

INSTALLATION MANUAL

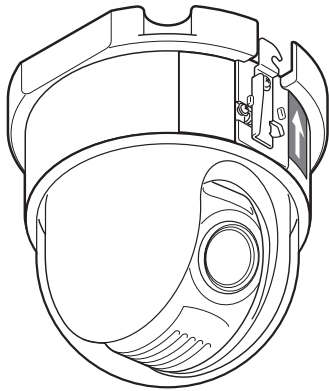
Color CCD Camera



Install these units securely according to this installation manual. Be aware that allowing them to fall may cause personal injury.

This installation should be made by a qualified service person and should conform to all local codes.

Please read this manual before installing and using this unit, and always follow the instructions in it for proper use. Please also read the separate Instruction Manual before using the unit for proper use.



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Pattern Sheet (inserted at the end of this manual)

Important

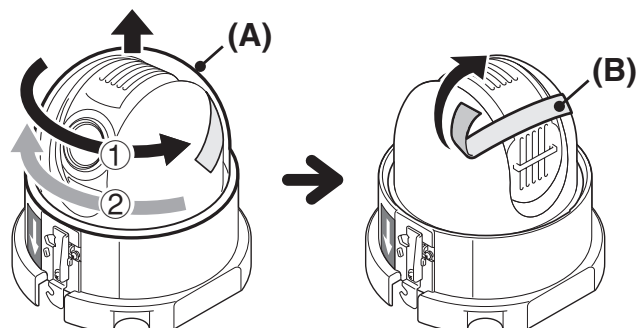
- Be careful when opening holes for installing the unit. Work with the power and video cables pulled out for easy installation.
- Make sure to properly perform waterproofing for the ceiling where you are installing the unit.
- Make sure that the surface in the installation location has no unevenness and is strong enough to bear the total weight of the unit.
- Install this unit in an environment where the temperature range stays between -10°C and $+50^{\circ}\text{C}$ (no condensation allowed).

CAUTION: For VA-80S (Power Board Unit)

ALL-POLE MAINS SWITCH with a contact separation of at least 3mm in each pole shall be incorporated in the electrical installation of the building.

Before Installing the Unit

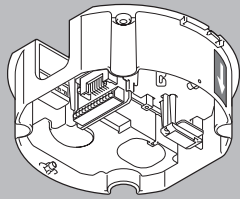
- ① Remove the plastic cover (A) and then the tape (B) fixing the lens.
- ② Put back the plastic cover (A) and lock it securely.
 - Turn the cover clockwise until it clicks.



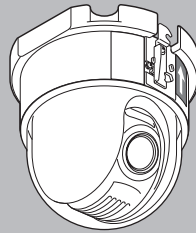
Product Lineup

To install the camera unit, the optional housing is required. When using a housing, be sure to choose the correct one for your environment of use.

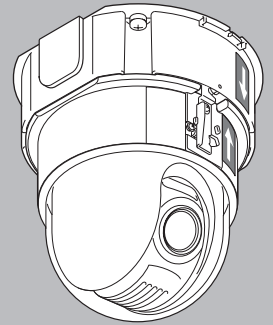
☞ For instructions on how to install the outdoor type, the wall mounting bracket, pendant mounting bracket, and attachment, refer to the relevant instruction manuals.



Power Board Unit
(VA-84S; for AC24V)
(VA-80S; for AC230V)



Camera unit



Indoor Type		Outdoor Type	
(In-ceiling Mount)	(Surface Mount)		
<p>P3</p>	<p>P4</p>	<p>P2</p>	<p>Pendant Mounting Bracket (VA-80BP)</p>
<p>P3</p>	<p>P4</p>	<p>Wall Mounting Bracket (VA-80BW)</p>	<p>Corner Mounting Adapter (VA-80AC)</p>
<p>In-ceiling Bracket Closed Type (VA-80ME)</p>	<p>In-ceiling Bracket Open Type (VA-80MF)</p>	<p>Attachment (VA-80A)</p>	<p>Pole Mounting Adapter (VA-80AP)</p>
		<p>Surface Cover (VA-80F)</p>	<p>Outdoor Housing (VA-80EX)</p>
			<p>● Clear Dome Cover (VA-CM8C)</p> <p>● Smoked Dome Cover (VA-CM8S)</p>

Surface Mount

Make sure to also consult the Surface Cover Instruction Manual.

1. Installing the power board unit

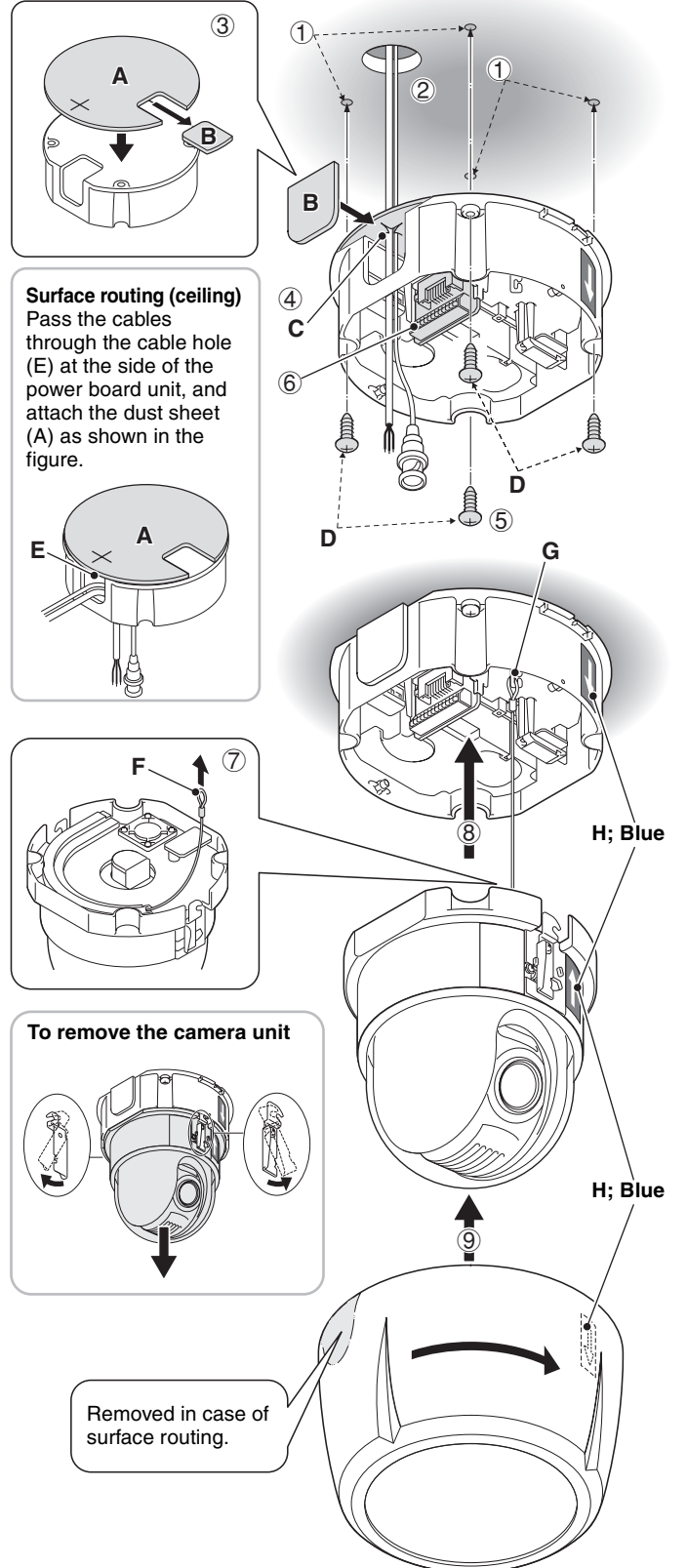
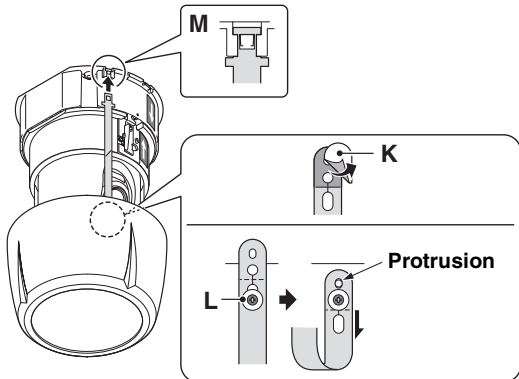
- ① Place the pattern sheet at the end of this manual on the ceiling, mark the locations and drill the holes for the cables and screws.
- ② Pull out the cables from the ceiling.
- ③ Attach the supplied dust sheet (A) to the base of the power board unit and the detachable piece of the sheet (B) to the side.
 - ✎ Peel off the release-coated paper from the dust sheet before attaching.
- ④ Pass the cables through the slit (C) in the dust sheet.
- ⑤ Fix the power board unit to the ceiling using the supplied screws (D) (4 places).
- ⑥ Connect the cables and set the switches.
 - ✎ See “Connections and Settings” on page 5.

2. Mounting the camera unit

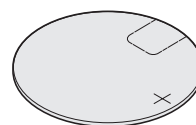
- ⑦ Fasten the camera unit safety wire (F) to the hook (G) on the inner side of the power board unit.
- ⑧ Align the arrows (H) of the same color (blue) on the camera unit and the power board unit, and push the camera unit until they click.
- ⑨ Align the arrows (H) of the same color (blue) on the inner side of the surface cover and the power board unit, and fix the cover by rotating it clockwise.

■ How to attach the drop-prevention cable (accessory)

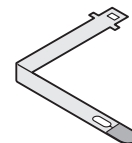
- 1) Peel off the two-sided tape (K) at the end of the cable and attach it to the hook (L) on the inner side of the surface cover as shown in the figure.
- 2) Fasten the cable to the hook (M) on the side of the power board unit.



Accessories



Dust sheet



Drop-prevention cable



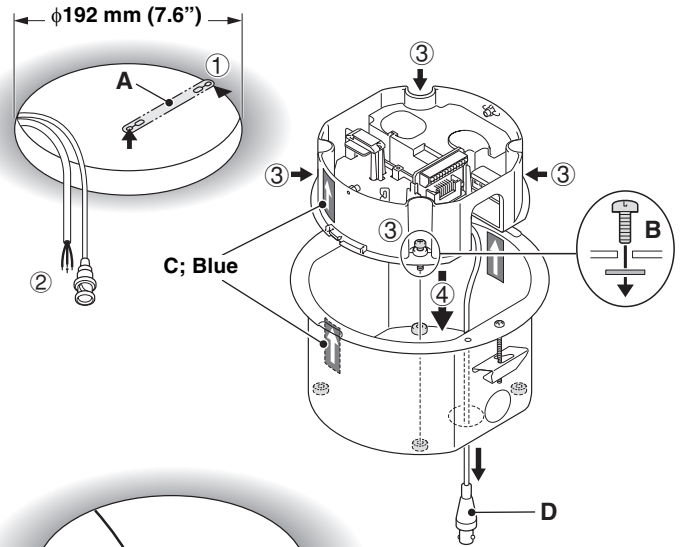
Screw (for power board unit)

In-ceiling Mount (Closed Type)

Make sure to also consult the In-ceiling Bracket Closed Type Instruction Manual.

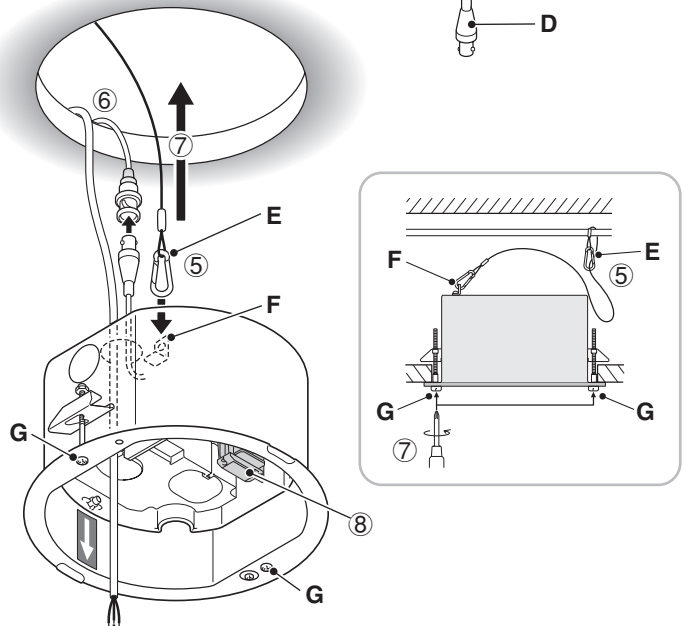
1. Installing the power board unit

- ① Draw a circumference on the ceiling using the supplied drop-prevention cable (A) as compass, and drill a hole for installing the in-ceiling bracket.
- ② Pull out the cables from the ceiling.
- ③ Pass the supplied screws (B) through each of the power board unit screw holes and fasten them loosely using washers (4 places).
- ④ Align the arrows (C) of the same color (blue) on the power board unit and the in-ceiling bracket, and mount the power board unit. Tighten firmly the screws (B) loosely fastened in the previous step.
 - Pass the video cable (D) through the bracket cable hole as preparation for the next step.



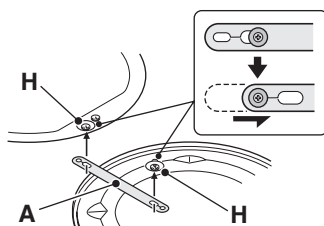
2. Installing on the ceiling

- ⑤ Attach the supplied safety wire (E) to the ceiling beam, for example, then connect it to the bracket-top hook (F).
- ⑥ Connect the video cable and pass the connection cables through the bracket.
- ⑦ Insert the bracket into the ceiling hole and fix it using screws (G) (2 places).
- ⑧ Connect the cables and set the switches.
 - ☛ See "Connections and Settings" on page 5.
- ⑨ Align the arrows (C) of the same color (blue) on the camera unit and the inner side of the bracket, and push the camera unit until they click.
- ⑩ Align the SANYO logos on the supplied bracket cover and the bracket, and push the cover until they click.

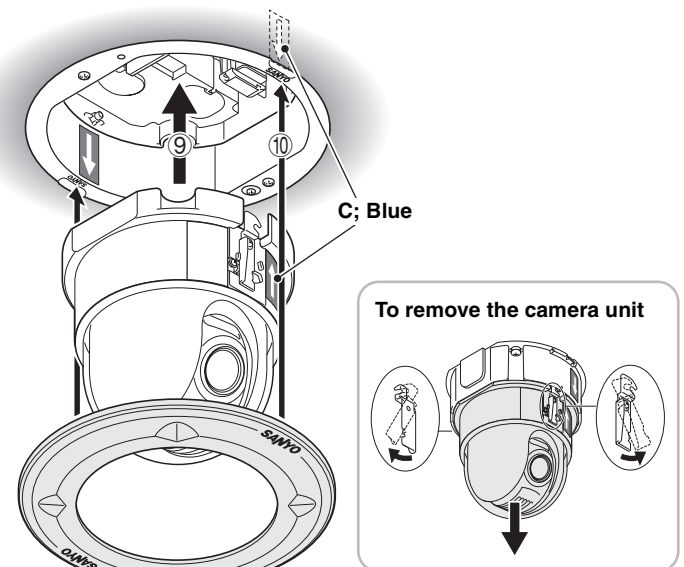
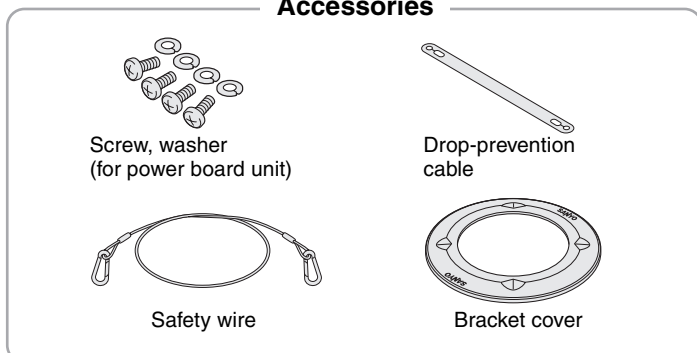


■ How to attach the drop-prevention cable (accessory)

Fasten the drop-prevention cable (A) to the hooks (H) on the bracket and its cover, then slide the cable as shown in the figure.



Accessories

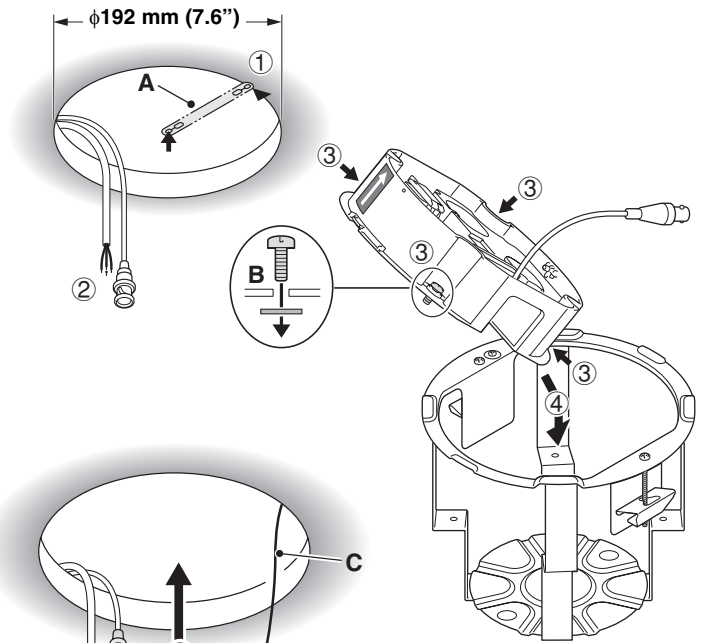


In-ceiling Mount (Open Type)

Make sure to also consult the In-ceiling Bracket Open Type Instruction Manual.

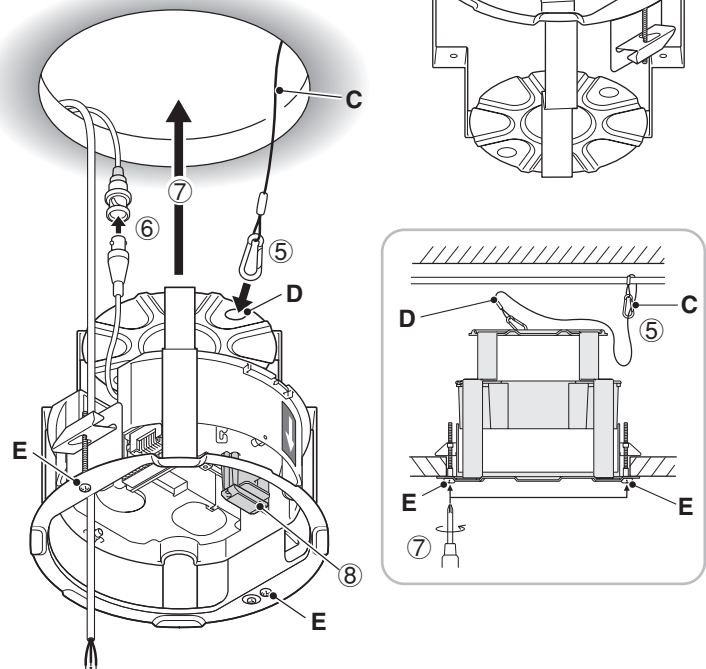
1. Installing the power board unit

- ① Draw a circumference on the ceiling using the supplied drop-prevention cable (A) as compass, and drill a hole for installing the in-ceiling bracket.
- ② Pull out the cables from the ceiling.
- ③ Pass the supplied screws (B) through each of the power board unit screw holes and fasten them loosely using washers (4 places).
- ④ Mount the power board unit in the in-ceiling bracket. Tighten firmly the screws (B) loosely fastened in the previous step.
 - When inserting the power board unit, do it diagonally.



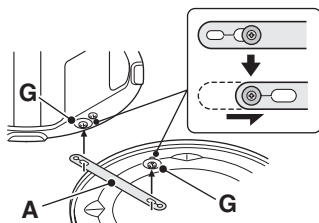
2. Installing on the ceiling

- ⑤ Attach the supplied safety wire (C) to the ceiling beam, for example, then connect it to the bracket-top hole (D).
- ⑥ Connect the video cable and pass the connection cables through the bracket.
- ⑦ Insert the bracket into the ceiling hole and fix it using screws (E) (2 places).
- ⑧ Connect the cables and set the switches.
 - ☞ See "Connections and Settings" on page 5.
- ⑨ Align the blue sticker (F) on the bracket and the arrow (F) of the same color on the camera unit, and then push the camera unit until they click.
- ⑩ Align the SANYO logos on the supplied bracket cover and the bracket, and push the cover until they click.

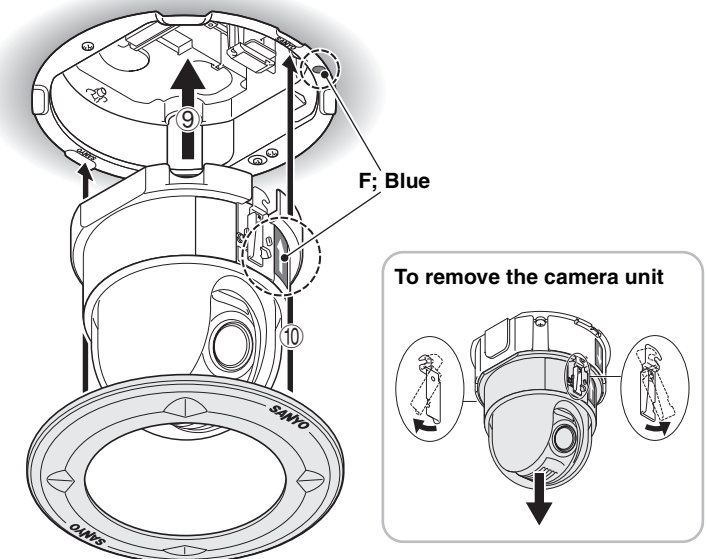
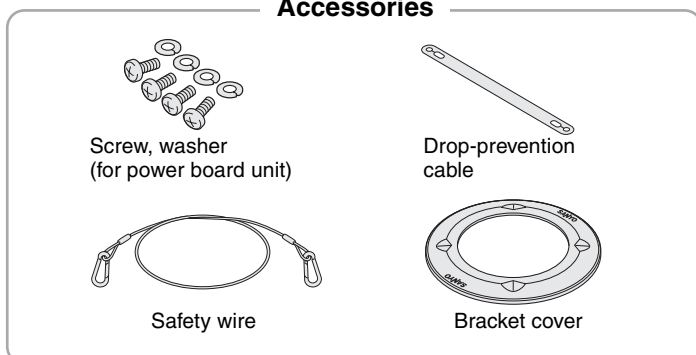


■ How to attach the drop-prevention cable (accessory)

Fasten the drop-prevention cable (A) to the hooks (G) on the bracket and its cover, then slide the cable as shown in the figure.



Accessories



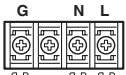
Connections and Settings



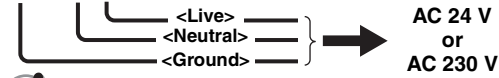
Do not connect the power cord until all other connections have been completed.

Make sure to also consult the Power Board Unit Instruction Manual.

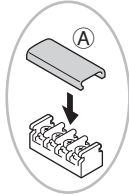
Power Supply Connection



For the connections use cables higher than 18 AWG.



- Fix the power cable end firmly so that the power terminal connection does not come loose. Use solderless terminals (ring or spade type) for wiring.
- After connection, always install the supplied power terminal cover (A) for safety reasons.



Monitor Connection

Supported coaxial cables

Cable type	Length
RG-59U (3C-2V)	250 m (273.4 yd) max.
RG-6U (5C-2V)	500 m (546.8 yd) max.
RG-11U (7C-2V)	600 m (656.2 yd) max.



- Using different cables from those specified here may attenuate the video and/or sync signals and interfere with correct transmission.
- RG-59U coaxial cables can be used when distance between devices is short, but not in duct or aerial routing.



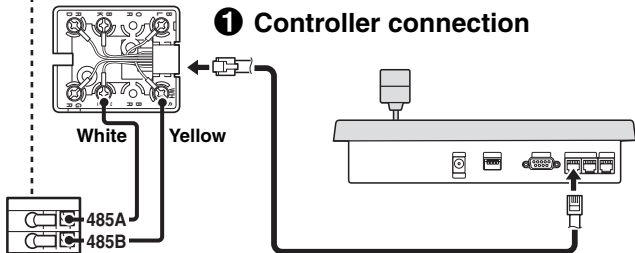
BNC type

Joint board

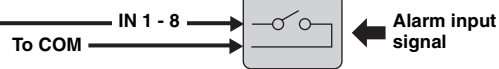
SIDE-A Connections

All connection cables should be 24 AWG or higher with a maximum length of no more than 600 m.

1 Controller connection



2 Alarm signal input



3 Alarm signal output

If a lamp is connected to this cable, it will light up when an alarm signal is received or when the built-in motion sensor detects movement.



For details on 2 and 3, refer to the "Alarm Settings (ALARM)" in the Instruction Manual.

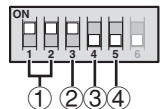
CAMERA	SET
LENS	SET
PAN/TILT	SET
AUTO MODE	SET
ALARM	SET
PRIVACY MASK	SET
PASSWORD	SET
LANGUAGE	SET
OPTION	SET
PRESET	OFF
MENU	BACK

ALARM	
ALARM IN	1
ALARM OUT	1
ALARM DISABLE	OFF
MOTION	OFF
ALARM DISPLAY	OFF
PRESET	OFF
MENU	BACK

SIDE-B Switch Settings

1 System control setting switches

- Switch 6 is unused.
- The factory setting is represented in bold.



1 Baud rate

Set the same baud rate as that on the camera.

Switch	1	2
2400	OFF	OFF
4800	OFF	ON
9600	ON	OFF
19200	ON	ON

2 Control method

Set either to RS485 or coaxial (COAX).

Switch	3
Coaxial (COAX)	ON
RS485	OFF

3 Protocol

Set the protocol for controlling the camera.

Switch	4
SSP (SANYO)	OFF
PELCO	ON

4 Termination (Switch 5)

"OFF" is set by default.

When connecting multiple cameras, termination setting must be "ON" on the last camera while it must be "OFF" on all others.

2 Address setting switches

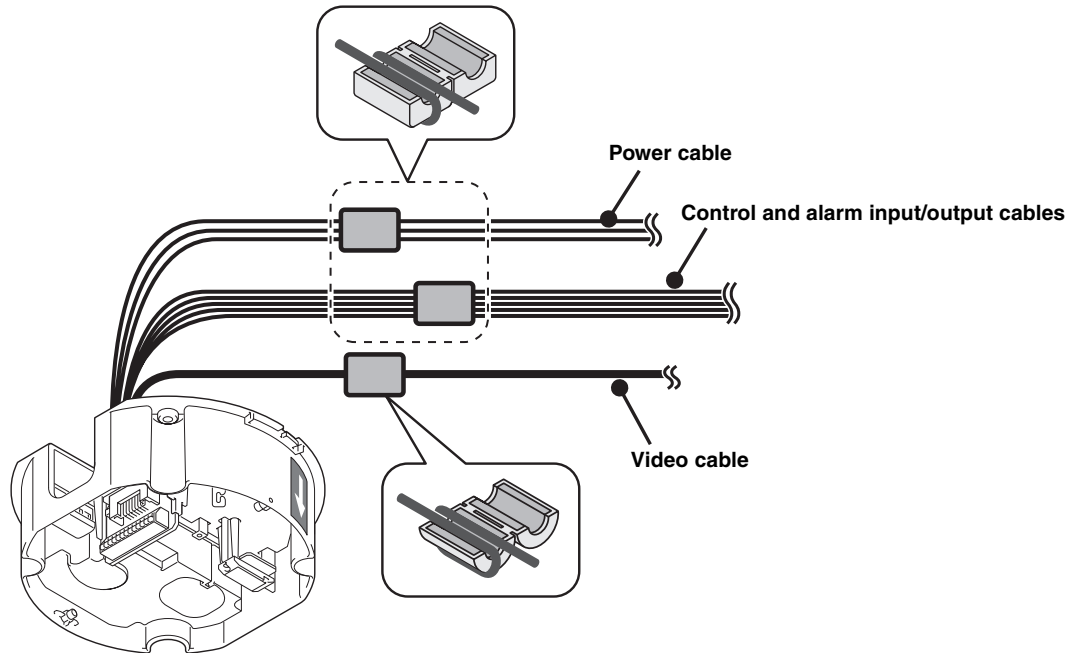
Set the camera address.

See "Address Settings Table" on page 7.

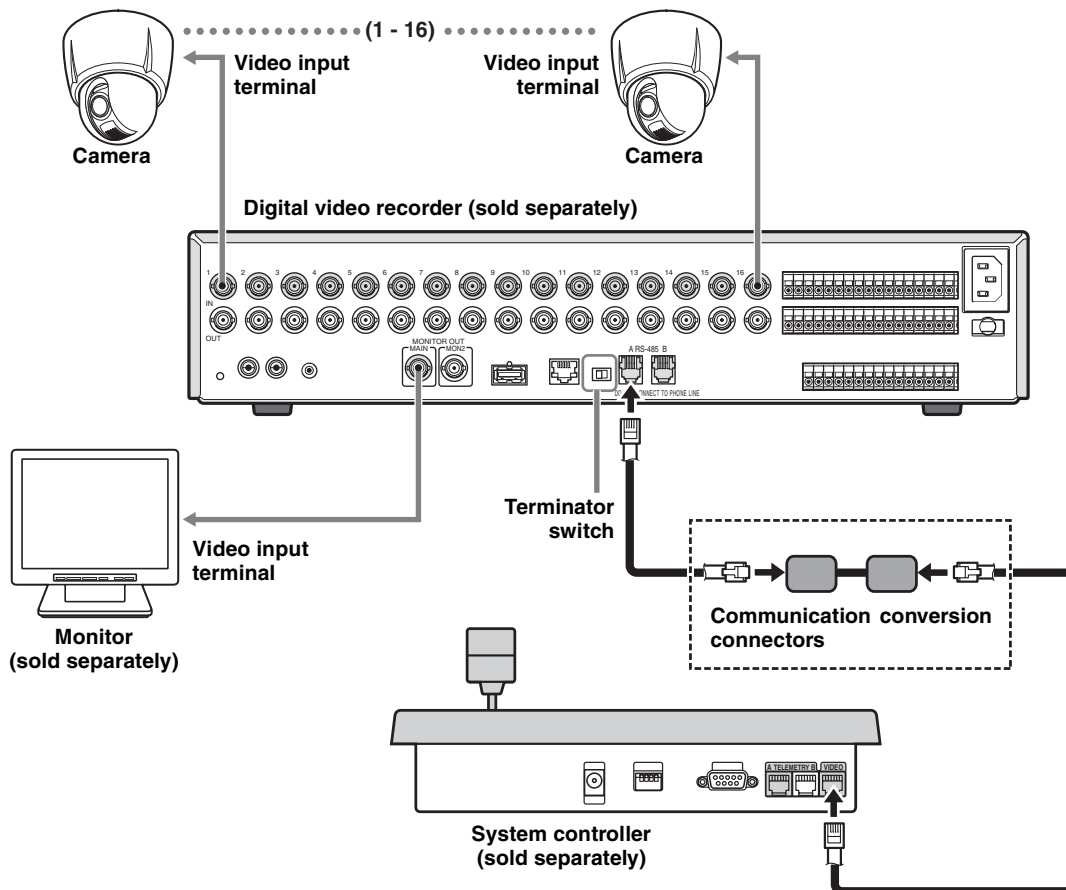


■ To prevent electromagnetic interference

Be sure to attach the clamping cores supplied with the camera unit to the cables as illustrated.



■ Connections for using coaxial control (System connection)

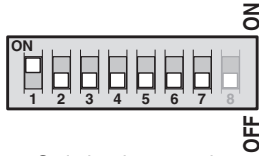


Address Settings Table

Addresses are specified by setting the switches to ON/OFF.

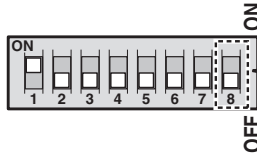
In the table, the circle mark “○” means ON. Set switches as shown in the table.

SANYO protocol: 1 - 127



- Switch 8 is unused.

PELCO protocol: 1 - 255



Switch 8

- Address 1 - 127: OFF
- Address 128 - 255: ON

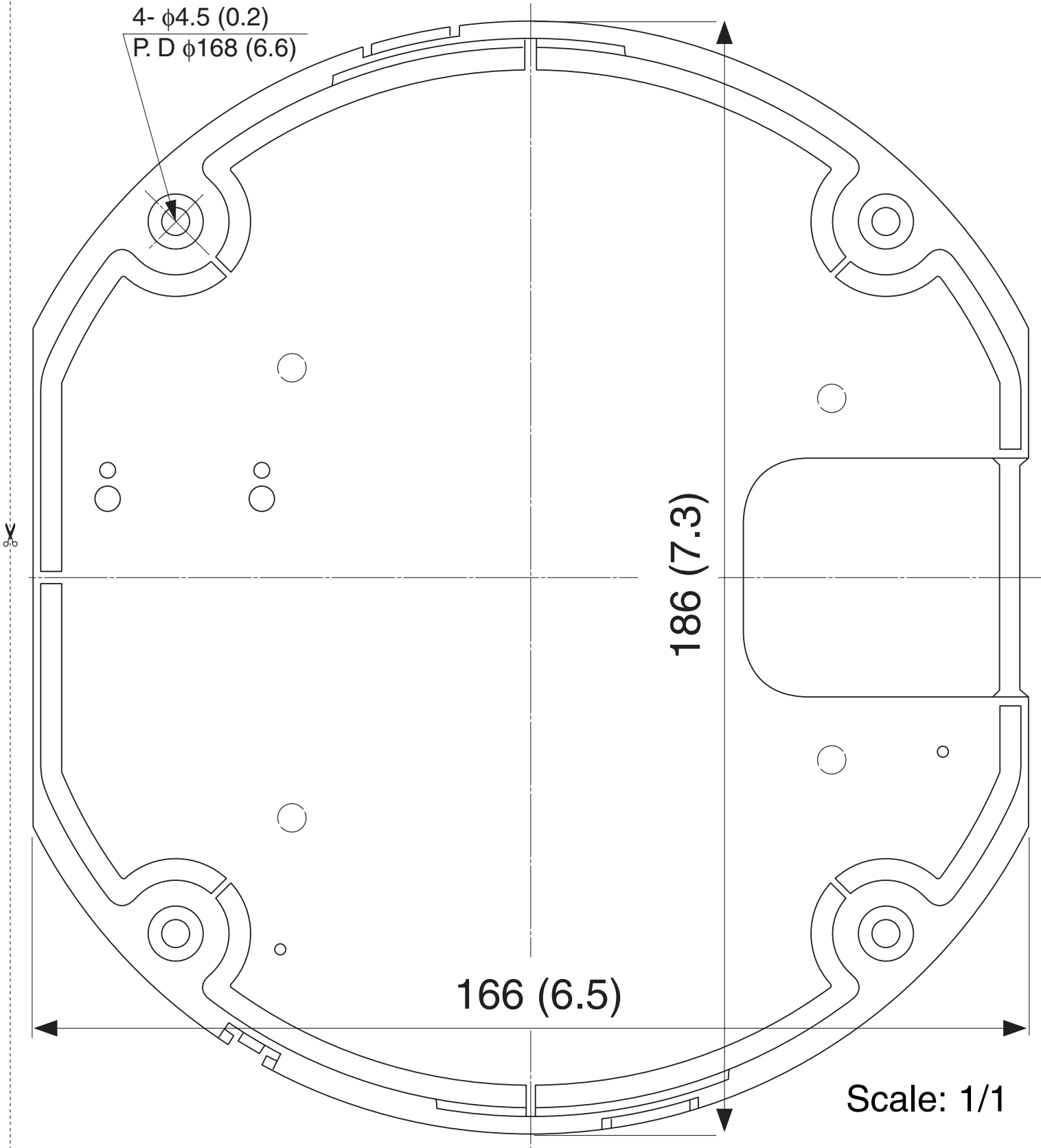
Address (Camera No.)		Switch No.						
Protocol		1	2	3	4	5	6	7
SANYO/PELCO	PELCO							
0*	128							
1	129	○						
2	130		○					
3	131	○	○					
4	132			○				
5	133	○	○	○				
6	134		○	○				
7	135	○	○	○				
8	136				○			
9	137	○			○			
10	138		○					
11	139	○	○					
12	140			○	○			
13	141	○	○	○	○			
14	142		○	○	○			
15	143	○	○	○	○			
16	144					○		
17	145	○				○		
18	146		○			○		
19	147	○	○			○		
20	148			○				
21	149	○	○	○				
22	150		○	○	○			
23	151	○	○	○				
24	152				○			
25	153	○			○	○		
26	154		○			○		
27	155	○	○			○		
28	156			○	○	○		
29	157	○	○	○	○			
30	158		○	○	○	○		
31	159	○	○	○				
32	160						○	
33	161	○					○	
34	162		○				○	
35	163	○	○				○	
36	164			○			○	
37	165	○	○	○			○	
38	166		○	○			○	
39	167	○	○	○			○	
40	168				○		○	
41	169	○			○		○	
42	170		○	○			○	

Address (Camera No.)		Switch No.						
Protocol		1	2	3	4	5	6	7
SANYO/PELCO	PELCO							
43	171	○	○					
44	172			○	○			○
45	173	○		○	○			○
46	174		○	○	○			○
47	175	○	○		○			○
48	176					○	○	
49	177	○					○	
50	178		○			○	○	
51	179	○	○			○	○	
52	180				○		○	
53	181	○		○			○	
54	182		○	○			○	
55	183	○	○				○	
56	184				○		○	
57	185	○				○	○	
58	186		○				○	
59	187	○	○				○	
60	188				○		○	
61	189	○		○			○	
62	190		○	○			○	
63	191	○	○				○	
64	192							○
65	193	○						
66	194		○					○
67	195	○	○					○
68	196				○			○
69	197	○		○				
70	198		○	○				
71	199	○	○					○
72	200				○			○
73	201	○						
74	202		○					○
75	203	○	○					○
76	204				○			○
77	205	○		○				
78	206		○	○				○
79	207	○	○	○				○
80	208					○		
81	209	○						○
82	210		○					○
83	211	○	○					○
84	212			○				○
85	213	○						○

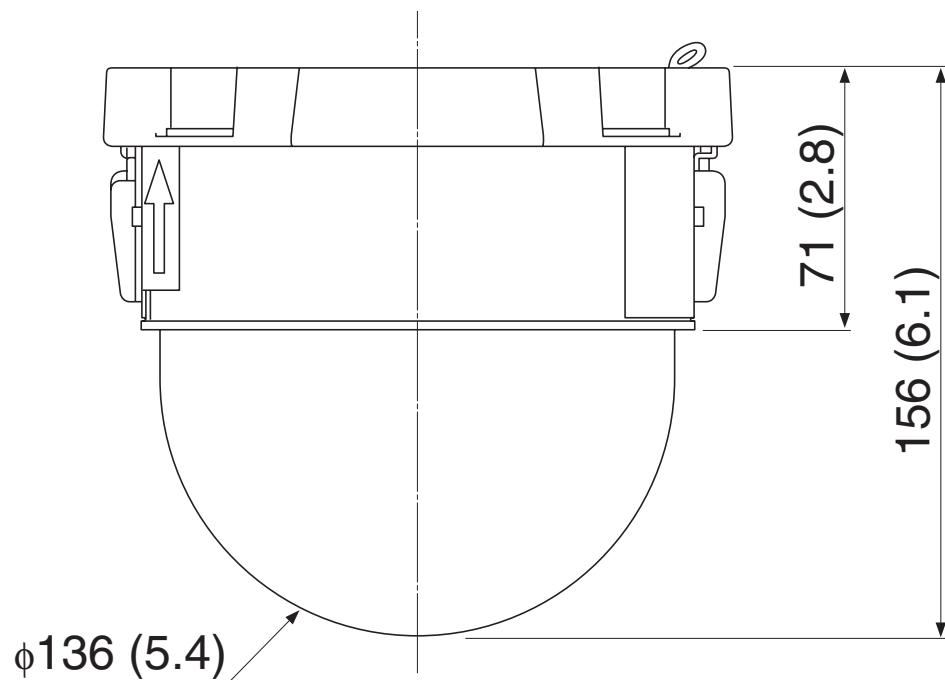
Address (Camera No.)		Switch No.						
Protocol		1	2	3	4	5	6	7
SANYO/PELCO	PELCO							
86	214		○	○				○
87	215	○		○				○
88	216				○			○
89	217	○						○
90	218		○					○
91	219	○	○					○
92	220			○				○
93	221	○		○				○
94	222		○	○				○
95	223	○	○					○
96	224						○	○
97	225	○						○
98	226		○					○
99	227	○	○					○
100	228			○				○
101	229	○		○				○
102	230		○					○
103	231	○	○	○				○
104	232				○			○
105	233	○						○
106	234		○					○
107	235	○	○					○
108	236			○				○
109	237	○		○				○
110	238		○	○				○
111	239	○	○					○
112	240						○	○
113	241	○						○
114	242		○					○
115	243	○						○
116	244		○					○
117	245	○						○
118	246			○				○
119	247	○	○					○
120	248				○			○
121	249	○						○
122	250		○					○
123	251	○						○
124	252			○				○
125	253	○		○				○
126	254			○				○
127	255	○	○					○

* When setting the address by using the menu screen on the camera, set the address setting switches to “0”.

Pattern Sheet: mm (inch)



■ Dimensions: mm (inch)



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Impreso en papel reciclado
Gedruckt auf Recyclingpapier
使用再生紙印刷

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SANYO Electric Co., Ltd.
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