

General Specifications

Model LPCKIT
Enclosed Display Style
Console Assembly



GS 33K50B40-50E

[Release 5]

■ GENERAL

This GS covers the hardware specifications of LPCKIT Enclosed Display Style Console Assembly.

You can use the assembly as Human Interface Station installing a general-purpose PC in it.

■ HARDWARE SPECIFICATIONS

● Display Units

Display: Single or dual stacked TFT LCDs monitors

Display Size: 19-inch Display area size LCDs

Resolution: 1280 x 1024 pixels

FOV (field of view):

up to at least 60° to left or right

up to at least 45° above

up to at least 20° below

Connection: Connected to a display output of a PC.
Stacked LCDs require a PC with two display outputs.

● Touch Panel (optional)

Touch Panel Type:

Optical type, provided with only the lower LCD (option code /1TP) or with both stacked LCDs (option code /2TP).

Connection: Connected to a dedicated interface inside the console assembly.

● Operation Keyboard

Eight-control-key Operation Keyboard:

Dustproof short-stroke key

User Function Key: 64 keys

Increment/Decrement Keys: 8 sets

Electronic Sounds:

7 kinds of loudspeaker sounds and 2 kinds of key sounds

Connection: Connected to a dedicated interface inside the console assembly.

● Interfaces

Enclosed Display Style Console Assembly is to be used by connecting the interface unit with a PC's USB port.

The interface unit consists of the followings.

The interface for PC

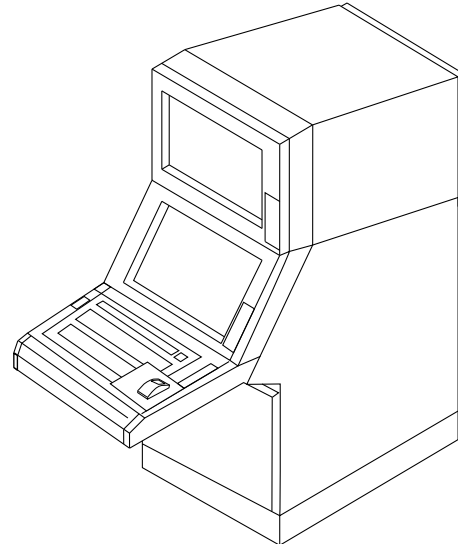
USB 2.0 (full-speed, bus-powered)

Interfaces for Internal Devices

3 ports for touch panels and an operation keyboard

RS-232C Interface

1 D-sub 9-pin male port



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Contact Inputs/Outputs

HIS Status Alarm Output (RDY): NO, NC, C

Rated voltage: 250 V AC, 30 V DC,
125 V AC (CSA C22.2 No.61010-1
Approved for 125 V AC and 30 V DC)

Rated current: 2 A

Rated electric power: 125 VA

Auxiliary Contact Outputs (DO1, DO2): +, -
Number of points: 2 points (photo MOS relay contacts)

Contact rating: 30 V DC, 0.1 A or less

Auxiliary Contact Inputs (DI1, DI2): +, -
Number of points: 2 points

Input signals: Contacts or voltages

Contact inputs: OFF signal 100 kΩ or greater;
ON signal 200 Ω or less

Contact rating: 5 V DC, 20 mA or greater

Voltage inputs: OFF signal 4.5 to 25 V DC;
ON signal ±1 V DC, 200 Ω or less

Fan Status and Internal Temperature Monitoring

The statuses of door fans and console internal temperature are continuously monitored. A system alarm message is output upon an abnormality.

● **Power Supply**

Power Supply Voltages and Frequency

To be specified by the corresponding suffix code when ordering.

Voltage: 100–120 V AC, Frequency: 50/60 Hz
Voltage: 220–240 V AC, Frequency: 50/60 Hz

Maximum Power Consumption

100–120 V AC supply

Console assembly only, with single LCD: 120 VA
Console assembly only, with dual stacked LCDs:
190 VA
Assembled PC: 400 VA
Assembled UPS for the /UT option: 230 VA
Service power receptacles:
360 VA (3 A)
(Make sure that service power receptacle requirement is 130 VA or less to use UPS for the /UT option.)

220–240 V AC supply

Console assembly only, with single LCD: 150 VA
Console assembly only, with dual stacked LCDs:
230 VA
Assembled PC: 400 VA
Assembled UPS for the /UT option: 230 VA
Service power receptacles:
720 VA (3 A)
(Make sure that service power receptacle requirement is 490 VA or less to use UPS for the /UT option.)

Terminals

Power Supply: M6 screw terminal connection
Grounding: M8 bolt terminal connection
Contact inputs/outputs: M4 screw terminal connection

● **Console Casing**

Paint Color

The codes in the parentheses below indicate the Munsell codes of the equivalent colors, respectively.

Body: Frosty white (2.5Y8.4/1.2)
Door: Pale sea moss green (7.8Y5.0/2.1)
LCD side: Slate gray (0.1PB4.6/0.2)
Channel Base: Spring black (3.3PB2.5/0.5)
UPS Tray Options: A tray for housing a UPS (Options: /UT):
Max. dimensions of UPS to be installed: 155 (W) x 400 (D) mm, and 150 to 175 (H) mm

Channel Base Optional Specifications

Channel Base with Hole for Cable:
Specify Optional Code "/CH".
A hole for cable, 300(W) by 40(H) mm is made at the rear of the channel base (A filler plate is attached upon delivery).
To increase channel base height by 50 mm:
Specify Optional Code "/HB".

Component Makeup

Engineering Keyboard (keyboard for built-in PC):
Can be placed in the drawer.
Case for Mouse of built-in PC: Not supplied.
8-control-key Operation Keyboard:
Attached to the desk.

● **Installation and Environmental Conditions**

The following shows the installation and environmental conditions for only the console assemblies. For the conditions required by the assembled PC, see the respective documentation for PC.

See also "CENTUM VP Installation Guidance" (TI 33K01J10-50E) for the conditions of the console assembly where a general-purpose PC is installed.

Temperature

Normal Operating Conditions: 5 to 40 °C
Transportation and Storage Conditions: –20 to 60 °C

Relative Humidity

Normal Operating Conditions:
20 to 80 % RH (no condensation)
Transportation and Storage Conditions:
20 to 80 % RH (no condensation)

Temperature Changes

Normal Operating Conditions: ±10 °C/h
Transportation and Storage Condition: ±20 °C/h

Power Supply

100–120 V AC ±10 %, 50/60 Hz ±3 Hz
220–240 V AC ±10 %, 50/60 Hz ±3 Hz

Withstanding Voltage

1500 V AC for 1 minute

Insulation Resistance

20 MΩ at 500 V DC

Grounding

Independent ground of up to 100 Ω resistance

Noise

Electric Field: 3 V/m or less (26 MHz to 1.0 GHz)
3 V/m or less (1.4 to 2.0 GHz)
1 V/m or less (2.0 to 2.7 GHz)

Magnetic Field:

30 A/m (AC) or less,
400 A/m (DC) or less

Static Electricity:

4 kV or less (direct discharge),
8 kV or less (aerial discharge)

Vibration

Continuous Vibration:

Total amplitude of 0.5 mm or less (1 to 14 Hz), for 5 seconds
Acceleration of 2.0 m/s² or less (14 to 100 Hz)

Earthquake-proof: 4.9 m/s² or less

Vibration during Transportation (while in packaging):
Horizontal 2.9 m/s² or less,
Vertical 4.9 m/s² or less

Dust

0.3 mg/m³ or less

Corrosive Gases

The same level as required for general offices.

● **IP Protection Rating**

IP20

● **Regulatory Compliance**

The following shows the regulatory compliance with which the console assembly complies.

For the detailed information of following standards, see "System Overview" (GS 33K01A10-50E, GS 33K01A20-50E).

For those standards with which the assembled PC complies, see the respective documentation for the PC.

Safety Standards

[CSA] (for 100-120 V AC power supply)

[CE Marking] (for 220-240 V AC power supply)

EMC Conformity Standards

[CE Marking] (for 220-240 V AC power supply)

[C-Tick Marking] (for 220-240 V AC power supply)

[KC Marking] (for 220-240 V AC power supply)

● **Requirements of PC to be Assembled**

The PC must meet the specifications required to run Standard Operation and Monitoring Function and Standard Builder Function for the CENTUM VP, as well as meet the following requirements.

Size

Small enough to be installed in the console assembly, (i.e., 445 mm wide, 450 mm deep, and 206 mm high or smaller)

Empty Expansion Slots

Expansion slots must be available for installing all of the following cards.

- Display card (For two LCDs, the PC needs two ports of display outputs.)
- VI702 (Vnet/IP interface card) or VF702 (Control bus interface card)

USB Port

USB 1.1/2.0 Type A

Need an extra port other than a keyboard and a mouse.

Display Output

The PC must be capable of outputting the display output at a resolution of 1280 x 1024 pixels and refresh rate of 60 Hz.

Power Consumption

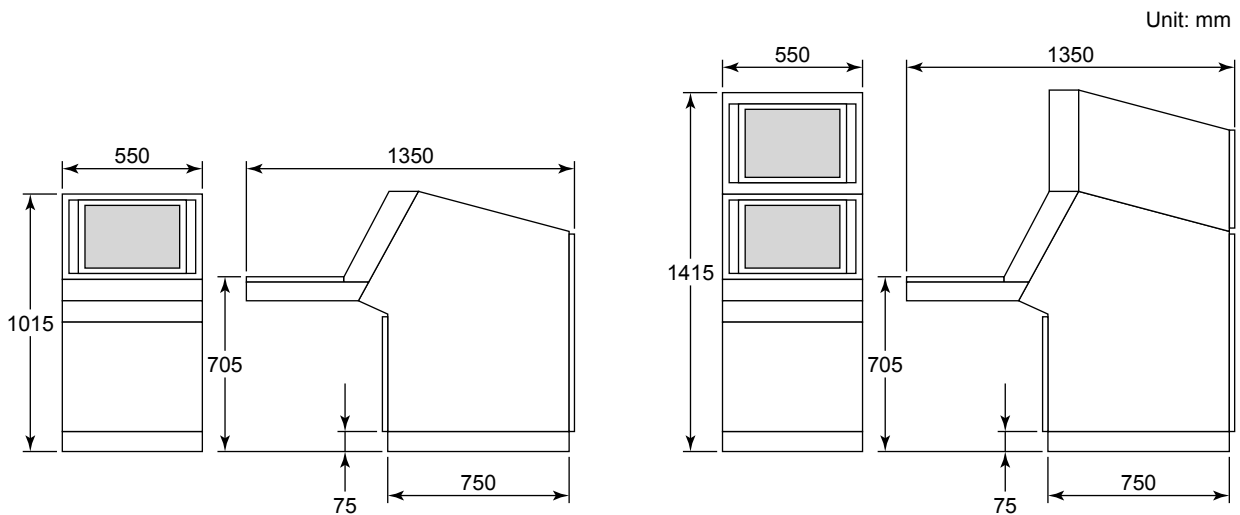
Choose a PC with the power consumption of 400 VA or less.

● **Regarding LCD Quality**

The LCDs used in console assemblies have been manufactured using an extremely advanced technology; nevertheless, a few pixels or less may remain continuously on or a few pixels or less may remain continuously off. This is not a fatal defect and your understanding is highly appreciated.

The design of LCD is subject to change without notice for improvement.

■ **EXTERNAL DIMENSIONS**



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Weight of single-LCD console assembly (with all options): Approx. 125 kg excluding PC

Weight of dual-stacked-LCD console assembly (with all options): Approx. 155 kg excluding PC

The height of the channel base in the figure, 75 mm is a standard specification.

For the channel base 50 mm taller than standard type, specify Suffix Code /HB to change the height of the channel base to 125 mm (=75 + 50 mm).

■ MODEL AND SUFFIX CODES

		Description
Model	LPCKIT	Enclosed Display Style Console Assembly (*1)
Suffix Codes	-M1	Model 1
	L3	Single 19-inch Display area size LCD (*2)
	L4	Dual stacked 19-inch Display area size LCD (*2)
	1	8-control-key Operation Keyboard
	4	RS-232C and DI/DO interface (*3)
	0	Always 0
	1 2	100-120 V AC power supply 220-240 V AC power supply
Option Codes	/PS2	PS/2 Interface Extension Cable (two cables) (*4)
	/USB	USB Interface Extension Cable (two cables) (*4)
	/□-AVC	Analog Display Cable (*2)
	/□-DVC	Digital Display Cable (*2)
	/1TP	With touch panel for lower LCD
	/2TP	With touch panel both for upper and lower LCD (*5)
	/UT	UPS tray
	/CH	Channel base with cable hole
/HB	Channel base height increased by 50 mm	

- *1: Prepare a general-purpose PC to install to Enclosed Display Style Console Assembly. Standard Operation and Monitoring Function (LHS1100 or LHM1101) and Console HIS Support Package for Enclosed Display Style (LHS1120) are required to run the PC.
- *2: The quantity (one or two) and the type of the display cable need to be specified according to the PC's specification.
- *3: Enclosed Display Style Console Assembly is connected to a USB port of a PC. The temperature and fan status monitors are standard features. The assembly does not include VI702 nor VF702 card. The VI702 or VF702 card needs to be ordered separately.
- *4: The extension cables for engineering keyboard and mouse, either for PS/2 or USB port, need to be specified according to the PC's specification.
- *5: Can be specified only when specifying suffix code L4 following M1.

■ STANDARD ACCESSORIES

Name	Part No.	Description	Quantity	Remarks
Air filter	T9070CB	—	1	For door fans
Function key labels	T9070PN	—	1 set	—

■ RELATED PRODUCTS

Model AKT201 Connection kit for console (for single LCD)
 Model AKT202 Connection kit for console (for stacked LCD)

■ ORDERING INFORMATION

Specify the model and suffix codes.

■ TRADEMARKS

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