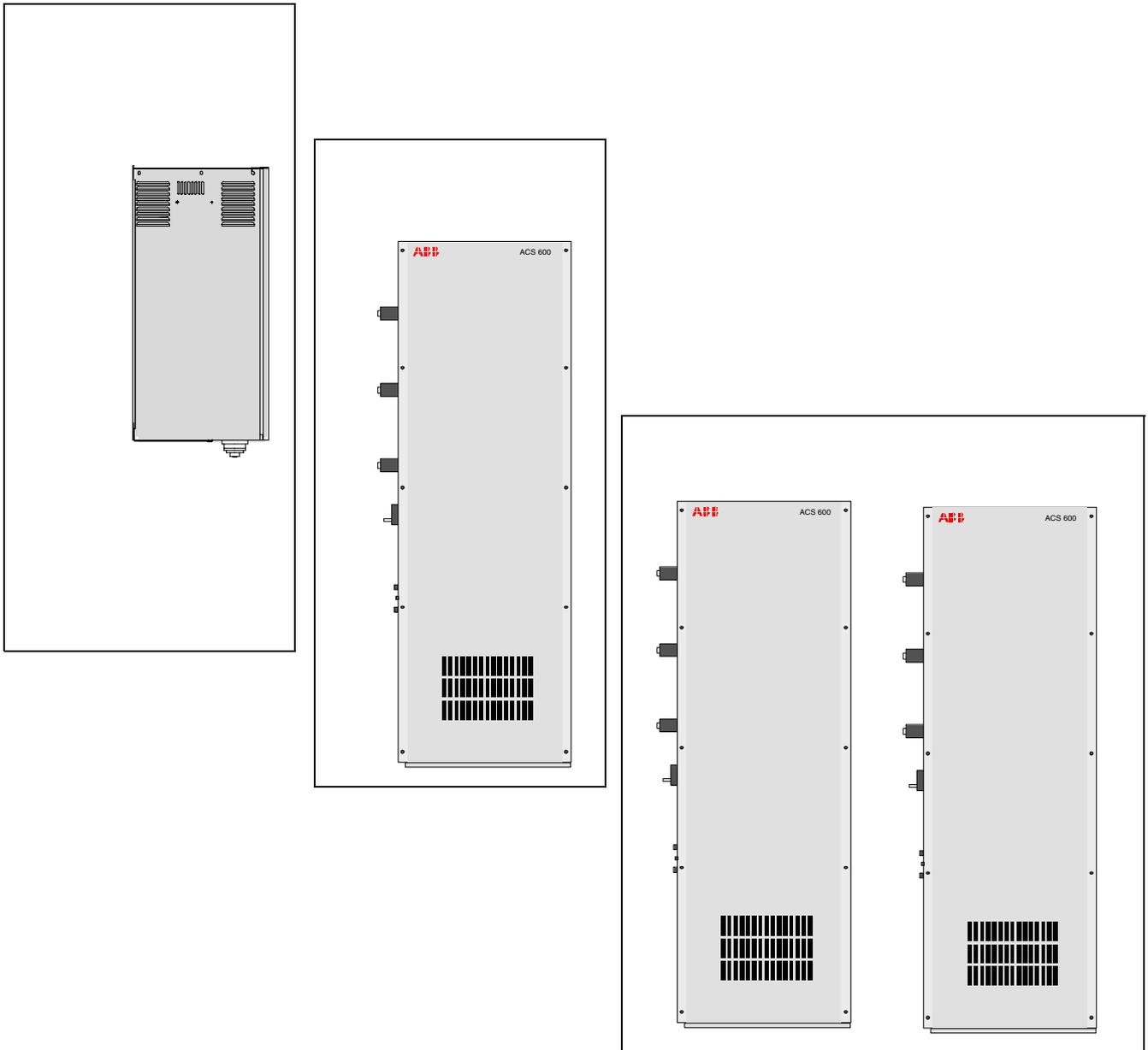


ACS 600

Converter Module Installation in User-defined Cabinet

ACx 6x1 Frequency Converters
ACx 604 Converter Modules



Chapter 1 – Introduction

Overview

This paper is intended for people who are responsible for designing a user-defined frequency converter cabinet and installing an ACx 6x1 frequency converter or an ACx 604 converter unit in a user-defined cabinet. It gives additional information to the installation instructions in the respective *Hardware Manual*. There is a special emphasis on meeting the European Union EMC (Electromagnetic Compatibility) Directive requirements.

We expect that you have a basic knowledge of physical and electrical fundamentals, electrical wiring practices, electrical components and electrical schematic symbols.

The dimensional drawings for ACx 604 converter units are included.

Delivery Check R7, R8, R9

After opening the package check that it contains the following items:

- main parts list
- ACx 604 frequency converter module with NIOC and NAMC control boards inside the module. (If an external drive control unit NDCU is ordered, the control boards are located in it, not inside the module.)
- NDCU-11/51 (if an external drive control unit is ordered)
- wire set for +24 V power supply
- two 2-metre fibre optic cables
- *ACS/ACC/ACP 604/607/627 Hardware Manual*
- *ACS 600 Converter Module Installation in User-defined Cabinet*
- respective *ACS 600 Firmware Manual*
- optional accessories (if ordered) with appropriate manuals
- report on the final testing procedure
- main circuit diagram

**Delivery Check 2 x R8,
2 x R9**

After opening the package of 2 x R8 and 2 x R9 units check that it contains the following items:

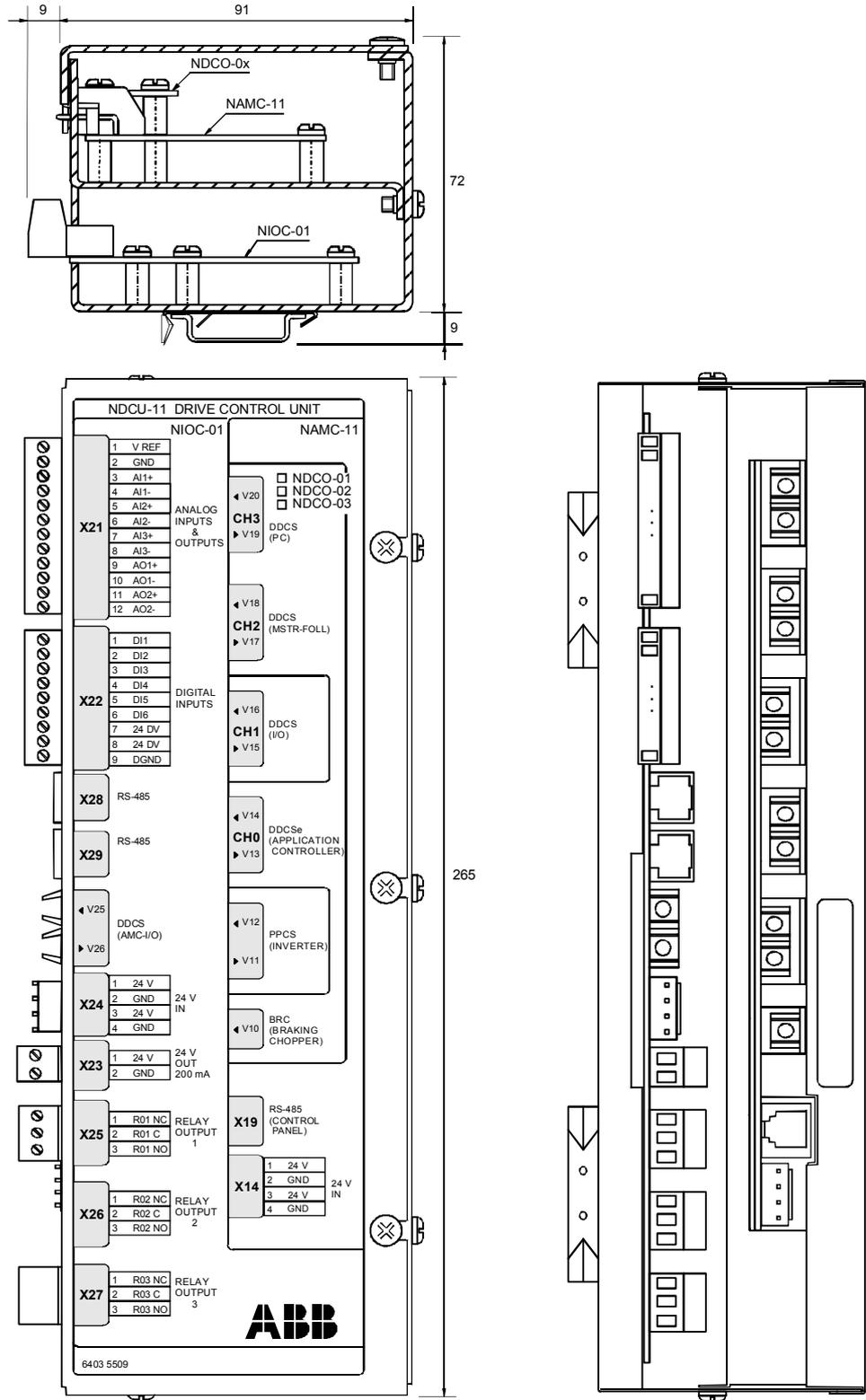
- main parts list
- ACx 604 frequency converter modules (2 pcs)
- Common control components: NDCU-11/51 and NPBU-41
- conductor set of earth fault protection (not used with 12-pulse supplied units). Refer to main circuit diagram 58985732: A13 NEFB X1 to A13 NEFB X1 and A13 NEFB X3 to A4 NINT X43.
- wire set for +24 V power supply
- 6 pieces of 5-metre fibre optic cables
- *ACS/ACC/ACP 604/607/627 Hardware Manual*
- *ACS 600 Converter Module Installation in User-defined Cabinet*
- *respective ACS 600 Firmware Manual*
- optional accessories (if ordered) with appropriate manuals
- a report on the final testing procedure
- main circuit diagram and control circuit diagrams

Testing

The ACS 604 modules have been tested by ABB at the factory. Also, current division between the modules of the 2 x R8 and 2 x R9 deliveries has been checked. Only testing of the assembly must be done when installing the modules in user-defined cabinets.

Drive Control Unit
NDCU-11 (NIOC-01 +
NAMC-11)

For the electrical connections refer to section *Control Board Connections (Frames R7, R8, R9)* or *Control Board Connections (Frames 2 x R8 and 2 x R9)*.



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Control Board Connections (Frames R7, R8, R9)

A circuit diagram of the control board connections of the ACx 604 modules is shown below. The NIOC and NAMC boards are located inside the module or in the external Drive Control Unit NDCU-11/51.

