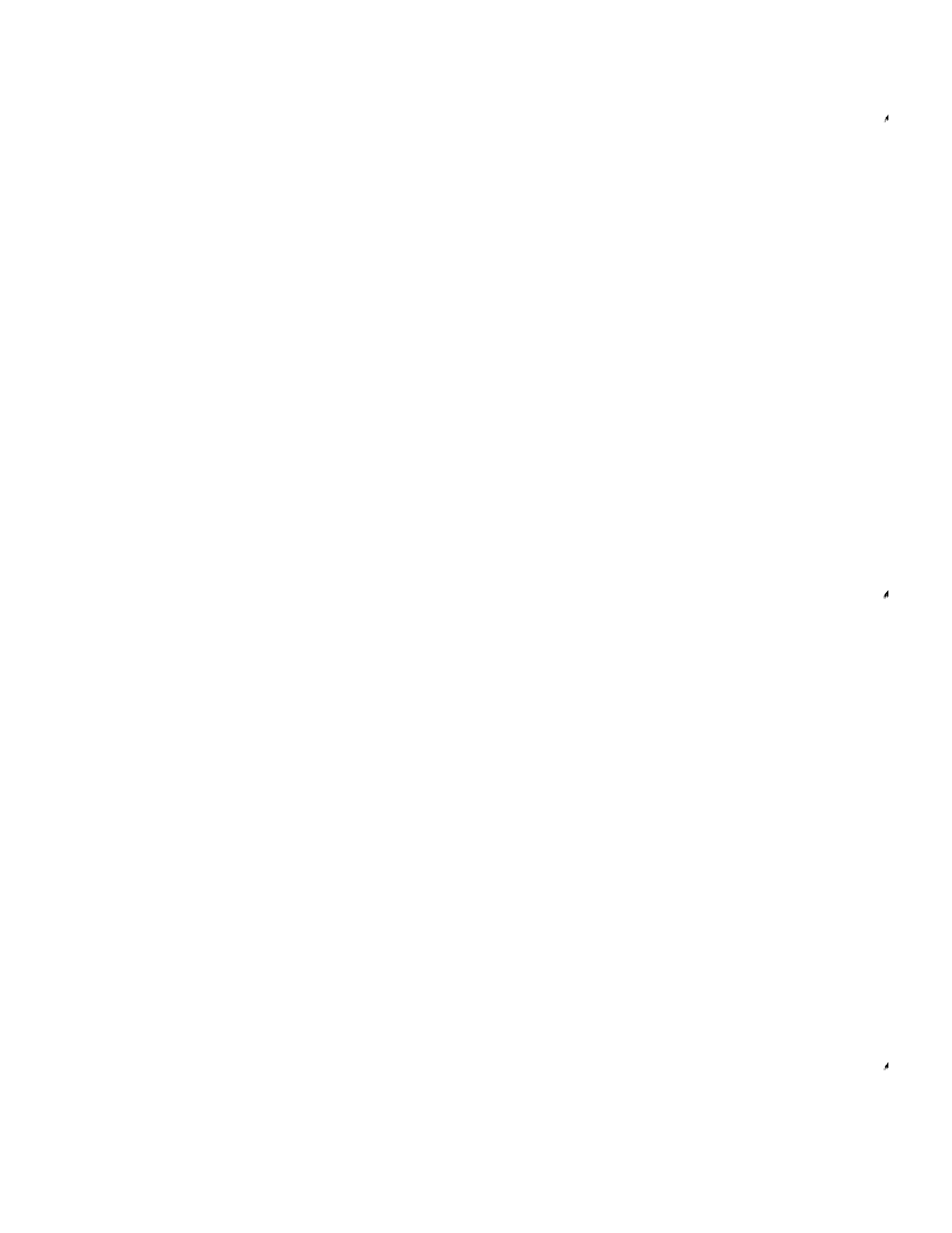


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**AMDAHL 4705/4705E
Communication Processors
Physical Planning Manual**



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Communication Processors
Physical Planning Manual**

Publication Number: G1022.0-02A
Part Number: BK-119266-001

June 1983

**FEDERAL COMMUNICATIONS COMMISSION (FCC)
STATEMENT**

This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions manual, may cause interference to radio communications. This equipment has been tested and found to comply with the requirements of Subpart J of Part 15 of FCC Rules for a Class A computing device. Operation of this equipment in a residential area is likely to cause interference in which case the user at its own expense will be required to take whatever measures may be required to correct the interference.

REVISION NOTICE

This is the second edition.

ABSTRACT

This technical manual provides all the physical and environmental information necessary to prepare facilities for Amdahl 4705/4705E Communication Processors.

READER COMMENT FORM

A reader comment form is provided at the end of this publication. If this form is not available, comments and suggestions may be sent to Amdahl Corporation, Technical Publications Department, Mail Stop 323, P.O. Box 470, Sunnyvale, CA 94086. All comments and suggestions become the property of Amdahl Corporation.

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PREFACE

The material presented in this manual contains the necessary information for the Amdahl Installation Planning or Marketing Representative to aid the customer in site preparation for the installation of the Amdahl 4705/4705E Communication Processors. Included in this information are requirements for air conditioning, cooling, humidity control, input power, floor tiles, cabling, plugs and receptacles. This manual also contains drawings that depict the physical characteristics and dimensions of the equipment being installed and scaled drawings to assist in laying out this equipment.

Proper preparation of the computer facility is essential to the timely and satisfactory installation of your equipment. If you should have any questions or need more information, contact your Amdahl Installation Planning or Marketing Representative.

For the readers convenience, a glossary of terms is available at the end of this manual.

INTRODUCTION

The successful installation of the Amdahl 4705/4705E Communications Processor requires adequate planning and constant supervision prior to arrival of the equipment. The customer is responsible for providing sufficient space and proper facilities for the equipment being installed. The following timetable shows a typical installation sequence of events.

1. Ninety days before equipment arrival:
 - a. Verify that all equipment components required for the installation have been ordered. Review these items with your Amdahl Installation Planning Representative.
 - b. Make a preliminary layout of the installation.
 - c. Review all air conditioning and power requirements.
 - d. Review all system cable orders.

2. Forty-five days before equipment arrival:

Make a final layout of the installation and review the layout with the Amdahl installation planning representative.

3. Fourteen days before equipment arrival:

Installation of all electrical service wiring should be completed.

4. Upon equipment arrival:

- a. Cables should be delivered to the equipment room and set in place.
- b. The equipment is installed in its predetermined location.

GENERAL INSTALLATION INFORMATION

In many data processing installations, the equipment is installed in two work environments (equipment and operations). This arrangement facilitates computer operations productivity and provides the user with flexibility in terms of planning work flow and equipment relocation. The equipment room is designated as the area set aside for the placement of the central processing unit (CPU) and the input/output (I/O) devices. The operations room is the room reserved to house the operating consoles and operations personnel responsible for directing the operation of the computer installation. Both of these rooms usually have raised floors.

Raised floors are highly recommended for the computer installation because they help to insure safety by permitting cables and electrical wiring to be confined under the floor. Amdahl recommends that the raised floor height be a minimum of twelve inches (30 cm) and be capable of supporting at least one hundred pounds per square foot (220 kg/square meter). The most commonly used raised floor tiles have dimensions that are either one or two foot square.

SAFETY

The customer installation site must always conform to local, state, and federal fire and safety regulations when planning any equipment installation. Conformance to OSHA standards is mandatory. Particular attention should be given to the following areas:

- Lighting levels
- Noise levels
- Personnel safety
- Fire precautions
- Dust emissions
- Equipment location

COMMERCIAL INPUT POWER

To obtain optimum equipment reliability, the power distribution panel that serves the equipment and operations rooms must not connect to feeders that serve any other loads. Equipment such as card punch machines, adding machines, calculators, and typewriters are transient signal producing devices. Devices such as these are potential sources of signal noise interference and can cause problems. Power for devices of this class must be isolated from the power to the equipment and operations room.

Convenience Outlets

Amdahl recommends that the customer provide at least two convenience outlets in the computer installation. Convenience outlets must not be on the same power distribution panel or feeder circuits that service the computer equipment. Equipment convenience outlets should not be used for anything except normal system servicing.

Electromagnetic Interference

Electromagnetic interference conditions result when the computer installation is located in an area near devices such as television and radio antennae, radar, radio-frequency heaters, arc welders, and certain industrial machinery. Proper assessment of the environment should determine whether any special installation or equipment considerations are necessary to safeguard against electromagnetic interference.

INPUT/OUTPUT EQUIPMENT SPECIFICATIONS

The following equipment specification illustrations include a list of air conditioning requirements, input power requirements, plugs and connectors, physical dimensions, dissipated heat output values, cable entry diagrams, and floor tile cutout dimensions. Also provided is a scaled (1/4 inch per foot) outline drawing that can be used as an overlay master for planning an installation on a scaled floor layout. The following figures illustrate the Amdahl 4705/4705E Communication Processors:

- Figure 1. 4705/4705E CP Basic Frame
- Figure 2. Cable Entry Data, 4705/4705E Basic Frame
- Figure 3. 4705/4705E CP Expansion Frame (EX1)
- Figure 4. Cable Entry Data, 4705/4705E Expansion Frame (EX1)
- Figure 5. 4705/4705E Scaled Template Drawings

Input/Output Equipment Specifications

SPECIFICATIONS

Heat Output: 4100 Kcal/Hr
16270 BTU/Hr

Airflow: 20.8 M³/min
734 CFM

Power Requirements:

Input Voltage (North America) 208 Vac ± 10%
 Input Voltage (Europe) 380/415 Vac ± 10%
 Frequency (North America) 60 Hz $\pm 2\%$
 Frequency (Europe) 50 Hz $\pm 4\%$
 Branch Circuit 30A
 Current 15.3A (max) @ 208 Vac
 Power 5.13 kVA max
 Phase 3
 Plug R&S FS-3760
 Receptacle R&S FS-3754
 Wires 3+ Gnd

Environment, Operating:

Temperature 59° - 90° F (15° - 32° C)
 Rel Humidity 20% - 80%

Environment, Nonoperating:

Temperature 32° - 122° F (0° - 50° C)
 Rel Humidity 8% - 30%

Environment, Shipping/Storage

Temperature -40° - 140° F (-40° - 60° C)
 Rel Humidity 8% - 100%

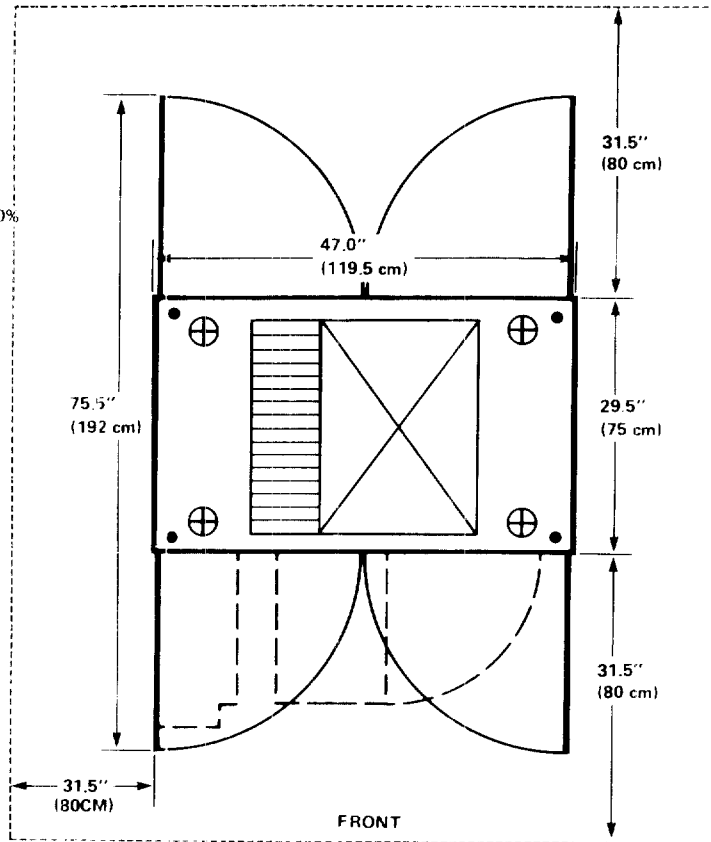
Cooling

Forced Air

Air Conditioning

Sub Floor (Recommended)

Room (By removal of skirt panels)



PHYSICAL DIMENSIONS

COVERS		DEPTH		HEIGHT		WIDTH		WEIGHT	
		IN	CM	IN	CM	IN	CM	LBS	KG
ON		29.9	75	62.6	159	47	119.5	1335	605
OFF		28	71	62.6	159	45	115	1323	600

UNDERCABINET OPENING

- Air Intake including Cable Entry (24 in. W x 24 in. L, 61 cm W x 61 cm L)

LEGEND

- ▨ Air Intake
- ⊕ Caster
- Leveling Pad
- ⊗ Cable Entry
- Service Clearance (All Are 31.5 Inches)

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Figure 1. 4705/4705E CP Basic Frame

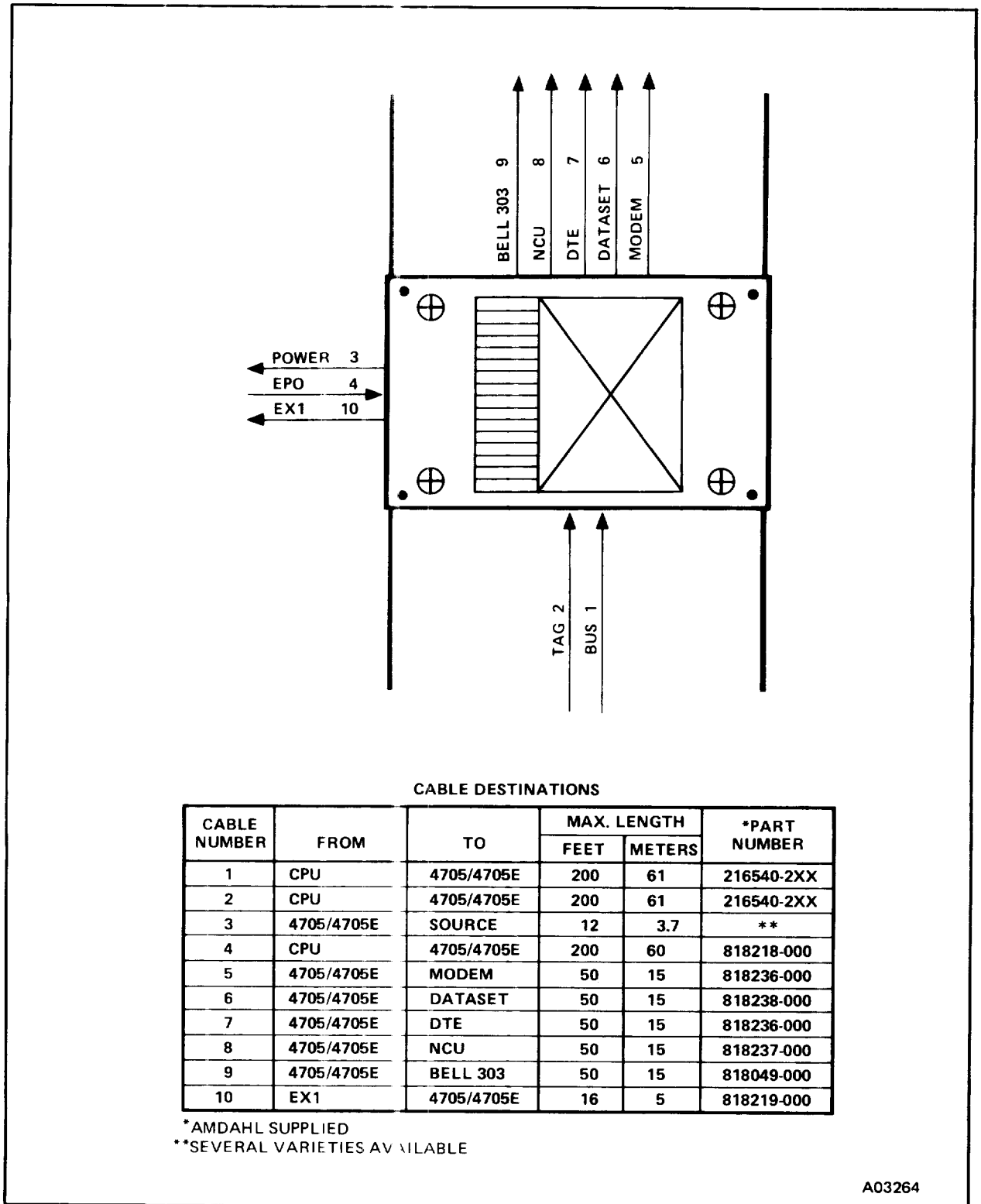


Figure 2. Cable Entry Data, 4705/4705E Basic Frame

Input/Output Equipment Specifications

SPECIFICATIONS

Heat Output: 920 Kcal/Hr
3650 BTU/Hr

Airflow: 6.6 M³/min
233 CFM

Power Requirements:

Input Voltage (North America) 208 Vac ± 10%
 Input Voltage (Europe) 380/415 Vac ± 10%
 Frequency (North America) 60 Hz $\pm \frac{2}{4}$ %
 Frequency (Europe) 50 Hz $\pm \frac{2}{4}$ %
 Branch Circuit 30A
 Current 3.4A (Max) @ 208 Vac
 Power 1.15 kVA max.
 Phases 3
 Plug R&S FS-3760
 Receptacle R&S FS-3754
 Wires 3+ Gnd

Environment, Operating:

Temperature 59° - 90° F (15° - 32° C)
 Rel Humidity 20% - 80%

Environment, Nonoperating:

Temperature 32° - 122° F (0° - 50° C)
 Rel Humidity 8% - 80%

Environment, Shipping/Storage

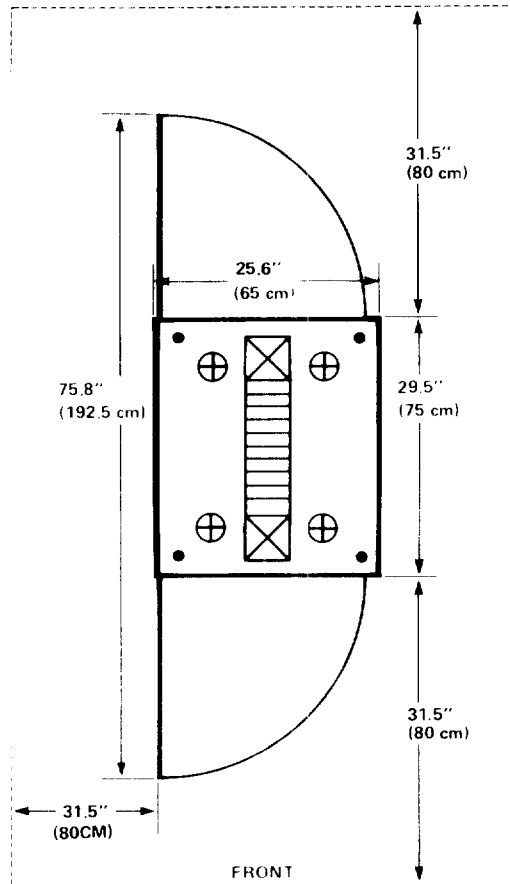
Temperature 40° - 140° F (-40° - 60° C)
 Rel Humidity 8% - 100%

Cooling

Forced Air

Air Conditioning

Sub Floor (Recommended)
 Room (By removal of skirt panels)



PHYSICAL DIMENSIONS

COVERS	OFF	DEPTH		HEIGHT		WIDTH		WEIGHT	
		IN	CM	IN	CM	IN	CM	LIBS	KG
	ON	29.5	75	62.6	159	25.6	65	668	302
	OFF	28	71	62.6	159	23.6	60	662	300

UNDERCABINET OPENING

- Air Intake including Cable Entry (8 in. W x 24 in. L, 20 cm W x 61 cm L)

LEGEND

- ▨ Air Intake
- ⊕ Caster
- Leveling Pad
- ⊗ Cable Entry
- Service Clearance

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Figure 3. 4705/4705E CP Expansion Frame (EX1)

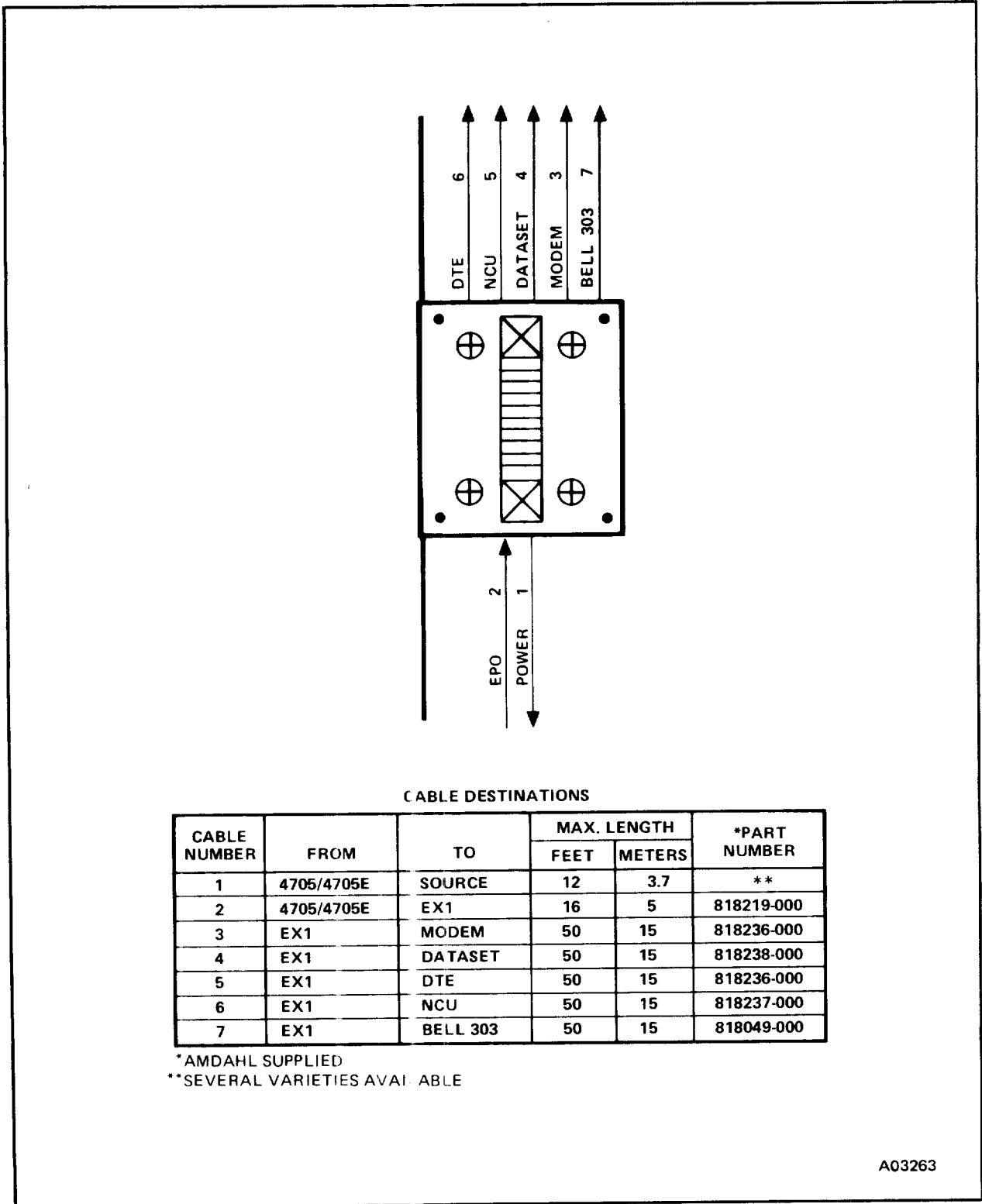
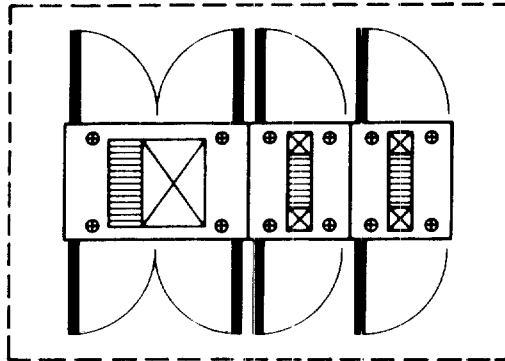
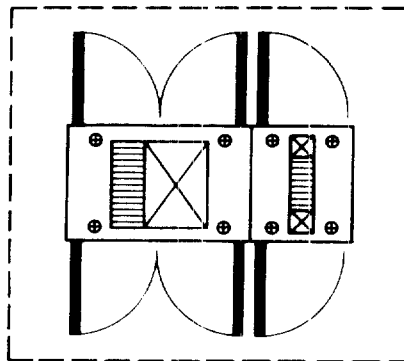


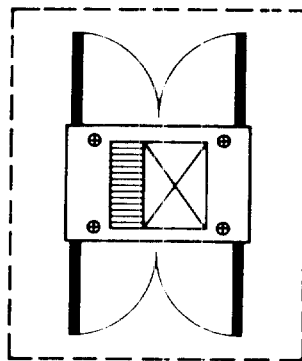
Figure 4. Cable Entry Data, 4705/4705E Expansion Frame (EX1)



4705/4705E BASIC FRAME WITH TWO EXPANSION FRAMES



4705/4705E BASIC FRAME WITH ONE EXPANSION FRAME



4705/4705E BASIC FRAME

LEGEND

-  Cable Entry
-  Air Intake
-  Leveling Pad
-  Service Clearance

Scale 1:48

A02396

Figure 5. 4705/4705E Scaled Template Drawings

GLOSSARY

A	Ampere
BTU	British thermal units
C	Centigrade
CFM	Cubic Feet per Minute
CPU	Central Processing Unit
DTE	Data Terminal Equipment
EMI	Electromagnetic Interference
EPO	Emergency Power Off
EX1	Expansion Frame
F	Fahrenheit
Hz	Hertz
I/O	Input/Output
kcal	kilocalories
kg	kilogram
kVA	kiloVolt Ampere
m ³ /min	Cubic meters per minute
NCU	Network Control Unit
OSHA	Occupational Safety and Health Administration
R&S	Russel & Stoll
Rel	Relative
V	Volt

REVISION HISTORY

This revision history lists all versions of this publication along with their effective dates.

VERSION	EFFECTIVE DATE
01A	November 1980
01B	January 1981
02A	June 1983

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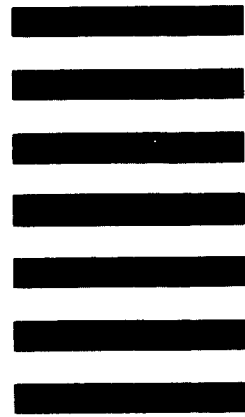
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