

DM Series Networking Technical Specification For PC Meter Connect Desktop Application.

Guidelines for Support Personnel

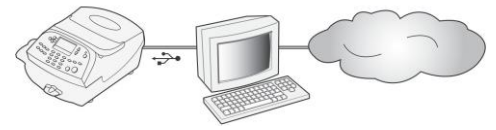
This document is designed for technical support personnel in your organization responsible for determining how the business will connect the Ethernet enabled Digital Meter to your corporate LAN, and set up firewall access to the Internet. A separate document is available for direct connection via LAN upon request. Because of the multitude of networks in use by our customers, Pitney Bowes cannot provide individual guidance with respect to each organization's infrastructure characteristics. We will however, provide all of the necessary information for each customer to provide a secure connection to the Pitney Bowes infrastructure for the services necessary to operate the Ethernet enabled Digital Meter in your secure network environment.

Meter Security Overview

The PC Meter Connect desktop application, LAN adapter, and Digital Meter are certified as a system by ICSA Labs, an independent division of Verizon Business offering vendor-neutral testing and certification of security products. Many of the world's top security vendors submit their products for testing and certification at ICSA Labs. Businesses rely on ICSA Labs to authoritatively set and apply objective testing and certification criteria for measuring product compliance and reliability. Visit <http://www.icsalabs.com> to learn more or review our certification.



Networking Details using PC Meter Connect Desktop Application



PC Meter Connect is a desktop application you install on your PC to allow your meter to connect to the Pitney Bowes Data Center through your PC's Internet connection, rather than over a standard telephone line. Postage refills and updates will be completed efficiently and much quicker via the Internet. The desktop application software is provided as a connectivity option for your meter.

If you have decided to connect your meter to the Pitney Bowes Data Center using PC Meter Connect, review the FAQs below to obtain answers to the most commonly asked questions applicable to meter models DM130E, DM175, DM185, DM195, DM300, DM400, and DM450.

Links: [download](#), [Install instructions](#) & [system requirements](#)

PC Meter Connect and Network Frequently Asked Questions (FAQs)

1. **What are the minimum PC system requirements for PC Meter Connect desktop application?**
 - Windows 2000 through to windows 10 (Non-Windows Operating Systems, e.g. Mac and Linux, are not supported)
 - 1.2 GHz processor, 512 Mb RAM
 - USB port
 - Administrative privilege to install software
 - Microsoft .NET framework 2.0 (required for PC Meter Connect) will be automatically installed if it is not ready on the PC. This is a one-time installation.
 - Internet Connection

2. **What are the network requirements for the meter using the PC Meter Connect desktop application?**
 - The System (Meter and PC Meter Connect desktop application) requires an Internet connection, accessed through a Wired or Wireless LAN.
 - The System supports 10/100 Ethernet transfer rates; Full Duplex.
 - The System will initiate all communication.
 - The System will initiate all communication via HTTP, HTTPS, and FTP.
 - The System will communicate to external Web Services via HTTP over Port 80.
 - The System will communicate to PB secure server(s) via HTTPS over port 443.
 - The System will communicate to PB data server via FTP, reference port details below.
 - The System will use Port 53 for DNS lookup.

3. **What access needs to be opened for my Firewall?**

It is recommended your meter be connected through a firewall. If unrestricted outbound access is not allowed in a particular organization, then Network access to Pitney Bowes' servers is accomplished by allowing access to the domains listed in the table below. To avoid potential

future firewall issues, it is **highly recommended** domains are used instead of IP addresses, because IP addresses have a tendency to change. Also, some domains are country-specific, so reference the country column to see if it is applicable to your meter.

Note – Due to the secure nature of the transactional servers, they may not reply to ping or tracert requests.

URL	Domain	Country	Protocol and Ports	Purpose
		All Countries	Outbound UDP on Port 53	DNS will utilize User Datagram Protocol (UDP) to resolve domains.
http://www.pb.com Note: If you have required access, clicking this URL will present the Pitney Bowes Home page.	www.pb.com	All Countries	Outbound HTTP on Port 80	This URL is used by PCMC to test internet connectivity. PCMC connects to the PB Home page.
http://distserv1.pb.com/dstproduct.asp	distserv1.pb.com	All Countries, except India	Outbound HTTP on Port 80	PCMC to Distributor communication to obtain list of servers PCMC will establish communication for the active session.
http://cometserv2.pitneybowes.com.au/t3cometserver_04.asp	Cometserv2.pitneybowes.com.au	Australia	Outbound HTTP on Port 80	PCMC to Comet Server communication to complete postal security device (PSD) audits, check your account balances, and to transfer funds from your PbP account to the PSD.
http://pbdlsp1.pb.com/PrdUpdate.dll Note: If you have required access, clicking this URL should provide the following response from within your default browser: <?xml version="1.0" ?> - <FileUpdateResponse> <Msg>301</Msg> </FileUpdateResponse>	pbdlsp1.pb.com	All Countries, except India	Outbound HTTP on Port 80	PCMC to Download Services global load balancer to Application Server communication used to send meter's configuration and determine whether updates are available. Updates include postal tariff changes, graphics (Ads, inscriptions), feature changes, and meter firmware updates.
http://pbdlsp1.pb.com/DLA/Service.svch	pbdlsp1.pb.com	All Countries, except India	Outbound HTTP on Port 80	PCMC to Download Services Application Server communication used to send meter's configuration and determine whether updates are available. Updates include postal tariff changes, graphics (Ads, inscriptions), feature changes, meter firmware, and PCMC.

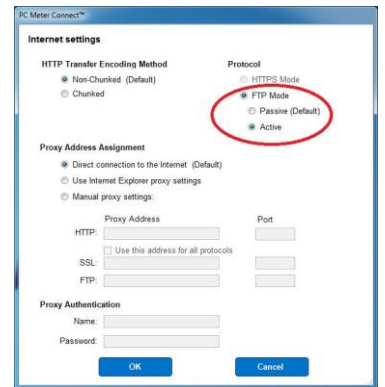
	<p>dlsdlp1T.pb.com</p> <p>dlsdlp1z.pb.com</p> <p>dlsdlp1.pb.com</p> <p>dlsdlp1b.pb.com</p>	<p>All Countries, except India</p>	<p>Unrestricted FTP</p> <p>Note: Reference FAQ 4 for additional Port details.</p> <p>OR</p> <p>HTTPS on Port 443 or TLS</p>	<p>PCMC to Download Services load balancer used to download customer's CCD/Order</p> <div data-bbox="1353 376 1522 510" style="border: 1px solid black; padding: 5px;"> <p>Protocol</p> <p><input checked="" type="radio"/> HTTPS Mode</p> <p><input type="radio"/> FTP Mode</p> <p><input type="radio"/> Passive (Default)</p> <p><input type="radio"/> Active</p> </div> <p>files, postal tariff changes, graphics (Ads, inscriptions), feature changes, and meter firmware updates. The Protocol used depends on selected protocol, see Internet Settings menu from PC Meter Connect desktop application.</p>
	<p>pbdlst1.pb.com</p> <p>dlsdlp1.pb.com</p>	<p>All Countries</p>	<p>HTTPS on Port 443 or TLS</p>	<p>PCMC to Download Services load balancer for PCMC desktop application updates and diagnostic error log uploads.</p>
<p>https://pbdlst1.pb.com/UploadService/Service.svc https://dlsdlp1.pb.com/.....</p>	<p>pbdlst1.pb.com</p>	<p>All Countries</p>	<p>HTTPS on Port 443 or TLS</p>	<p>PCMC to Download Services communication to send PCMC diagnostic error logs. PCMC to Download Services file upload to send PCMC diagnostic error logs to DLA.</p>

If IP Addresses **must** be used, Pitney Bowes recommends the firewall be set to allow unrestricted access to the full blocks of Pitney Bowes IP Addresses listed below.

IP Range	Comments
152.144.128.0 - 152.144.128.255	Applicable to Australia, Canada, Japan, USA
172.28.106.0 - 172.28.107.255	Applicable to Australia, Canada, Japan, USA
172.31.224.0 - 172.31.224.255	Applicable to Australia, Canada, Japan, USA
199.231.32.0 - 199.231.47.255	Applicable to Australia, Canada, Japan, USA
209.85.128.0 - 209.85.255.255	Applicable to Australia, Canada, Japan, USA

4. **What type of FTP is used by the System “Active” or “Passive”?**

FTP may be used if the preferred method, HTTPS is not desired. The PC Meter Connect desktop application will default to FTP “Passive” mode, but the protocol can be changed to “Active” if necessary, see Internet Settings menu from PC Meter Connect desktop application to the right.



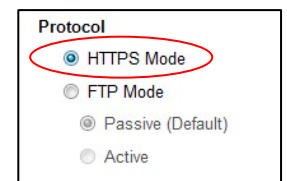
- **Firewall on “Active” FTP** - what ports should be opened on server and client side?

On server port 20 for data and port 21 for commands must be opened. On the client, ports > 1023 must be opened for successful FTP connection and transfer of files.

- **Firewall on “Passive” FTP** - what ports should be opened on server and client side? On server port 21 for commands and ports > 1023 must be opened. On the client, ports > 1023 must be opened for successful FTP connection and transfer of files.

5. **FTP communication is restricted on my network. Is there an alternate communication protocol allowed in place of FTP?**

Some meters support using HTTPS as an alternative to FTP. If your meter supports this communication, access the Internet Settings menu from the PC Meter Connect desktop application and select HTTPS mode. If the feature is not supported, the option will be greyed out.



6. **What type of communication does the meter use while connecting to the Pitney Bowes Data Center Servers?**

The meter uses HTTP on Port 80, HTTPS on Port 443, and FTP on Port 21 for communications to Pitney Bowes Data Center Servers. Port 80 is used to communicate XML formatted messages requesting services.

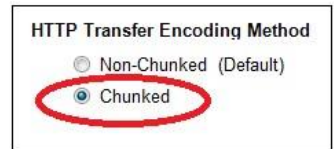
Note: For HTTPS downloads the ports will depend on the supported security for both the client and target server. If Secure Sockets Layer (SSL) is used, all communication will be on port 443. If the client and host server support Transport Layer Security (TLS), TLS will be used by PC Meter Connect desktop application. If TLS is used, port 443 is used for the server, but the client will use a random higher level port.

7. Does the System use static and dynamic addressing?

Your System utilizes the PC's internet connection and will function with static or dynamic IP addressing.

8. Is the HTTP communication "Chunked" or "Non-Chunked"?

The System with PC Meter Connect desktop application supports both "chunked" and "non-chunked" HTTP transfer encoding communication. By default, the PC Meter Connect desktop application will use "non-chunked". However, Postage by Phone connectivity can be easily changed using the Internet Settings menu from PC Meter Connect desktop application on the right. You should only make this change if necessary. Most networks will function properly with the default, Non-Chunked setting.



9. My network is connected to the internet via a Proxy. How do I set PC Meter Connect desktop application to use the same Proxy?

If your communications are routed through a Proxy, PC Meter desktop application must be setup to access the Proxy. At the Internet Settings screen, either uses the current settings that Internet Explorer uses or you can manually enter the settings.

◆ Right click on the PC Meter Connect system tray icon and select Internet Settings.



◆ At the Internet Settings screen, either use Internet Explorer proxy settings or manual proxy settings, reference images below.

