



PWR-120

INSTALLATION MANUAL





Datalogic Automation S.r.l.
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PWR-120 Installation Manual

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SAFETY REGULATIONS

ELECTRICAL SAFETY

This product conforms to the applicable requirements contained in the European Standard for electrical safety EN-60950-1 at the date of manufacture.



This symbol refers to operations that must be performed by qualified personnel only. Example: opening the device.



This symbol refers to operations where there is danger of electrical shock. Before opening the device make sure the power cable is disconnected to avoid electrical shock.

The AC Plug Label appears as follows:

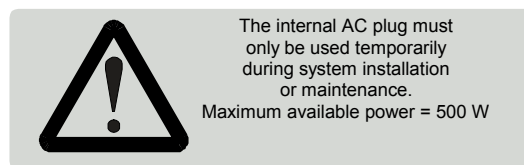


Figure 1 – AC Plug Label

SERVICES AND SUPPORT

Datalogic provides several services as well as technical support through its website. Log on to **www.automation.datalogic.com** and click on the links indicated for further information including:

- **PRODUCTS**

Search through the links to arrive at your product page where you can download specific **Manuals** and **Software & Utilities** including:

- **SERVICES & SUPPORT**

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- **Authorised Repair Centres**

- **CONTACT US**

E-mail form and listing of Datalogic Subsidiaries

GENERAL VIEW

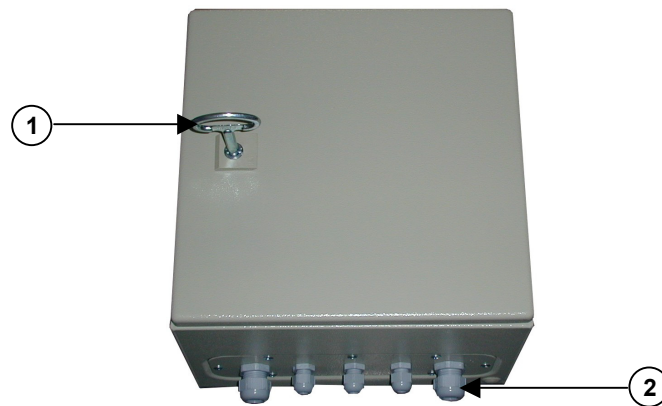


Figure 2 – PWR-120 Closed View

- ① Key Lock ② Compression Connectors

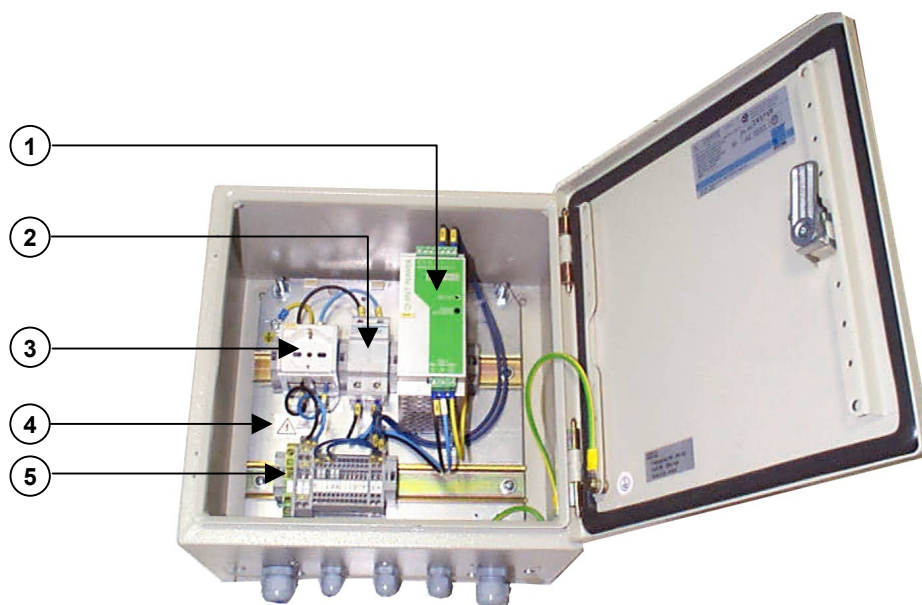



Figure 3 – PWR-120 Open View

- ① Monophase Switching Power Supply ④ AC Plug Label
② Safety Fuse ⑤ Terminal Block
③ AC Plug
(for temporary use only)

GUIDE TO INSTALLATION

The following can be used as a checklist to verify all the steps necessary to complete installation of the PWR power Supply.

	<i>Before wiring the device make sure the power is disconnected to avoid electrical shock.</i>
CAUTION	

- 1) Read all information in the section “Safety Precautions” at the beginning of this manual.
- 2) Mount the PWR near the Reading Station.
- 3) With AC line voltage OFF, wire the AC Line input to the PWR AC Terminal Block see par. 1.2.1.
- 4) System Wiring Directly to Scanners:

Provide correct and complete system cabling to the PWR according to the signals necessary for the layout of your application. (See par. 1.2.2 and your scanner manual for details. All system cables must pass through the glands.
- 5) Close and lock the PWR enclosure.
- 6) Apply the AC line voltage from the building installation and check that the PWR powers up correctly.

The installation is now complete.

1 INSTALLATION



CAUTION

Before opening the device make sure the power cable is disconnected to avoid electrical shock.

1.1 PWR-120 ELECTRICAL DIAGRAM

The PWR-120 components are electrically connected as displayed in the following diagram:

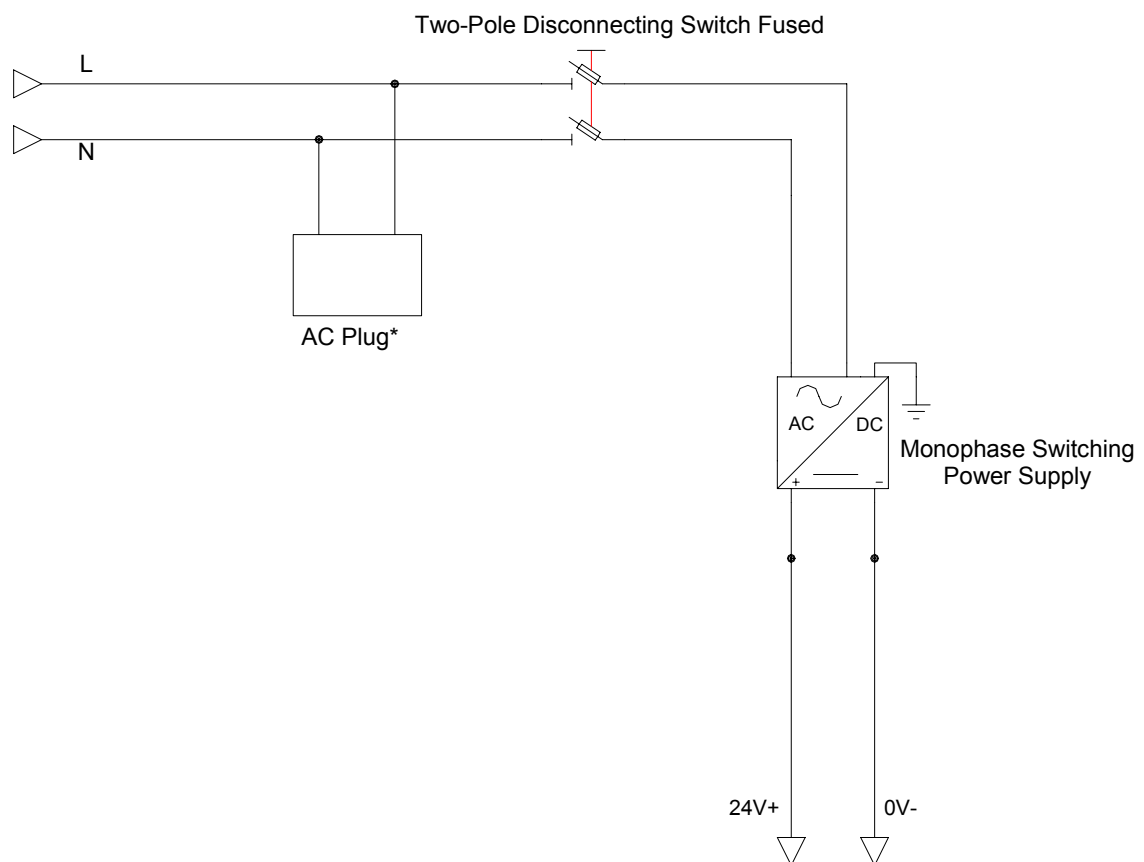


Figure 4 - PWR-120 electrical diagram



CAUTION

* The AC plug must only be used temporarily during system installation or maintenance. The maximum power is 500 W.

1.2 ELECTRICAL CONNECTIONS

The PWR-120 power unit provides a terminal block through which AC Line voltage enters and 24 Vdc Low Voltage output is provided.

The terminal block also allows various system wiring terminals so that all system wiring (i.e. P.S., Encoder, etc.) can be provided through a single cable when connecting directly to the scanners.

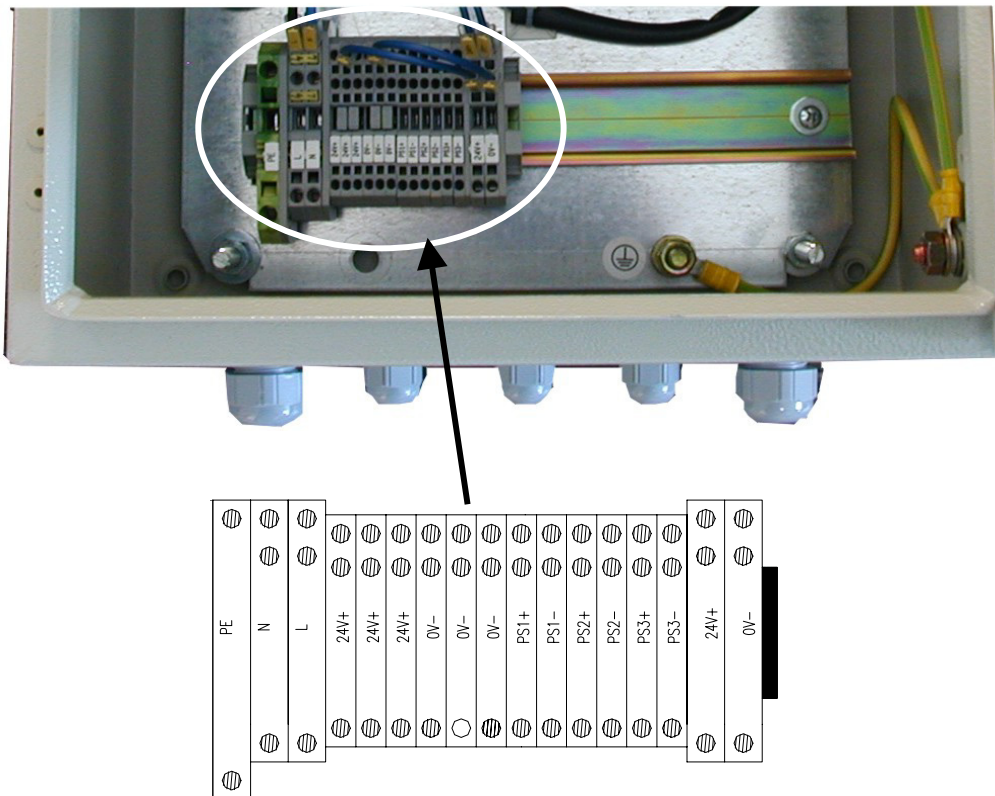


Figure 5 - Terminal Block

1.2.1 Input Line Voltage

Wire according to the following points:

Primary wiring: Overcurrent protection should be provided by a 12 to 15 A building installation circuit breaker. Wiring methods from the branch circuit breaker to the PWR-120 power supply shall comply with the National Electric Code ANSI/NFPA.

For primary wiring use a 3-conductor cable with minimum size 13 AWG for every conductor. Choose the overall cable diameter and UL Listed conduits accordingly. These conductors have to be inserted into the dedicated terminal blocks on the DIN rail (see diagram) which are marked Line (L) neutral (N) and Protection Earth (PE).

The terminal block marked with the ground symbol is a special block which allows direct connection of the Protection Earth with the enclosure of the PWR-120.

The AC input cable must be inserted through one of the Glands and the individual wires installed into the AC terminal block.

Replace the protection cover over the spring clamp connector after correctly installing the wires.

The AC plug can only be used temporarily during installation or maintenance procedures.

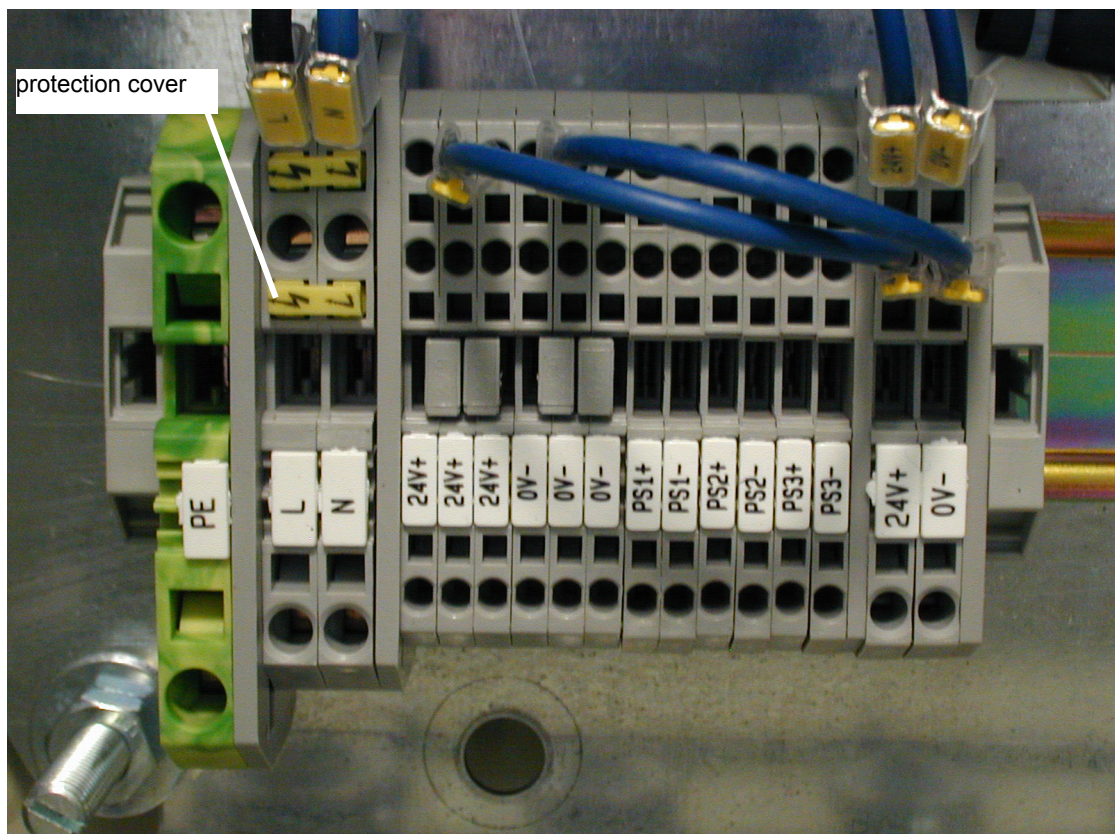


Figure 6 – PWR-120 AC Line Terminal Block with Protection Cover

1.2.2 PWR-120 Supply Capacity

The PWR-120 supply unit is intended to be used in Datalogic scanning systems to supply multiple scanners simultaneously.

A general rule to consider is that each scanner requires both peak power and steady state power.

Power distribution is performed simultaneously for all scanners. This means that the PWR-120 must bear the peak power draw of all the scanner motors starting up together. See the specific scanner manual for consumption data.

PWR-120:

The maximum peak power propagated is $24\text{ V} \times 7.5\text{ A} = \underline{180\text{ W}}$, while the steady state (normal) power is $24\text{ V} \times 5\text{ A} = \underline{120\text{ W}}$.

Due to these limits, the maximum number of scanners to be supplied is:

Power Supply Unit	Maximum Number of Scanners					
	DS6000	DX6000	DS8100A	DX8200A	DS8100*	DX8200*
PWR-120	6	5	4	3	2	1

* DS8100 and DX8200 scanners have peak power (startup) consumption of 60W.

The power supply unit is connected directly to the scanners.

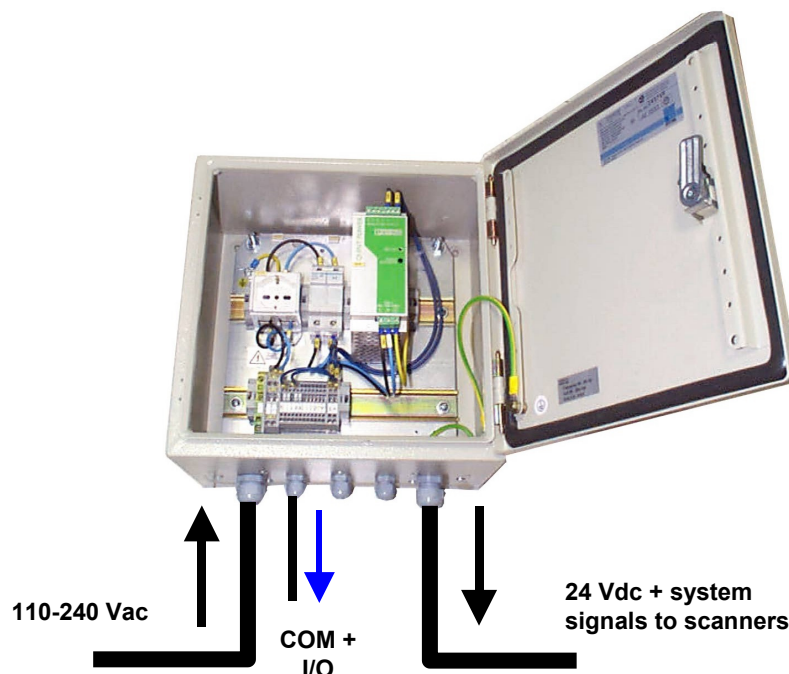


Figure 7 – Input/Output Power Connections

Refer to the scanner Reference Manual to make the low voltage output and other I/O interface wire connections to the scanner.

2 TECHNICAL FEATURES

ELECTRICAL FEATURES	
Input voltage	AC from 85 to 264 V from 45 to 65 Hz
Input current	1.6 A @ 85 V; 0.8 A @ 264 V
Nominal output current	5 A
Maximum output current	7.5 A (up to +40 °C)
Output voltage	24 VDC
ENVIRONMENTAL FEATURES	
Operating temperature	-25° to +50 °C (-13° to +122 °F)
Storage temperature	-40° to +85 °C (-40° to +185 °F)
Humidity	90% non condensing
Protection Class	IP65*
PHYSICAL FEATURES	
Mechanical dimensions	300 x 300 x 210 mm (11.8 x 11.8 x 8.26 in)
Weight	9 kg (19.84 lb)

* when all unused glands are plugged with the appropriate gland plugs.

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PWR-XXX Power Supply Unit

e tutti i suoi modelli
 and all its models
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 y todos sus modelos

sono conformi alle Direttive del Consiglio Europeo sottoelencate:
 are in conformity with the requirements of the European Council Directives listed below:
 sont conformes aux spécifications des Directives de l'Union Européenne ci-dessous:
 der nachstehend angeführten Direktiven des Europäischen Rats:
 cumple con los requisitos de las Directivas del Consejo Europeo, según la lista siguiente:

89/336/EEC EMC Directive	e	92/31/EEC, 93/68/EEC	emendamenti successivi
	and		further amendments
	et		ses successifs amendements
	und		späteren Abänderungen
	y		sucesivas enmiendas

2006/95/EC Low Voltage Directive

Basate sulle legislazioni degli Stati membri in relazione alla compatibilità elettromagnetica ed alla sicurezza dei prodotti.
 On the approximation of the laws of Member States relating to electromagnetic compatibility and product safety.
 Basée sur la législation des Etats membres relative à la compatibilité électromagnétique et à la sécurité des produits.
 Über die Annäherung der Gesetze der Mitgliedsstaaten in bezug auf elektromagnetische Verträglichkeit und Produktsicherheit entsprechen.
 Basado en la aproximación de las leyes de los Países Miembros respecto a la compatibilidad electromagnética y las Medidas de seguridad relativas al producto.

Questa dichiarazione è basata sulla conformità dei prodotti alle norme seguenti:
 This declaration is based upon compliance of the products to the following standards:
 Cette déclaration repose sur la conformité des produits aux normes suivantes:
 Diese Erklärung basiert darauf, daß das Produkt den folgenden Normen entspricht:
 Esta declaración se basa en el cumplimiento de los productos con las siguientes normas:

EN 55022 (Class A ITE), September 1998:

INFORMATION TECHNOLOGY EQUIPMENT
 RADIO DISTURBANCE CHARACTERISTICS
 LIMITS AND METHODS OF MEASUREMENTS

EN 61000-6-2, September 2005:

ELECTROMAGNETIC COMPATIBILITY (EMC)
 PART 6-2: GENERIC STANDARDS - IMMUNITY FOR INDUSTRIAL ENVIRONMENTS

EN 60950-1, December 2001:

INFORMATION TECHNOLOGY EQUIPMENT - SAFETY -

EN 60950-1/A11, April 2004:

PART 1 : GENERAL REQUIREMENTS

EN 61000-3-2, APRIL 2006:

ELECTROMAGNETIC COMPATIBILITY (EMC)

PART 3-2 : LIMITS - LIMITS FOR HARMONIC CURRENT EMISSIONS (EQUIPMENT INPUT CURRENT UP TO AND INCLUDING 16A PER PHASE)

EN 61000-3-3, JULY 1995:

ELECTROMAGNETIC COMPATIBILITY (EMC)

EN 61000-3-3/A1, JUNE 2001:

PART 3 : LIMITS SECTION 3: LIMITATION OF VOLTAGE FLUCTUATIONS AND FLICKER IN LOW-VOLTAGE SUPPLY SYSTEMS FOR EQUIPMENT WITH RATED CURRENT <= 16A

Lippo di Calderara, January 29th, 2008

Lorenzo Girotti
 Product & Process Quality Manager

