

Integrated Operation Desk






OP074-NB

User manual

IM19H15-E

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Symbol Definition	
	WARNING: Indicates information that a potentially hazardous situation which, if not avoided, could result in serious injury or death.
	RISK OF ELECTRICAL SHOCK: Indicates information that Potential shock hazard where HAZARDOUS LIVE voltages greater than 30V RMS, 42.4V peak, or 60V DC may be accessible.
	ESD HAZARD: Indicates information that Danger of an electro-static discharge to which equipment may be sensitive. Observe precautions for handling electrostatic sensitive devices
	ATTENTION: Identifies information that requires special consideration.
	TIP: Identifies advice or hints for the user.

Security& Caution Symbols

The following table lists Security& Caution symbols used on equipments.














No.	Symbol	Description
1		Direct current (DC)
2		Alternating current (AC)
3		Ground (Earth) terminal
4		Protective earth (ground) terminal
5		Reference ground (Earth) terminal
6		Frame or chassis
7		Equipotentiality
8		On (power)
9		Off (power)
10		Caution, risk of electric shock
11		Caution, hot surface
12		Caution, risk of danger
13		Electrostatic sensitive devices (ESD)

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Operation Desk OP074-NB

Section 1 Overview

Operation desk OP074-NB is a combined operation desk assembled with desk body modules, desktop modules and side board modules. Users can install the hardware equipments and accessory devices of several operators in the application.

The combination types for modules of the operation desk include:

- Linear type
- Inner arc type

Users can select one type in application.

1.1 Function Features

- The modularized system is easy for transportation, installation and modification.
- The component can be replaced separately.
- It has the design of useful ventilation opening.
- It has enough space for the two hosts.
- The solid framework secures the reliability, durability and stability of the product.

1.2 Composition of Operation Desk

1.2.1 Working Unit Module

The working unit module ,which consists of desk body modules and desktop modules, contains the main devices of operation station. Structure of single operation desk is shown as Figure 1-1, unit: mm. The dimension of operation desk is shown as Table 1-1.

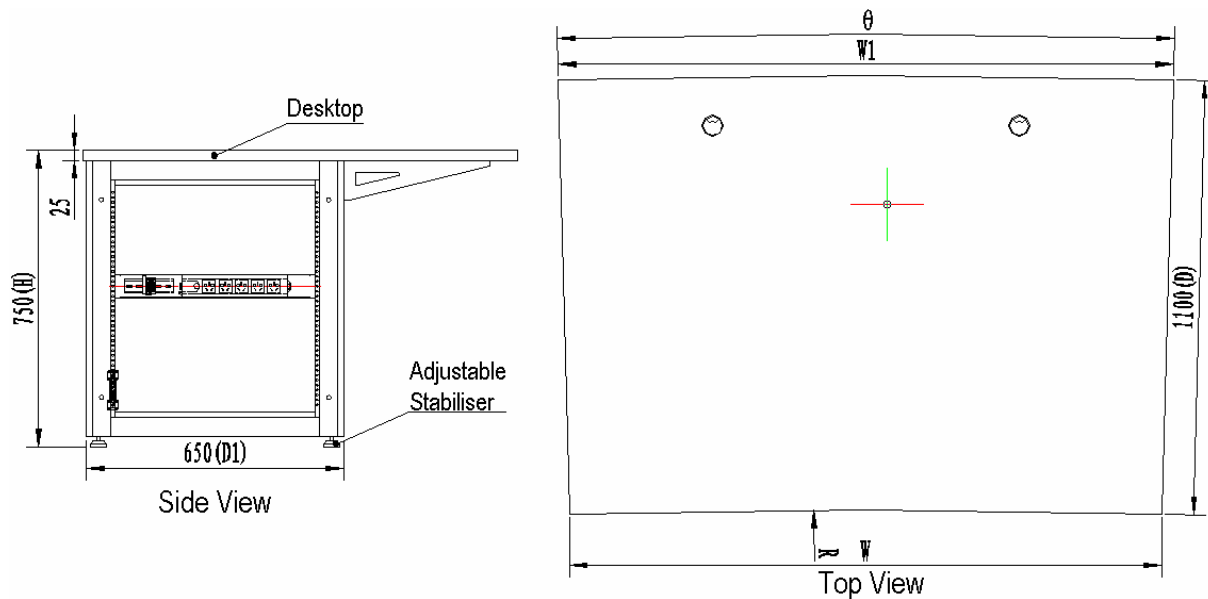


Figure 1-1 Structure and size of operation desk

- **Desktop:** Used to place the industrial keyboard, general keyboard and mouse, etc.. Normally, there are 4 types desktop: dual-station right-angle desktop, tri-station right-angle desktop, dual-station 3° desktop and tri-station 4.5° desktop.
- **Main Body:** Comprised of framework, front and back doors, etc, and there are structures like power distribution unit, wiring terminal unit and grounding copper bar, etc. In the main body, host computer of two operation stations (standing type) can be placed.
- **Power Distribution Unit:** Comprised of terminal, power socket and the rack board for power distribution, etc., and the power switcher can be installed on the inner side of operation desk. When two groups of independent power supply are provided from the outside, enter the power socket through the switcher, and when the single group of power supply is provided from the outside, enter the power supply socket through the terminal (or air switch).
- **Grounding Copper Bar:** There is one grounding copper bar on the left and the right respectively in the operation desk, used to connect the protective earth in the control system.
- **Adjustable Stabiliser:** used to adjust the height of operation desk, to make sure the various operation desktops are in the same level, and to stabilize the operation desk.

1.2.2 Side Board Unit Module

The side board is often installed on the two sides of a group or a row of operation desks, and can coordinate the layout.

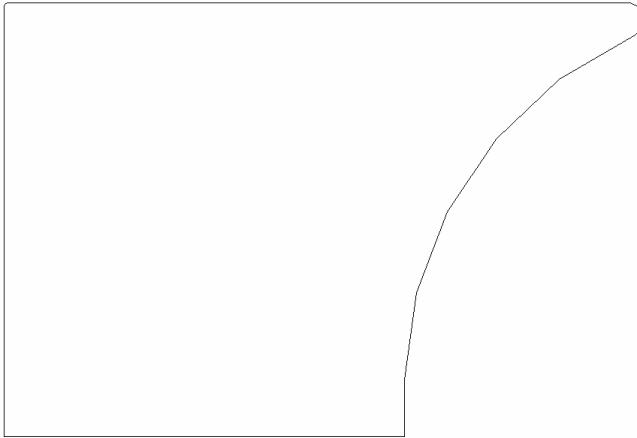


Figure 1-2 Side board unit module

1.3 Models Selection

The details of models selection are shown in the table below.

Table 1-1 Selection list for modules

Type	Degree of Turn Angle θ	Name		Model	Dimension (mm)
Working Unit Module (Refer to Figure 1-1)	0°	Dual-station Right-angle Desktop	Fireproof Plate	OP074-NB200	H=750 D/D1=1100/650 W/W1=1500/1500
	0°	Tri-station Right-angle Desktop	Fireproof Plate	OP074-NB300	H=750 D/D1=1100/650 W/W1=2250/2250
	3°	Dual-station 3° Desktop	Fireproof Plate	OP074-NB230	H=750 D/D1=1100/650 W/W1=1500/1556.4 R=28.6m
	4.5°	Tri-station 4.5° Desktop	Fireproof Plate	OP074-NB345	H=750 D/D1=1100/650 W/W1=2250/2335.9 R=28.6m
Side Board Unit Module(Refer to Figure 1-2)	-	Side Board Unit Module		OP074-NB-CB	H760 D1115

1.4 Appearance

The operation desk consists of work unit modules and side board unit modules.

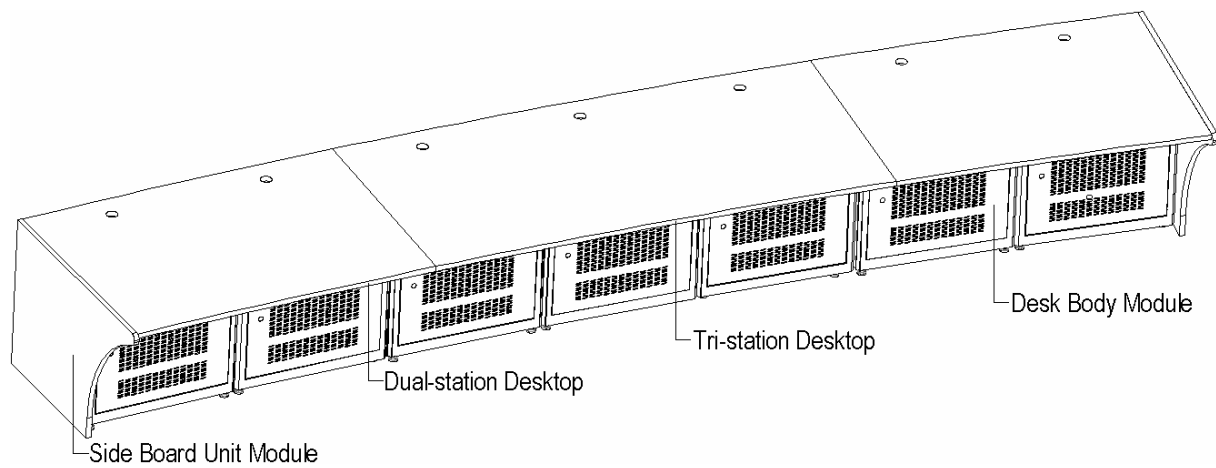


Figure 1-3 Outline dimension of operation desk

Section 2 Technical Specifications

- **Fabrication Material:** Materials for desktops and side boards are fireproof board and the basic material is the cold-rolled steel plate.
- **Standard Color:** Desktop and side board are in fashion grey suede. The base and the front and back doors are in dark grey RAL7035. Other color can be applied as requested by client.
- **Storage Environment:** Temperature: (-40~70)℃; Relative Humidity: (5~95)%; No Condensation.
- **Transportation Environment:** Temperature: (-40~70)℃; Relative Humidity: (5~95)%; No Condensation.
- **Work Environment:** Temperature: (5~40)℃; Relative Humidity: (5~85)%; No Condensation; Temperature Change Rate: 0.5℃/min.
- **Design Standards**
 - GB/T 7269-1987 Layout, Types and Dimension for Electronic Equipment Console
 - GB/T 10217-1988 Model and Design Principle for Electrotechnics Control
 - DLT 575.1-1999 Design Principle for Man-machine Project in Control Center

Section 3 Installation Preparation

Tools

- **Transportation Tools:** Forklift or manual plane board trailer.
- **Opening Box Tools:** Steel prier, and hammer with prier.
- **Installation Tools:** Screwdriver, 10", 14", 17" wrench and internal hexagonal wrench of 5mm.

Requirements for Ground

Ground should be plane and clean, without requirement for reinforcement.

Section 4 Safety Notes

Electric Safety

- It is forbidden to execute the installation operation with the power.
- Avoid from directly contacting the component with the electricity.
- When system is operating, it is strictly forbidden to touch the wiring terminal for naked power distribution unit.
- It is strictly forbidden to directly use the lead to distribute power from the socket in the power distribution unit.

When Transporting

- Gradient<10°.
- Handle with care, avoid rolling and upside down.
- Avoid intensive collision or vibration.
- Avoid from using the rolling wheel to transport.
- When the forklift lifts, pay special attention, and at this time, it is strictly forbidden to move the articles.

Protection

- It is strictly forbidden to firstly disassemble the package and then transport the article, i.e. the article should be moved to the installation field and then disassemble the package.
- Please wear the labor protection article, such as the glove, etc, to avoid from being injured.

Section 5 Installation

5.1 Open Box and Check

Steps to open the box are shown below:

1. Make sure personnel from two parties of supply and demand and the package box all have arrived at the installation field.
2. Disassemble the metal packages on four corners on the package box.
3. Pry up the cover of the package box.
4. Disassemble the side boards of the package box.
5. Take out the encasement list, and check the goods quantity and quality as the list.
6. Both parties for supply and demand sign and confirm the result for opening the case.
7. Clean up the package material, and clean the installation field.

5.2 Install Operation Desk

1. Arrange the unit modules according to the layout of diagram of the operation desk in central control room.
2. Adjust the positions of the operation desks, to make the left and right sides of the adjacent operation desks be closely matched (single working unit module consists of 2 or 3 desk body modules, decided by desktop concretely), and to align the front and back positions of desk body.
3. Adjust the stabilisers of the operation desks to make all the surfaces of operation desks on the same level.
4. Use M8 screw to link the adjacent operation desks via the holes on the frame stand column, and then tighten the screw M8 by screwdriver to link the adjacent operation desks closely. The holes are shown in Figure 5-1.
5. Install the bracket arm on the desk body module pre-tightly by the screw M6, which is shown in Figure 5-1.
6. Install the desktop. Put the desktop on the desk body, and pre-tighten the up desktops via desktop installation holes by the screw M6, which is shown in Figure 5-1.

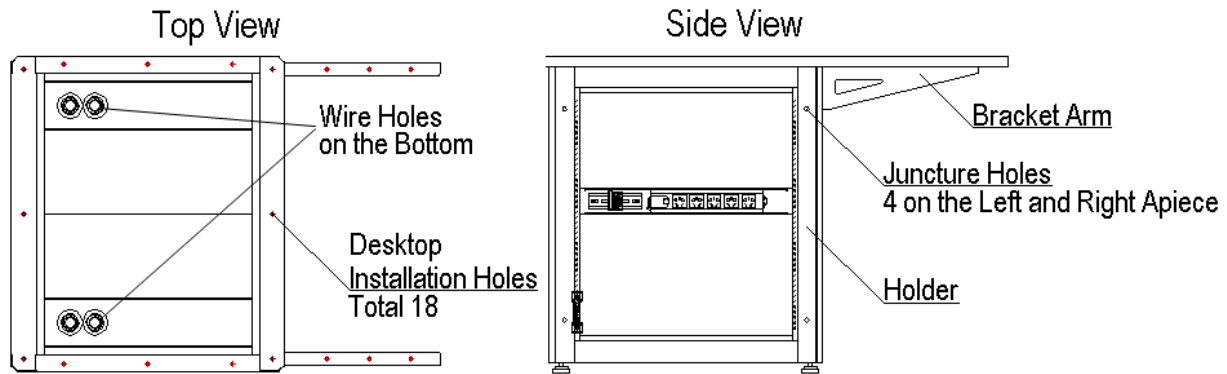


Figure 5-1 Holes

7. After installing every working unit module, adjust the position of each working unit module, to align the front and back of desktops of working unit modules and to link the adjacent operation desks closely.
8. After adjusting the whole group of operation desk, use M8 screw to link the adjacent working unit modules via the holes on the desk holder column, and then tighten the M8 screws via spanner, to match the adjacent up desktops side by side closely.

5.3 Wiring

1. Connect the power wire, ground wire and communication network wire through the wire holes of the left and right sides of the operation desk bottom cover plate into the operation desk.
2. When the wiring power is in one group, connect the wiring power with the input terminal of terminal. When the wiring power is in 2 groups, connect them with the 2 groups of input terminals. The wiring of terminal with power socket and switcher is completed before leaving the factory.
3. Connect the control wire with the terminal row according to the project design requirements, as shown in Figure 5-2.



Figure 5-2 Wiring

4. Fix the grounding wires from the collected grounding plate by the big wire frame of the grounding copper bar, as shown in Figure 5-3.

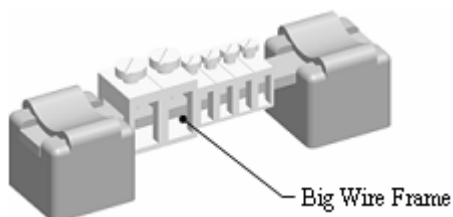


Figure 5-3 Grounding copper bar

5.4 Grounding

1. Connect the grounding points of the input terminals in power socket and switcher with the grounding copper bar. The connection has been completed before leaving the factory.
2. Connect the grounding points of front and back doors with the grounding copper bar. The connection has been completed before leaving the factory.
3. Fix the grounding wires from the collected grounding plate by the bug wire frame of the grounding copper bar, as shown in Figure 5-3.



TIP:

Each desk body module has grounding copper bar, and power connection.

Section 6 Disassembly



Attention:

Before disassembling the operation desk, the power switch should be cut off.

The disassembly steps are shown below:

1. Disassemble the equipment wires in the operation station.
2. Remove the equipments in the operation station (host, monitor, keyboard and mouse, etc).
3. Disassemble the wire-in cables on the operation desk.
4. Disassemble the up desktop.
5. Disassemble the bracket arm of the operation desk.
6. Loosen and remove the screws between all unit modules.
7. Remove the operation desk.

Section 7 Revision

Table 7-1 List for updating and modification of data version

Document Version	Applicable Product Version	Remarks
V1.0 (20160622)	OP074-NB	The first version
V1.1(20161018)	OP074-NB	Add code.