

## **Quick Start Guide**

### **2MP 4X PTZ IP Camera**

#### **O2P4X**



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# Welcome

Thank you for purchasing this Network camera!

This manual is designed to be a reference tool for your system.

Please read this manual carefully before operating the unit and retain it for future reference.

Should you require any technical assistance, please contact Speco Technologies Technical Support.

# Important Safeguards and Warnings

## 1 . Electrical safety

All installation and operation here should conform to local electrical safety codes.

Use a certified/listed 12VDC Class 2 power supply only.

**Please note: Do not connect two power supplying sources to the device at the same time; it may result in device damage! The product must be grounded to reduce the risk of electric shock.**

Improper handling and/or installation could run the risk of fire or electrical shock.

## 2 . Environment

Heavy stress, violent vibration or exposure to water is not allowed during transportation, storage and installation.

This product should be installed in a cool, dry place away from direct sunlight and heat sources.

Do not install the product in extreme temperature conditions.

Do not expose the camera to electromagnetic radiation. Otherwise it may result in CMOS sensor failure.

Do not block any ventilation openings.

Do not allow water and liquid intrusion into the camera.

## 3. Operation and Daily Maintenance

Please shut down the device and then unplug the power cable before you begin any maintenance work.

Do not touch the CMOS sensor optic component. You can use a blower to clean the dust on the lens surface.

Always use the dry soft cloth to clean the device. If there is too much dust, use a cloth dampened with a small quantity of neutral detergent. Finally use the dry cloth to clean the device.

Please use a professional optical cleaning method to clean the enclosure. Improper enclosure cleaning (such as using cloth) may result in poor IR functionality and/or IR reflection.

The grounding holes of the product are recommended to be grounded to further enhance the reliability of the camera.

Dome cover is an optical device, please don't touch or wipe cover surface directly during installation and use, please refer to the following methods if dirt is found:

Stained with dirt

Use oil-free soft brush or hair dryer to remove it gently.

Stained with grease or fingerprint

Use oil-free cotton cloth or paper soaked with alcohol or detergent to wipe from the lens center outward. Change the cloth and wipe several times if it is not clean enough.

## **Warning**

This camera should be installed by qualified personnel only.

All the examination and repair work should be done by qualified personnel.

Any unauthorized changes or modifications could void the warranty.

## **Statement**

This guide is for reference only.

Product, manuals and specifications may be modified without prior notice. Speco Technologies reserves the right to modify these without notice and without incurring any obligation.

Speco Technologies is not liable for any loss caused by improper operation.

## **Note:**

Before installation, check the package and make sure that all components are included.

Keep the package material in case the camera needs to be sent back for service or repair.

Contact your rep or Speco customer service department immediately if something is broken or missing in the package.

# 1 Device Check

## 1.1 Check Accessories

Before installation, check the package and make sure that all components are included. Contact your rep or Speco customer service department immediately if something is broken or missing in the package.

| Accessory Name               | Amount |
|------------------------------|--------|
| Network Camera Unit          | 1      |
| Quick Start Guide            | 1      |
| Junction Box                 | 1      |
| Installation Accessories Bag | 1      |
| CD                           | 1      |

## 1.2 Check Device

Remove the device from the package. See Figure 1-1.

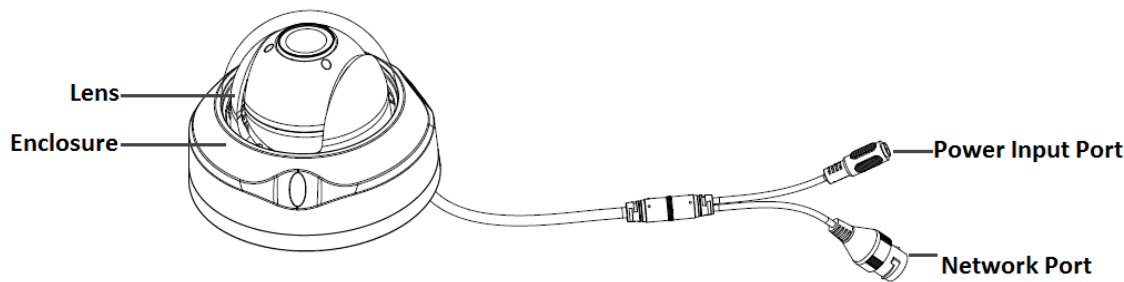


Figure 1-1

## 1.3 Installation Template

The installation template is used for drill hole positioning on the surface. See Figure 1-2.

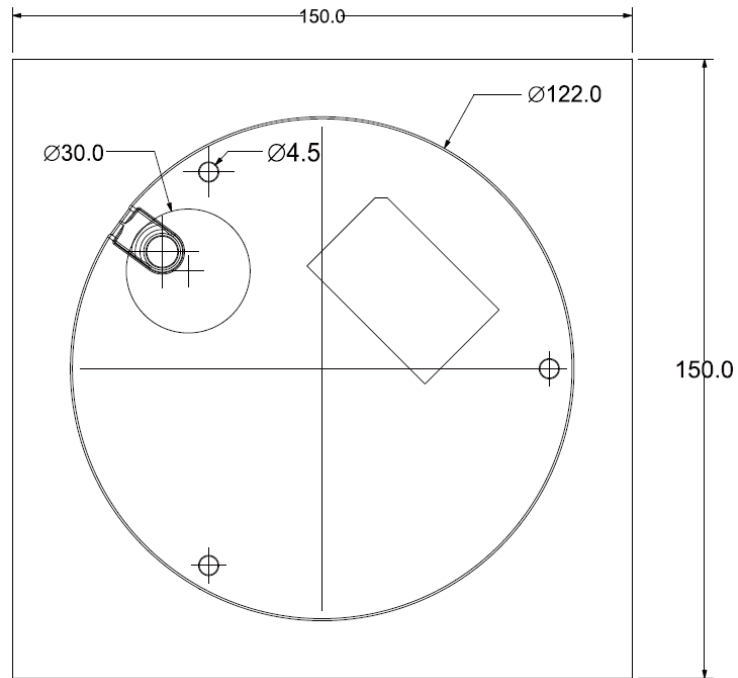


Figure 1-2

## 1.4 SD Card Slot and Reset Button

SD card slot and button are shown in Figure 1-3.

Please make sure the SD card is in a non read-write state when removing it. Otherwise, it may result in data loss and SD card damage. The button is used for setting the device back to a factory default state. Press and hold the reset button for more than 5 seconds to activate factory default.

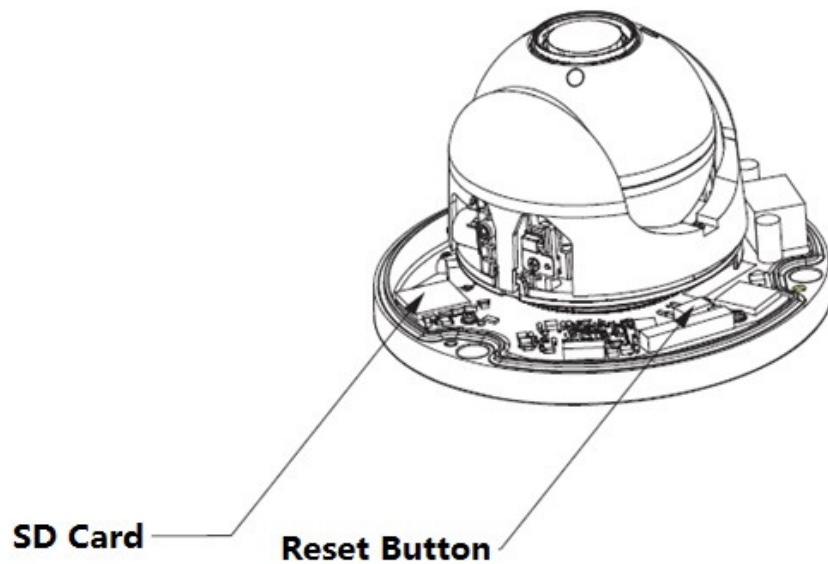


Figure 1-3

## 2 Device Installation

### 2.1 Component Installation

The installation of pedestal seal ring is shown in Figure 2-1.

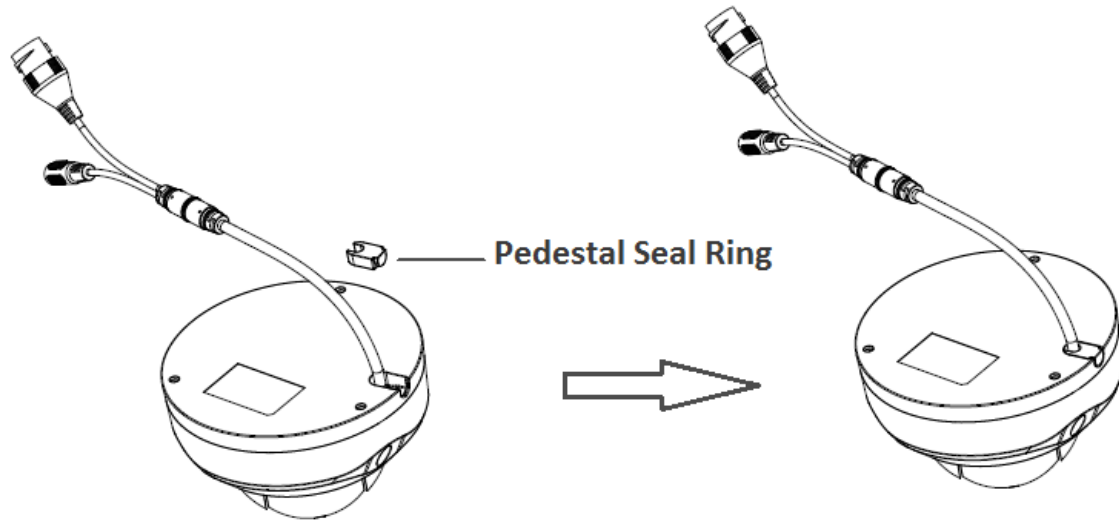


Figure 2-1

The installation setup is shown in Figure 2-2.

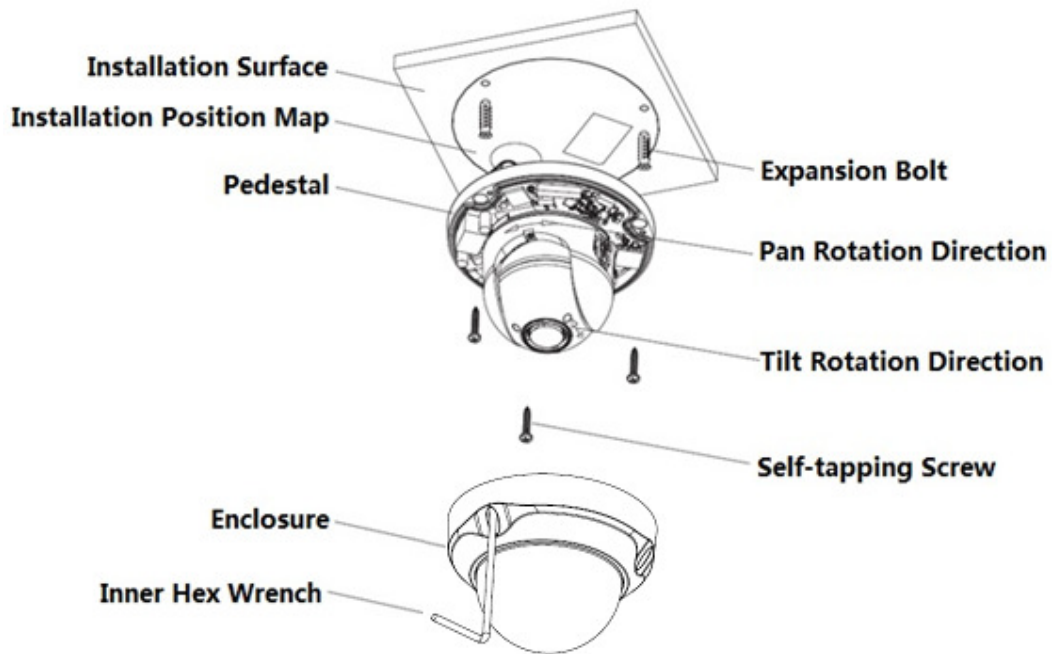


Figure 2-2

## **2.2 Installation Steps**

### **2.2.1 Installation Environment**

The ceiling mount speed dome can be installed on a hard surface ceiling in an indoor environment. Before the installation, please make sure:

- The ceiling is thick enough to install the expansion bolt.
- The ceiling can sustain at least 8x the weight of the speed dome.

### **2.2.2 Installation Steps**

#### **Step 1**

Install the default pedestal seal ring as shown in Figure 2-1.

#### **Step 2**

Confirm the installation position, drill holes on the ceiling according to the installation template, and then put the three plastic expansion bolts into the holes.

#### **Step 3**

Unscrew three locking screws on the enclosure by using the hex wrench, and remove the enclosure.

#### **Step 4**

Use the three self-tapping screws to fix the pedestal on the surface, and insert the screws into the expansion bolts.

#### **Step 5**

Use the three locking screws to fix the dome enclosure on the pedestal.

## 3 IP Scanner

### 3.1 Overview

IP Scanner can search for the device on the local network.

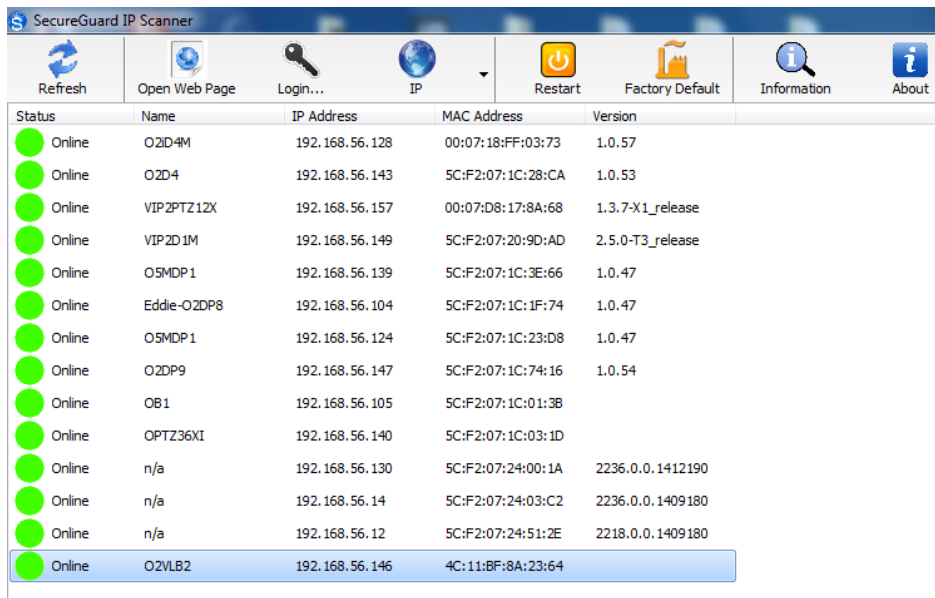
Please note that only devices that are on the same subnet can be discovered.

### 3.2 Operation

Open up IP Scanner.

Figure 3-1

In the device list, you can view the IP address, model number, and MAC address of each device. Select the applicable device and double click to open up the web viewer.



The screenshot shows the 'SecureGuard IP Scanner' application window. It features a toolbar with buttons for Refresh, Open Web Page, Login..., IP (selected), Restart, Factory Default, Information, and About. Below the toolbar is a table listing discovered devices. Each row includes a status indicator (green circle), a name, an IP address, a MAC address, and a version number. The last row, 'O2VLB2' with IP '192.168.56.146', is highlighted in blue.

| Status | Name        | IP Address     | MAC Address       | Version          |
|--------|-------------|----------------|-------------------|------------------|
| Online | O2ID4M      | 192.168.56.128 | 00:07:18:FF:03:73 | 1.0.57           |
| Online | O2D4        | 192.168.56.143 | 5C:F2:07:1C:28:CA | 1.0.53           |
| Online | VIP2PTZ12X  | 192.168.56.157 | 00:07:D8:17:8A:68 | 1.3.7-X1_release |
| Online | VIP2D1M     | 192.168.56.149 | 5C:F2:07:20:9D:AD | 2.5.0-T3_release |
| Online | O5MDP1      | 192.168.56.139 | 5C:F2:07:1C:3E:66 | 1.0.47           |
| Online | Eddie-O2DP8 | 192.168.56.104 | 5C:F2:07:1C:1F:74 | 1.0.47           |
| Online | O5MDP1      | 192.168.56.124 | 5C:F2:07:1C:23:D8 | 1.0.47           |
| Online | O2DP9       | 192.168.56.147 | 5C:F2:07:1C:74:16 | 1.0.54           |
| Online | OB1         | 192.168.56.105 | 5C:F2:07:1C:01:3B |                  |
| Online | OPTZ36XI    | 192.168.56.140 | 5C:F2:07:1C:03:1D |                  |
| Online | n/a         | 192.168.56.130 | 5C:F2:07:24:00:1A | 2236.0.0.1412190 |
| Online | n/a         | 192.168.56.14  | 5C:F2:07:24:03:C2 | 2236.0.0.1409180 |
| Online | n/a         | 192.168.56.12  | 5C:F2:07:24:51:2E | 2218.0.0.1409180 |
| Online | O2VLB2      | 192.168.56.146 | 4C:11:BF:8A:23:64 |                  |

Figure 3-1 IP Scanner

## 4 Web Operation

This device supports viewing and management via a web browser on a PC.

### 4.1 Login and Main Interface

Open the browser and input network camera address in the address bar or double click the device in IP Scanner. See Figure 4-1.

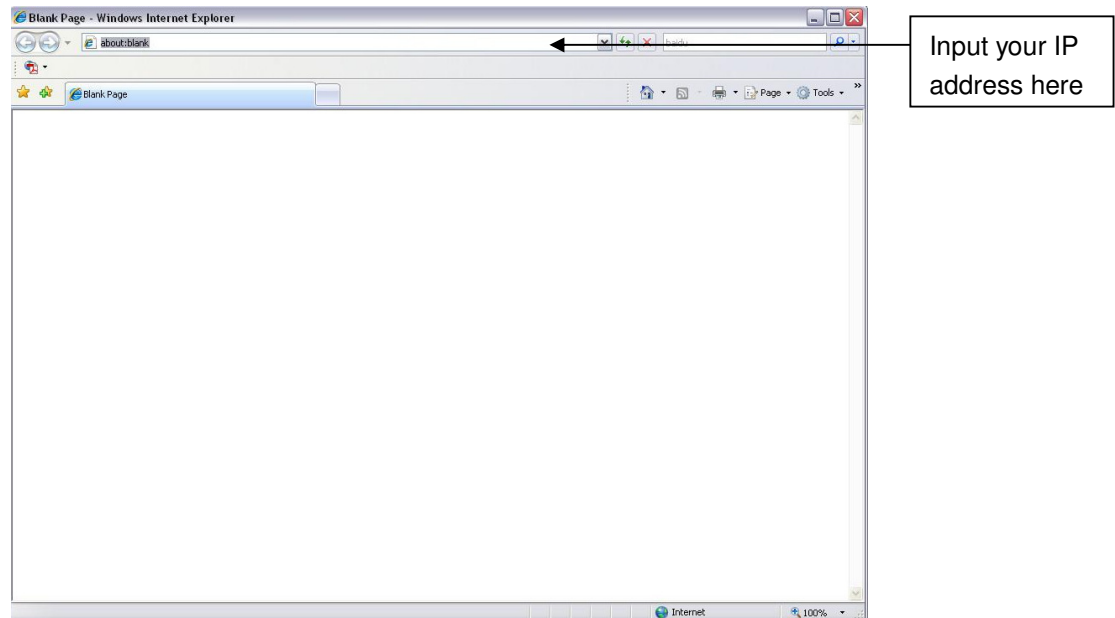


Figure 4-1 IP address

The login interface is shown as below. See Figure 4-2.

Please input your user name and password.

Default user name is **admin** and password is **1234**.

**Note: For security purposes, please change the password after initial login.**

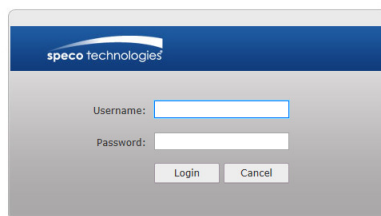


Figure 4-2 Web login

## 5 APPENDIX | Surge Protection

This device uses TVS lightning protection technology. It can effectively prevent damages from various pulse signals below 2000W, such as sudden lighting and surge. While maintaining your local electrical safety code, you still need to take necessary precaution measures when installing the speed dome in an outdoor environment.

- The distance between the signal transmission cable and high-voltage device (or high-voltage cable) shall be at least 50 meters (164 ft).
- Outdoor cable layout shall go under the penthouse if possible.
- For vast land, please use sealing steel tube under the land to implement cable layout and connect one point to the earth. Open floor cable layout should not be used.
- In areas prone to strong thunderstorms or near high sensitive voltage (such as near high-voltage transformer substation), you need to install additional high-power lightning protection device or lightning rod.
- The lightning protection and earth of the outdoor device and cable shall be considered under the lightning protection of the whole building and conform to your local national or industry standard.
- System shall adopt equal-potential wiring. The earth device shall meet anti-jamming and at the same time conform to your local electrical safety code. The earth device shall not short circuit to N (neutral) line of high voltage power grid or mixed with other wires. When connecting the system to earth alone, the earth resistance shall not be more than  $4\Omega$  and earth cable cross-sectional area shall be below  $25\text{ mm}^2$ .

## 6 APPENDIX II 12V DC Wire Gauge and Transmission

### Distance Reference

The recommended max transmission distance is under the following environments: The wire diameter is fixed and the DC 12V power voltage loss rate is below 10%. For the device being supplied the DC power, the max allowed voltage loss rate is 10%. All the wires listed in the following sheet are copper wire. (Copper wire resistance  $p = 0.0175\Omega \cdot \text{mm}^2/\text{m}$ )

| Feet (m) \ mm<br>w | 0.8000            | 1.000             | 1.250             | 2.000              |
|--------------------|-------------------|-------------------|-------------------|--------------------|
| 5                  | 122.13<br>(37.23) | 190.83<br>(58.16) | 298.17<br>(90.88) | 763.31<br>(232.66) |
| 10                 | 61.06<br>(18.61)  | 95.41 (29.08)     | 149.08<br>(45.44) | 381.66<br>(116.33) |
| 15                 | 40.71<br>(12.41)  | 63.61 (19.39)     | 99.39 (30.29)     | 254.44<br>(77.55)  |
| 20                 | 30.53 (9.31)      | 47.71 (14.54)     | 74.54 (22.72)     | 190.83<br>(58.16)  |
| 25                 | 24.43 (7.45)      | 38.17 (11.63)     | 59.63 (18.18)     | 152.66<br>(46.53)  |
| 30                 | 20.35 (6.20)      | 31.80 (9.69)      | 49.69 (15.15)     | 127.22<br>(38.78)  |
| 35                 | 17.45 (5.32)      | 27.26 (8.31)      | 42.60 (12.98)     | 109.04<br>(33.24)  |
| 40                 | 15.27 (4.65)      | 23.85 (7.27)      | 37.27 (11.36)     | 95.41 (29.08)      |
| 45                 | 13.57 (4.14)      | 21.20 (6.46)      | 33.13 (10.10)     | 84.81 (28.85)      |
| 50                 | 12.21 (3.72)      | 19.08 (5.82)      | 29.82 (9.09)      | 76.33 (23.27)      |
| 55                 | 11.10 (3.38)      | 17.35 (5.29)      | 27.11 (8.26)      | 69.39 (21.15)      |
| 60                 | 10.18 (3.10)      | 15.90 (4.85)      | 24.85 (7.57)      | 63.61 (19.39)      |
| 65                 | 9.39 (2.86)       | 14.68 (4.47)      | 22.94 (6.99)      | 58.72 (17.90)      |
| 70                 | 8.72 (2.66)       | 13.63 (4.15)      | 21.30 (6.49)      | 54.52 (16.62)      |
| 75                 | 8.14 (2.48)       | 12.72 (3.88)      | 19.88 (6.06)      | 50.89 (15.51)      |
| 80                 | 7.63 (2.33)       | 11.93 (3.64)      | 18.64 (5.68)      | 47.71 (14.54)      |
| 85                 | 7.18 (2.19)       | 11.23 (3.42)      | 17.54 (5.35)      | 44.90 (13.69)      |
| 90                 | 6.78 (2.07)       | 10.60 (3.23)      | 16.56 (5.05)      | 42.41 (12.93)      |
| 95                 | 6.43 (1.96)       | 10.04 (3.06)      | 15.69 (4.78)      | 40.17 (12.25)      |
| 100                | 6.11 (1.86)       | 9.54 (2.91)       | 14.91 (4.54)      | 38.17 (11.63)      |

## 7 APPENDIX III Wire Gauge Reference

| Metric bare wire diameter (mm) | AWG | SWG | Bare wire cross section (mm <sup>2</sup> ) |
|--------------------------------|-----|-----|--------------------------------------------|
| 0.050                          | 43  | 47  | 0.00196                                    |
| 0.060                          | 42  | 46  | 0.00283                                    |
| 0.070                          | 41  | 45  | 0.00385                                    |
| 0.080                          | 40  | 44  | 0.00503                                    |
| 0.090                          | 39  | 43  | 0.00636                                    |
| 0.100                          | 38  | 42  | 0.00785                                    |
| 0.110                          | 37  | 41  | 0.00950                                    |
| 0.130                          | 36  | 39  | 0.01327                                    |
| 0.140                          | 35  | /   | 0.01539                                    |
| 0.160                          | 34  | 37  | 0.02011                                    |
| 0.180                          | 33  | /   | 0.02545                                    |
| 0.200                          | 32  | 35  | 0.03142                                    |
| 0.230                          | 31  | /   | 0.04115                                    |
| 0.250                          | 30  | 33  | 0.04909                                    |
| 0.290                          | 29  | 31  | 0.06605                                    |
| 0.330                          | 28  | 30  | 0.08553                                    |
| 0.350                          | 27  | 29  | 0.09621                                    |
| 0.400                          | 26  | 28  | 0.1257                                     |
| 0.450                          | 25  | /   | 0.1602                                     |
| 0.560                          | 24  | 24  | 0.2463                                     |
| 0.600                          | 23  | 23  | 0.2827                                     |
| 0.710                          | 22  | 22  | 0.3958                                     |
| 0.750                          | 21  | /   | 0.4417                                     |
| 0.800                          | 20  | 21  | 0.5027                                     |
| 0.900                          | 19  | 20  | 0.6362                                     |
| 1.000                          | 18  | 19  | 0.7854                                     |
| 1.250                          | 16  | 18  | 1.2266                                     |
| 1.500                          | 15  | /   | 1.7663                                     |
| 2.000                          | 12  | 14  | 3.1420                                     |
| 2.500                          | /   | /   | 4.9080                                     |
| 3.000                          | /   | /   | 7.0683                                     |