

3.5 Connecting Signal Cable

The terminals or connectors of I/O modules interface I/O signals from/to the field.



IMPORTANT

Do not ground the secondary side of the field power supply connected to the digital modules.

■ Process I/O Signal Connection

- Power, control bus, and signal cables must be separately laid. Avoid laying them in parallel.
- In case of using multicore cables for field wiring, do not share one multicore cable with I/O modules of different voltage types (i.e. 48 V DC and 24 V DC).
 - 48 V DC: SDV53A
 - 24 V DC: SDV144, SDV521, SDV531, SDV541
- The use of group-shielded twisted-pair cables is recommended for analog signal input specifically in order to prevent induction noise. A twisted-pair cable pitch of 50 mm or less should be used and the shielded cables must be grounded.
- The use of twisted-pair cables is also recommended for digital signals.
- The twisted-pair cable has the following advantages over a solid wire:
 - More flexible for easy curving and cabling in limited spaces.
 - With good contact and durable in using a solderless contact.
- Signal cables must be clamped so that their weight does not affect terminals.
- Use solderless lug or pressure clamp terminal contact when process I/O signals are connected with terminals.
- Be careful when laying cables so as not to place excessive force on the cables.

● Solderless Lug



IMPORTANT

- Use the solderless contact with an insulation covering.
- Use the solderless contact and crimp tools of the same manufacturer.
- Use correct-size crimp tools according to cable sizes.