![CANARE]

Platforms

Power supply for Canare plug-in modules. The robust 1RU rack mountable and space efficient portable types are available.

— Key Features and Benefits

- Compact design - Maximum 16 modules within 1RU
- Hot swappable
- 161UPSC can be output 4 types of alarm signals via Dsub 9P (F).
- 161UPSC provides power redundancy by adding a PSM2.

✉	For inquiries about this products

161UPSC-**

Tech Data	Downloads

// Slot-in Module Types

Model	Description	Number of Slots
161UPSC-**	1RU rack mount type	16
6PSC-**	Portable type	6
2PSC	Palm size	2
PSM2-**	Redundant power supply module for 161UPSC	N/A

Specifications

Model	161UPSC	6PSC	2PSC
Number of Slots	16	6	2
AC Input Voltage	100 to 240V 50/60Hz 0.35A		N/A
DC Input Voltage	N/A	10 to 18V	10 to 18V
Max Power Consumption (exclusive of modules)	22W	4.5W (AC) 2.2W (DC	2.2W
Power Connector	AC3P Jack	AC3P Jack (AC) XLR4 Male (DC)	XLR4 Male
Supply Voltage to Module		DC 5V	
Operating Temperature		- 10 to 40 deg C	

Instruction Manual
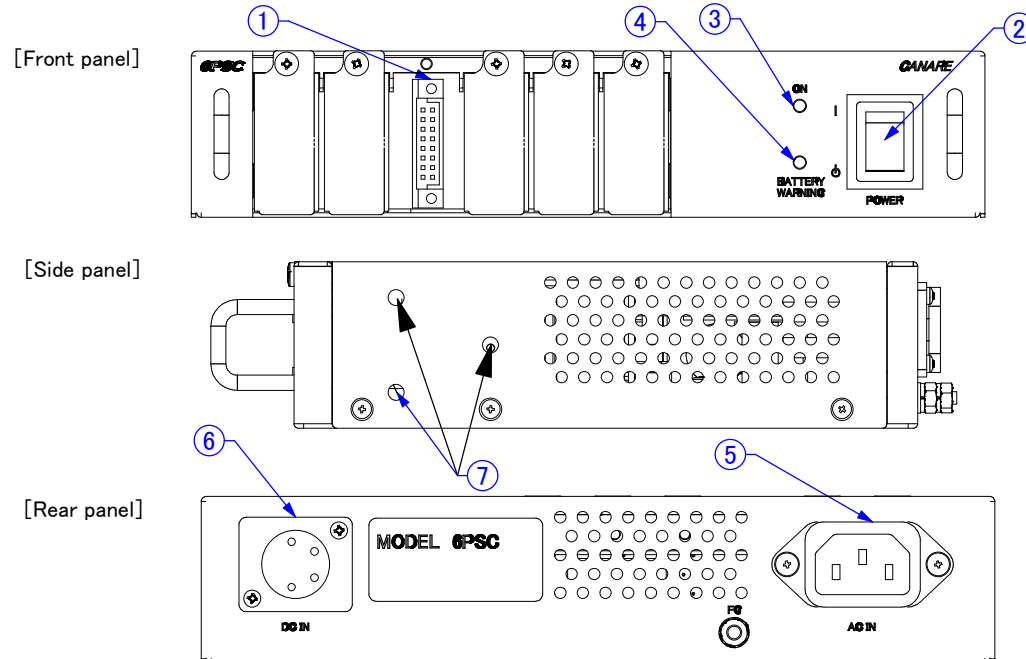## for 6PSC 6-channel portable platform

Safety precautions

⚠ Caution

● Use the equipment only with the specified input power voltage.
Using a voltage higher than specified may result in fire, electric shock,injury, or equipment failure.

● Do not disassemble or modify the equipment unless otherwise directed by the instruction manual.
Failure to do so may result in fire, electric shock,injury, or equipment failure.

● Do not allow water or any foreign object into the equipment.
Failure to do so may result in fire, electric shock,injury, or equipment failure.

● Do not use the equipment in areas of high humidity or dusty environments.
Failure to do so may result in fire, electric shock,injury, or equipment failure.

● Do not block any ventilation openings.
Failure to do so may result in fire, injury, or equipment failure.

● When the plug-in module is not in use, cover the empty space with a blank panel.

● Use only the DC power sources listed below.
Lithium-ion battery pack : BP-GL95A (SONY)
Power base station   : EB-2   (IDX system technology inc.)

● Please inform your Canare dealer if the equipment breaks down, gets wet, has any foreign object, or operates in an abnormal manner.

Features

● Portable platform having 6 slots for Canare plug-in module installation.
● 6 slots equipped.
● Both AC and DC operation.
● Seamless switching between AC and DC operation.
● Low voltage warning in DC operation.
● Wide operating voltage range.(AC:100V~240V, DC:10V~18V)
● Hot swap available for a plug-in module insertion or extraction.
● Compact design (1RU height, half-rack)
● Rohs compliance.

Functions

[Front panel]

[Side panel]

[Rear panel]

MODEL 6PSC
DC IN
AC IN

Installation

Install the equipment horizontally as shown in Fig.1.
Do not install vertically.
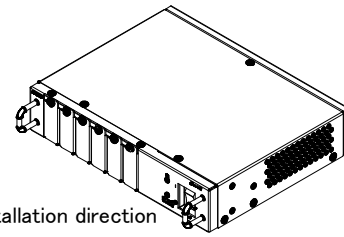Failure to do so may result in fire, injury,or equipment failure.

Fig.1 Installation direction

Operating

1. Remove the mounted brank panels(1) covering the mounting slots.

2. Insert the plug-in module into the mounting slot by grabbing hold of its captive screw, as shown in Fig.2.

3. Align the captive screw with the corresponding screw hole in the equipment, and tighten the screw securely with a Phillips-head screwdriver.

4. Connect the coaxial cable to the plug-in module's BNC connector.

5. Be sure to clean the ferrule tip of the plug and the interior of the plug-in module's adapter as shown in Fig.3. If the fiber-optic connector becomes dirty, light loss could increase, possibly degrading the light communication quality.

6. Connect the single-mode fiber-optic cable with a SC connector to the plug-in module's SC adapter by inserting the SC connector into the SC adapter until the white line on the SC connector's tip is hidden. A secure connection is confirmed by a clicking sound and tactile feedback. If no clicking sound is heard or no tactile feedback is felt, re-perform the connection. Imprecise connections may result in malfunctions such as unstable optical power and disconnection of the SC connector.

7. Connect the AC cord to AC inlet(5) or DC cord to DC inlet(6).

8. Set the power switch(2) to the ON position to supply the power to the plug-in module. Power LED(3) lights green.

※ When the battery warning LED (4) flashes red during DC power operation, replace the battery immediately.

※ Read the instruction manual for details on each of the plug-in modules.

Attaching the rubber feet

· Attach the rubber feet if the equipment is to be used without surrounding support. There are four areas on the base of equipment scored with three punch marks in the shape of triangles to indicate where they should be placed.

· Clean the area around the punch marks with alcohol to remove all soil and grease. Peel the protective paper from the rubber feet,and then press them firmly into place within the respective punch marks ,as shown in Fig.4.

· The rubber feet can be removed by hand once they have been attached.

DIN connector pin assignment

· DIN connecters for supplying the power are located at the back of the plug-in module mounting slot. Its pins are assigned as shown in Fig.5 ,when viewed from the front.

· Following table shows the pin assignment.

Pin No.	Name	Functions
a1, b1	GND	Electrical ground
a2, b2	DC +5V	DC+5V OUTPUT
a3～a8 b3～b8	NC	No connect

Fig.2 Plug-in module installation

Captive screw

Clean inside the ferrule tip and fiber-optic adapter.

Ferrule
Adapter

Fig.3
SC connector areas for cleaning

Punch marks
Rubber foot
Punch mark
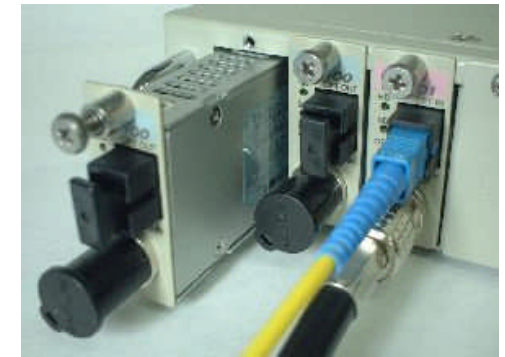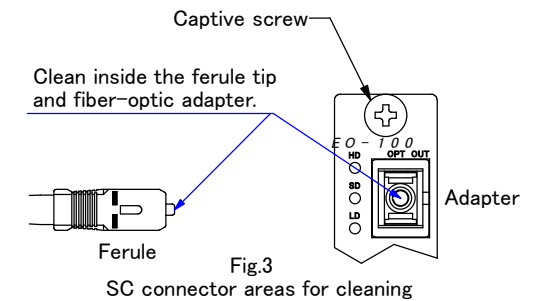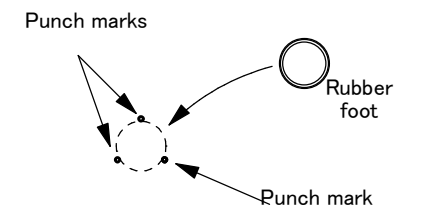
Fig.4
Rubber feet attachment method

Pin No.   Pin No.

GND→ a1   b1 ←GND
DC +5V→ a2   b2 ←DC +5V
a3   b3
NC   NC
a8   b8

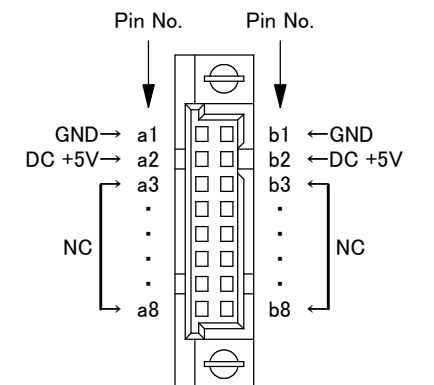Fig.5   DIN connector pin assginment
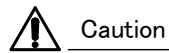
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①Mounting slot	6 slots for plug-in module(Cover the open slot in which no plug-in module is mounted.)
②Power switch	Upper side: Power on Lower side: Standby
③Power LED	Lights on green：Power on Off: Standby
④Battery warning LED	Flashes red when DC IN voltage drops below approximately 12.5V.
⑤AC inlet	The inlet for connecting the AC cord. The supplied wire stopper prevents the AC cord from disconnecting.
⑥DC inlet	The inlet for connecting the DC cord. (Connector model number：XLR4-32-F77) (Pin No.1：GND Pin No.4：+V)
⑦Screw holes for M3	Depth max.5mm

Specifications

No. of plug-in module	Max. 6 units (Hot swappable)	
Power source	AC 100V to 240V 50/60Hz DC 14.8V (Power is supplied from AC IN ,when AC IN and DC IN are connected.)	
Power consumption	AC operetion Max. 4.5W DC operation Max. 2.2W (Excluding power consumption of plug-in module.)	
Power output	Max. 12W	

Operating temperature	−10℃ to 40℃(14°F to 104°F) (No condensation)
Storage temperature	−20℃ to 75℃(−4°F to 167°F) (No condensation)
Operating relative humidity	20% to 90%
Dimensions(W/H/D)	210×44×165 (mm) 8 1/4 x 1 3/4 x 6 1/2(inches) (Excluding protrusions)
Mass	Approx. 650g (1 lb. 7 oz.) (Excluding mass of plug-in module)
Accessories	·AC cord 1 ·Wire stopper preventing the AC cord from disconnecting 1 ·Rubber feet 4 ·Instruction manual(this document) 1

The exterior features and specifications in this document are subject to change due to modification without prior notice.

Instruction Manual
## for 2PSC 2-channel portable platform

Safety precautions

⚠ Caution

● Use the equipment only with the specified input power voltage.
Using a voltage higher than specified may result in fire, electric shock,injury, or equipment failure.

● Do not disassemble or modify the equipment unless otherwise directed by the instruction manual.
Failure to do so may result in fire, electric shock,injury, or equipment failure.

● Do not allow water or any foreign object into the equipment.
Failure to do so may result in fire, electric shock,injury, or equipment failure.

● Do not use the equipment in areas of high humidity or dusty environments.
Failure to do so may result in fire, electric shock,injury, or equipment failure.

● Do not block any ventilation openings.
Failure to do so may result in fire, injury, or equipment failure.

● When the plug-in module is not in use, cover the empty space with a blank panel.

● Use only the DC power sources listed below.
Lithium-ion battery pack : BP-GL95A (SONY)
Power base station   : EB-2   (IDX system technology inc.)

● Please inform your Canare dealer if the equipment breaks down, gets wet, has any foreign object, or operates in an abnormal manner.
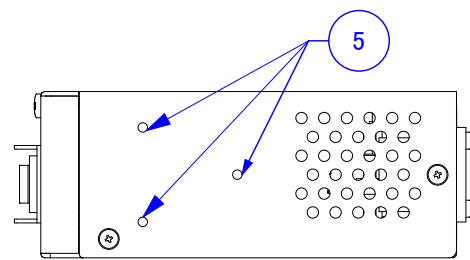
Features

●Portable platform having 2 slots for Canare plug-in module installation.
●2 slots equipped.
●DC operation.
●Wide operating voltage range.(DC:10V~18V)
●Hot swap available for a plug-in module insertion or extraction.
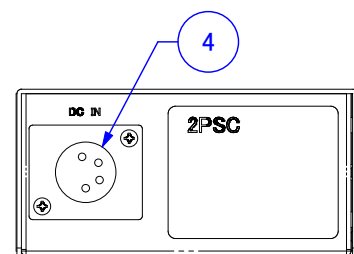●Compact design (1RU height)
●Rohs compliance.

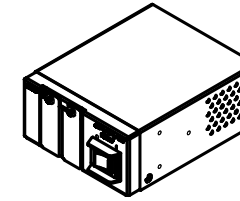### Functions

[Front panel]
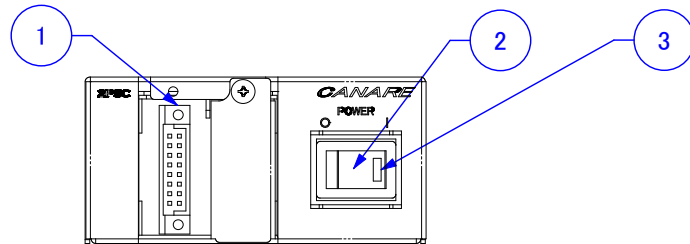
[Side panel]

[Rear panel]

①Mounting slot	2 slots for plug-in module(Cover the open slot in which no plug-in module is mounted.)
②Power switch	Right side: Power on Left side: Power off
③Power LED	Lights on green：Power on Off：Power off
④DC inlet	The inlet for connecting the DC cord. （Connector model number：XLR4-32-F77）（Pin No.1： GND Pin No.4： +V）
⑤Screw holes for M3	Depth max.5mm

Installation

Install the equipment horizontally as shown in Fig.1.
Do not install vertically.
Failure to do so may result in fire, injury,or equipment failure.

Fig.1
Installation direction

Operating

1. Remove the mounted brank panels(1) covering the mounting slots.

2. Insert the plug-in module into the mounting slot by grabbing hold of its captive screw, as shown in Fig.2.

3. Align the captive screw with the corresponding screw hole in the equipment, and tighten the screw securely with a Phillips-head screwdriver.

4. Connect the coaxial cable to the plug-in module's BNC connector.

5. Be sure to clean the ferrule tip of the plug and the interior of the plug-in module's adapter as shown in Fig.3. If the fiber-optic connector becomes dirty, light loss could increase, possibly degrading the light communication quality.

6. Connect the single-mode fiber-optic cable with a SC connector to the plug-in module's SC adapter by inserting the SC connector into the SC adapter until the white line on the SC connector's tip is hidden. A secure connection is confirmed by a clicking sound and tactile feedback. If no clicking sound is heard or no tactile feedback is felt, re-perform the connection. Imprecise connections may result in malfunctions such as unstable optical power and disconnection of the SC connector.

7. Connect the DC cord to DC inlet(4).

8. Set the power switch(2) to the ON position to supply the power to the plug-in module. Power LED(3) lights green.

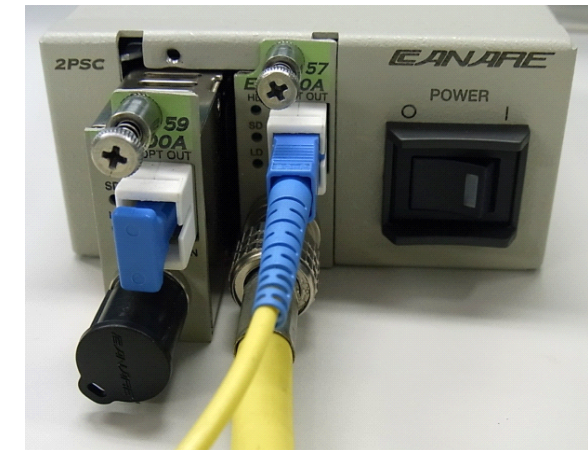※ Read the instruction manual for details on each of the plug-in modules.

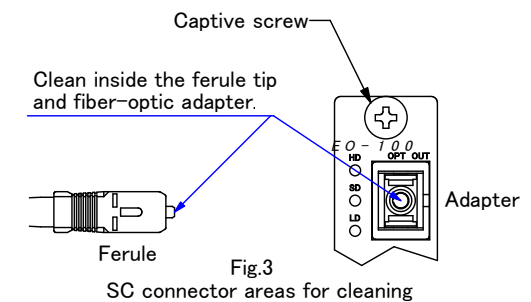Fig.2 Plug-in module installation

Captive screw

Clean inside the ferrule tip and fiber-optic adapter.

Ferrule

Adapter

Fig.3
SC connector areas for cleaning

DIN connector pin assignment

・ DIN connecters for supplying the power are located at the back of the plug-in module mounting slot. Its pins are assigned as shown in Fig.4 ,when viewed from the front.

・ Following table shows the pin assignment.

Pin No.	Name	Functions
a1, b1	GND	Electrical ground
a2, b2	DC +5V	DC+5V OUTPUT
a3～a8 b3～b8	NC	No connect

Pin No.   Pin No.

GND→ a1   b1 ←GND
DC +5V→ a2   b2 ←DC +5V
a3   b3
NC   NC
a8   b8
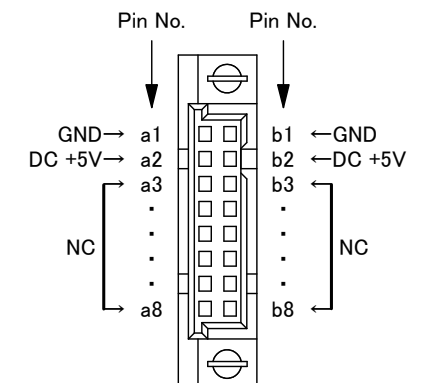
Fig.4   DIN connector pin assginment

Specifications

No. of plug-in module	Max. 2 units (Hot swappable)
Power source	DC 14.8V
Power consumption	Max. 0.4W (Excluding power consumption of plug-in module.)
Power output	Max. 4W

Operating temperature	-10℃ to 40℃(14°F to 104°F)(No condensation)
Storage temperature	-20℃ to 75℃(-4°F to 167°F)(No condensation)
Operating relative humidity	20% to 90%
Dimensions(W/H/D)	90×44×110（mm) 3 1/2 x 1 3/4 x 4 3/8(inches) (Excluding protrusions)
Mass	Approx. 220g (7 3/4 oz.) (Excluding mass of plug-in module)
Accessories	・Instruction manual(this document) 1

The exterior features and specifications in this document are subject to change due to modification without prior notice.

# Power Supply Module **PSM2**   *Instruction Manual*

Safety Precautions

⚠ **Caution**
- This product is an additional power supply for 161UPSC. Refer the instruction manual of 161UPSC, too.
- Do not allow water or moisture to get into the module. This may cause an unexpected accident or damage.
- Do not use this unit in an environment with excessive moisture or dust. This may cause an unexpected accident or damage.
- Do not block the vents. This raises the internal temperature and may cause damage.
- Do not open the cover or modify the module. This may cause an unexpected accident or damage.
- Please contact Canare dealer if this product brakes down, gets wet or operates in an abnormal manner.

Features

- Supports redundant operation for 161UPSC.
- Useful for the maintenance part.

Outline and functions
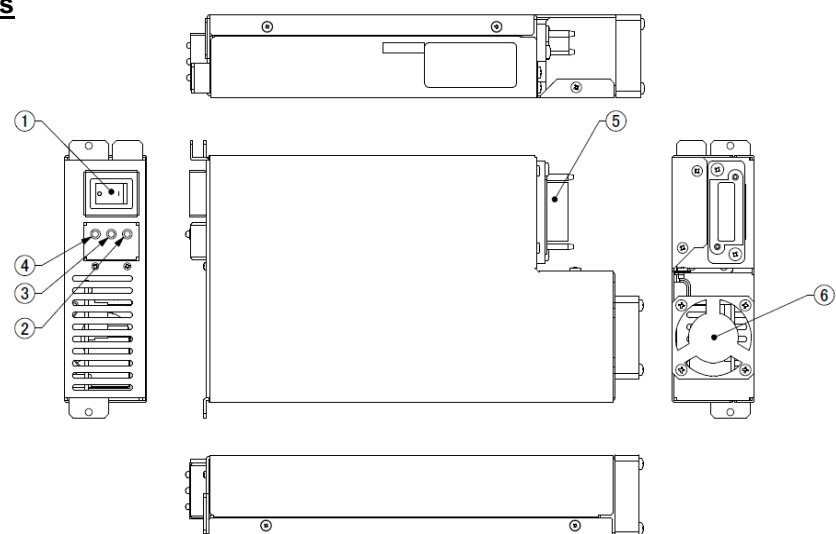
① Power Switch	Up：Power on Down：Power off
② Power on indicator LED	Power on：Green Power off：Lights out
③ Low voltage alarm indicator LED	Abnormal voltage：Red Normal voltage：Lights out
④ Fan alarm indicator LED	Cooling fan stops：Red Normal：Lights out
⑤ Connector	For connection with 161UPSC
⑥ Cooling fan	For cooling inside

Specifications

Storage temperature	-20～70℃
Operating temperature	-10～40℃
AC input rating	AC100～240V 50/60Hz
Dimensions	434mm(W)×44mm(H)×340mm(D)
Weight	500 g

Accessories

AC code	1
Instruction manual	1

How to install to a vacant slot

※ Following explanation is how to install for redundant operation.

1. Switch off the 161UPSC.
2. Remove the front cover of the 161UPSC as shown in Figure 1.
3. Remove the power supply blank panel as shown in Figure 1, 2.
4. Insert this power supply module to the vacant slot carefully.
   Tighten up with 2 screws to secure this installed power supply module.
5. Fit up the front cover.
6. Connect the AC code to AC inlet2 as shown in Figure3.
7. Turn on the power switches of 161UPSC.
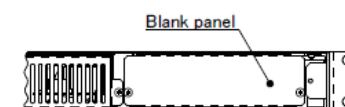   Then the 161UPSC is under redundant operation.

Figure 1. Extraction of front cover
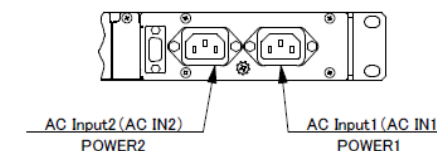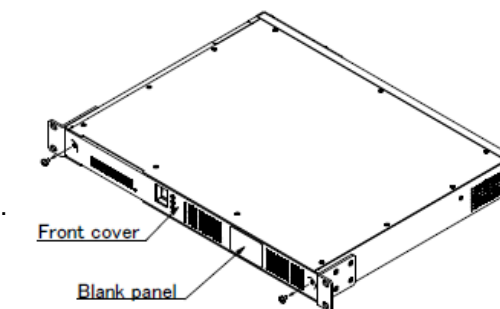

Figure 2. Location of blank panel

Figure 3. Location of AC Input

How to exchange the power module

※ Following explanation is how to exchange the power supply module for periodical maintenance, or when the alarm indication LEDs with the installed power supply module light on.

1. Switch off the 161UPSC.
2. Remove the front cover of the 161UPSC as shown in Figure 1.
3. Remove the two screws of the power supply module to be exchanged.
   Then pick out the installed power supply module carefully as shown in Figure 4.
4. Insert the new power supply module to the vacant slot carefully.
   Tighten up with 2 screws to secure this installed power supply module.
5. Fit up the front cover.
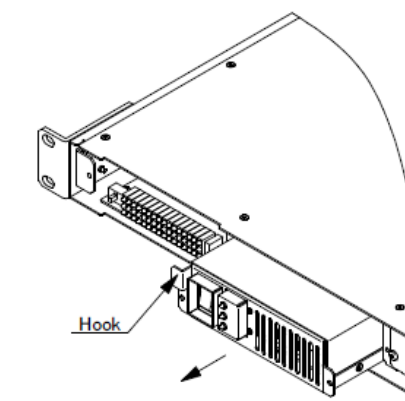6. Turn on the power switches of 161UPSC.

Figure 4. Extraction of the power supply module

The exterior features and specifications in this document are subject to change due to modification without prior notice.
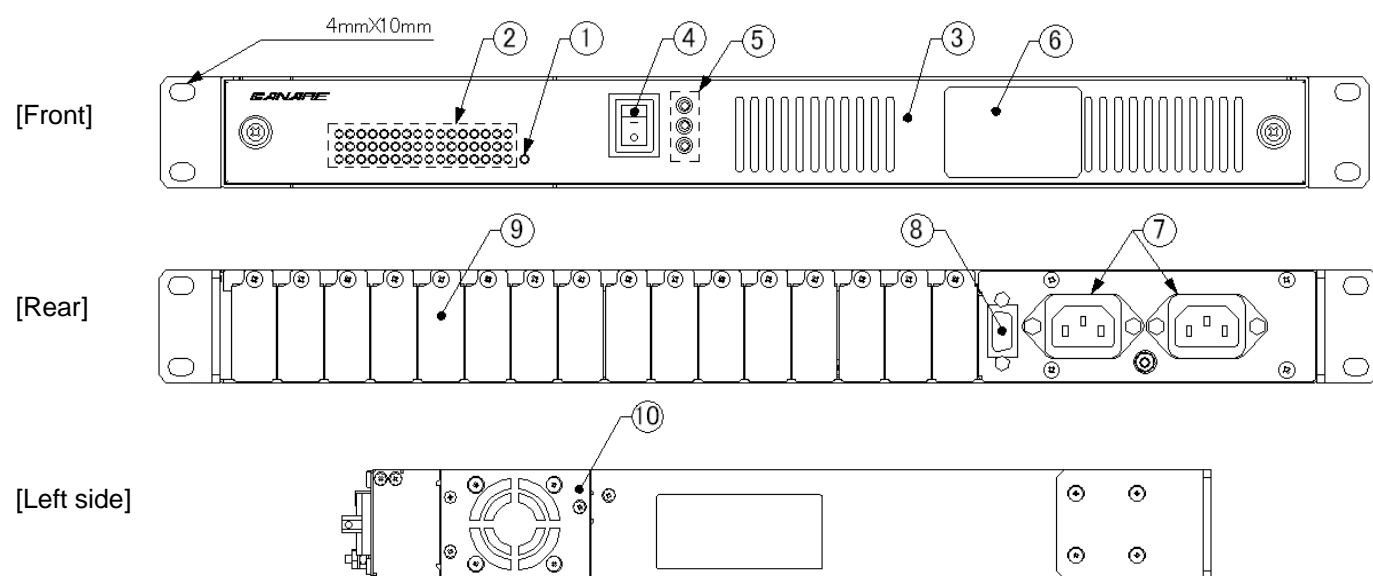
Safety   Precautions

⚠ **Caution**

- Use this product only with the specified power voltage. This may cause an unexpected accident or damage.
- Do not open the cover or modify the unit. This may cause an unexpected accident or damage.
- Do not allow water or moisture to get into the unit. This may cause an unexpected accident or damage.
- Do not use this unit in an environment with excessive moisture or dust. This may cause an unexpected accident or damage.
- Do not block the vents. This raises the internal temperature and may cause damage.
- Make sure empty and unused slots are covered when plugged in.
- Do not remove the front cover. This may cause an unexpected accident.
- Please contact your Canare dealer if this product breaks down, gets wet or operates in an abnormal manner.

Features

- 16 module capacity in a 1RU frame.
- Includes one power supply module as standard.
- Optional redundant power supply available.
- Front panel LEDs indicate the status of power supply modules and installed modules.
- Status information of power supply modules and plug in units can be monitored via alarm terminal.

Outline and Functions

[Front]

[Rear]

[Left side]

1 Side Mounted Fan Alarm Indicator	Red when side mounted cooling fan stops
2 Upper Row LEDs :Status Indicators	Identifications of plug in unit EO :Green OE :Yellow EE :Both Green and Yellow
Middle Row LEDs :Status Indicators	Signal classification HD-SDI :Green SD-SDI/DVB-ASI :Yellow
Lower Row LEDs :Status Indicators	LD emitting light :Green PD receiving signal or light :Yellow
3 Front Cover	
4 Power Switch	Up :Power on Down :Power off
5 Upper Row LED :Power on Indicator	Power on :Green Power off :Lights out
Middle Row LED :Low Voltage Alarm Indicator	Abnormal voltage :Red Normal voltage :Lights out
Lower Row LED :Fan Alarm Indicator	Cooling fan stops :Red Normal :Light out
6 Power Supply Side Blank Panel	A blank panel cover (When an optional redundant power supply is not present)
7 AC Inlet	Right :For standard equipped power supply module
	Left :For redundant power supply module.
8 Alarm Terminal	D-Sub (9pins) female connector for status information output
9 Blank Panel	A blank panel for unused slots
10 Cooling Fan	A replaceable cooling fan

Specifications

Storage temperature	-20 - 70 degrees centigrade	Maximum number of mountable modules	16
Operating temperature	-10 - 40 degrees centigrade	Dimensions	434mm (W) × 44mm (H) × 340mm (D)
AC input rating	AC100 - 240V 50/60Hz	Weight	4.5kg

Accessories

AC cord	1	Instruction manual	1
AC cord stopper	2	Rack mount instruction manual	1

Operating instructions

1. Remove the rear blank panels <9> covering the mounting slots.
2. Insert the module such as an optical converter into the mounting slot by gripping the captive screw, as shown in Figure 1
3. Align the captive screw with the corresponding screw hole in the power supply unit, and tighten securely with a phillips head screwdriver to secure the optical converter.
4. Connect the coaxial cable to the optical converter's BNC connector.
5. Referring to the Figure 2, be sure to clean the ferrule tip of the plug and the interior of the optical converter's connector. If the fiber optic connector is dirty, this may degrade the transmission and communication may be lost.
6. Connect single mode fiber optic cable with a SC connector to the optical converter by inserting the SC connector in to the SC connector of optical converter until the white line tip is hidden and becomes invisible. Connection completion is confirmed by a click sound and tactile feedback. If there is no click sound and/or tactile feedback, retry the connection. Imprecise connection may cause degradation of transmission performance.
7. Connect the AC cord to AC inlet1 <7> to supply power.
8. Set the power switch <4> to the "ON" position to supply the power to the optical converter. The upper LED <5> lights green, indicating that the system begins to work.

※When the voltage warning LED (central LED) or the fan warning LED (lower LED) turned on red, please exchange the operating power supply unit to new one immediately.
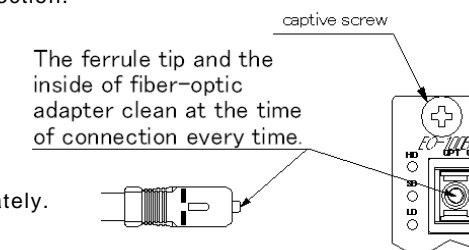※Please refer to the manual of each optical converter.

Figure 1   Installation module

The ferrule tip and the inside of fiber-optic adapter clean at the time of connection every time.
Figure 2   SC connector sections to clean

Redundant Operation

When an additional power supply module (PSM2) is installed, redundant operation is possible.
When an unexpected power supply failure happens to the current power supply module, the redundant power supply switches over automatically, having the system resume as normal.

1. Remove the two black screws on the both sides of the front cover <3>, remove the front cover.
2. Remove the blank panel <6> for the power supply module at the right hand of the front cover.
3. Remove the two screws, and remove the blank panel at the slot of the power supply module as shown in Figure 3.
4. Install the power supply module carefully to upper vacant slot, and tightening up the two screws.
5. Connect the AC cord to AC inlet2 <7>.
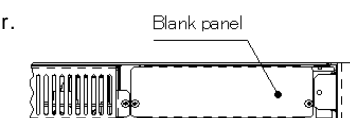6. Turn on the power switch. Then the power supply module should be operating.

Blank panel
Figure 3   Location of blanc panel

Alarm terminal pin assignment

・ The alarm terminal's pin assignment is as shown in Figure 4. Its output format is an open collector configuration.
   * Note, however, that only the DC alarm pin employs a mechanical contact (relay) output.
・ Two sets of alarm modes are supported. Initial factory setting is mode 1.
   Select the alarm mode which you like. Set the alarm mode switch at the left hand after removing front cover <3>, as shown in Figure5

Pin No.	Name	Status	Mode 1		Mode 2	
			Normal	Abnormal	Normal	Abnormal
1	LD status	Emission status of EO module's LD	Hi	Lo	Lo	Hi
2	PD status	Receiving status of OE module's PD	Hi	Lo	Lo	Hi
3	DC alarm	DC voltage output status	Hi	Lo	Hi	Lo
4	FAN alarm	Rotation of the cooling fan	Hi	Lo	Lo	Hi
5	GND	-	-	-	-	-

LD 1
PD 2
DC-ALM 3
FAN-ALM 4
GND 5
6 NC
7 NC
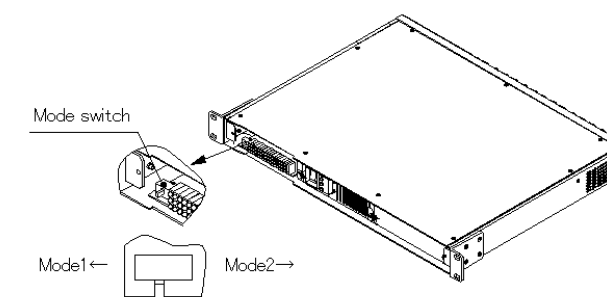8 NC
9 NC
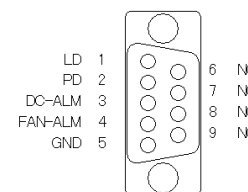
Figure 4   Alarm terminal pin assignment

Mode switch
Mode1←   Mode2→
Figure 5   Mode switch of the alarm output

Canare Electric Co., Ltd.   URL http://www.canare.co.jp

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