



PS 52 Power Supply Bar Code Systems

SICK

© 1999
SICK, Inc.
6900 West 110th Street
Bloomington, Minnesota 55438 USA
Tel: 952 • 941 • 6780
Fax: 952 • 941 • 9287
www.sickoptic.com

Introduction

The PS 52 Power Supply, with an input voltage of 115/230 V AC or 24 V DC (model dependent), is designed to provide a 24 V DC source for a single CLV 21X, 220 or 41X bar code scanner. Standard 9-pin D-Sub and 15-pin D-Sub female connectors make for easy connectivity on the PS 52. The PS 52 also acts as a distribution or break-out box, since its terminal block can be easily accessed via PG connector ports located on the side of the enclosure. The terminal block incorporates the communication interface and discrete inputs/outputs of the scanners. This terminal block provides easy access in applications where hardwiring, due to long cable runs, is preferable to a D-Sub connector type interface.



PS 52 Port Functionality

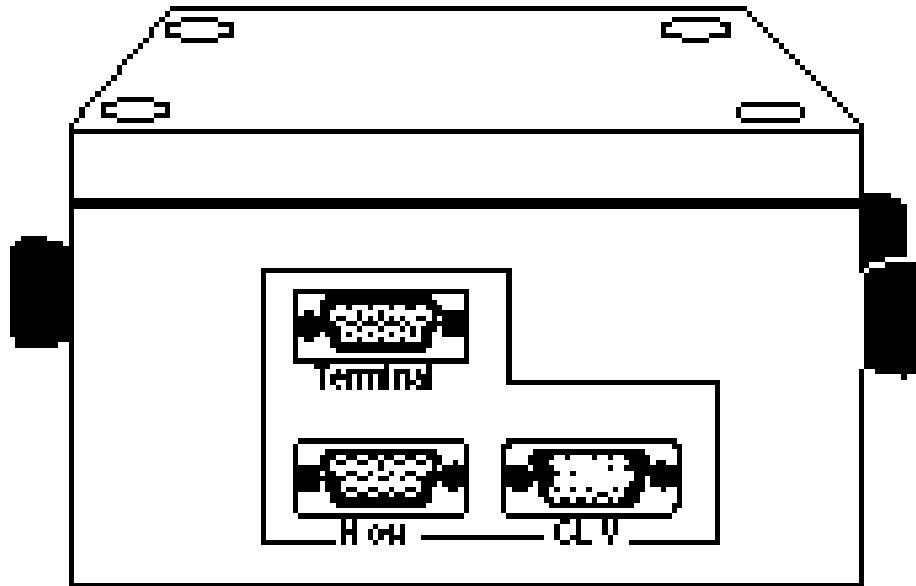


Figure 1

| PORT | FUNCTIONALITY |
|------|---------------|
|------|---------------|

| | |
|----------|--|
| Terminal | Connection to Host Device to program the CLV series scanners using the CLV Setup Software. The communication parameters are an RS 232 interface with a 2400-baud rate, 8 data bits, 1 stop bit, and no parity. A straight through cable can be used to connect this port to the RS 232 serial port of the PC. This port is a 9-pin D-Sub female connector. |
|----------|--|

**Note: Only used for the CLV 21x and 220 scanners*

| | |
|------|--|
| Host | Connection to Host Device is for transmission of the bar code data to the Host Device. The interface is dependent upon the type of bar code scanner attached. This port is a 9-pin D-Sub female connector. |
|------|--|

**Note: Also used to program CLV 410, 412 and 414 bar code scanners using the CLV Setup Software*

| | |
|-----|---|
| CLV | Connection of the CLV 21x, 220 and 41x to supply power, communications, and discrete input/output. This port is a 15-pin D-Sub high density female connector. |
|-----|---|

D-Sub Connector Pin-out Functionality

| PIN | TERMINAL PORT ¹ | HOST PORT | CLV PORT ² | CLV PORT ¹ |
|-----|----------------------------|-----------|-----------------------|-----------------------|
| 1 | N/C | N/C | +24 V | +24 V |
| 2 | AUX TxD RS232 | TxD RS232 | Sensor 2 | AUX RxD RS232 |
| 3 | AUX RxD RS232 | RxD RS232 | Output 3 | AUX TxD RS232 |
| 4 | N/C | Term 422 | Term 422 | Term 422 |
| 5 | GND | GND | GND | GND |
| 6 | N/C | T+ RS422 | R+ RS422 | R+ RS422 |
| 7 | N/C | T- RS422 | R- RS422 | R- RS422 |
| 8 | N/C | R+ RS422 | T+ RS422 | T+ RS422 |
| 9 | N/C | R- RS422 | T- RS422 | T- RS422 |
| 10 | | | RxD RS232 | RxD RS232 |
| 11 | | | TxD RS232 | TxD RS232 |
| 12 | | | Output 1 | Device Ready |
| 13 | | | Output 2 | Read Result |
| 14 | | | Sensor 1 | Sensor |
| 15 | | | Sensor GND | Sensor GND |

¹ Configuration for use with CLV 21x, 220

² Configuration for use with 41x

Figure 2

16 Pole Terminal Block

The 16 pole terminal block is used to make hardwire connection to various bar code scanner signals. In most applications, this is not required. Below is the list of signals and functionality of each.

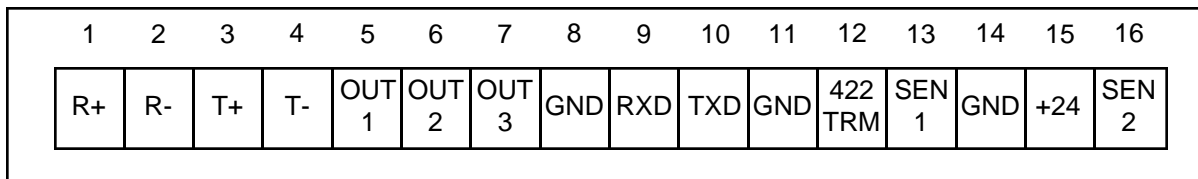


Figure 3

| PIN # | SIGNAL | FUNCTION |
|-------|----------|---|
| 1 | R+ | RS 422 Receive + line from CLV host port (Also RS 485 Receive line) |
| 2 | R- | RS 422 Receive - line from CLV host port |
| 3 | T+ | RS 422 Transmit + line from CLV host port (Also RS 485 Transmit line) |
| 4 | T- | RS 422 Transmit - line from CLV host port |
| 5 | OUT 1 | Discrete output line #1 24 V DC PNP (Device Ready) |
| 6 | OUT 2 | Discrete output line #2 24 V DC PNP (Read Result) |
| 7 | OUT 3 | Discrete output line #3 24 V DC PNP |
| 8 | GND | Signal Ground |
| 9 | RXD | RS 232 Receive line from CLV Host port |
| 10 | TXD | RS 232 Transmit line from CLV Host port |
| 11 | GND | Signal Ground |
| 12 | 422 TERM | Termination line for the RS 422 interface |
| 13 | SEN 1 | Sensor input line (1) to trigger the scanner |
| 14 | GND | Signal Ground |
| 15 | + 24 | 24 V DC line |
| 16 | SEN 2 | Sensor input line (2) to trigger the scanner |

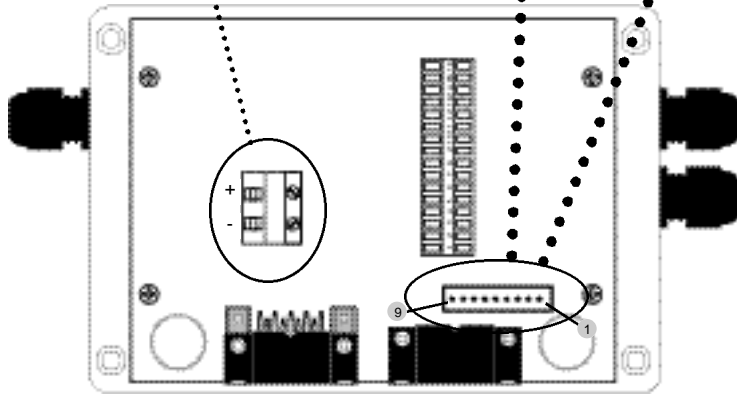
Figure 4

Functionality of Molex Interface (J3)

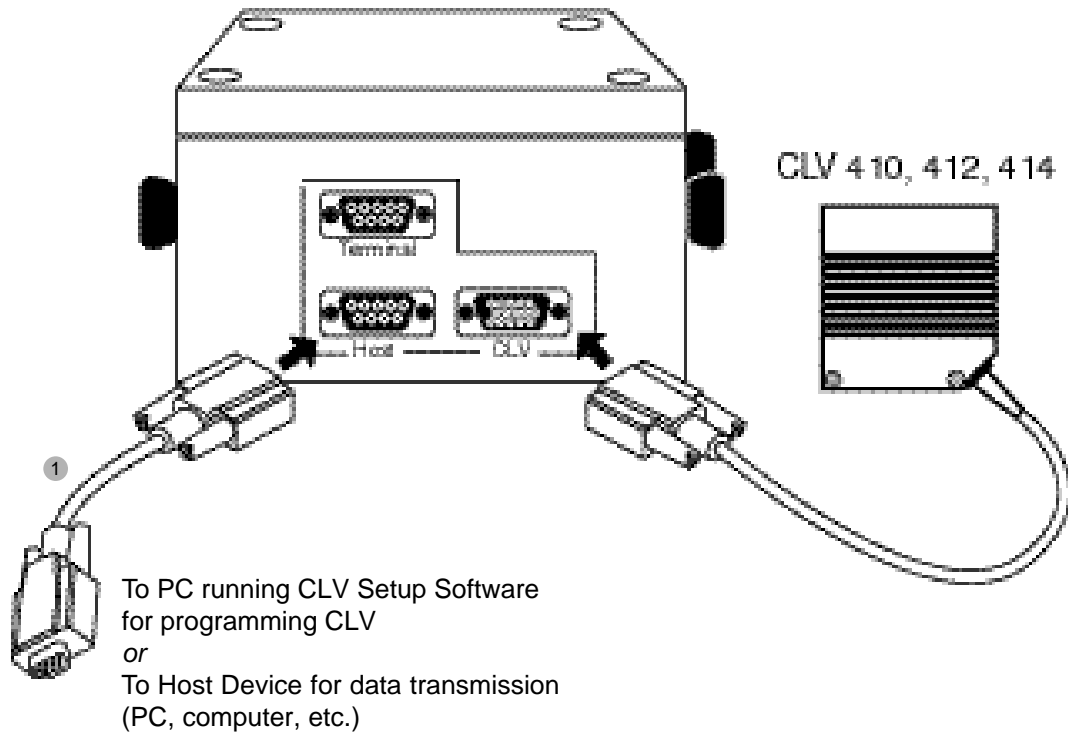
The 24 V DC version of the PS 52 (PS 52-0000) has a 2-position terminal of DC input. The input is polarity independent for ease of wiring.

This connector is an extension of the terminal block. It's intended use is to provide extra connectivity without consuming the terminal block connections.

| | | |
|---|---|--------------|
| 1 | ● | +24 V DC |
| | ● | RxD (RS 232) |
| | ● | TxD (RS 232) |
| | ● | GND |
| | ● | OUTPUT 1 |
| | ● | OUTPUT 2 |
| | ● | OUTPUT 3 |
| | ● | SENSOR 2 |
| 9 | ■ | SENSOR 1 |

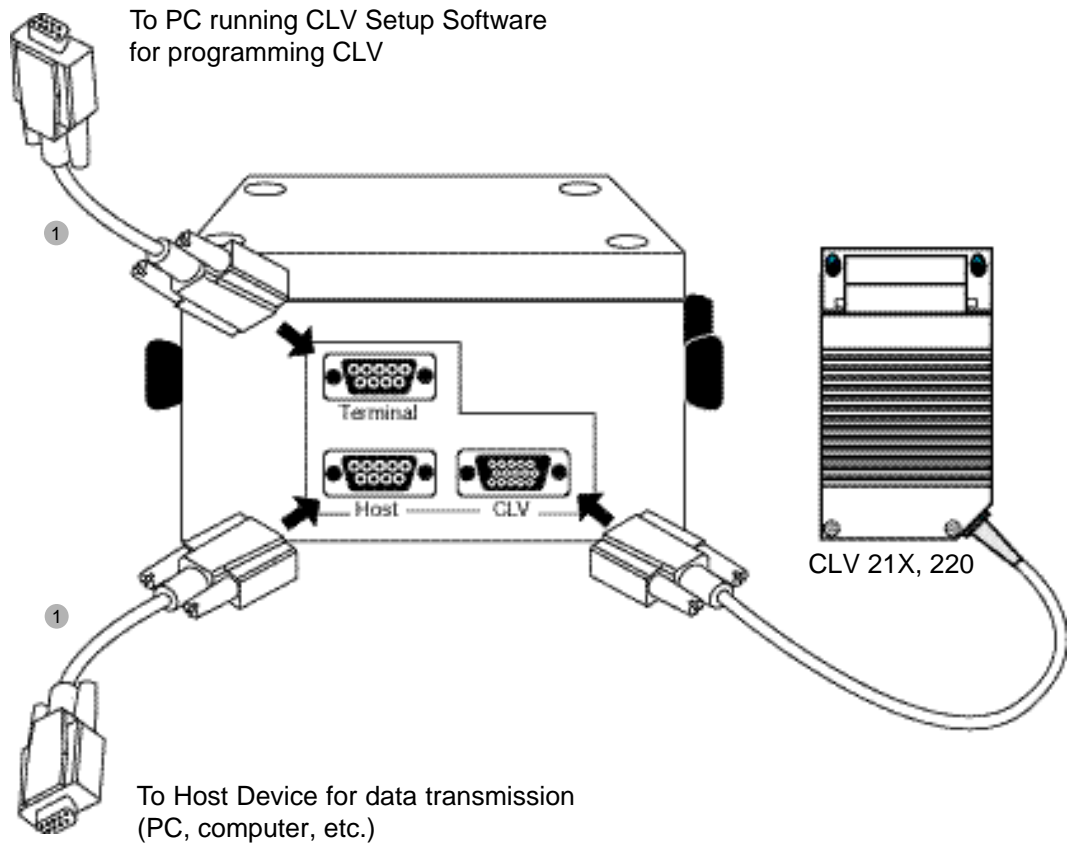


CLV 410, 412, 414 Standard Configuration



- | | | |
|---|-----------|---------------------|
| 1 | 7 021 851 | 2 m Interface Cable |
| | 7 021 849 | 3 m Interface Cable |

CLV 21X, 220 Standard Configuration



- 1 7 021 851 2 m Interface Cable
- 7 021 849 3 m Interface Cable

Dimensional Drawings

Dimensions in mm (in)

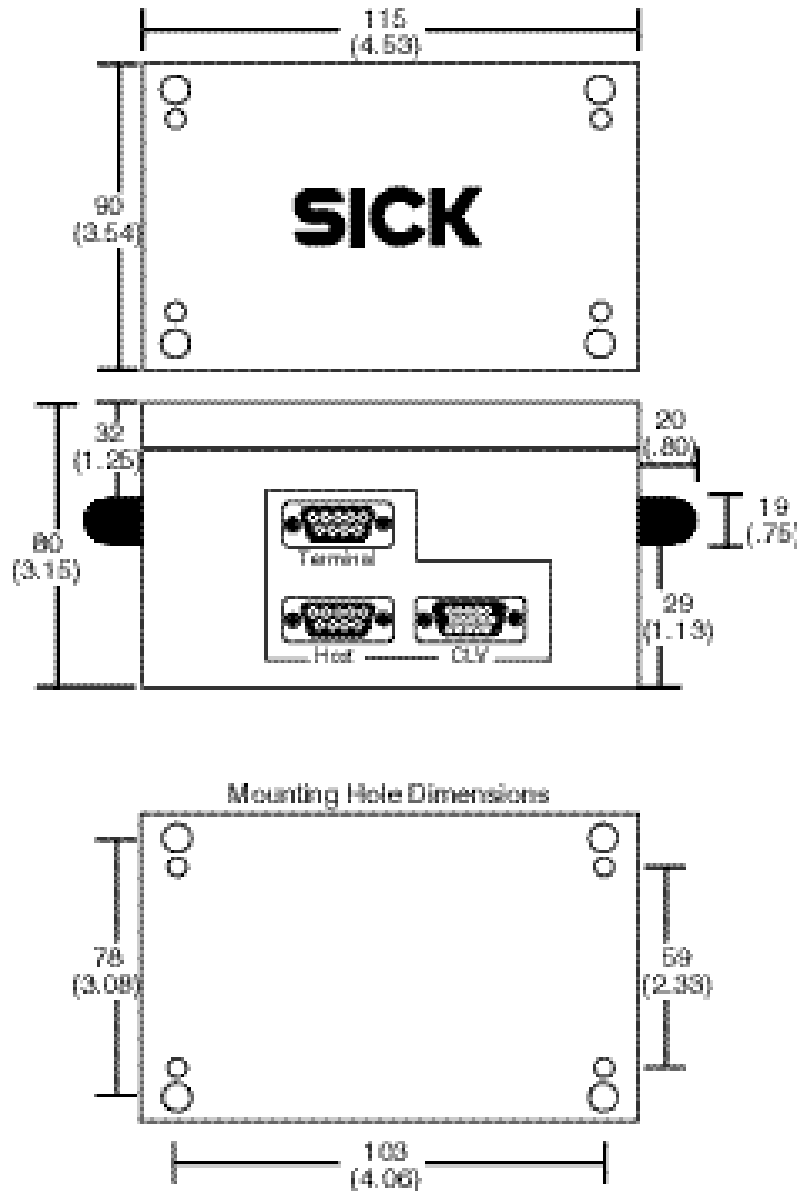


Figure 6

Technical Specifications

| PS 52 POWER SUPPLY | |
|------------------------|---|
| Input Voltage | 115 V AC / 230 V AC 60/50 Hz |
| Output Voltage | 24 V DC \pm 20% |
| Max. Power Output | 350 mA |
| Enclosure Material | Polycarbonate |
| Enclosure Rating | NEMA 12 (pending), FCC Class A Part 15 compliance, CE compliant |
| Transformer Rating | UL, CSA |
| Dimensions (L x W x H) | 115 x 90 x 80 mm (4.53 x 3.54 x 3.15 in) |
| Weight | 0.64 kg (1.40 lb) |
| Operating Temperature | 0...70° C (32...158° F) |
| Relative Humidity | 90% non-condensing |
| Mounting | One side, 4 holes, 4.76 mm (.19 in) diameter |
| Power Cord Length | 1.83 m (6 ft) |

Figure 7

Industrial Automation Products for North America and the World.

S a l e s • S e r v i c e • S u p p o r t



For more information and application assistance, please call:

800-325-7425

Visit us on the World Wide Web:

www.sickoptic.com

Email:

info@sickoptic.com

SICK

SICK, INC. • 6900 WEST 110TH STREET • BLOOMINGTON MN 55438 USA
PHONE (952) 941-6780 • FAX (952) 941-9287