

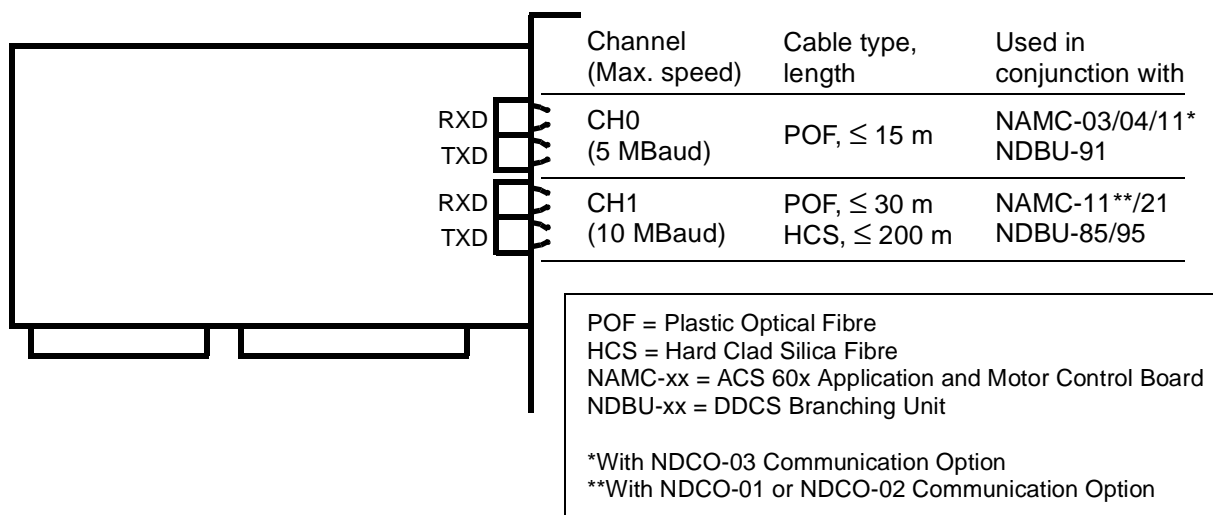
NISA-03 DDCS/ISA Adapter Installation Instructions

The NISA-03 DDCS/ISA Adapter

The NISA-03 DDCS/ISA Adapter is an interface board for controlling ABB ACS 600 Product Family drives (later referred to as ACx 600) from a personal desktop computer. The board enables the use of *DriveWare* PC software, e.g. *DriveWindow*. The NISA-03 occupies a standard 16-bit ISA slot on the computer motherboard.

The optical signal is connected to the NAMC (Application and Motor Control Board) of the ACx 600 with fibre optic cables. The signal can be distributed to several drives using NDBU Series Branching Units; refer to the NDBU documentation on more information on this feature.

The NISA-03 has two DDCS-protocol optical channels, one equipped with 5 megabaud optical components, the other with 10 megabaud optical components. The channel to use depends on the board it is connected to. The diagram below presents the boards as well as cable types and lengths that can be used with each NISA-03 channel.





WARNING! Do not work on a powered ACx 600. Before installation, switch off the mains and other dangerous voltages (e.g. from external control circuits) to the ACx 600. After switching off the mains, always allow the intermediate circuit capacitors 5 minutes to discharge before commencing work on the frequency converter.



WARNING! The component boards of both a personal computer and the ACx 600 contain integrated circuits that are extremely sensitive to electrostatic discharge (ESD). Wear an earthing wrist band when handling component boards. Do not touch the boards unnecessarily. Do not remove the NISA-03 from its antistatic packaging until required.

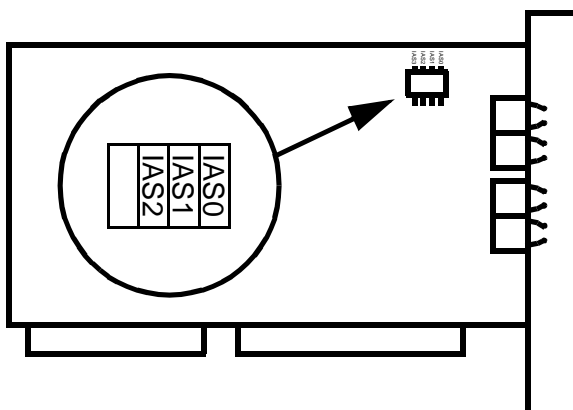


WARNING! Handle the fibre optic cables with care. The maximum long term tensile load is 1 N; the minimum short term bend radius is 35 mm. Do not touch the ends of the fibres with bare hands as the fibre is extremely sensitive to dirt. When running the cables into the ACx 600 converter unit, use rubber grommets at cable entries to protect the cables.

Installation Procedure

1. Switch off the PC and all its peripherals. Disconnect the mains leads.
2. Switch off the mains supply and other dangerous voltages (e.g. from external control circuits) to the ACx 600.
3. Remove the PC cover. Check that no existing boards use the same addressing space with the NISA-03.
The default base I/O address for the NISA-03 is 280H. (The NISA-03 requires 32 consecutive locations.) If this address is already used by another board on the system, 2A0H can be selected using the DIP switches as shown below. (DIP switch IAS3 is not used.)

Note: When installing new boards on the computer system, it is a good practice to write down the I/O addresses, as it helps the addition of other cards later, and makes troubleshooting easier if problems arise.



Base I/O Address	DIP Switches		
	IAS2	IAS1	IAS0
280H (Default)	OFF	OFF	OFF
2A0H	OFF	OFF	ON

4. Locate an available 16-bit ISA card slot. Remove the expansion slot cover and screw. (Keep the screw.)
5. Press the NISA-03 Adapter into the slot evenly and firmly. Use the screw from the slot cover to fasten the NISA-03 into its place.
6. Close the PC cover.

Before proceeding, make sure that the intermediate circuit capacitors in the ACx 600 have discharged. (Before starting work on the ACx 600, wait at least 5 minutes after switching off the mains supply.)

7. Open the front cover (or door) of the ACx 600. Locate the NAMC (or NDBU) board. (The actual location of the boards inside the drive vary depending on drive type.) Lead the fibre optic cables to the inside of the drive. Use grommets at cable lead-throughs.
8. Inside the ACx 600, connect the fibre optic cables to Channel 3 (terminals V19 and V20) on the NAMC board. (On NDBU Branching Unit, the incoming cables are connected to the MSTR channel.) Observe connector colour codes.
9. At the PC, connect the fibre optic cables to the appropriate NISA-03 channel (CH0 or CH1; see first page). Observe connector colour codes.
10. Close the front cover (or door) of the ACx 600.



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