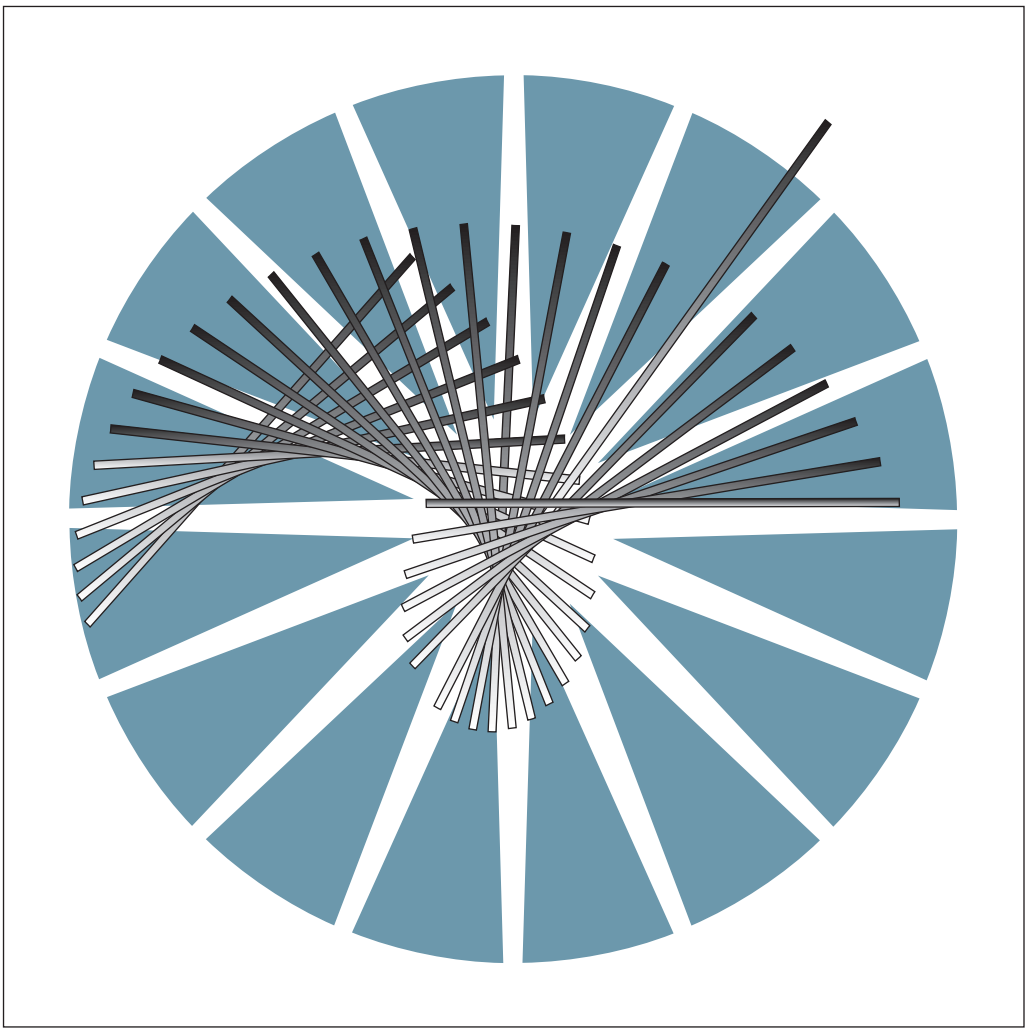
3745 Communication Controller
Models 130, 150, 160, 170, and 17A
3746 Expansion Unit Model 900

100/120-Volt Connection RPQ 7L1184 Installation and Maintenance Information



SY33-2078-3

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Note!

Before using this information and the product it supports, be sure to read the general information under “Notices” on page v.

Fourth Edition (January 1995)

The information contained in this manual is subject to change from time to time. Any such changes will be reported in subsequent revisions. Changes have been made throughout this edition, and this manual should be read in its entirety.

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Federal Communications Commission (FCC) Statement

Note: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference, in which case the user will be required to correct the interference at his own expense.

Properly shielded and grounded cables and connectors must be used in order to meet FCC emission limits. IBM is not responsible for any radio or television interference caused by using other than recommended cables and connectors or by unauthorized changes or modifications to this equipment. Unauthorized changes or modifications could void the user's authority to operate the equipment.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

For Canada, *Canadian Department of Communication Statement,* **GX27-3883, applies.**

Safety

General Safety

This product meets IBM safety standards.

For general safety information, see: *IBM Telecommunication Products Safety Handbook*, GA33-0126.

Service Inspection Procedure

The following procedure helps the service representative check that the transformer assembly conforms with IBM safety criteria. It is to be used whenever safety is suspected.

Any deficiencies detected when using this procedure (if they make the transformer unsafe) must be, either reported to the owner and/or user, or corrected by exchanging the transformer assembly.

The areas checked by this procedure are:

1. Input power voltage
2. Circuit protector
3. Safety label
4. Power supply part number
5. Grounding
6. Covers.

Important Note

- The transformer assembly is a sealed unit. It cannot be opened for maintenance.

Procedure Steps

- *Step 1* Input power voltage
  - Check that the voltage indicated on the transformer assembly power rating plate is consistent with the voltage level measured at the customer's power receptacle. See Figure 1-2 on page 1-4 for location.
- *Step 2* Circuit protector
  - Check that the circuit protector is not damaged and physically operates correctly.
- *Step 3* Safety label
  - Check that the safety labels are present. See Figure 1-2 on page 1-4 for location.

- *Step 4* Power supply part number
  - Check that the part number written on the transformer assembly is consistent with “Transformer Assembly Part Number” on page 1-8
- *Step 5* Grounding
  - Check that electrical continuity is assured between the ground wires of the power cords and between those ground wires and the frame ground.
- *Step 6* Cover
  - The transformer assembly is a sealed unit. Check that the rivets are in place and have not been forced.

Chapter 1. Generalities

Introduction

This RPQ allows connecting an IBM 3745 Communication Controller Model 130, 150, 160, 170 or 17A or an IBM 3746 Expansion Unit Model 900 to a customer's 100/120-volt power supply.

It consists of a transformer with an input power cord with a plug and an output power cord. Overload protection is provided through a circuit protector at the input.

The transformer assembly is a sealed unit. It cannot be opened for maintenance.

Specifications

Dimensions

	Front	Side	Height
mm	170	220	160
(inches)	(6.69)	(8.66)	(6.30)

Service Clearances

	Front	Rear	Right	Left
mm	250	none	25	25
(inches)	(9.84)		(0.98)	(0.98)

See Figure 1-1 on page 1-3.

Weight

17 kg (37.25 lb)

Heat Output

50 W

Airflow

Convection only

Power Requirements

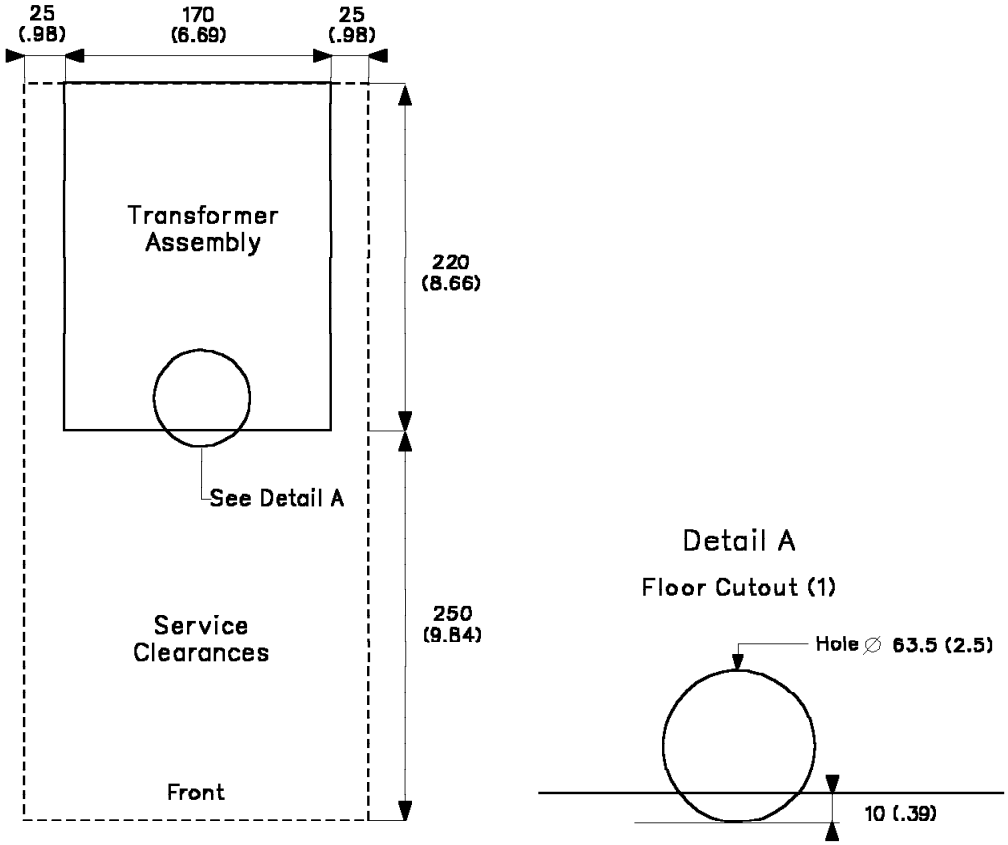
kVA	1.2
Phase	1
Input Current	11 A maximum for United States/Canada 13 A maximum for Japan
Inrush current	180 A maximum
Branch circuit ampacity	15 A
Voltage	60 Hz 120 V for United States/Canada 50/60 Hz 100 V for Japan
Frequency	50/60 Hz

Environment, Operating

Temperature	10°C-41°C (50°F-105°F)
Relative Humidity	8% to 80%

Plan View

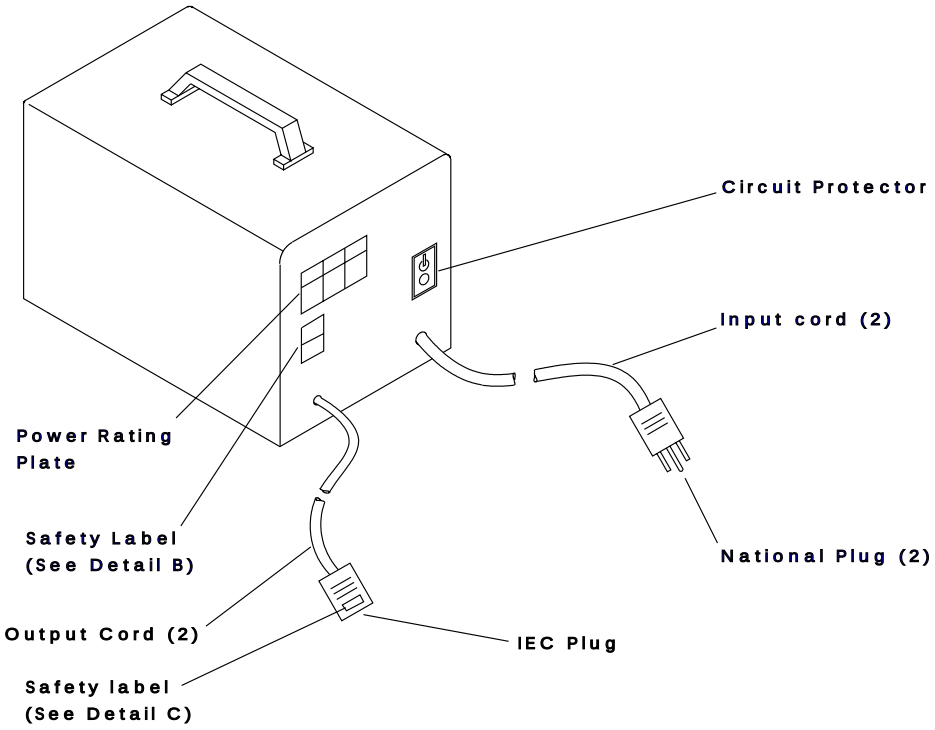
Metric scale: 1 mm = 5 mm. Measurements in inches are shown in parentheses.



(1) A floor cutout is required for raised floor installation.

Figure 1-1. Plan View

Component Location



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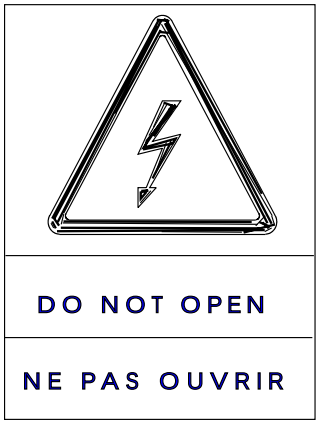
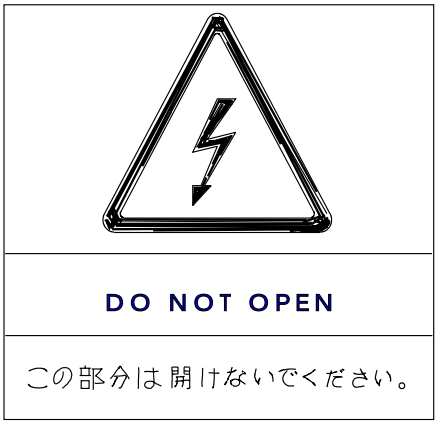
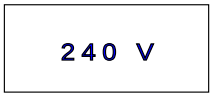


Detail B

JAPAN





Detail C

(2) For details on cord length and plug type, see
“Transformer Assembly Part Number” on page 1-8.

Figure 1-2. Component Location

Installation

1. Measure the customer's primary power using the *3745-130/150/160/170/17A and 3746-900 Installation Guide*, SY33-2067, Chapter 2 "Measuring the Customer's Primary Power", steps 1 through 3.

   The acceptable voltage limits are: 90 through 127 volts. See “Input Voltages” on page 1-7.

2. Ensure that the 3745 is not connected to the customer's power supply

   Ensure that CB1 is switched to **OFF** on the front of the 3745 primary power box (see Figure 1-3 for location).

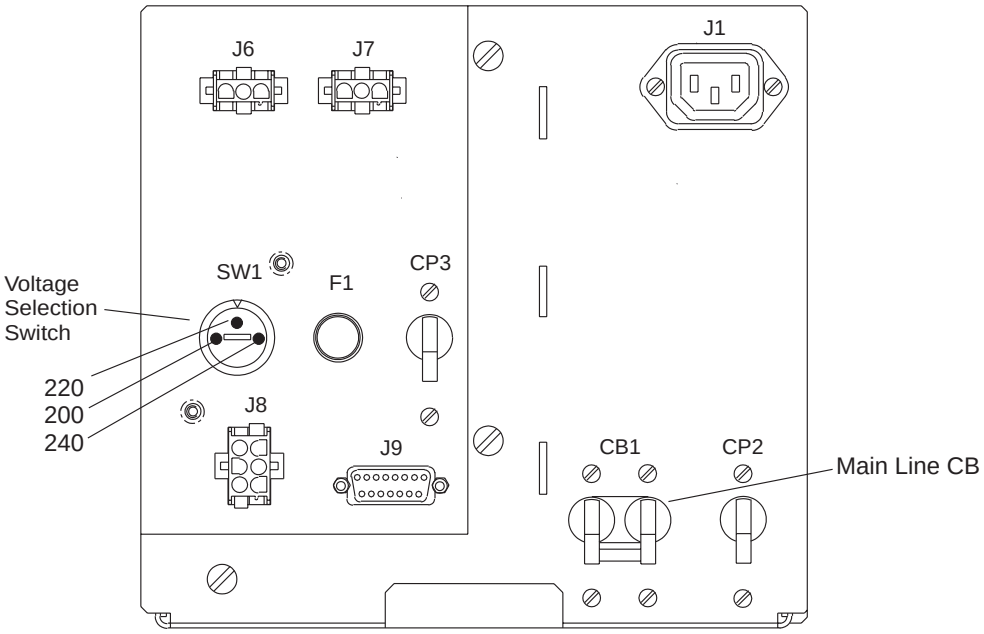


Figure 1-3. Primary Power Box (Front View)

   On the front side of the primary power box, set the SW1 switch (see Figure 1-3 for location) to position 240.

3. If the machine is shipped with the 200/240-volts line cord installed, it must be disconnected and removed.

   a. Remove the clamp securing the power cord. Keep this clamp and its screw for further use.

   b. Disconnect the power cord from connector J3 (see Figure 1-4 on page 1-6 for location).

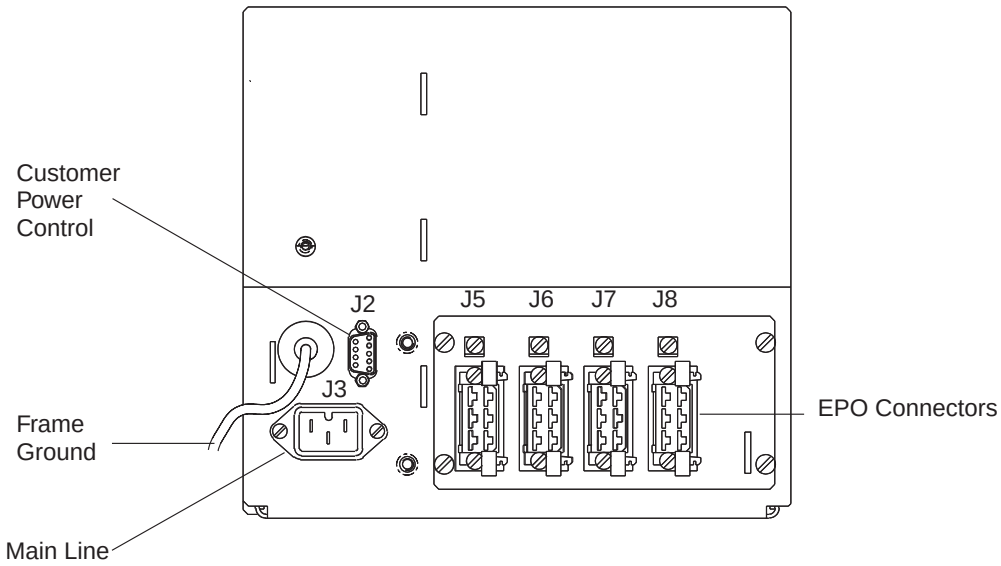


Figure 1-4. Primary Power Box (Rear View)

4. Place the transformer assembly according to “Service Clearances” on page 1-2. The transformer must be installed above the raised floor (if present).

   IMPORTANT

   Ensure that the transformer is placed so that it will not cause a tripping hazard. Place it against a wall, on or under a desk or table, away from aisles.

5. Plug the output power cord of the transformer to connector J3. Secure the cable with the clamp and screw removed in step 3a.
6. Route the input power cord to the customer's receptacle, and insert the power plug into the customer's main socket.
7. Switch the transformer assembly circuit protector to the **ON position**.
8. Continue the 3745 installation using the *Installation Guide* Chapter 2, step 4 of "3745 Connection to Customer's Primary Power".

Operation

The transformer is a passive device requiring no action. The 3745 power (ON/OFF) will still be controlled by the 3745 control panel. The circuit protector on the transformer is for circuit protection only and should not be used as an ON/OFF switch.

Maintenance

In case of problems, the transformer assembly being a FRU, the entire assembly must be exchanged. Before the exchange, check if the circuit protector is in the **ON position**.

For part number assembly refer to “Transformer Assembly Part Number” on page 1-8.

AC Voltage Limits

Input Voltages

Voltages	Canada U.S.A	Japan
Nominal	120	100
Minimum	114	90
Maximum	127	110

Output Voltages

Voltages	
Nominal	240
Minimum	210
Maximum	260

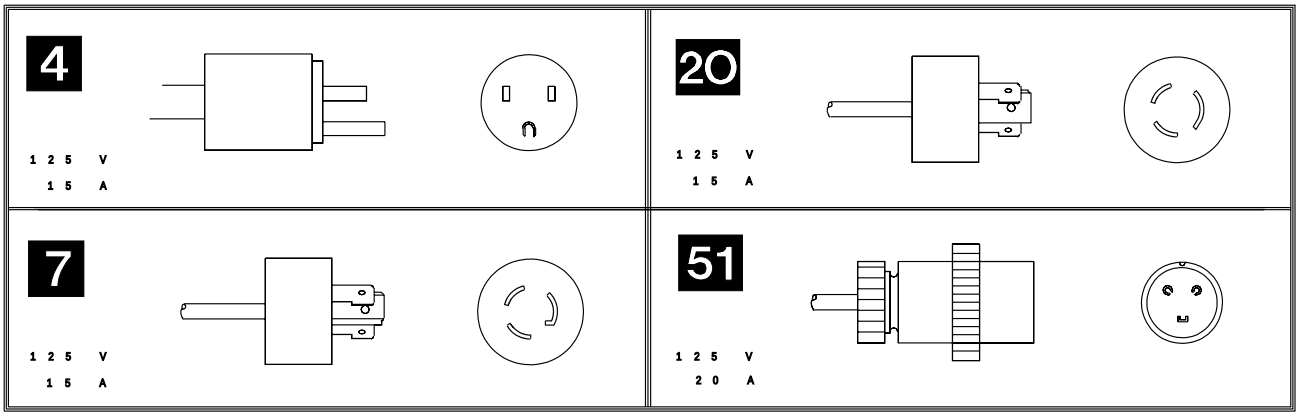
Transformer Assembly Part Number

Country	P/N	Plug[1]	Cord Length[2] Input	Output
Chicago locking plug	34F1229	7	0.46 (18)	1.22 (48)
Chicago non-locking plug	34F1230	4	0.46 (18)	1.22 (48)
Chicago moisture resistant plug	34F1231	51	0.46 (18)	1.22 (48)
U.S.A, CANADA locking plug	34F1232	7	0.46 (18)	3.57 (140)
U.S.A, CANADA non-locking plug	34F1233	4	0.46 (18)	3.57 (140)
U.S.A, CANADA moisture resistant plug	34F1234	51	0.46 (18)	3.57 (140)
JAPAN locking plug	34F1235	20	1.30 (51)	2.72 (106)
JAPAN non-locking plug	34F1293	4	1.30 (51)	2.72 (106)

[1] See “Power Attachment Cord Assemblies.”

[2] Metric measurements (meters), English measurements are shown in parentheses (inches).

Power Attachment Cord Assemblies



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