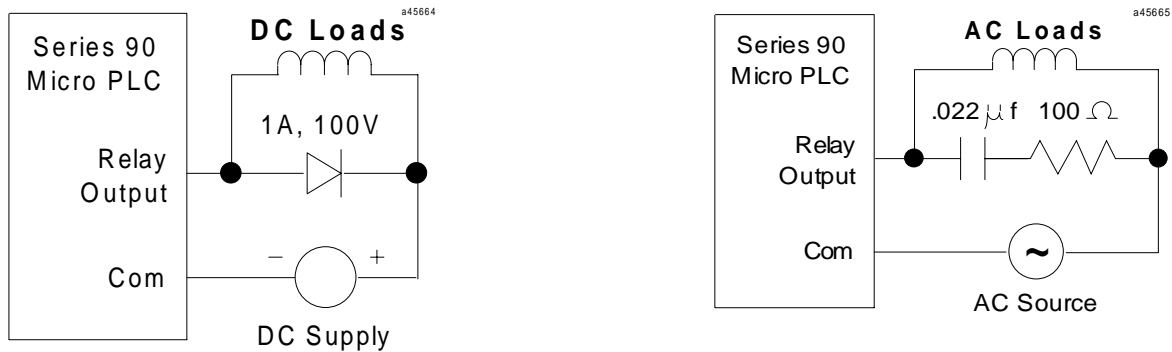


Figure 5. Typical Suppression Circuits for Inductive Loads