



PWO-480

INSTALLATION MANUAL





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PWO-480 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:

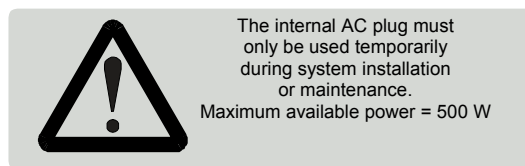


Figure 1 – AC Plug Label

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:

- **PRODUCTS**

Search through the links to arrive at your product page which describes specific Info, Features, Applications, Models, Accessories, and Downloads.

- **SERVICE**

- **Overview** - Warranty Extensions and Maintenance Agreements
- **Sales Network**- Listing of Subsidiaries, Repair Centers, Partners
- **Helpdesk**
- **Material Return Authorization**

GENERAL VIEW

PWO-480

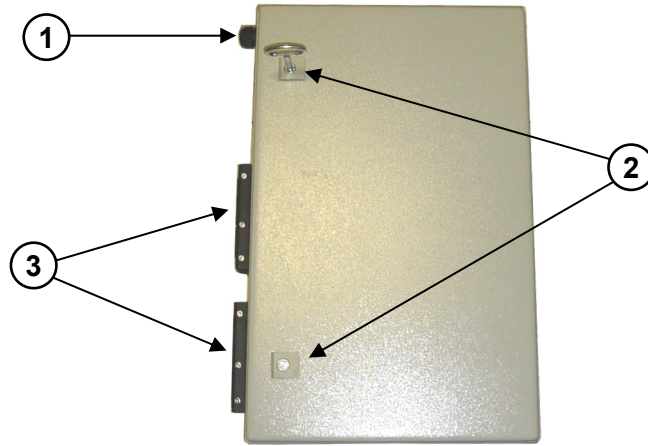


Figure 2 – PWO-480 Closed View

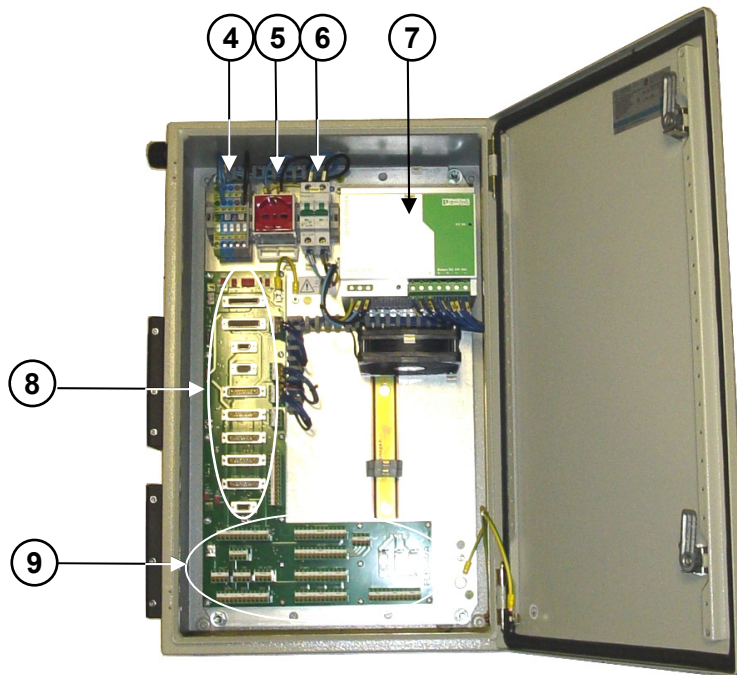



Figure 3 – PWO-480 Open View

- | | |
|------------------------------------|------------------------------------|
| ① AC Line Gland | ⑥ Bipolar Circuit Breaker |
| ② Key Locks | ⑦ Monophase Switching Power Supply |
| ③ Cable Glands | ⑧ System Cable Connectors |
| ④ AC Line Input Terminal Block | ⑨ System Wiring Terminal Blocks |
| ⑤ 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 PWO-480.

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

- 1) Read all information in the section “Safety Precautions” at the beginning of this manual.
- 2) Mount the PWO-480 near the Reading Station.
- 3) With AC line voltage OFF, wire the AC Line input to the PWO-480 AC Terminal Block.
- 4) Connect the SC6000 Controller to the PWO-480 by means of the appropriate accessory cables (see par. 1.2). All system cables must pass through the glands.
- 5) Provide correct and complete system cabling to the PWO according to the signals (Lonworks, encoder P.S., etc) necessary for the layout of your application. (See all sub paragraphs under 2.5. All system cables must pass through the glands.
- 6) Set the Bipolar Circuit Breaker to the ON position.
- 7) Apply the AC line voltage from the building installation and check that the PWO-480 powers up correctly.
- 8) Close and lock the PWO-480 enclosure.

The installation is now complete.

1 INTRODUCTION

1.1 PRODUCT DESCRIPTION

The PWO-480 unit is intended to be used in Datalogic scanning systems where an SC6000 Controller unit is used as a supervisor of a DS8000 and/or DS6000 scanner network.

The PWO-480 acts as a power supply for the overall system (controller and scanners), as well as a Junction Box for the SC6000 I/O and COM.

One model is available:

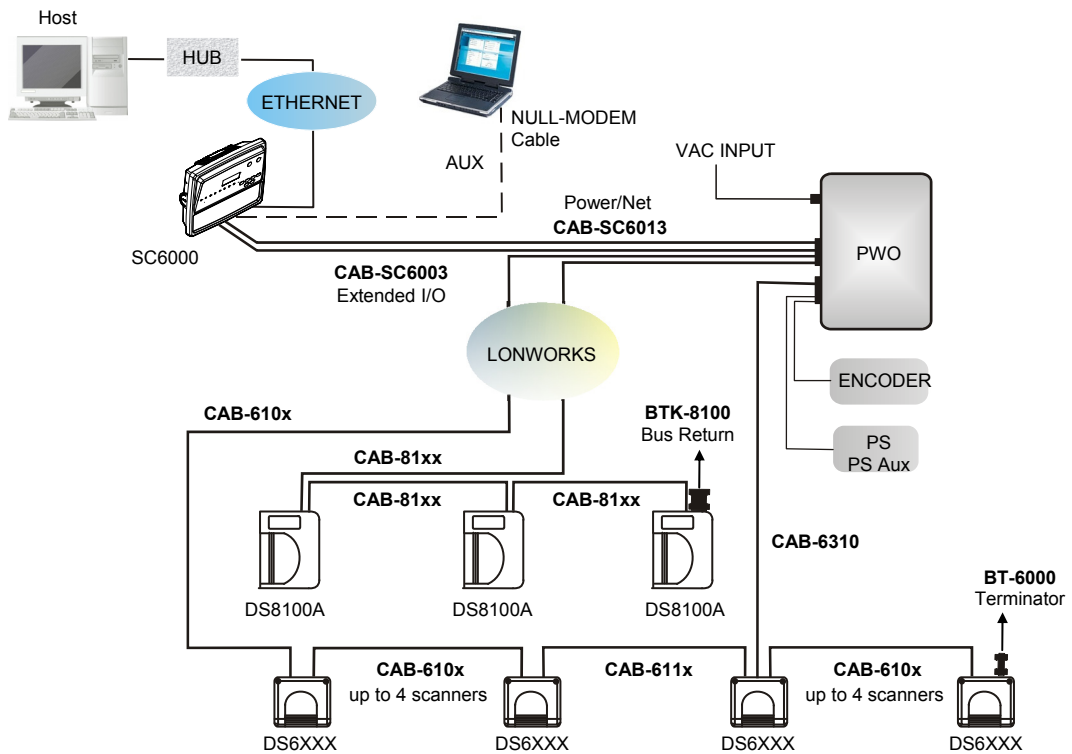
PWO-480, input 100-240 Vac, output 24 Vdc, 480 W power supply unit.

1.2 ACCESSORIES

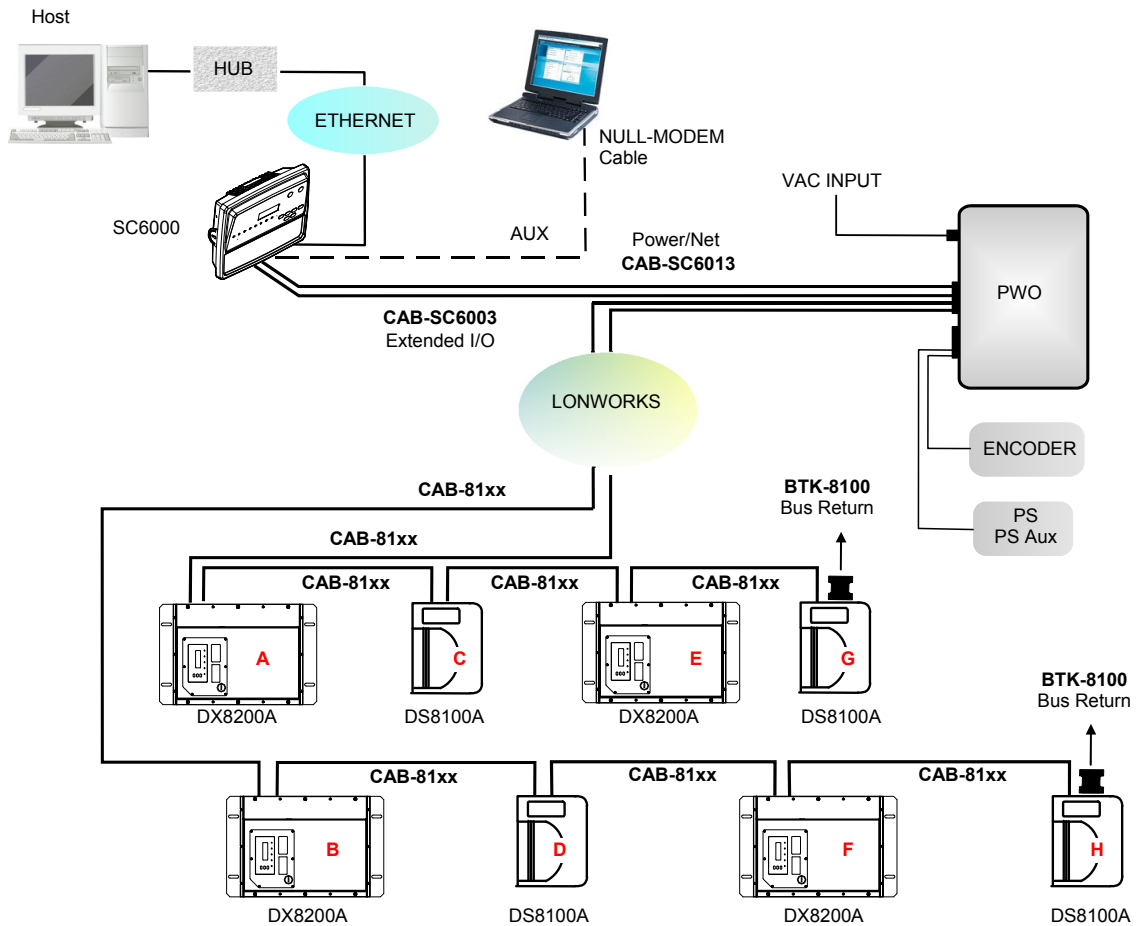
The following accessories are necessary to build a reading station that uses the PWO-480 Power Supply (the scanner-related accessories are not included in this list):

Name	Description	Part Number
CAB – SC6003	25-pin cable SC6000 to PWO, 3m (for Extended I/O connections)	93A051338
CAB – SC6013	25-pin cable SC6000 to PWO, 3m (for Power/Net connections)	93A051337
CAB – SC6103	9-pin cable SC6000 to PWO, 3m (for Main Host and Modem connections)	93A051294
CAB – PWO 03	17-pin cable PWO to PWO, 3m (for redundancy)	93A051295
MOD-SC6000	Modem for SC6000 (INSYS Modem 56K)	93ACC1776

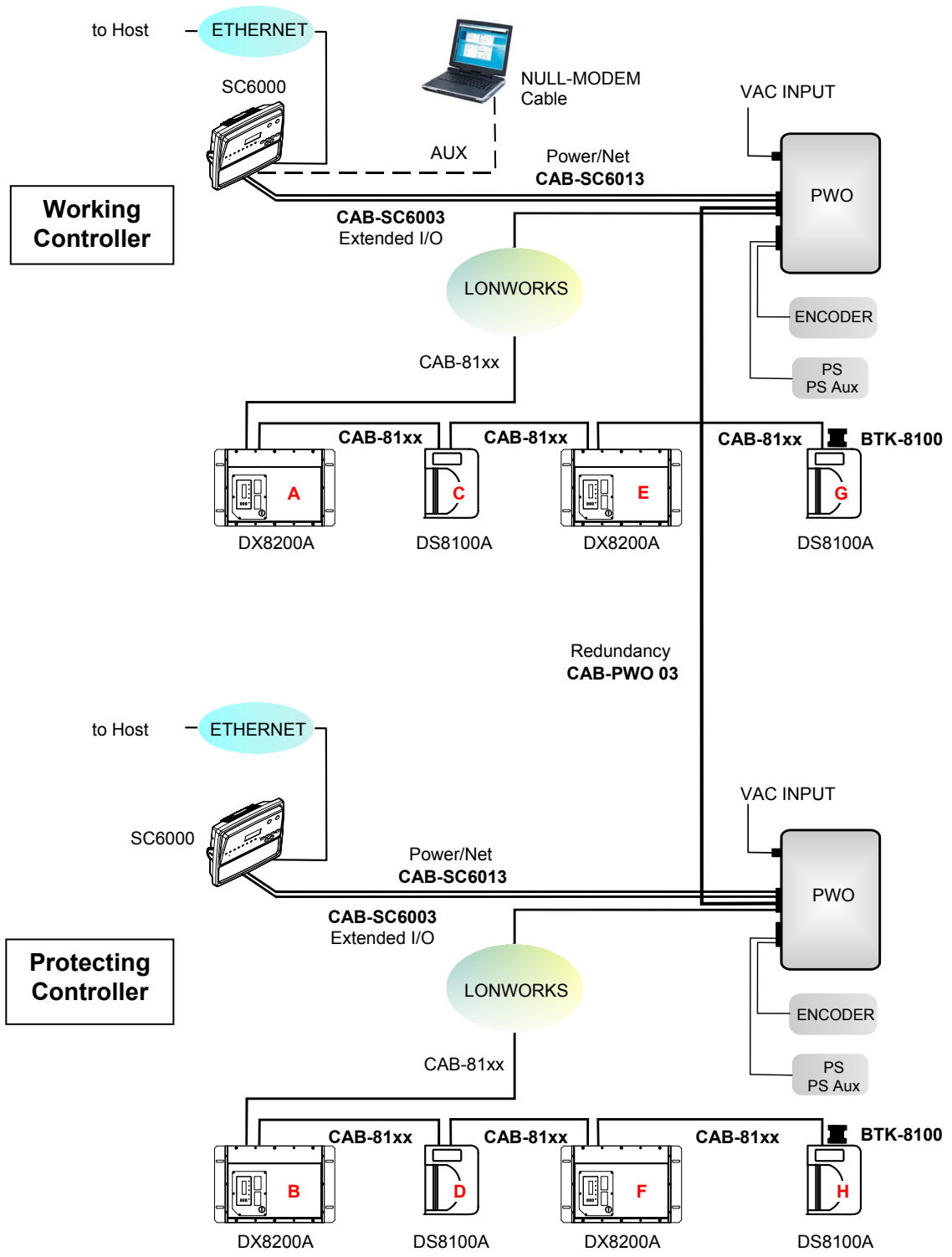
1.3 SYSTEM LAYOUTS



Example Single Controller Layout with DS8100A and DS6000 Series Scanners



Example Single Controller Layout with DX8200A and DS8100A Scanners

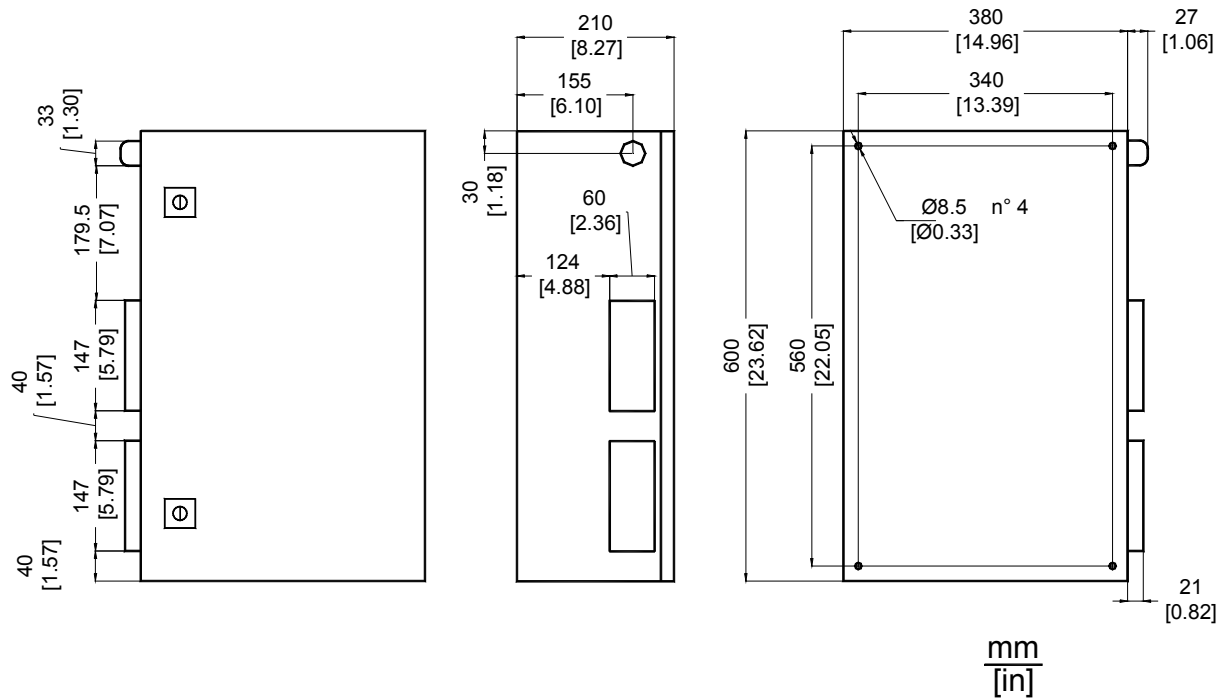


Example Redundant System Layout


2 INSTALLATION

2.1 MECHANICAL INSTALLATION

The diagram below gives the overall dimensions of the PWO-480 and may be used for its installation. The four through holes (diam. 8.5 mm) on the back of the enclosure are for mechanical fixture.

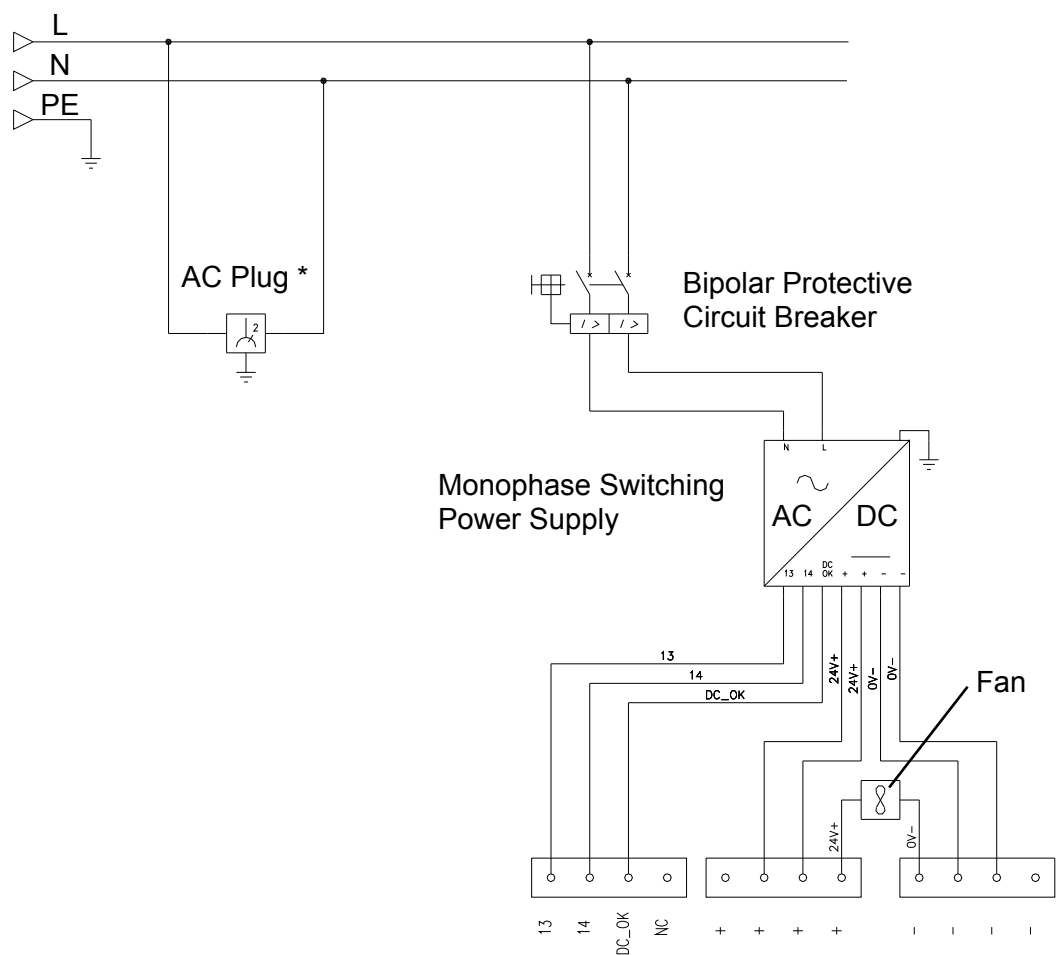


2.2 PWO-480 ELECTRICAL DIAGRAM




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

WARNING



PWO-480 Electrical Diagram



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

CAUTION

2.3 PWO-480 SUPPLY CAPACITY

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 PWO-480 must bear the peak power draw of all the scanner motors starting up together.

The maximum peak power propagated is $24\text{ V} \times 26\text{ A} = 624\text{ W}$, while the steady state (normal) power is $24\text{ V} \times 20\text{ A} = 480\text{ W}$.

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-480	24	20	16	12	8	6

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

2.4 INPUT LINE VOLTAGE

Wire according 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 PWO-480 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 PWO-480.

The AC input cable must be inserted through the AC Line Gland 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.



AC Line Terminal Block with Protection Covers

2.5 SYSTEM WIRING TO PWO-480

System wiring is performed using standard accessory cables and direct wiring to terminal block connectors provided on the PCB inside the PWO-480.

To insert system cables:

Remove the upper gland block by unscrewing the 2 side screws and the 3 top screws.

Use a screwdriver to pry apart the upper gland block from the lower gland block.

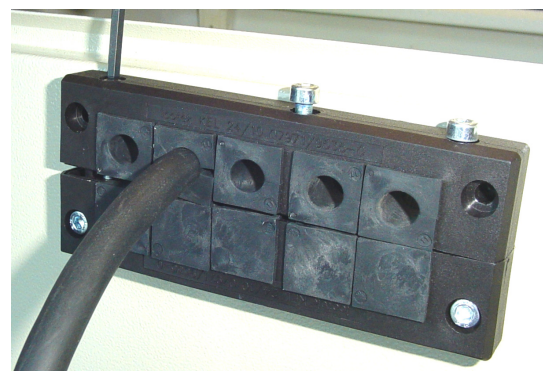
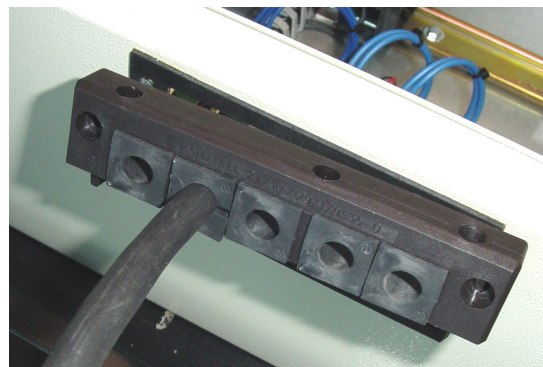
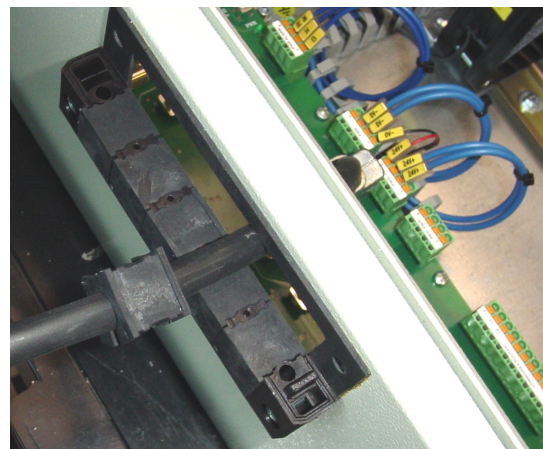
Pass all system cables through the opening and attach the rubber glands around each cable.

Slide each gland into the block making sure that each gland is rotated so that the split is horizontal.

Insert gland block plugs in the unused cable slots in order to maintain IP65 protection.

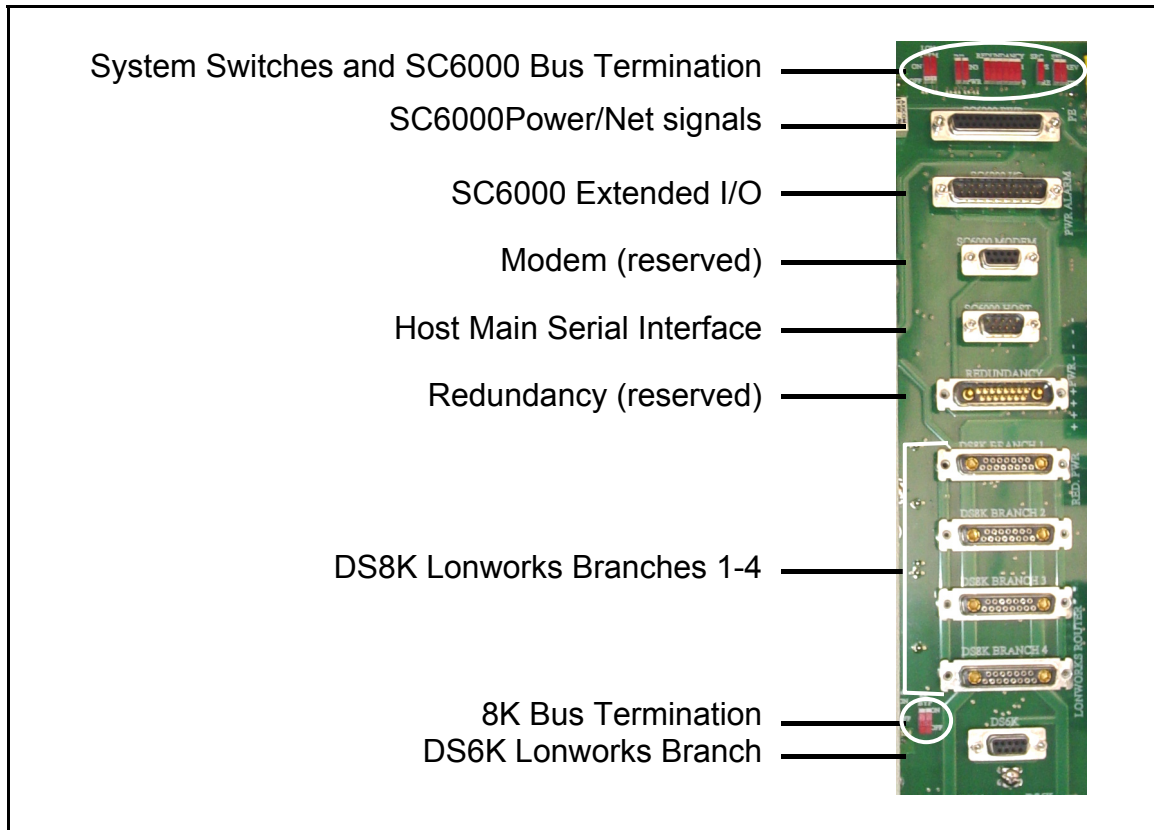
Place the block into position on the housing while adjusting the cable lengths as needed.

Fix the block to the housing by tightening the 3 top screws and then the 2 side screws.

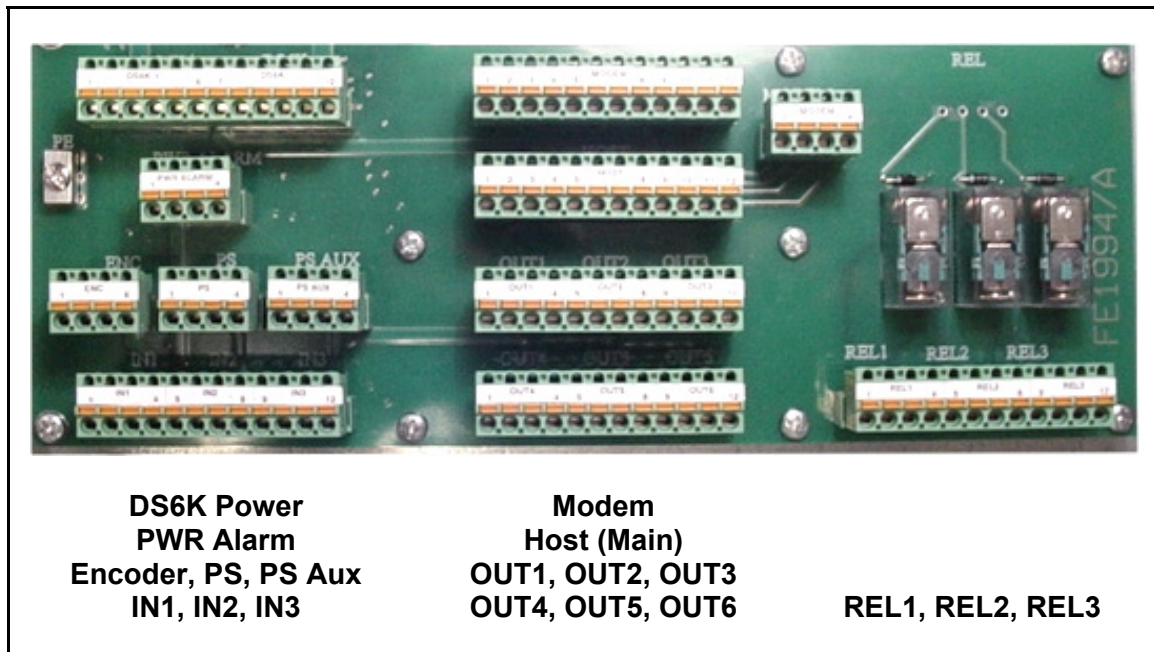


The following connectors and terminal blocks are available for system connections:

Cable Connectors

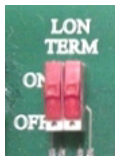


Spring Clamp Connectors



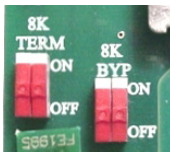
2.6 SWITCH SETTINGS

2.6.1 Bus Termination



The **LON TERM** switch must be in the ON position to provide Lonworks bus termination at the SC6000 side.

For DS8K branches, the last scanner in each branch as well as any unused DS8K branches inside the PWO-480 must be terminated by a BTK-8100 Bus Terminator.

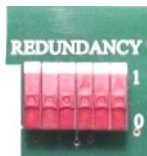


The **8K TERM** switches must be in the ON position if the network is made up exclusively of DS8K family scanners. If at least one DS6K family scanner is employed, these switches must be set to OFF.

For the DS6K branch, the last scanner in the branch must be terminated by a BT-6000 Bus Terminator.

The **8K BYP** switches must be in the ON position if the network is made up exclusively of DS6K family scanners. If at least one DS8K family scanner is employed, these switches must be set to OFF.

2.6.2 Redundancy Selection



The group of 6 **REDUNDANCY** switches enable/disable redundancy and must all be set to the same value.

When all switches are set to 0 (default) redundancy is disabled.

When all switches are set to 1 redundancy is enabled.

2.6.3 Redundancy Role



The **SEL** switches define the redundancy role and must be both set to the same value.

When in the STD position they set the SC6000/PWO-480 to Working.

When in the REV position they set the SC6000/PWO-480 to Protecting.

2.6.4 Source

The **SRC** switch defines the source signals (Presence Sensor or Remote Encoder) to the scanners.



When SRC is in the PS position the Presence Sensor is passed to all the scanners in the system. This is the correct setting for Single Controller systems working in On-Line Operating Mode.

When SRC is in the RE position the relative Remote Encoder is passed to each scanner branch. This setting is only for Redundant systems.

2.6.5 IN3 Selection

The **IN3** switches select the operation of the IN3 signal towards the SC6000 and must be both set to the same value.



In position PWR (default), they provide internal PWO-480 24 Vdc power monitoring signals to be sent to the SC6000. The alarm threshold is 21.6 Vdc (nominal value -10%). Values between 21.6 and 24 Vdc are therefore considered in the proper operating range.

In position IN3 they allow the user to connect an external configurable input like IN1 and IN2.

2.7 ELECTRICAL CONNECTIONS


2.7.1 SC6000 to PWO-480

The following connectors are used to connect the SC6000 to the PWO-480:

	Connector	Type
	Power/Net	25-pin female power supply, Ionworks and input/output signals, use CAB-SC6013
	Extended I/O	25-pin male I/O supply and extended I/O signals (optoisolated), use CAB-SC6003
	Reserved	Connect modem directly to SC6000, use CAB-SC6103.
	Host - Main	9-pin male RS232/RS485 main serial connection, use CAB-SC6103

2.7.2 Lonworks

The PWO-480 allows connection between the SC6000 and the DS8K and/or DS6K family scanners on the Lonworks network. The following scanner connectors are used to connect each branch using the standard accessory cables.

	Connector DS8K Branches 1-4*	Type 17-pin female power supply, Lonworks and system signals for: DS8100A, DX8200A or DS8100-x0x0**
	DS6K	9-pin female power supply, Lonworks and system signals for: DS6300, DS6400, DX6400 12-pin spring clamp for DS6K extended branch power

* When DS8K scanners are connected, any unused DS8K branches inside the PWO-480 must be terminated by a BTK-8100 Bus Terminator

** DS8100-x0x0 scanners cannot be used together with the other scanners in a Lonworks network.

DS8K Branches

PWO-480 supports up to **4** DS8K scanner branches with up to **4** DS8100A scanners per branch or up to **3** DX8200A scanners.

DS6K Branch

PWO-480 supports **1** DS6K scanner branch with up to **24** scanners (DS6300 or DS6400) or up to **20** DX6400 scanners.

The DS6K connector can supply up to 4 DS6000 series scanners using the standard CAB-610x cables.

To extend this branch you can connect another 6 groups of three to four scanners each using the CAB-611x cable and CAB-610x combination bringing power to each group from the PWO-480 DS6K 12-pin spring clamp connector through the CAB-6310 cable to the DS6K scanner Main Interface connector (see the typical layout drawing in par. 1.3).

DS6K Lonworks Extended Branch Power 12-Pin Spring Clamp Connector

Pin	Name	Function
1-6	VS	Supply Voltage for DS6K branch extensions
7-12	GND	Ground Reference for DS6K branch extensions

2.7.3 PS/PS AUX/Encoder

The PS and Encoder signals (and PS Aux if used) are connected to PWO-480 on their relative 4-pin spring clamp connectors.

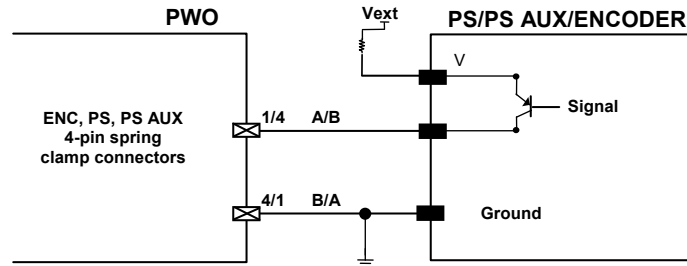


Figure 4 - PNP Command Input with Electrical Isolation

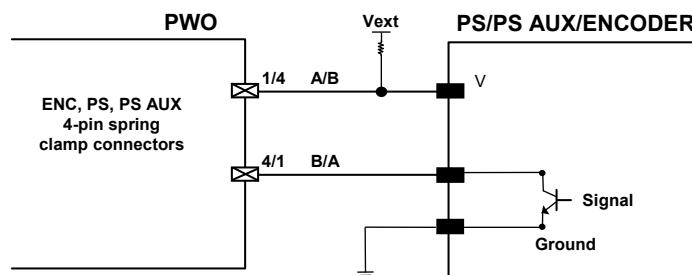
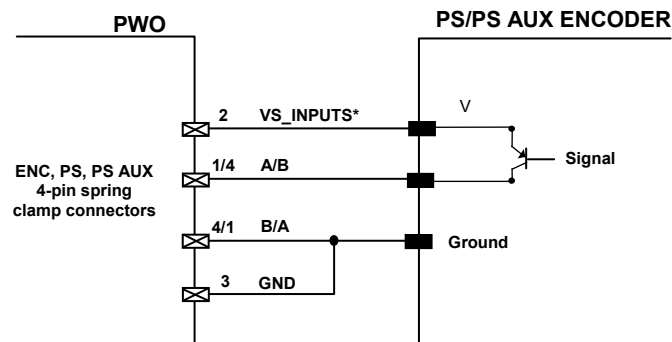
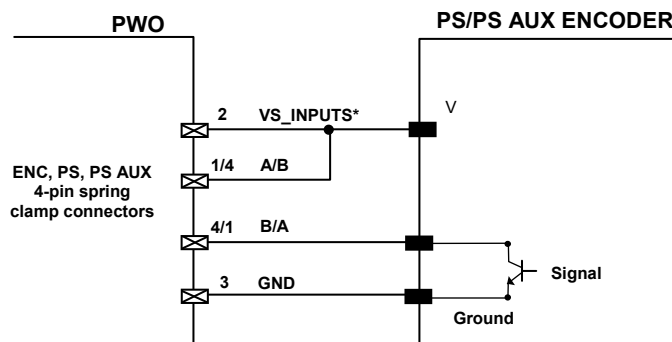


Figure 5 - NPN Command Input with Electrical Isolation



*VS_INPUTS is connected through the SC6000 25-pin Extended I/O connector and is short-circuit protected.

Figure 6 - PNP Command Input Using System Power



*VS_INPUTS is connected through the SC6000 25-pin Extended I/O connector and is short-circuit protected.

Figure 7 - NPN Command Input Using System Power

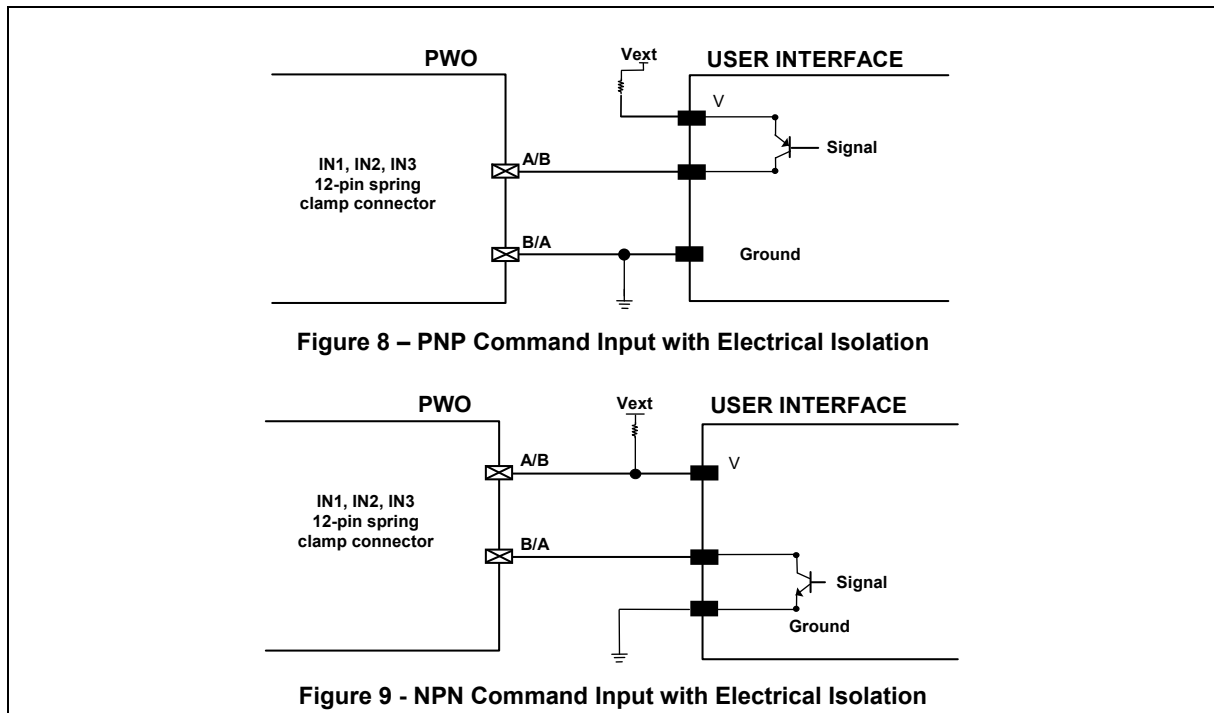
2.7.4 Extended I/O

Inputs

All command logic inputs are optocoupled on the SC6000.

IN1, IN2, IN3 12-Pin Spring Clamp Connector

Pin	Name	Function
1	IN1A	Configurable digital input 1 – polarity insensitive
2	VS_INPUTS	System power to inputs
3	GND	System power reference ground
4	IN1B	Configurable digital input 1 – polarity insensitive
5	IN2A	Configurable digital input 2 – polarity insensitive
6	VS_INPUTS	System power to inputs
7	GND	System power reference ground
8	IN2B	Configurable digital input 2 – polarity insensitive
9	PWR/IN3A	Output Power Monitor or Configurable digital input 3 – polarity insensitive
10	VS_INPUTS	System power to inputs
11	GND	System power reference ground
12	PWR/IN3B	Power Monitor or Configurable digital input 3 – polarity insensitive



Isolation between the command logic and the SC6000 is maintained by powering the inputs with an external supply voltage (V_{ext}). For convenience, the inputs can be powered using the VS_INPUTS signal on the PWO-480. In this case, however, the device is no longer electrically isolated. The VS_INPUTS signal is short-circuit protected.

The electrical features of these inputs are:

Maximum voltage 30 V

Maximum current 10 mA

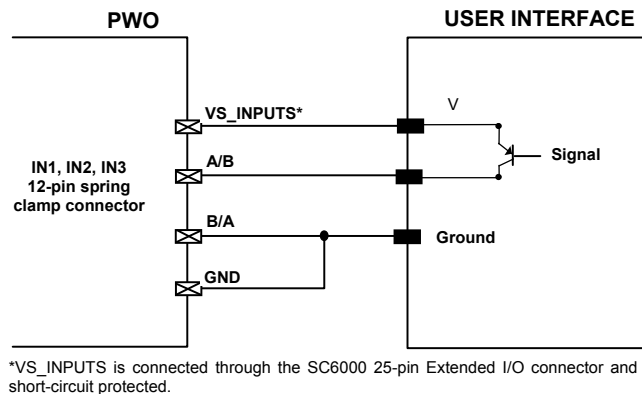


Figure 10 - PNP Command Input Using System Power

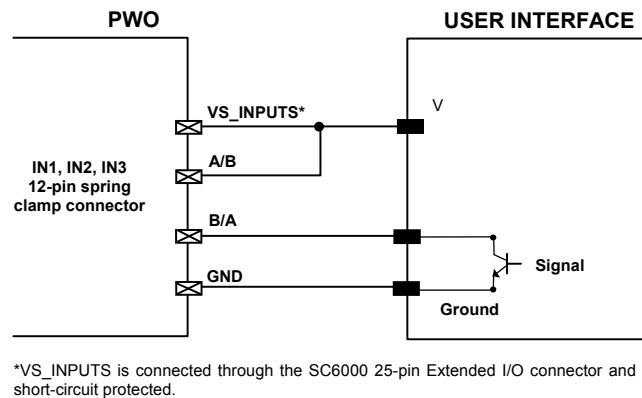


Figure 11 - NPN Command Input Using System Power

Outputs

Six general purpose outputs are available.

OUT1, OUT2, OUT3 12-Pin Spring Clamp Connector

Pin	Name	Function
1	OUT 1+	Configurable digital output 1 – positive pin
2	VS_OUTPUTS	System power to outputs
3	GND	System power reference ground
4	OUT 1-	Configurable digital output 1 – negative pin
5	OUT 2+	Configurable digital output 2 – positive pin
6	VS_OUTPUTS	System power to outputs
7	GND	System power reference ground
8	OUT 2-	Configurable digital output 2 – negative pin
9	OUT 3+	Configurable digital output 3 – positive pin
10	VS_OUTPUTS	System power to outputs
11	GND	System power reference ground
12	OUT 3-	Configurable digital output 3 – negative pin

OUT4, OUT5, OUT6 12-Pin Spring Clamp Connector

Pin	Name	Function
1	OUT 4+	Configurable digital output 4 – positive pin
2	VS_OUTPUTS	System power to outputs
3	GND	System power reference ground
4	OUT 4-	Configurable digital output 4 – negative pin
5	OUT 5+	Configurable digital output 5 – positive pin
6	VS_OUTPUTS	System power to outputs
7	GND	System power reference ground
8	OUT 5-	Configurable digital output 5 – negative pin
9	OUT 6+	Configurable digital output 6 – positive pin
10	VS_OUTPUTS	System power to outputs
11	GND	System power reference ground
12	OUT 6-	Configurable digital output 6 – negative pin

The function of all six outputs can be defined by the user in software on the SC6000 through Genius™, refer to Genius™ Help On-Line for details.

Isolation between the command logic and the SC6000 is maintained by powering the outputs with an external supply voltage (V_{ext}). For convenience, the outputs can be powered using the VS_OUTPUTS signal on the PWO-480. In this case, however, the device is no longer electrically isolated. The VS_OUTPUTS signal is short-circuit protected.

The electrical features of these outputs are:

Collector-emitter voltage	30 V Max.
Collector current	130 mA Max.
Saturation voltage (V_{CE})	1 V at 10 mA Max.
Maximum power dissipation	90 mW at 50°C (Ambient temperature).

The limit requested by the maximum power dissipation is more important than that of the maximum collector current: if one of these outputs is continuously driven, the maximum current must not be more than 40 mA although 130 mA may be reached in pulse conditions.

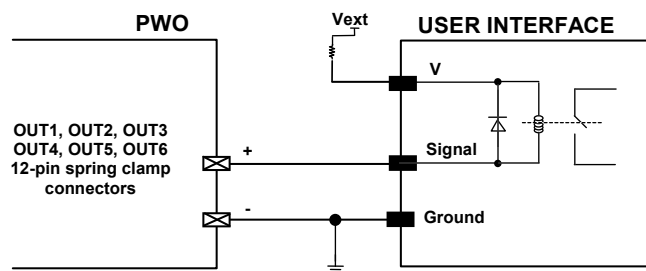


Figure 12 - Open Collector Output Connection with Electrical Isolation

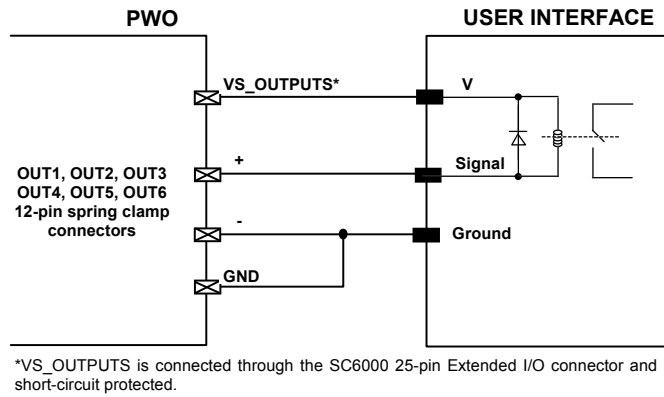


Figure 13 - Open Collector Output Connection Using System Power

Relays

There are three relay outputs available on the relative 12-pin spring clamp connector.

REL1, REL2, REL3 12-Pin Spring Clamp Connector

Pin	Name	Function
1	REL 1 NC	Normally Closed pole
2	REL 1 Common	Common pole
3	REL 1 NO	Normally Open pole
4		not connected
5	REL 2 NC	Normally Closed pole
6	REL 2 Common	Common pole
7	REL 2 NO	Normally Open pole
8		not connected
9	REL 3 NC	Normally Closed pole
10	REL 3 Common	Common pole
11	REL 3 NO	Normally Open pole
12		not connected

Each relay can carry a 6.5 A load.

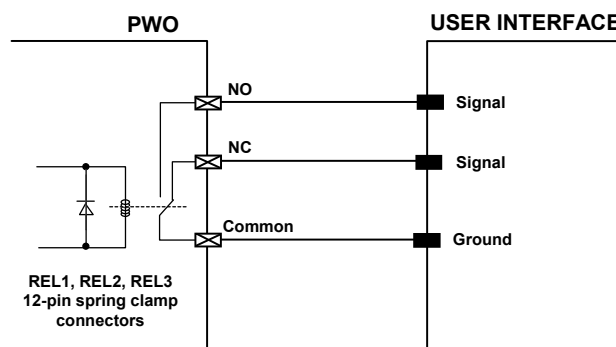



Figure 14 - Relay Outputs

2.7.5 Host (Main) Interface

The Host main serial interface is compatible with the following electrical standards:

RS232

RS485 Full Duplex

 <p>CAUTION</p>	<p><i>Do not connect GND and GND_ISO to different (external) ground references. GND and GND_ISO are internally connected through filtering circuitry which can be permanently damaged if subjected to voltage drops over 0.8 Vdc.</i></p>
---	---

Details regarding the connections and use of the main interface selection are given in the next paragraphs.

Host (Main) 12-pin Spring Clamp Connector Pinout		
Pin	RS232	RS485 Full Duplex
1	TX	TX485+
2	RX	RX485+
3	RTS	TX485-
4	CTS	RX485-
5	GND_ISO	GND_ISO

RS232 Interface

The main serial interface is used for communication between the SC6000 and the Host computer through the PWO and allows both transmission of code data and controller configuration.

The following pins of the 12-pin spring clamp connector are used for RS232 interface connection:

It is always advisable to use shielded cables. The overall maximum cable length must be less than 15 m (49.2 ft).

Host (Main) RS232 12-pin Spring Clamp Connector Pinout		
Pin	Name	Function
1	TX	Transmit
2	RX	Receive
3	RTS	Request to send
4	CTS	Clear to send
5	GND_ISO	Main signal ground

The RTS and CTS signals control data transmission and synchronize the connected devices.

If the RTS/CTS hardware protocol is enabled, the SC6000 activates the RTS output to indicate a message can be transmitted. The Host must activate the CTS input to enable the transmission.

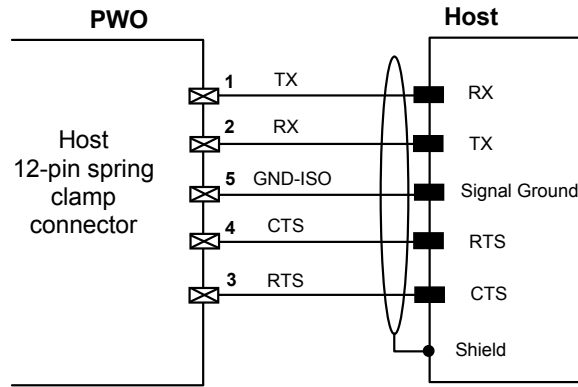


Figure 15 - RS232 Connections

RS485 Full-Duplex Interface

The RS485 full-duplex interface is used for non-pollled communication protocols in point-to-point connections over longer distances (max 1200 m / 3940 ft) than those acceptable for RS232 communications or in electrically noisy environments.

The following pins of the 12-pin spring clamp connector are used for RS485 full-duplex interface connection:

Host (Main) RS485 12-pin Spring Clamp Connector Pinout		
Pin	Name	Function
1	TX485+	RS485 transmit (+)
2	RX485+	RS485 receive (+)
3	TX485-	RS485 transmit (-)
4	RX485-	RS485 receive (-)
5	GND_ISO	Main signal ground

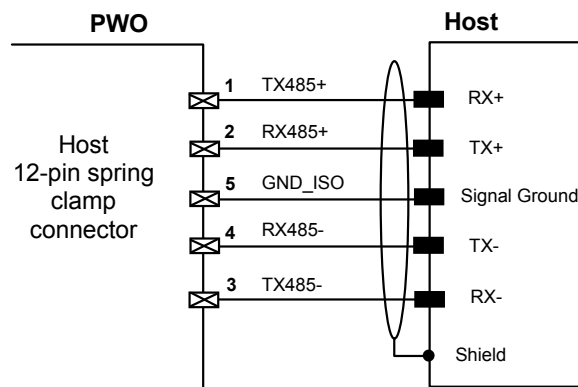


Figure 16 - RS485 Full-Duplex Interface Connections

2.7.6 Modem

The modem serial interface is used for communication between the SC6000 and the Host computer to remotely control the reading station. An accessory modem can be installed onto the DIN rail and powered inside the PWO.

The SC6000 should be connected directly to the modem using CAB-SC6103. The telephone line can be directly connected to the accessory modem inside the PWO-480.

The PWO-480 supplies power to the modem from the modem 12-pin spring clamp connector.

Modem Power 12-pin Spring Clamp Connector Pinout		
Pin	Name	Function
11	VS	Supply Voltage (24+ V)
12	GND	Ground

See the Modem Installation document on the CD-ROM for complete installation and configuration details.

2.7.7 Power Alarm

The PWO-480 provides lines to monitor the power supply output on the power alarm 4-pin spring clamp connector. This output can be used to control an external alarm in case of PWO power failure.

The alarm threshold is 21.6 Vdc (nominal value –10%). Values between 21.6 and 24 Vdc are therefore considered in the proper operating range.

When the power supply output level is in the range 21.6...24 Vdc, DC_OK has the same value as the output; it can be loaded with 40 mA max. to GND.

When the power supply output level falls below 21.6 Vdc, DC_OK goes to 0 Vdc.

Pin 2 is reserved for PWO internal use.

Power Alarm 4-pin Spring Clamp Connector Pinout		
Pin	Name	Function
1	GND	Ground
2	Reserved	Reserved
3	DC_OK	Power Out OK Signal
4	N.C.	No Connection

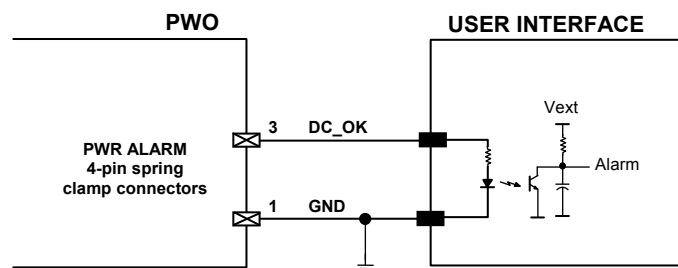


Figure 17 – Example Power Alarm Output

3 TECHNICAL FEATURES

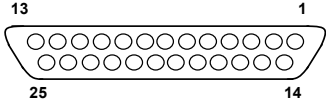
ELECTRICAL FEATURES	
Input Voltage	AC from 85 to 264 V from 45 to 65 Hz
Input Current	6.73 A @ 85 V; 2.12 A @ 264 V
Nominal Output Current	20 A
Maximum Output Current	26 A (up to +40 °C)
Output Voltage	24 VDC ± 1%
ENVIRONMENTAL FEATURES	
Operating Temperature	-25° to +50 °C (-13° to +122 °F)
Storage Temperature	-40° to +85 °C (-40° to +185 °F)
Humidity	90% non condensing
Vibration Resistance	EN 60068-2-6 Frequency range from 5 to 150 Hz; Constant displacement 3 mm pk-pk from 5 to 9 Hz; Constant acceleration 0.5 g from 9 to 150 Hz 2 hours on each axis
Shock Resistance	EN 60721-3-3 250 m/s ² , 6 ms 3 + 3 shocks on each axis
Protection Class	IP65*
PHYSICAL FEATURES	
Mechanical Dimensions	600 x 407 x 210 mm (23.6 x 16 x 8.3 in)
Weight	19.2 kg. (42 lbs 5 oz.)

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

A CONNECTOR PINOUTS

POWER SUPPLY - I/O (POWER/NET CONNECTOR)

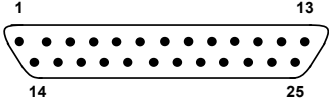
The PWO supplies 24 VDC.

25-pin D-Sub Female Connector Pinout			
Pin	Name	Function	
1	REL1	Relay output control	 <p>25-pin Female D-sub Connector</p>
2	REL3	Relay output control	
3	GND	Ground	
4	GND	Ground	
5	ENCODER A	Encoder (Tach)	
6	PS_AUX A	Presence sensor aux.	
7	PS A	Presence sensor	
8	SYS_ENC_I/O	System signal	
9	RES	Reserved	
10	RES	Reserved	
11	SHIELD_OUT	Lonworks	
12	LON_OUT B	Lonworks	
13	LON_OUT A	Lonworks	
14	REL2	Relay output control	
15	RES	Reserved	
16	VS	Supply voltage	
17	ENCODER B	Encoder (Tach)	
18	PS_AUX B	Presence sensor aux	
19	PS B	Presence sensor	
20	SYS_I/O	System signal	
21	RES	Reserved	
22	RES	Reserved	
23	SHIELD_IN	Lonworks	
24	LON_IN B	Lonworks	
25	LON_IN A	Lonworks	

Pin references with the denomination A and B are polarity insensitive signals.

EXTENDED I/O

25-pin D-Sub Male Connector Pinout		
Pin	Name	Function
1	VS_OUTPUTS	Power for outputs
2	IN1 A	Input signal 1 - polarity insensitive
3	IN2 A	Input signal 2 - polarity insensitive
4	IN3 A	Input signal 3 - polarity insensitive
5	GND	Ground
6	OUT1+	Configurable digital output 1 - positive pin
7	OUT2+	Configurable digital output 2 - positive pin
8	OUT3+	Configurable digital output 3 - positive pin
9	VS_INPUTS	Power for inputs
10	OUT4+	Configurable digital output 4 - positive pin
11	OUT5+	Configurable digital output 5 - positive pin
12	OUT6+	Configurable digital output 6 - positive pin
13	GND	Ground
14	GND	Ground
15	IN1 B	Input signal 1 - polarity insensitive
16	IN2 B	Input signal 2 - polarity insensitive
17	IN3 B	Input signal 3 - polarity insensitive
18	GND	Ground
19	OUT1-	Configurable digital output 1 - negative pin
20	OUT2-	Configurable digital output 2 - negative pin
21	OUT3-	Configurable digital output 3 - negative pin
22	GND	Ground
23	OUT4-	Configurable digital output 4 - negative pin
24	OUT5-	Configurable digital output 5 - negative pin
25	OUT6-	Configurable digital output 6 - negative pin



25-pin Male D-sub Connector

MAIN INTERFACE

The main serial interface is compatible with the following electrical standards:

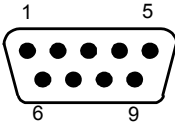
RS232

RS485 full-duplex



CAUTION

Do not connect GND and GND_ISO to different (external) ground references. GND and GND_ISO are internally connected through filtering circuitry which can be permanently damaged if subjected to voltage drops over 0.8 Vdc.

9-pin D-sub Female Connector Pinout			
Pin	RS232	RS485 Full Duplex	
2	TX	TX485 +	 <p>9-pin D-sub Male Connector</p>
3	RX	RX485 +	
5	GND_ISO	GND_ISO	
7	CTS	RX485 -	
8	RTS	TX485 -	

**Datalogic Automation S.r.l.**

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Bologna - Italy

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declares that the

PWO-480; Power Supply Unit

and all its models

are in conformity with the requirements of the European Council Directives listed below:

**2004 / 108 / EC EMC Directive
2006/95/EC Low Voltage Directive**

This Declaration is based upon compliance of the products to the following standards:

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*

Monte San Pietro, April 23th, 2010

Lorenzo Girotti
Product & Process Quality Manager

