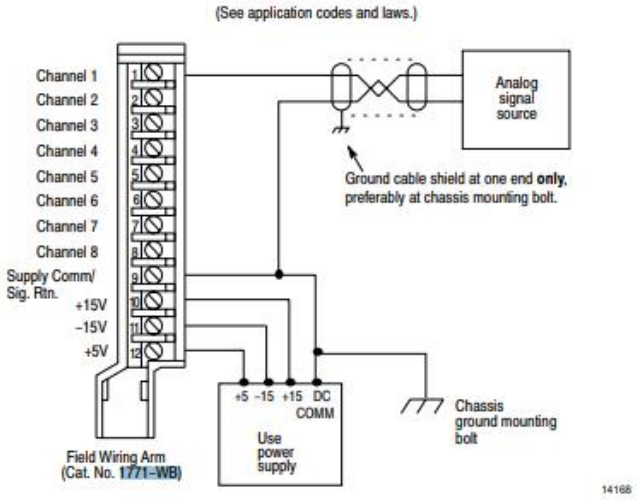
There is no restriction on cable length for current mode input devices. Cable length resistance, however, when added to module input resistance, must not be enough to cause an overload on the analog driving device.

Figure 3.2
Connection Diagram

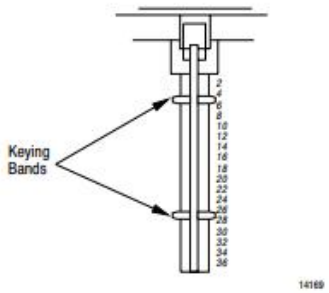


If you use a 1770-P1 power supply for your external power source, you must jumper the 5 VDC COMMON and the 15 VDC COMMON terminals together either at the power supply or at the module. Figure 3.3 shows the wiring connections for the Power Supply (1770-P1).

To key a module slot to accept only the 1771-IE module, position the keying bands on the upper backplane connector at the following positions (Figure 3.1):

- between 4 and 6
- between 26 and 28

Figure 3.1
Keying Positions



Wiring

Connect analog devices and external power to your input module through the Field Wiring Arm (cat. no. 1771-WB). The wiring arm pivots on the front of the I/O chassis to connect with the module. Wiring connections are made at the wiring arm, so you can remove the module from the chassis without disconnecting the wiring.

Connection diagram (Figure 3.2) shows connections of analog devices and power supply to the wiring arm of the input module.

The COMMON terminal on the wiring arm connects to the power supply COMMON and SIGNAL RETURN wires from each of your input devices (Figure 3.2). Do not confuse the SIGNAL RETURN wire with the cable shield. The SIGNAL RETURN is one of the insulated wires of the cable-twisted pair. The cable shield is discussed in the next section.

When wiring analog devices to the wiring arm, use Belden No. 8761 or an equivalent cable. We recommend that the cable from voltage mode input devices does not exceed 50 feet in length. We base this recommendation on considerations of noise immunity in typical industrial environments.