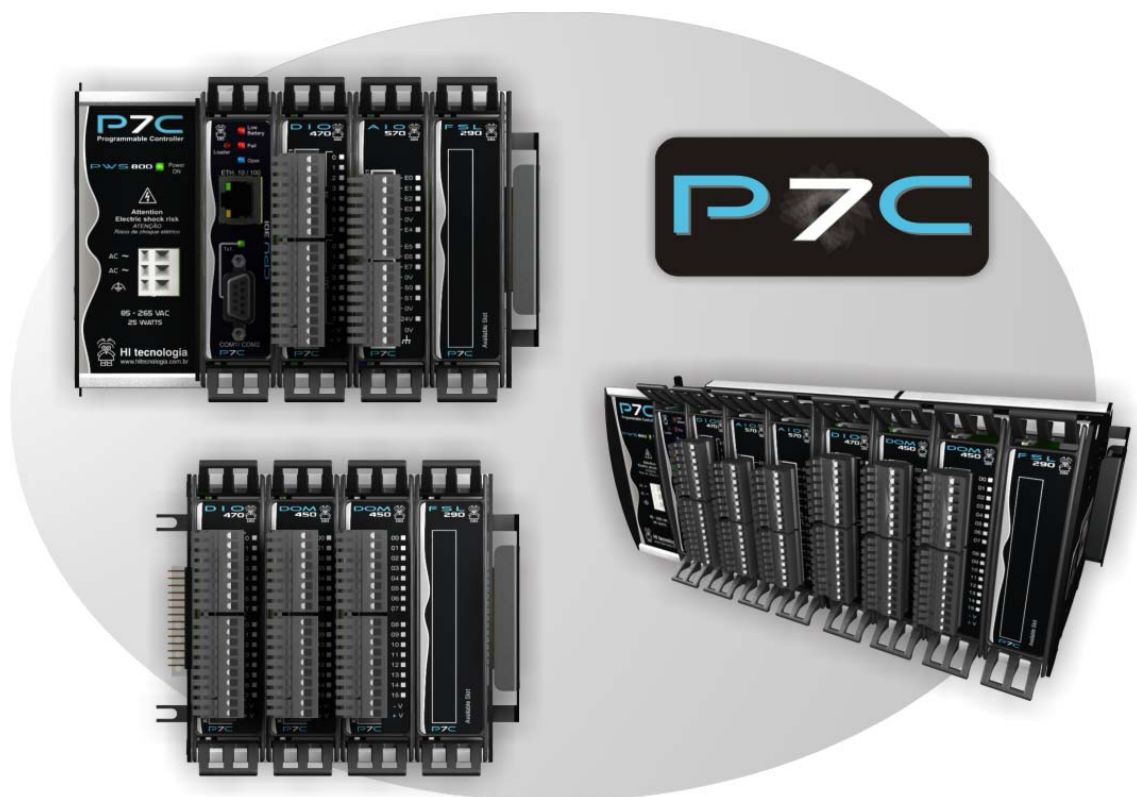


Racks

P7C Controller – HI tecnologia



The content of this document is part of P7C User Manual (PMU1070011). The Notes and Acronyms full list is at the complete version of the manual. To get it, please, access: www.hitecnologia.com.br

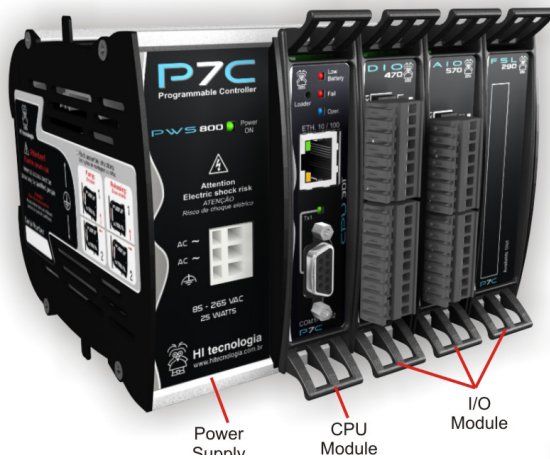
04

Technical Specifications

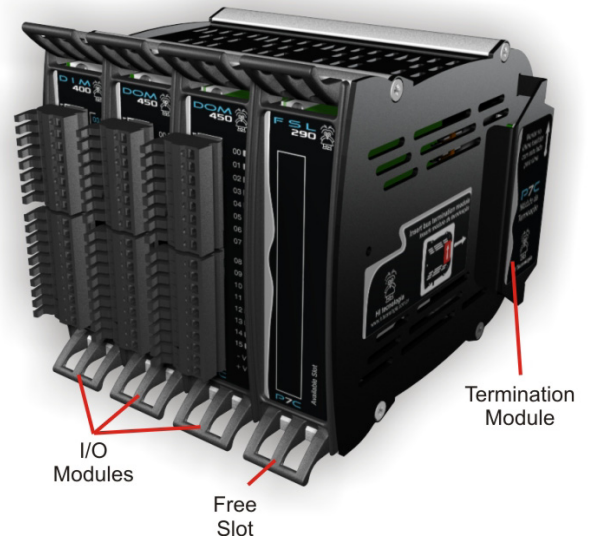
Presentation

P7C¹ programmable controllers line was developed for attending machine and process control applications. This PLC¹ has up to 368 I/O¹ points at its full configuration and offers all the others HI controllers versatility, including also new and exclusive features. Its design is based on expansible racks, supporting up to 4 hardware modules per rack. The basic configuration is composed by a main rack with power supply and capacity up to 4 modules. On the other hand, the Full configuration can be composed by 1 main rack + 5 expansion racks, providing 24 slots¹ for use. The racks interconnection must be done always on the right side of the rack, using the connector¹ placed at the backplane¹.

Main Rack



Expansion Rack



Note: The modules can have lever connectors (for the new modules) or screw connectors.

1 - Check the Notes and Acronyms List at the beginning of this document

Applicable Standards

P7C' controller was developed for attending CE certification requirements, being adherent to the standards defined by IEC61131-2. According to the criterion defined by IEC61131-2, the equipment is able to operate on the named "Zone B", attending to the specification of the following standards:

Standards	Name
CISPR11, CISPR16-1	Irradiated interference
CISPR11, CISPR16-1 and CISPR16-2	Conducted interference
IEC61000-4-2	Electromagnetic discharge immunity
IEC61000-4-3	Irradiated eletromagnetic fields immunity
IEC61000-4-4	Fast transients immunity
IEC61000-4-5	Immunity against high energy outbreaks
IEC61000-4-6	Immunity against conducted radiofrequency
IEC61000-4-8	Immunity against electromagnetic fields

Technical Data – Main Rack AC (300.107.200.000)

Power Supply AC (PWS800)	85 to 265 VAC or 100 to 400 VDC automatic
Consumption	25 Watts máx
Operating temperature	0 to 60 C°
Storage temperature	-25 C° to 80 C°
Humidity	≤90% without condensation
Rack weight	1,0 Kg approximately
Box	Aluminium and Carbon Steel
Protection Degree	IP30
Dimensions	150 (W) x 110 (H) x 115 (L) mm

Technical Data – Main Rack DC (300.107.200.010)

Power Supply DC (DCC850)	10 to 36 VDC automatic
Consumption	30 Watts máx
Operating temperature	0 to 60 C°
Storage temperature	-25 C° to 80 C°
Humidity	≤90% without condensation
Rack weight	1,0 Kg approximately
Box	Aluminium and Carbon Steel
Protection Degree	IP30
Dimensions	150 (L) x 110 (A) x 115 (P) mm

Technical Data – Expansion Rack (300.107.200.100)

Power Supply	Supplied by main rack
Consumption	-
Operating temperature	0 to 60 C°
Storage temperature	-25 °C to 80 °C

1 - Check the Notes and Acronyms List at the beginning of this document

Technical Specifications

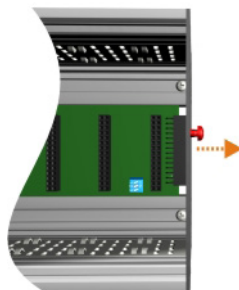
Humidity	≤90% without condensation
Rack weight	0,5 Kg
Box	Aluminium and Carbon Steel
Protection Degree	IP30
Dimensions	110 (W) x 110 (H) x 115 (P) mm
Maximum number	5 expansion racks

Racks connection

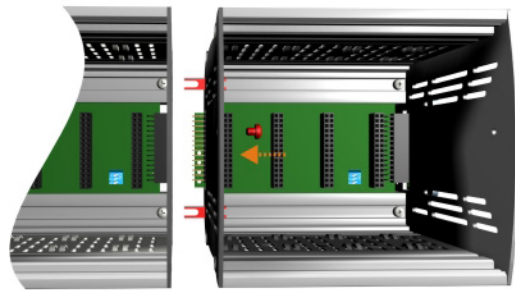
The expansion racks must be connected to the right side of the main rack. In the case of adding one expansion rack, it is necessary to remove the screw place at the main rack side (Picture A), and loosen the two screws placed on the rack back side, in order to fit the (red) locks, as shown on the picture (Picture B) and there the connection will be made. For that, approach both racks, in order to fit the locks and connectors¹ together. Push both screws (M3x4) to fix the two locks as Picture C shows.

IMPORTANT: Note the perfect racks connection: they must be aligned after the correct connection. The incorrect connection may result in bad performance or damages to the product.

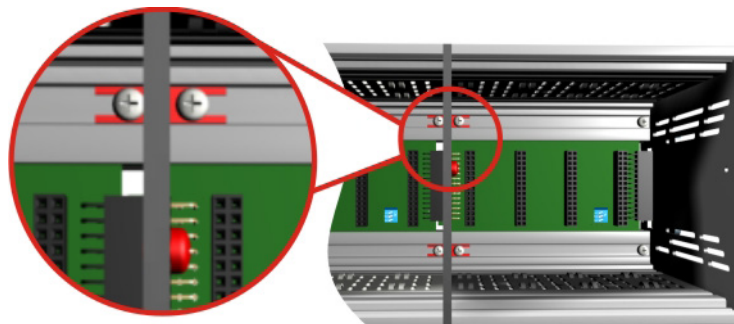
Picture A: Screw



Picture B: Locks / Screws



Picture C: Connection



1 - Check the Notes and Acronyms List at the beginning of this document

Supply

The power supply connector¹ is a spring connector¹ that does not need a screw to be tightened. To insert the wire in the terminal block¹, use a screw-driver at the smaller hole (as indicated by A, at the following picture). Push the screw-driver until open the spring (as indicated by letter B at the following picture) and, after, insert the wire in the corresponding terminal block¹. After this procedure, remove the screw-driver and make sure the connection was completed correctly. To remove the wire is possible to execute the same procedure indicated by letters A and B of the following picture.



ATTENTION: Electric-shock danger: the bad utilisation may result in fire or death. Read and follow the instructions indicated at this manual:

Make sure that the cables which will be connected to the power supply are disenergized before any operation;

Inspect the cable before each utilisation. Do not use if the cable is damaged.

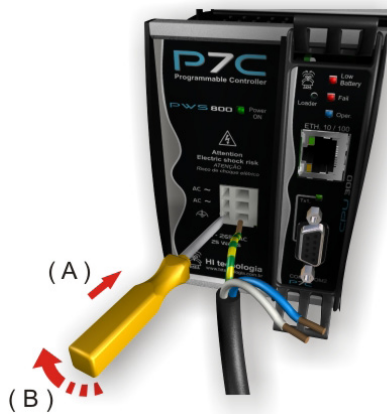
Insert the cable completely into the terminal block¹;

Do not use excessive force to make the connections;

Keep the equipment away from water. Do not use it if wet;

Avoid the overheating. Unwind the cable and do not cover it with any material;

Do not superimpose, drag or put objects above the cable;



AC Rack (PWS800)		
Terminal Connector ¹	Con-	Signal
1		AC
2		AC
3		Ground



DC Rack (DCC850)	
Terminal Connector ¹	Signal
1	-
2	+
3	Ground

¹ - Check the Notes and Acronyms List at the beginning of this document



IMPORTANT: The main Rack MRK AC power supply can be from 85 to 265 VAC or 100 to 400 VDC. The main Rack MRK DC power supply can be from 10 to 36VDC. We recommend the use of a rigid or flexible 2,5mm² wire (7mm stripped) or flexible 1,5mm² wire with eyelets terminal.

Earth-Protection Connector



Note: The modules can have lever connectors (for the new modules) or screw connectors.



IMPORTANT: Use connector¹ Faston 6.3 totally isolated for 1mm² green and yellow cable. This connection with the rack can be made at the bottom side, on the top side or both ways.

Addressing

Racks addressing

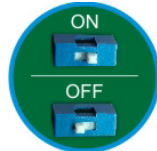
The expansion racks are coupled on the main rack right side, being possible to couple up to five expansions. Each rack has a three straps¹ set named J1, J2, J3. This set, placed at the backplanes¹, (between the connectors¹ of the third and fourth slots¹) must be configured according to the position of the rack, using jumpers¹, as the following:

Identification	J1	J2	J3
Main Rack	OFF	OFF	OFF
Expansion Rack 01	ON	OFF	OFF
Expansion Rack 02	OFF	ON	OFF
Expansion Rack 03	ON	ON	OFF
Expansion Rack 04	OFF	OFF	ON
Expansion Rack 05	ON	OFF	ON

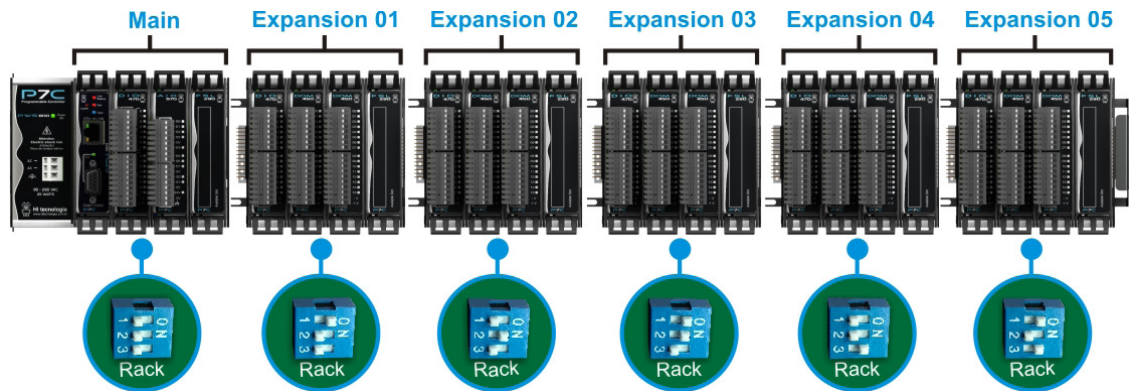
Caption:
ON: with jumper¹
OFF: without jumper¹



Caption:



1 - Check the Notes and Acronyms List at the beginning of this document



Note: The modules can have lever connectors (for the new modules) or screw connectors.

Termination Module – BBT260

The termination module must be, obligatorily, connected to the last expansion rack or, if it does not exist, then it must be connected to the main rack.

IMPORTANT:

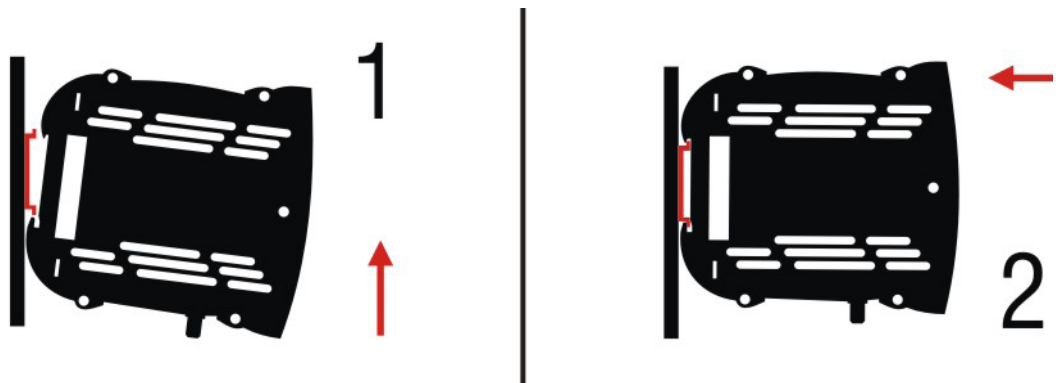
The equipment does not work without the termination module;

The module can not be connected and/or disconnected with the equipment turned on. Make sure the equipment is turned off before any operation;



Fixing the Rack on trails

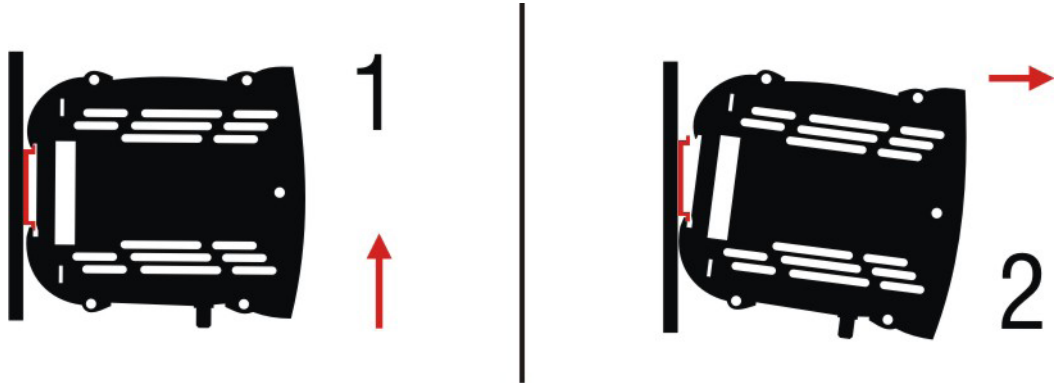
To fix the rack on the trail is necessary to fit the rack lower part (as indicated by number 1, at the picture), pushing from the bottom to the top. To put the rack in the trail just fit the lower part of the rack (as indicated by number 1 at the picture), pushing to the top and at the direction of the trail (as indicated by number 2 at the picture):



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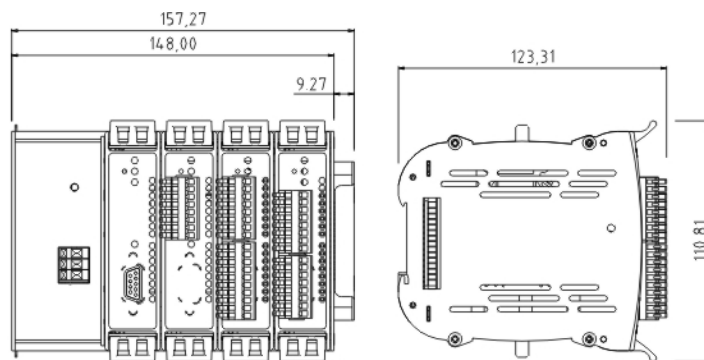
Removing the rack from trails

To remove the rack from the trail, just push it to the top (as indicated by number 1, at the picture) and also move it to the front (as indicated by number 2, at the picture):

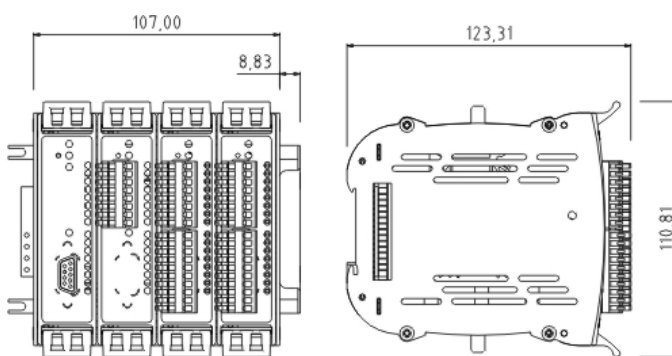


Dimensions (mm)

Main Rack



Expansion Rack



Note: The modules can have lever connectors (for the new modules) or screw connectors.

Part Number

Code	Identification
300.107.200.000	P7C ¹ MRK AC main rack
300.107.200.010	P7C ¹ MRK DC main rack
300.107.200.100	P7C ¹ XRK expansion rack

1 - Check the Notes and Acronyms List at the beginning of this document

Technical Specifications