

1. Product Description

Nexto Series is a powerful and complete series of Programmable Logic Controllers (PLCs) with exclusive and innovative features, targeted for covering control systems requirements from medium to large applications or high performance industrial machines.

The backplane racks are the basic elements where Nexto Series modules are connected. The power supply and communication links are provided by these devices. Also, they are easy to install and maintain.

Nexto Series offers four different backplane rack sizes: 8, 12, 16 and 24-slot backplane rack and one 2-slot base. NX9020 (2-slot base for panel assembly) is a choice for applications which don't require I/O modules. NX9010 (8-slot backplane rack without hot swap) is the perfect choice in machinery applications. The NX9000 (8-slot backplane rack) is the perfect choice in applications with few or, even, no local I/O points. If higher I/O point density is required, or there's the need of more modules, the user can select larger backplane racks, like NX9001 (12-slot backplane rack), NX9002 (16-slot backplane rack) or NX9003 (24-slot backplane rack).



Its main features are:

- Available sizes for 2, 8, 12, 16 or 24 slots
- Easy module insertion and removal
- Rugged and lightweight design
- High-speed backplane bus
- Automatic addressing
- Compact size

2. Ordering Information

2.1. Included Items

The product package contains the following items:

- One NX9000, NX9001, NX9002, NX9003, NX9010 backplane rack or one base NX9020.

2.2. Product Code

The following code should be used to purchase the product:

Code	Description
NX9020	2-Slot base for panel assembly
NX9010	8-Slot Backplane Rack (No Hot Swap)
NX9000	8-Slot Backplane Rack
NX9001	12-Slot Backplane Rack
NX9002	16-Slot Backplane Rack
NX9003	24-Slot Backplane Rack

Table 1: Backplane Models

3. Related Products

The following products must be purchased separately when necessary:

Code	Description
NX9100	Left/Right Side Rack Ends
NX9102	Rack Connector Cover

Table 2: Related Products

Notes:

NX9100: NX9100 is a pair of side rack ends designed for protecting the rack ends. NX9100 must be purchased separately.

NX9102: NX9102 was designed to protect unused backplane connectors against dust, moisture and ESD (Electric Static Discharge). It's highly recommended the use of backplane connector covers in all unused backplane connectors. NX9102 must be purchased separately.

4. Innovative Features





Nexto Series brings to the user many innovations regarding utilization, supervision and system maintenance. These features were developed focusing a new concept in industrial automation.



iF Product Design Award 2012: Nexto Series was the winner of iF Product Design Award 2012 in industry + skilled trades group. This award is recognized internationally as a seal of quality and excellence, considered the Oscars of the design in Europe..

5. Product Features

5.1. General Features

	NX9020	NX9010	NX9000	NX9001	NX9002	NX9003
IP level	IP 20					
Operation temperature	0 to 60 °C					
Storage temperature	-25 to 75 °C					
Relative humidity	5 to 96 %, non condensing					
Conformal coating	x	x	✓	✓	✓	✓
Isolation Logic to protective earth 500 Vac / 1 minute	x	✓	✓	✓	✓	✓
Standards IEC 61131-2  CE – 2014/35/EU (LVD) and 2014/30/EU (EMC)	✓	✓	✓	✓	✓	✓
 RoHS – 2011/65/EU	✓	✓	✓	✓	✓	✓
 LISTED UL Listed – UL61010-1 (file E473496)	x	✓	✓	✓	✓	✓
DNV Type Approval – DNV-CG-0339 (TAA000013D)	x	✓	✓	✓	✓	✓
 EAC – CU TR 004/2011 (LVD) and CU TR 020/2011 (EMC)	✓	✓	✓	✓	✓	✓
Module dimensions (W x H x D) mm	55.1 x 119.00 x 18.60	163.70 x 119.00 x 18.60	163.70 x 119.00 x 18.60	236.10 x 119.00 x 18.60	308.50 x 119.00 x 18.60	453.30 x 119.00 x 18.60
Package dimensions (W x H x D) mm	110.00 x 140.00 x 30.00	230.00 x 184.00 x 35.00	230.00 x 184.00 x 35.00	304.00 x 184.00 x 35.00	377.00 x 184.00 x 35.00	520.00 x 184.00 x 35.00
Weight	0.05 kg	0.22 kg	0.27 kg	0.50 kg	0.60 kg	0.82 kg
Weight With Package	0.06 kg	0.35 kg	0.40 kg	0.65 kg	0.76 kg	1.15 kg
Current consumption	-	-	0.065 A	0.085 A	0.130 A	0.170 A
Products support						
NX3003	✓	✓	✓	✓	✓	✓
NX3004	✓	✓	✓	✓	✓	✓
NX3005	✓	✓	✓	✓	✓	✓
NX3008	✓	✓	✓	✓	✓	✓
NX3010	x	x	✓	✓	✓	✓
NX3020	x	x	✓	✓	✓	✓
NX3030	x	x	✓	✓	✓	✓
NX5100	x	✓	✓	✓	✓	✓

	NX9020	NX9010	NX9000	NX9001	NX9002	NX9003
NX5101	✓	✓	✓	✓	✓	✓
NX5110	✗	✓	✓	✓	✓	✓
NX5210	✗	✗	✓	✓	✓	✓
CPU redundancy support	✗	✗	✓	✓	✓	✓
Hot swap support	✗	✗	✓	✓	✓	✓

Table 3: General Features

Notes:

IP level: The IP level was defined considering that the backplane rack is fully inserted with Nexto Series modules.

CPU redundancy support: The backplanes support half-cluster redundancy, where a redundant CPU and a Redundancy Link Module must be placed side-by-side. These modules must be placed in the slots 2 and 4, occupying the slot numbers 2, 3, 4 and 5 (all modules with redundant features need 2 slots per module).

Conformal coating: The conformal coating protects the electronics inside the product from moisture, dust and other harsh elements in electronic circuits.

ATTENTION

When using the backplane NX9010, I/O data depends on the bus modules continuity to travel between the CPU and I/O modules, that is, the lack of any module on the bus will cause to all other modules physically on the right to get also diagnosed as missing.

6. Compatibility with Other Products

To develop an application for Nexto Series products, it is necessary to check the version of MasterTool IEC XE. The following table shows the minimum MasterTool IEC XE version required (where the backplane racks were introduced):

Products	MasterTool IEC XE
NX9001, NX9002 and NX9003	1.00 or higher
NX9000	2.01 or higher
NX9010	2.02 or higher
NX9020	3.12 or higher

Table 4: Compatibility with Other Products

ATTENTION

The Backplane Rack NX9010 is compatible with, besides the previous table, only I/O modules, except for the NX2020.

7. Physical Dimensions

7.1. 2-Slot Base for panel assembly (NX9020)

Dimensions in mm.

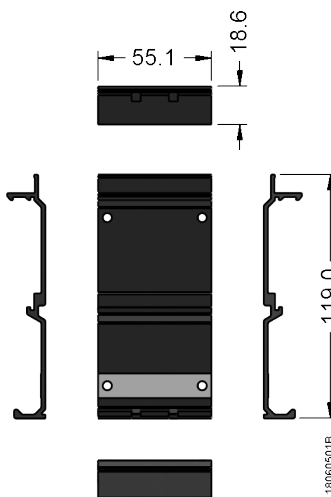


Figure 1: 2-Slot Base for panel assembly

7.2. 8-Slot Backplane Rack Without Hot Swap (NX9010)

Dimensions in mm.

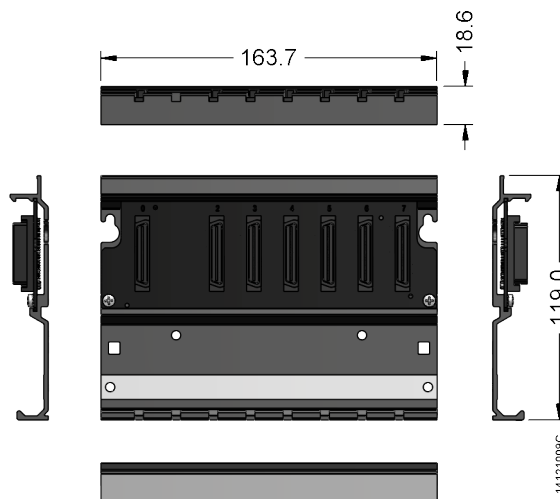


Figure 2: 8-Slot Backplane Rack (No Hot Swap)

7.3. 8-Slot Backplane Rack (NX9000)

Dimensions in mm.

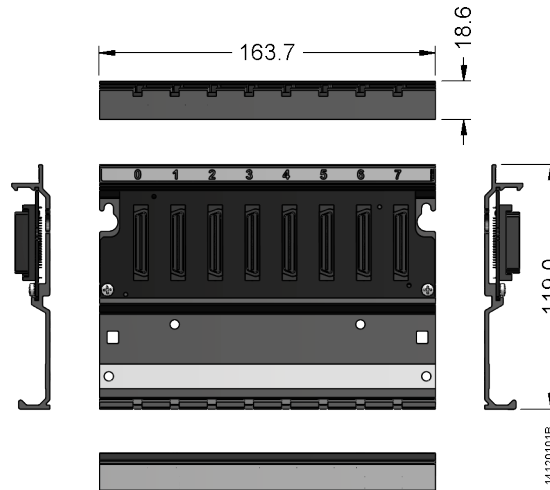


Figure 3: 8-Slot Backplane Rack

7.4. 12-Slot Backplane Rack (NX9001)

Dimensions in mm.

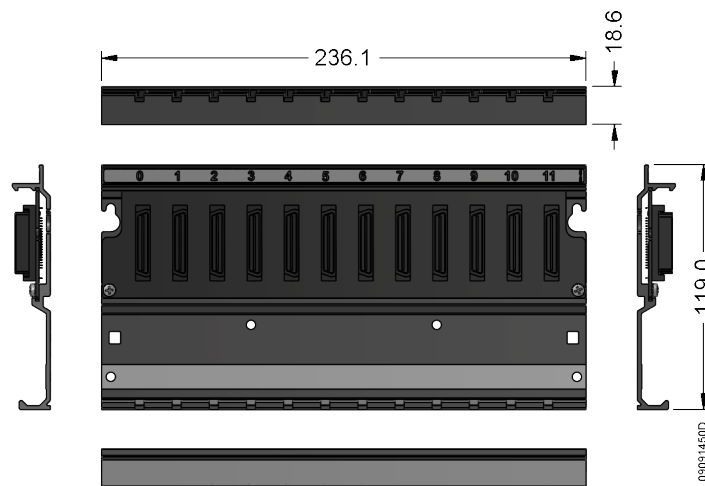


Figure 4: 12-Slot Backplane Rack

7.5. 16-Slot Backplane Rack (NX9002)

Dimensions in mm.

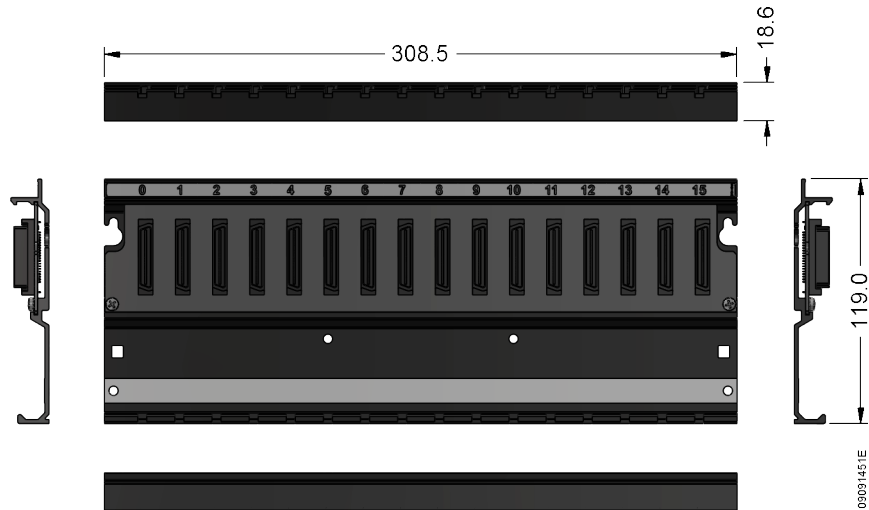


Figure 5: 16-Slot Backplane Rack

7.6. 24-Slot Backplane Rack (NX9003)

Dimensions in mm.

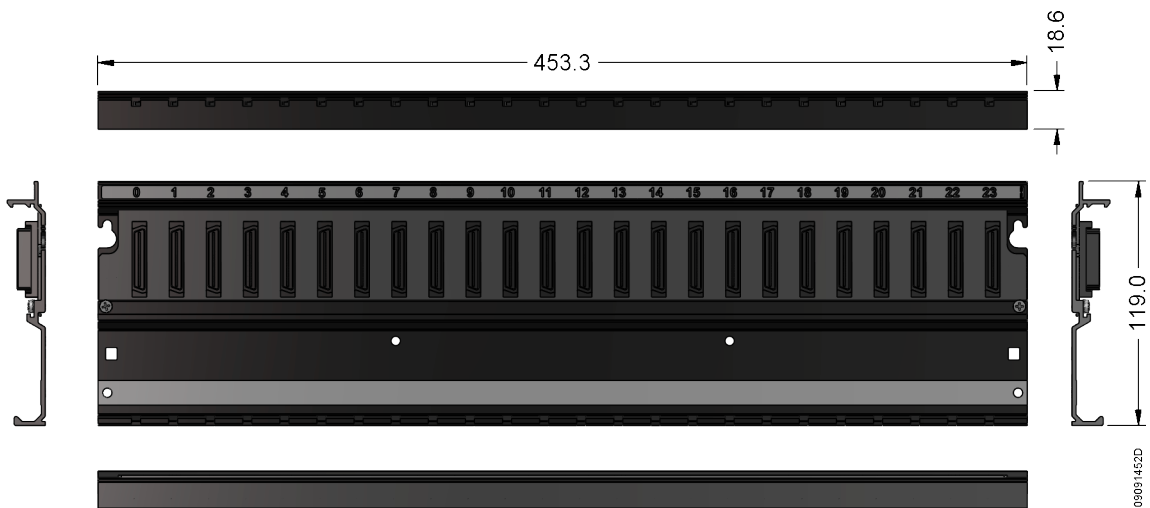


Figure 6: 24-Slot Backplane Rack

8. Installation

8.1. Module Installation

Nexto Series has a variety of modules where some require two slots and others only one slot. The number of slots used per each module can be found at module's specific technical documentation.

ATTENTION

For more information about how to select the recommended slot number for each kind of module (power supply, CPU, bus expansion, I/O modules, link between buses, Ethernet or PROFIBUS network), please check the item Placement Rules at Nexto Series User Manual – MU214600.

8.2. Electrical Installation

Information and orientations about correct electrical installation can be found at Nexto Series User Manual – MU214600.

8.3. Mechanical Assembly

The figures below indicate the position of all holes used to fasten Nexto Series backplanes in a given panel. More information about mechanical assembly can be found at Nexto Series User Manual – MU214600.

8.3.1. NX9020

Dimensions in mm.

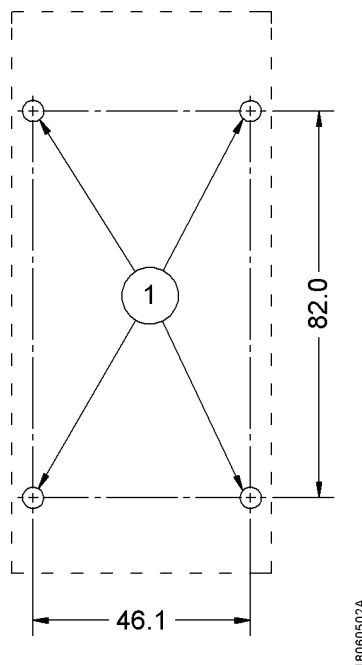


Figure 7: Drilling NX9020

8.3.2. NX9000, NX9001, NX9002, NX9003, NX9010

Dimensions in mm.

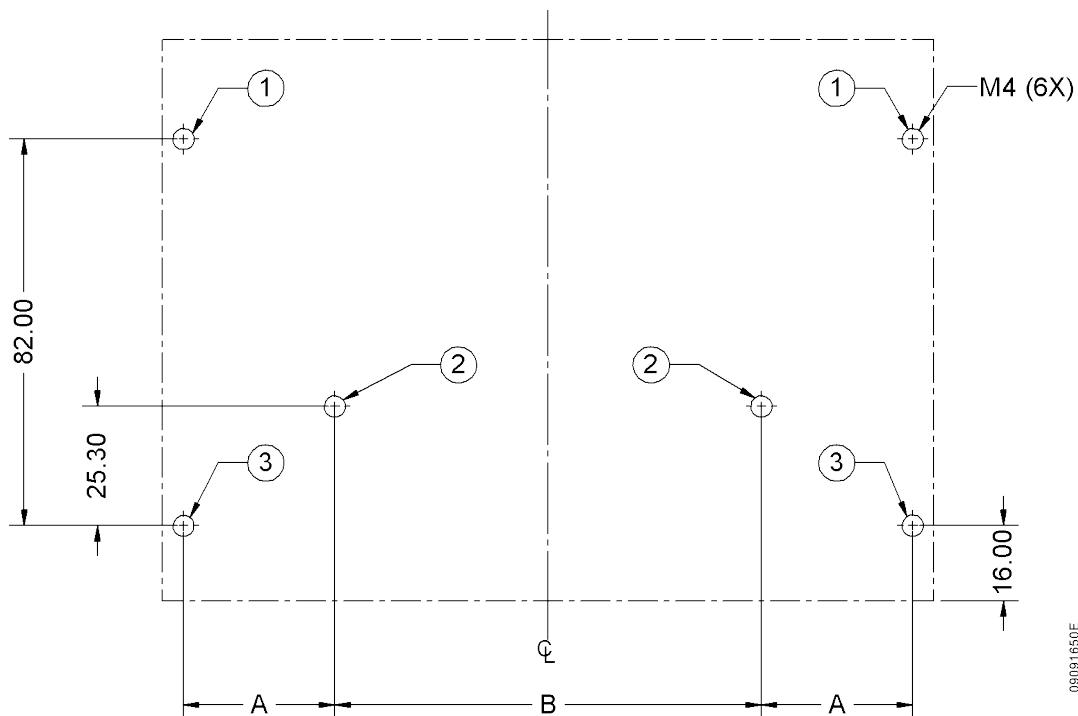


Figure 8: Drilling for Rack Fixation

The table below must be consulted to find the respective dimension for A and B according the backplane model.

Code	Dimension A	Dimension B
NX9000	32.1 mm	90.5 mm
NX9001	68.3 mm	90.5 mm
NX9002	104.5 mm	90.5 mm
NX9003	140.7 mm	162.9 mm
NX9010	32.1 mm	90.5 mm

Table 5: Backplanes Drilling Dimensions

9. Manuals

For further technical details, configuration, installation and programming of Nexto Series, consult the table below.

This table is only a guide of some relevant documents that can be useful during the use and maintenance of NX9020, NX9010, NX9000, NX9001, NX9002 and NX9003. The complete and updated table containing all documents of Nexto Series can be found at Nexto Series User Manual – MU214600.

Document Code	Description	Language
CE114000	Nexto Series – Technical Characteristics	English
CT114000	Série Nexto – Características Técnicas	Portuguese
CS114000	Serie Nexto – Características Técnicas	Spanish
MU214600	Nexto Series User Manual	English
MU214000	Manual de Utilização Série Nexto	Portuguese
MU214300	Manual del Usuario Serie Nexto	Spanish

Table 6: Related Documents