

Cable Information

Internal use only



Revision history

Rev.	Date	Changes	Note
1.02	Feb. 2010	Addition ; AW-PB506 cable Info.	
1.03	Jun. 2010	Addition ; Pan/Tilt & Controller interface	
1.04	Jun. 2010	Addition ; PH405 / HRP150 connection	
1.05	Aug. 2010	Addition ; AW-CA20T6G	
1.06	Sep. 2010	Revised ; HRP935 Preview connecter number HR10A-7R-4P => HR10A-7R-4P(73)	

SECTION 1

AW camera series



Option Cable

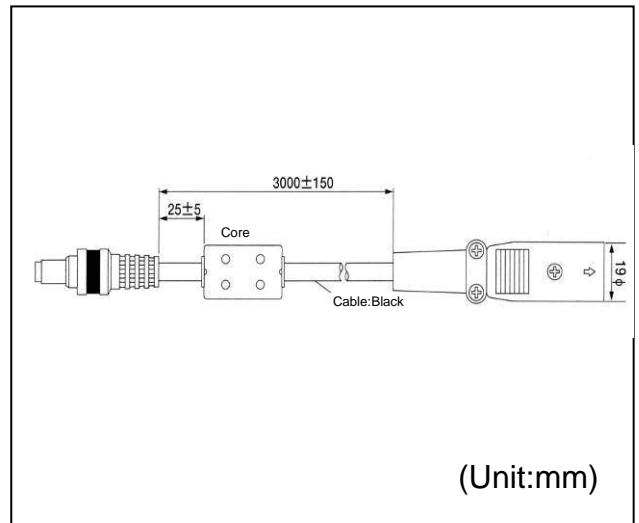
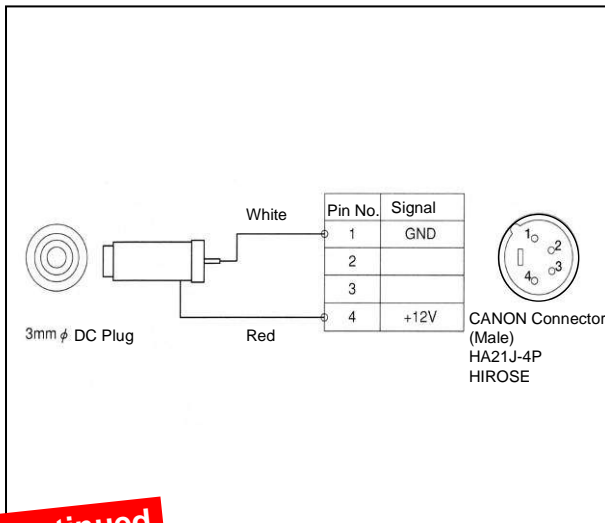
Discontinued

AW-CA4T1(DC power cable)

- This cable is used for connection with convertible cameras(AW-E350/E650/E655/E750 /E800A/E300S or live switcher(AW-SW350) and power supply(AW-PS505).
- Cable Length:3m

●Wiring & Signals

●Dimensions



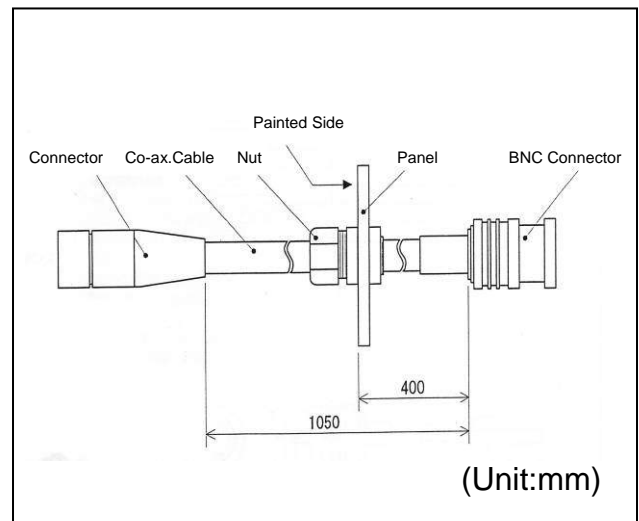
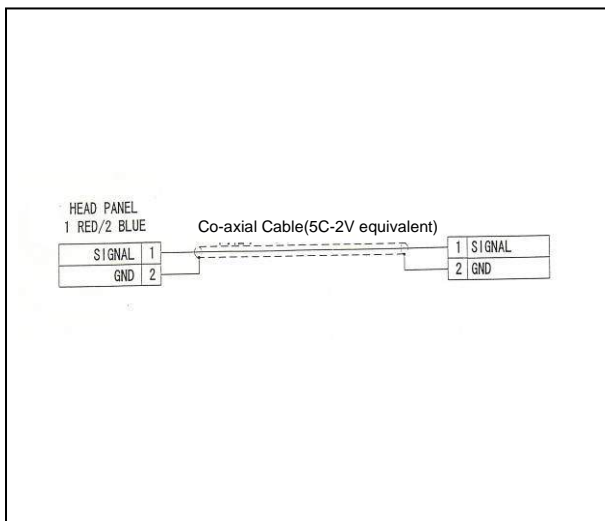
Discontinued

AW-CA1T1(Co-axial cable with special connector)

- This co-axial cable with special connector is used for special signal output such as SDI signal on outdoor pan-tilt head system (AW-PH600/CH600).
- Cable Length:1m

●Wiring & Signals

●Dimensions



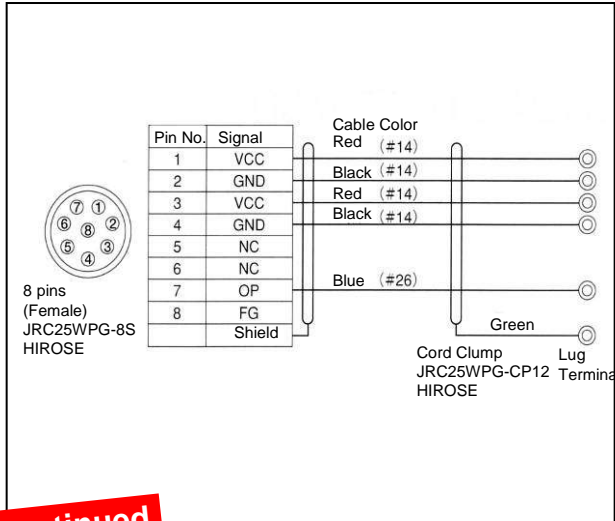
Option Cable

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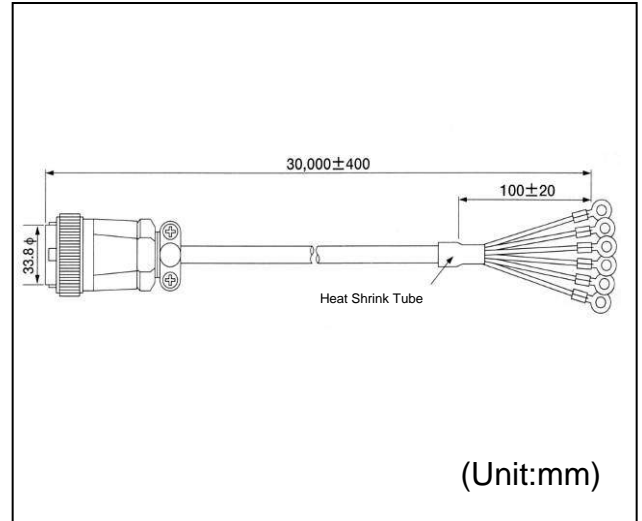
AW-CA8U30(Power cable)

- This cable is used for connection with pan-tilt head(AW-PH600) and power supply (AW-PS600).
- Cable Length:30m

●Wiring & Signals



●Dimensions

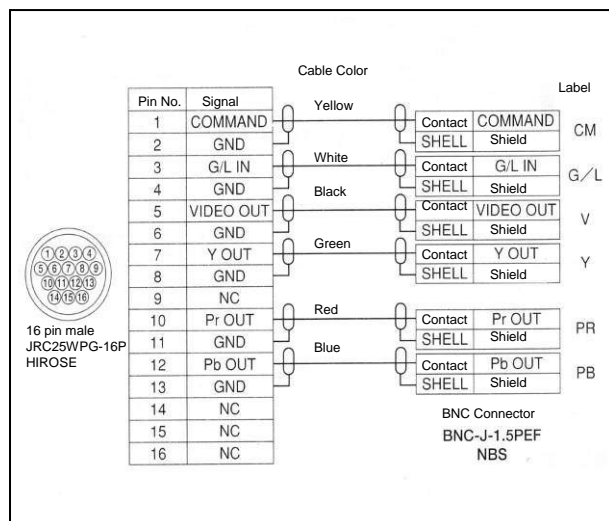


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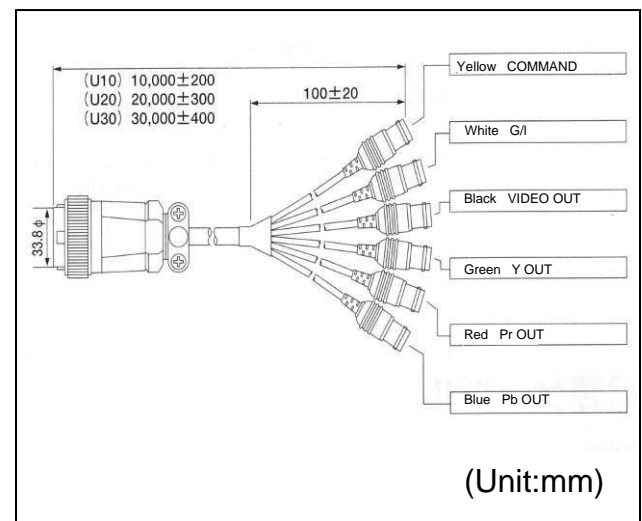
AW-CA16U10/20/30(Camera control cable)

- This cable is used with outdoor pan-tilt head system (AW-PH600) or indoor pan-tilt head(AW-PH500) for camera control and genlock.
- Cable Length:AW-CA16U10:10m,AW-CA16U20:20m,AW-CA16U30:30m

●Wiring & Signals



●Dimensions

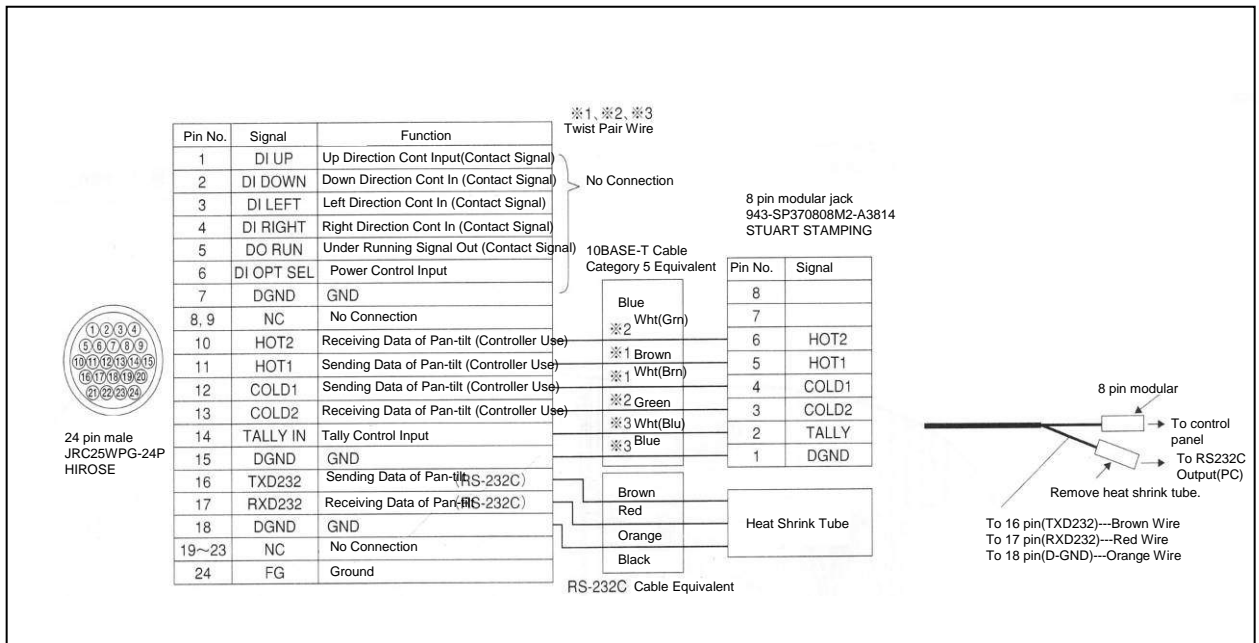


Option Cable

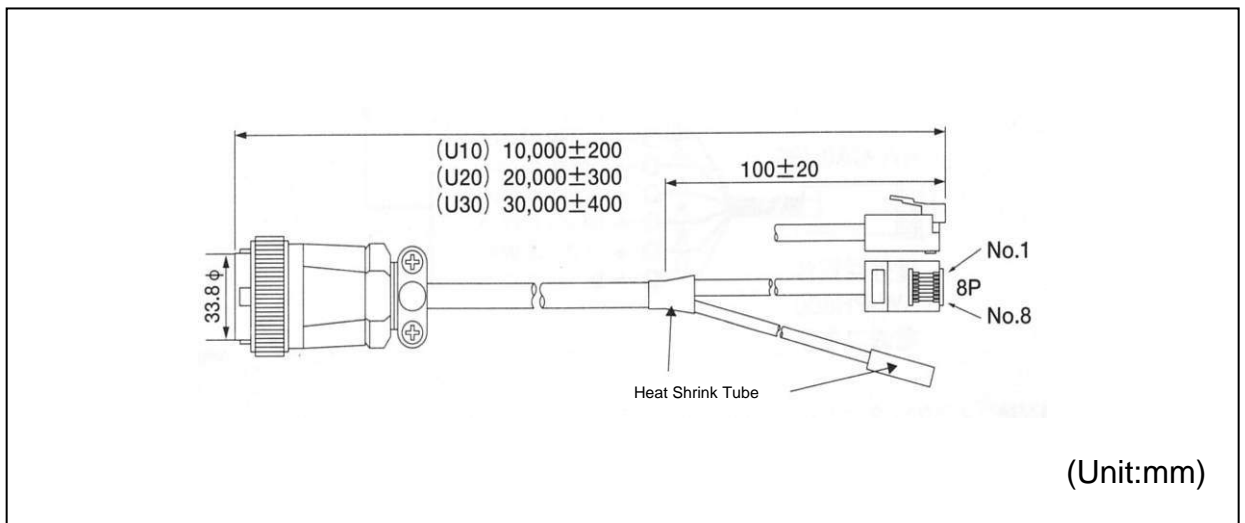
Discontinued

AW-CA24U10/20/30(Camera control cable)

- This cable is used with pan-tilt head(AW-PH600) or indoor pan-tilt head(AW-PH500) for pan-tilt control.
- Cable Length:AW-CA24U10:10m,AW-CA24U20:20m,AW-CA24U30:30m
- Wiring & Signals



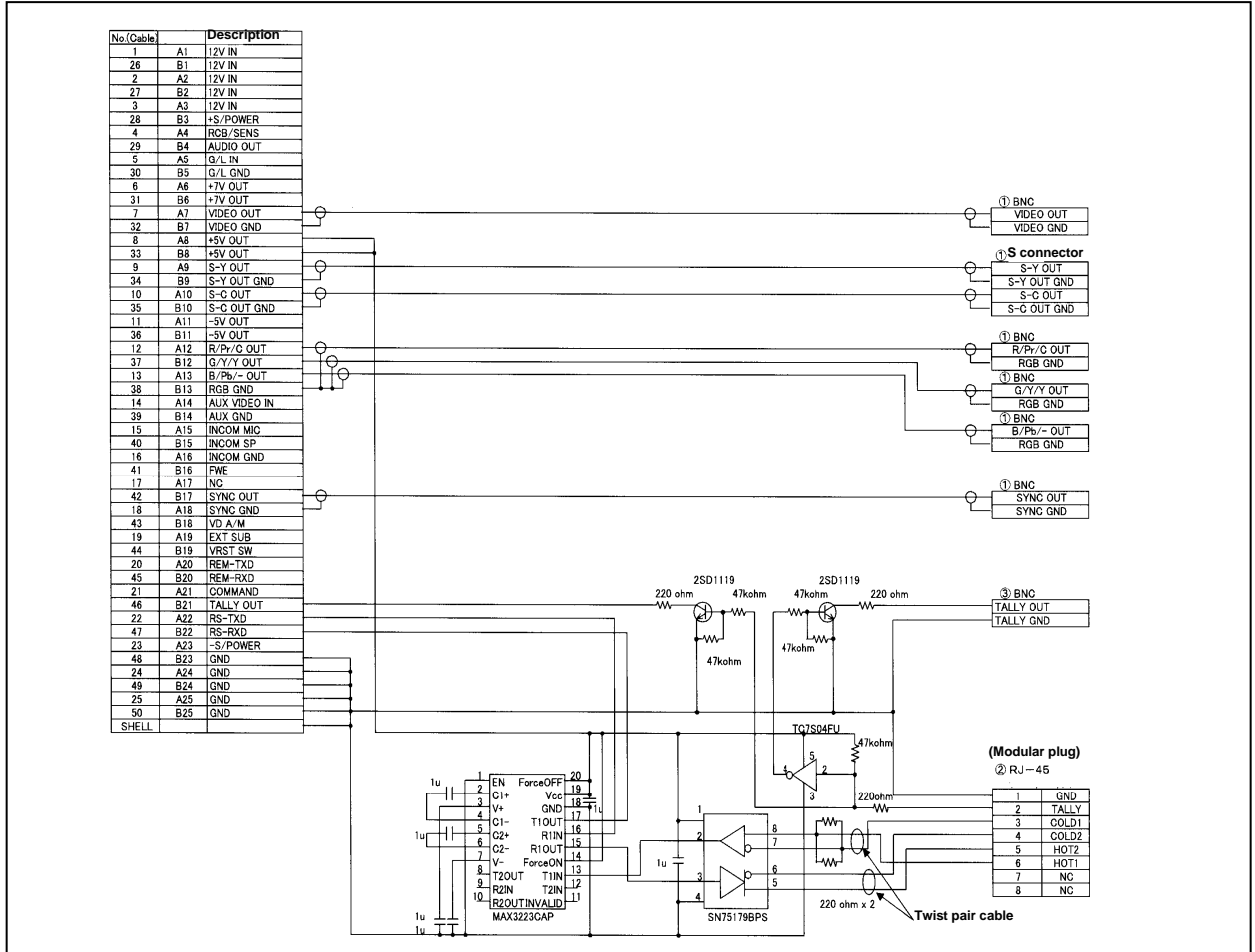
●Dimensions



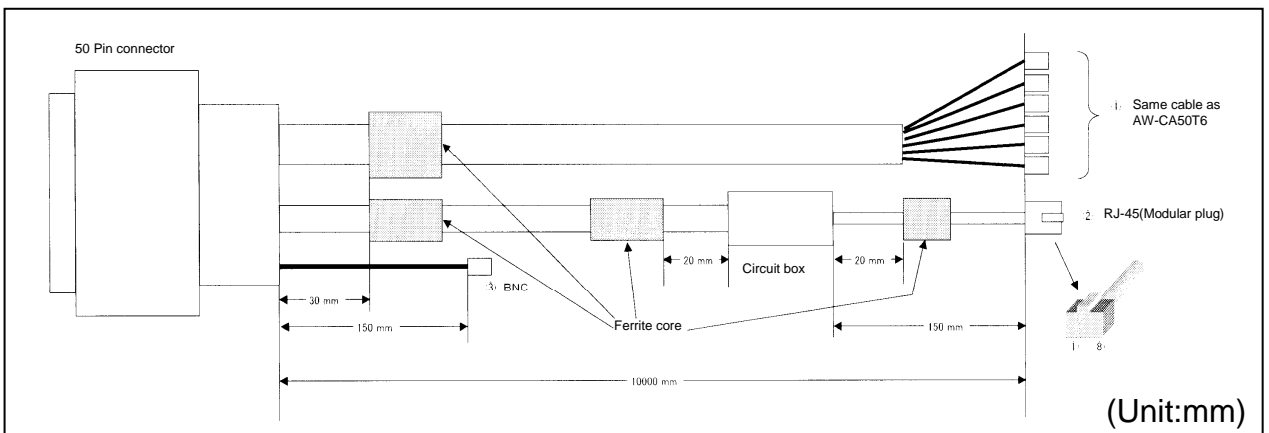
Option Cable

AW-CA50T8(Camera control cable)

- This cable is used for controlling cameras(AW-E350/E650/E655/E750/E800A) by AW-CB400.
- Cable Length:10m
- Camera control distance can be extended max.1000m by using 10-BASE-T cable.
- Wiring & Signals



●Dimensions

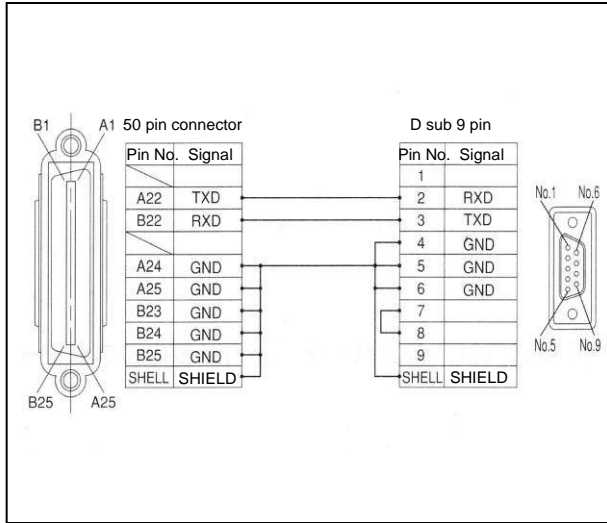


Option Cable

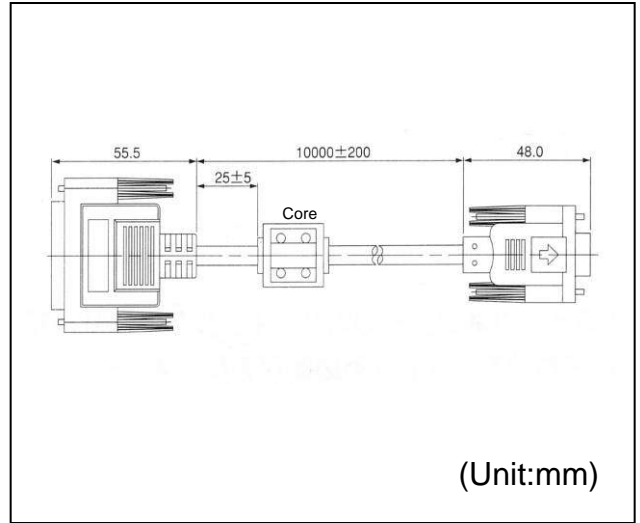
AW-CA50T9(RS232C camera control cable)

- This cable is used for connection with convertible cameras(AW-E350/E650/E655/E750 /E800A) and PC.
- Cable Length:10m

●Wiring & Signals



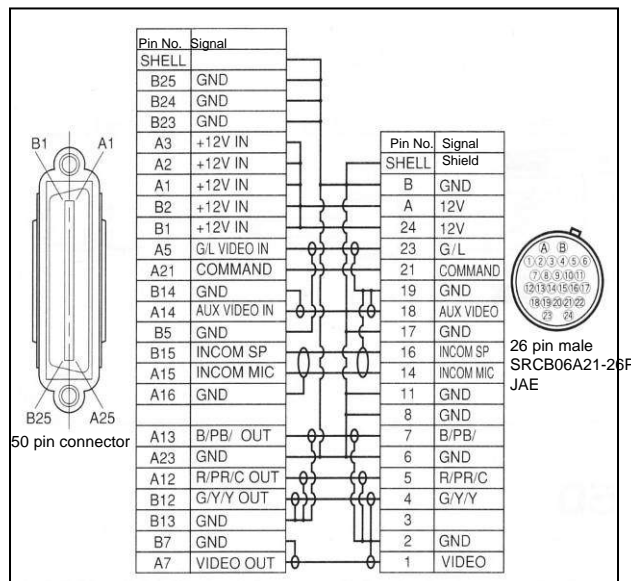
●Dimensions



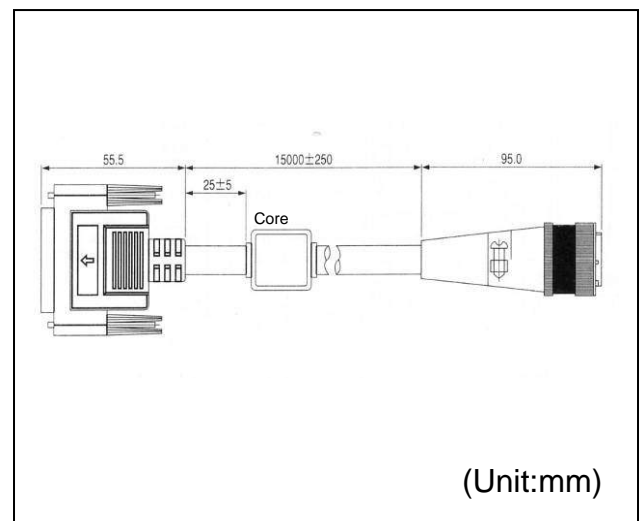
AW-CA50A26(RCU cable)

- This cable is used for connection with convertible cameras(AW-E350/E650/E655/E750 /E800A) and RCU(WV-RC700A).
- Cable Length:15m

●Wiring & Signals



●Dimensions

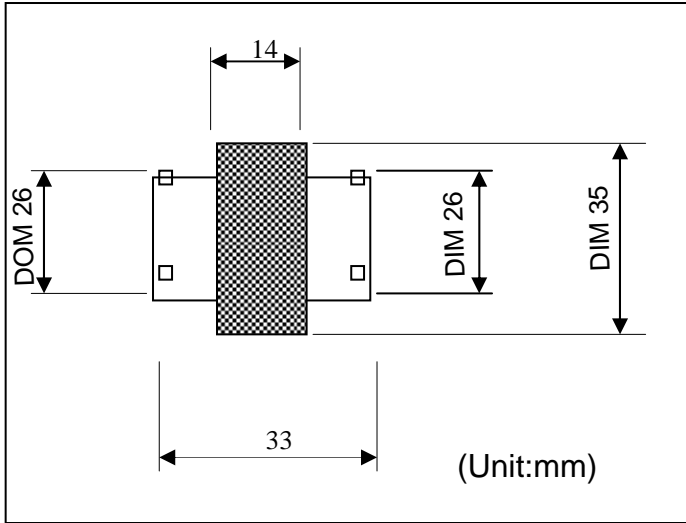


Option Cable

AW-CA26T26(RCU extension cable joint connector)

- This connector is used for extension of RCU cable(AW-CA50A26) with RCU extension cable(AW-CA26U15/30/100).
- Length:30mm

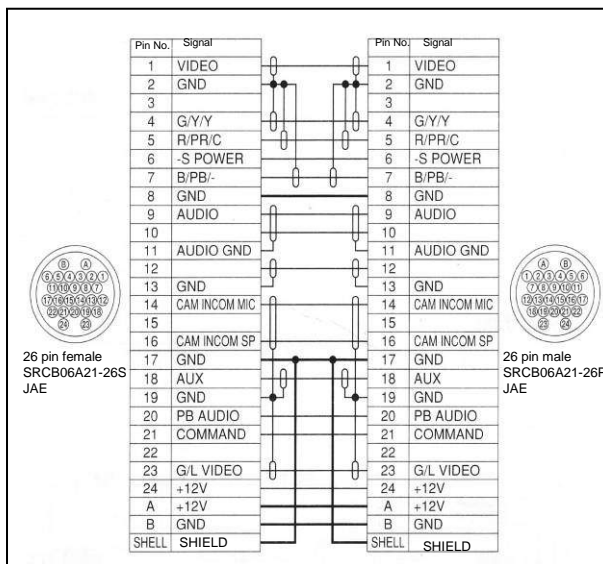
●Dimensions



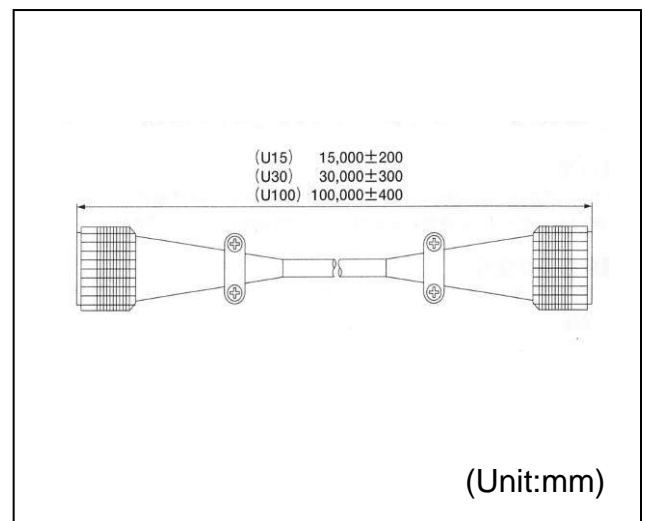
AW-CA26U15/30/100(RCU extension cable)

- This cable is used for extension of RCU cable(AW-CA50A26) with joint connector WC-CA26T26).
- Cable Length:AW-CA26U15:15m,AW-CA26U30:30m,AW-CA26U100:100m

●Wiring & Signals



●Dimensions



Option Cable

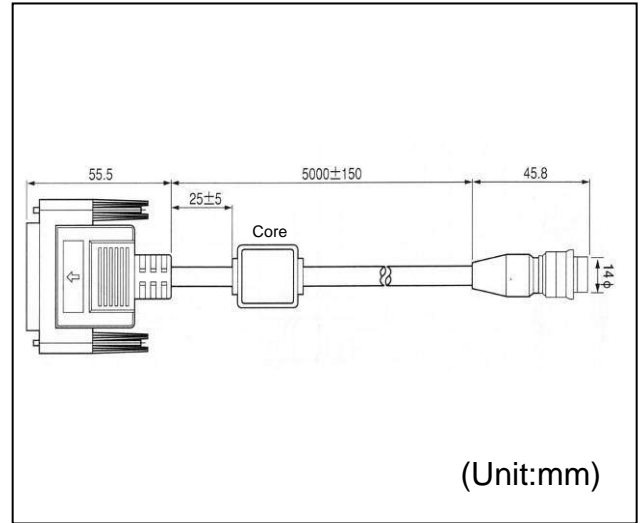
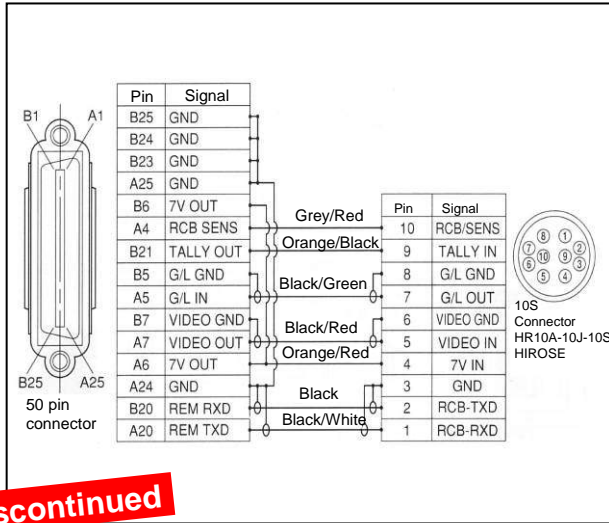
Discontinued

AW-CA50B10(RCB cable for extension)

- This cable is used with extension cable for connection with convertible cameras (AW-E350/E300S/E650/E655/E750/E800A) and camera control box(WV-CB700A).
- Length:5m

●Wiring & Signals

●Dimensions



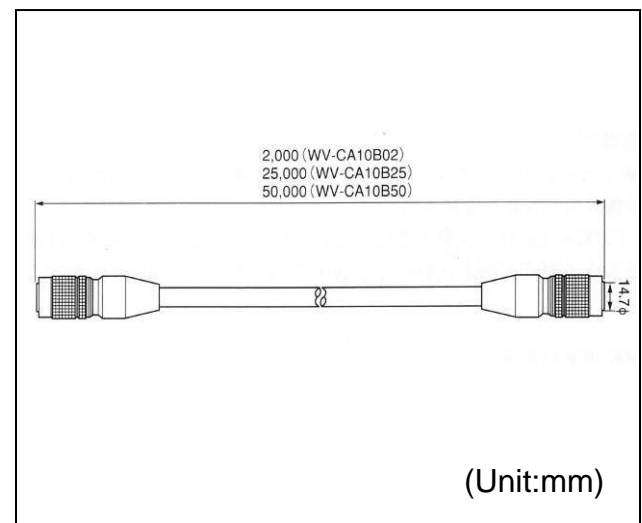
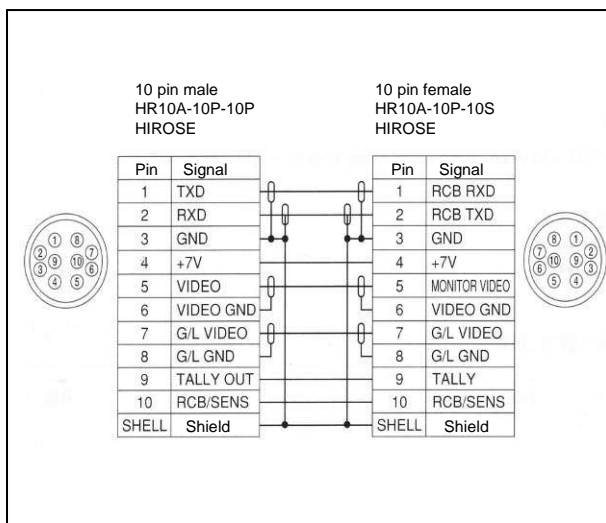
Discontinued

AW-CA10B02/25/50(RCB extension cable)

- This cable is used for extension of RCB cable(AW-CA50B10).
- Cable Length:AW-CA10B02:2m,AW-CA10B25:25m,AW-CA10B50:50m

●Wiring & Signals

●Dimensions



Option Cable

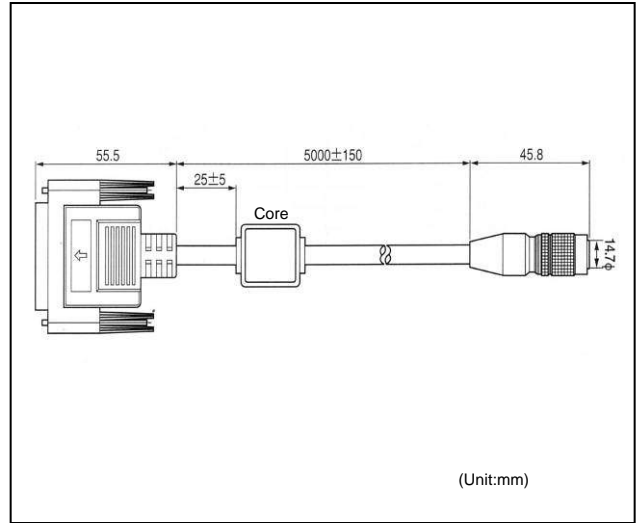
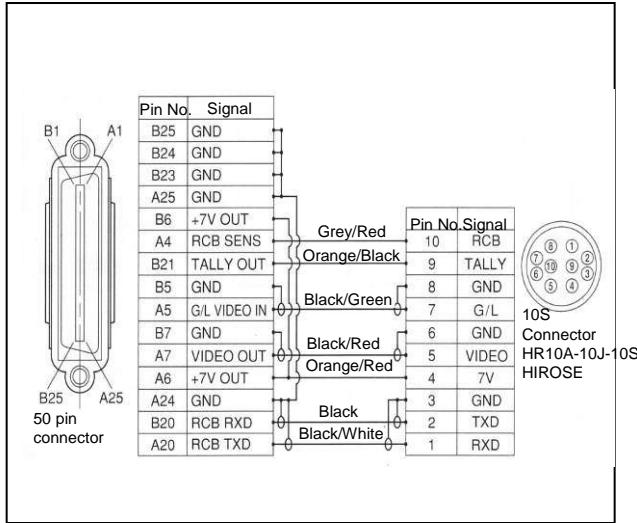
Discontinued

AW-CA50T10(RCB cable)

- This cable is used with connection with convertible cameras(AW-E350/E300S/E650/E655/E750/E800A) and camera control box(WV-CB700A).
- Length:5m

●Wiring & Signals

●Dimensions

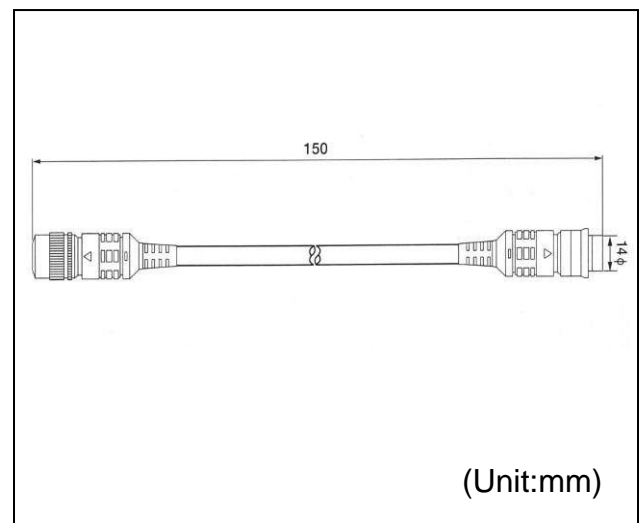
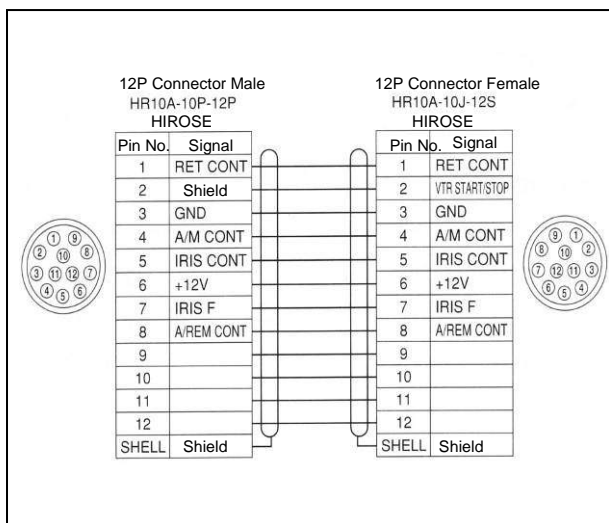


AW-CA12T12A(Lens extension cable)

- This cable is used for extension of lens iris cable .
- Cable Length:15cm

●Wiring & Signals

●Dimensions

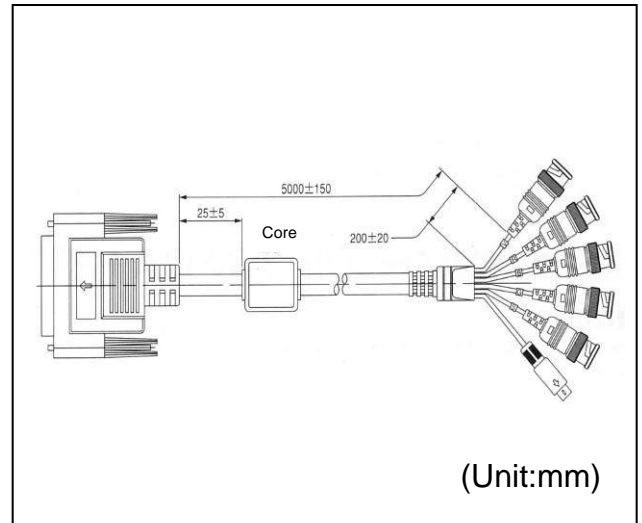
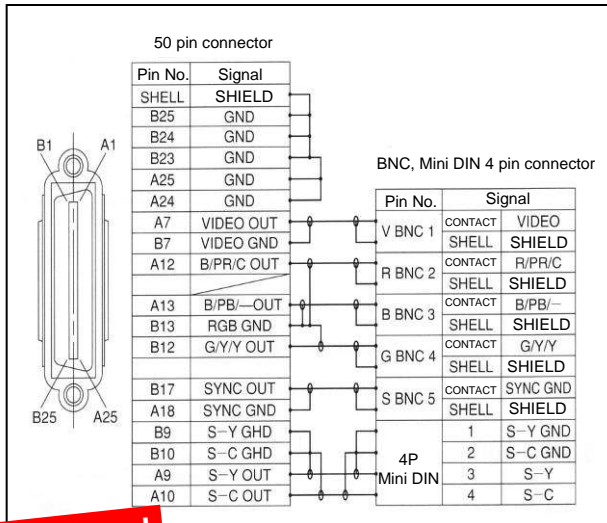


Option Cable

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AW-CA50T6(RGB cable)

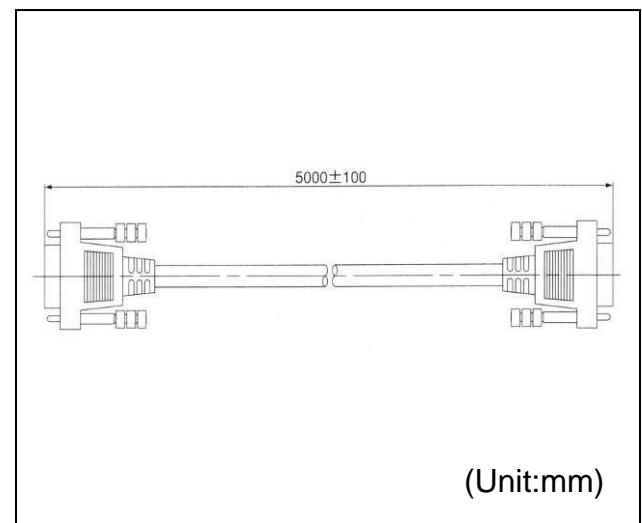
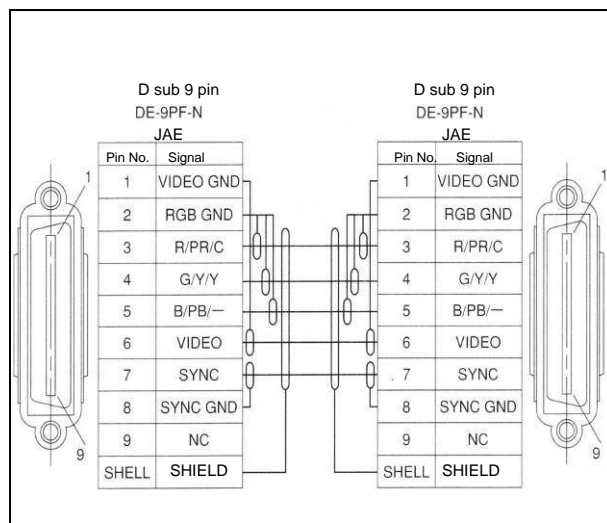
- This cable is used for connection with convertible cameras(AW-E350/E300S/E650/E655/E750/E800A)installed RGB card(AW-PB302 and RGB monitor.
- Length:5m
- Wiring & Signals
- Dimensions



Discontinued

AW-CA9T9(RGB cable for PC)

- This cable is used for connection with convertible cameras(AW-E350/E300S/E650/E655/E750/E800A)installed RGB card(AW-PB302) and PC.
- Cable Length:5m
- Wiring & Signals
- Dimensions



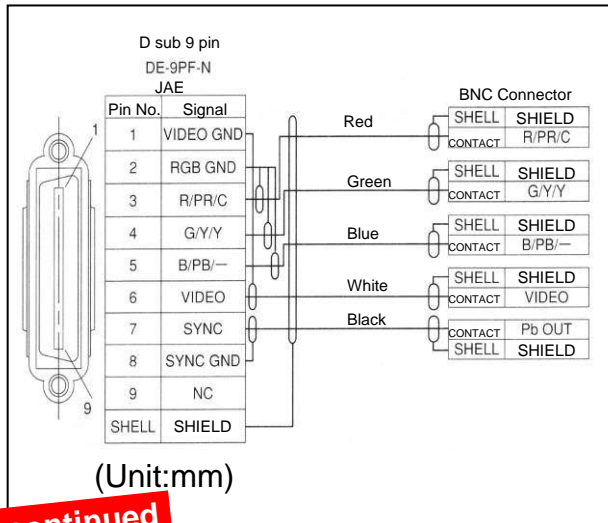
Option Cable

Discontinued

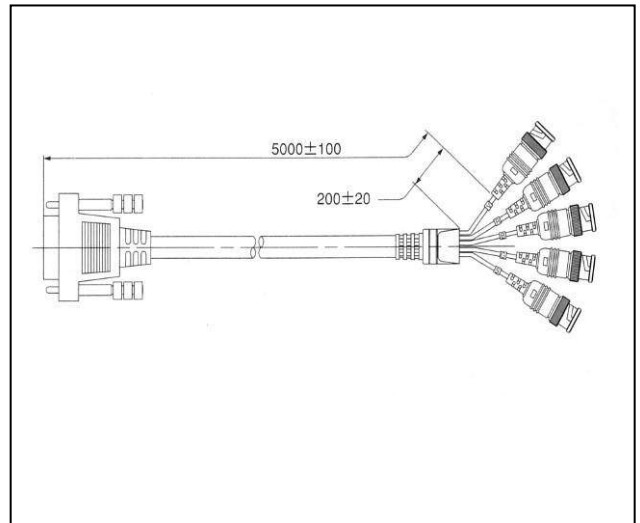
AW-CA9T5(USB cable)

- This cable is used for connection with convertible cameras(AW-E350/E300S/E650/E655/E750/E800A)installed RGB card(AW-PB302 and RGB monitor.
- Length:5m

●Wiring & Signals



●Dimensions

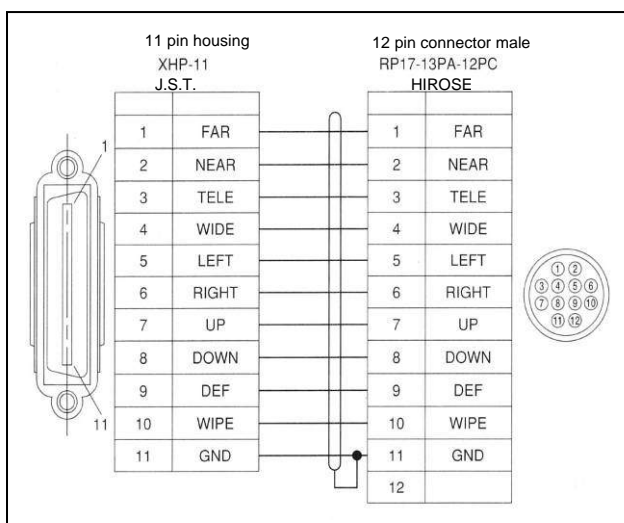


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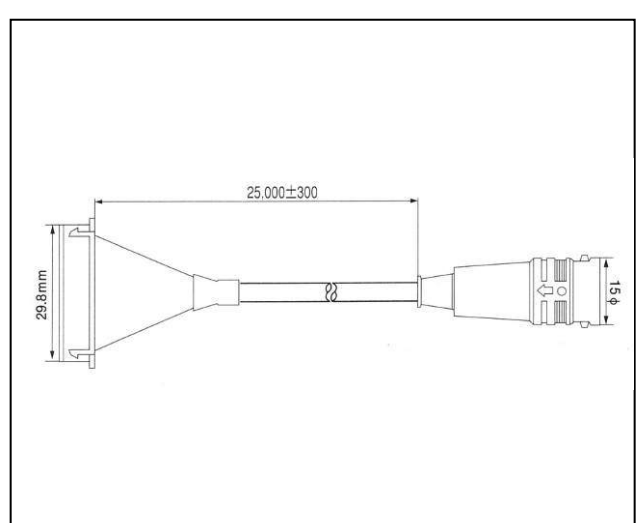
AW-CA12T11(Contact closure type pan-tilt cable)

- This cable is used for connection with convertible cameras(AW-E350/E300S/E650/E655/E750/E800A)installed lens interface card(AW-PB308) and contact closure type pan-tilt head.
- Cable Length:25m

●Wiring & Signals



●Dimensions



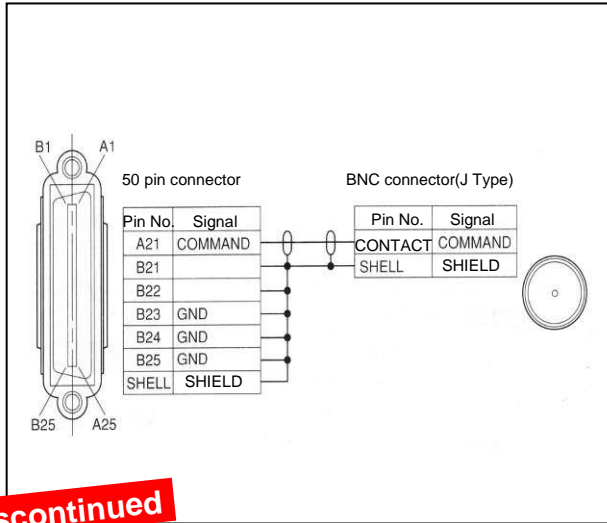
Option Cable

Discontinued

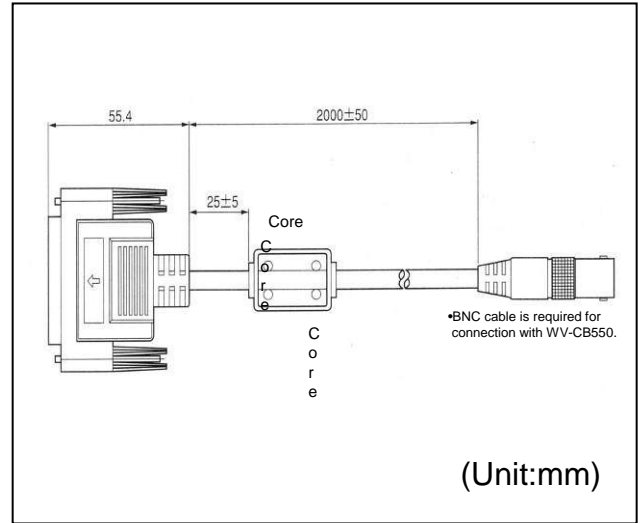
AW-CA50TBNC(WV-CB550 cable)

- This cable is used for connection with convertible cameras(AW-E350/E300S/E650/E655/E750/E800A) and remote control box(WV-CB550).
- Length:2m

●Wiring & Signals



●Dimensions

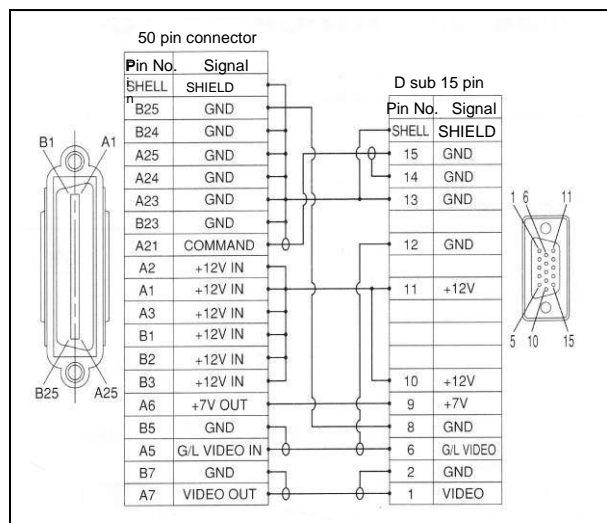


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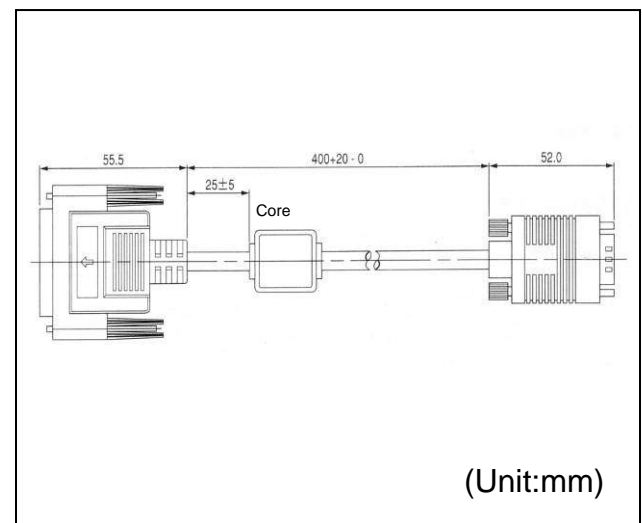
AW-CA50T15(Pan-tilt cable)

- This cable is used for connection with convertible cameras(AW-E350/E300S/E650/E655/E750/E800A) and pan-tilt head(AW-PH300A/PH600).
- Cable Length:40cm

●Wiring & Signals



●Dimensions



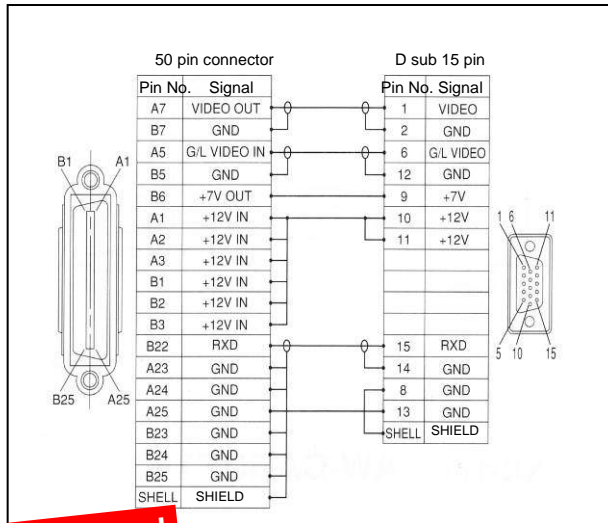
Option Cable

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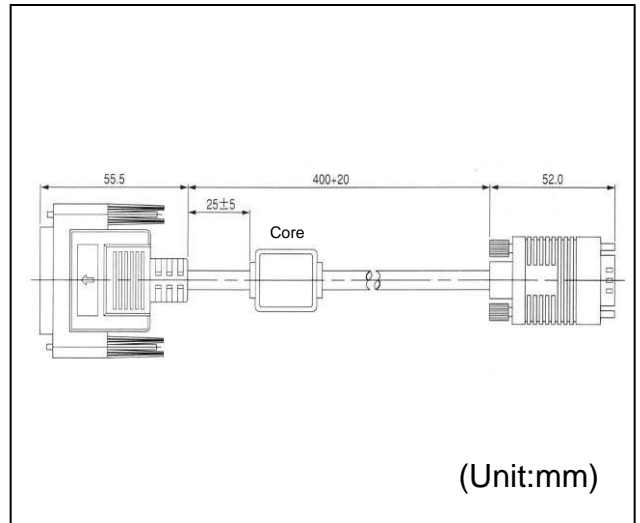
AW-CA50A15(Pan-tilt cable)

- This cable is used for connection with convertible cameras(AW-E350/E300S/E650/E655/E750/E800A) and pan-tilt head(AW-PH300A/PH600) for RS232C control.
- Length:40cm

●Wiring & Signals



●Dimensions

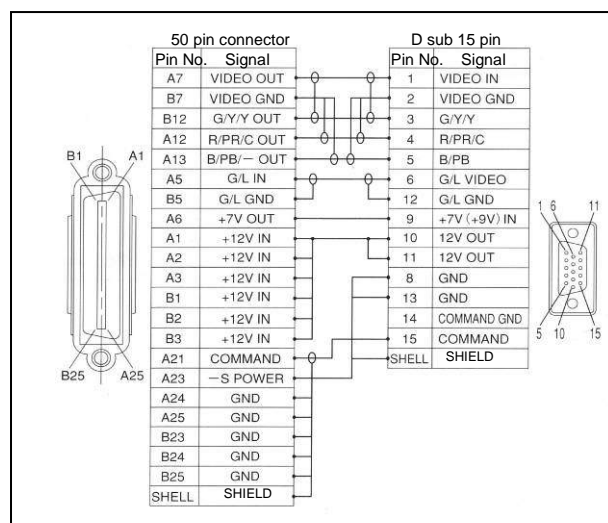


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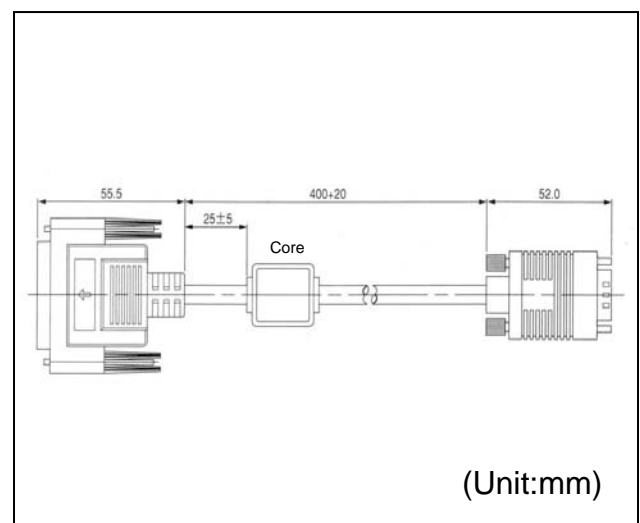
AW-CA50C15(Pan-tilt cable)

- This cable is used for connection with convertible cameras(AW-E350/E300S/E650/E655/E750/E800A) and pan-tilt head(AW-PH300A/PH600) for component output.
- Cable Length:40cm

●Wiring & Signals



●Dimensions



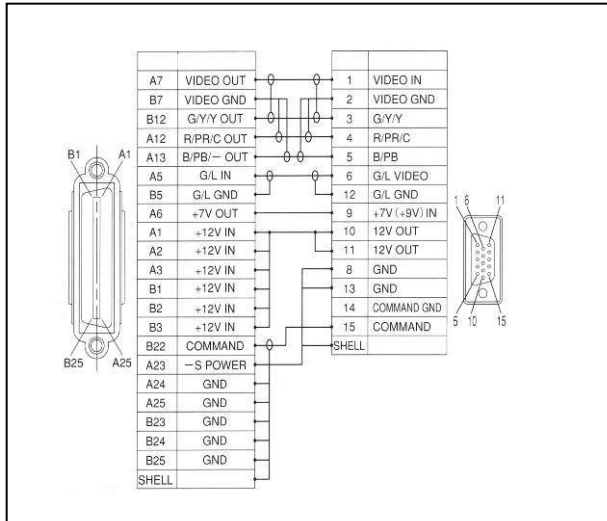
Option Cable

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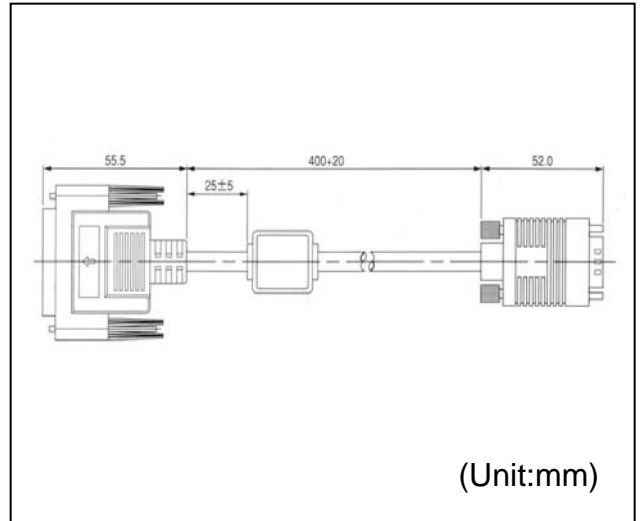
AW-CA50D15(Pan-tilt cable)

- This cable is used for connection with convertible cameras(AW-E350/E300S/E650/E655/E750/E800A) and pan-tilt head(AW-PH300A/PH600) for RS232C control and component output.
- Length:40cm

●Wiring & Signals



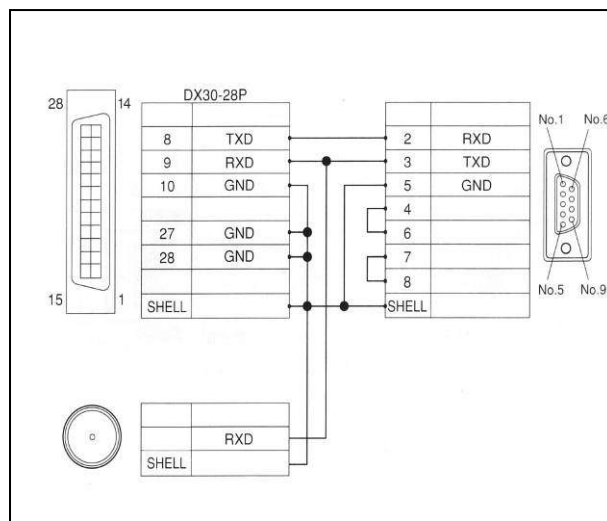
●Dimensions



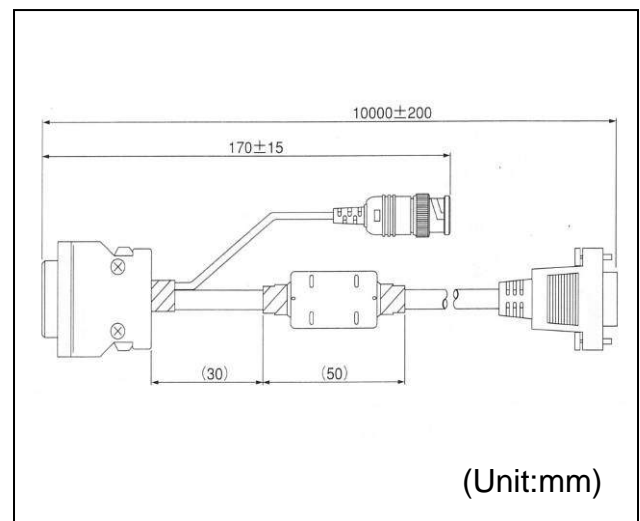
AW-CA28T9(RS232C pan-tilt cable)

- This cable is used for connection with convertible cameras(AW-E350/E300S/E650/E655/E750/E800A) and pan-tilt head(AW-PH300A/PH600) by RS232C control.
- Cable Length:10m

●Wiring & Signals



●Dimensions

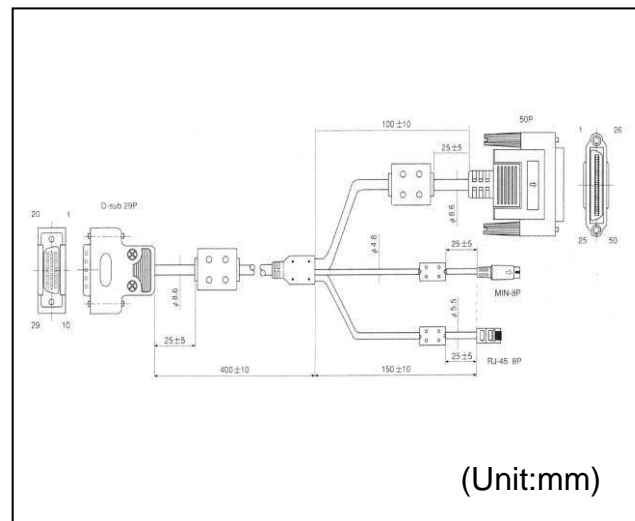
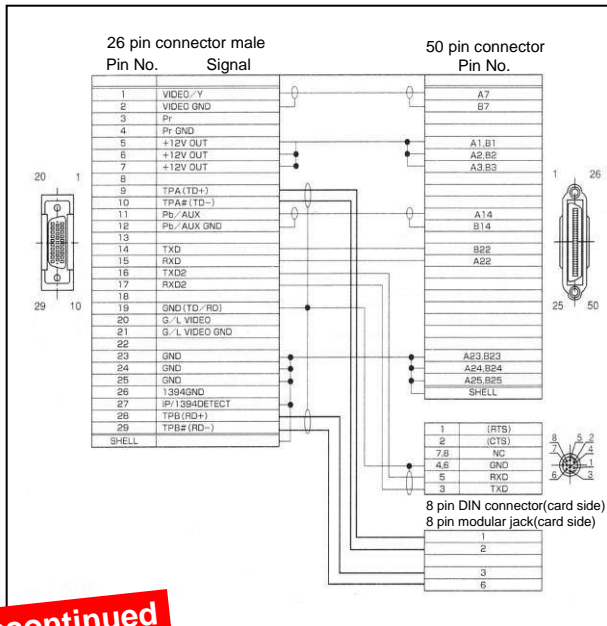


Option Cable

Discontinued

AW-CA50F29(Pan-tilt cable)

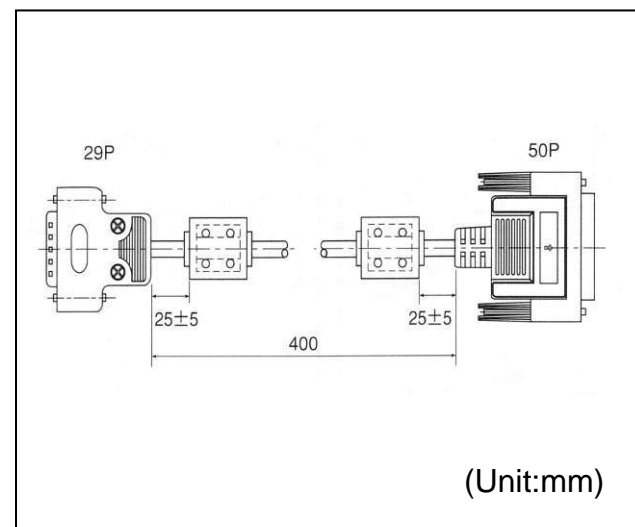
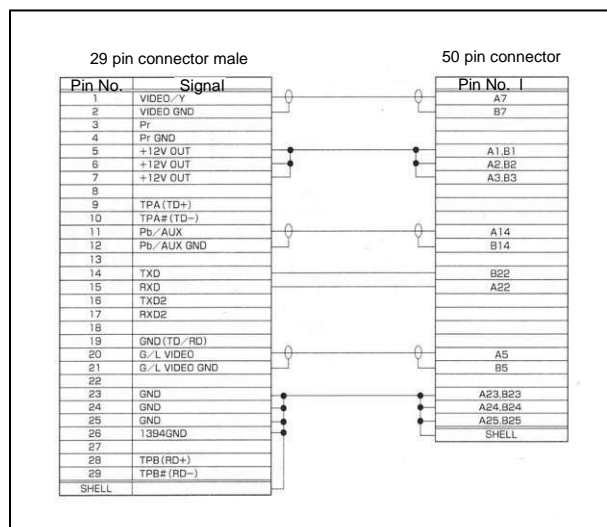
- This cable is used for connection with convertible cameras(AW-E350/E300S/E650/E655/E750/E800A) installed Web Card(AW-PB309) and pan-tilt head(AW-PH350) for Web control.
- Length:55cm
- Wiring & Signals
- Dimensions



Discontinued

AW-CA50T29(Pan-tilt cable)

- This cable is used for connection with convertible cameras(AW-E350/E300S/E650/E655/E750/E800A) and pan-tilt head(AW-PH350) for composite output.
- Cable Length:40cm
- Wiring & Signals
- Dimensions

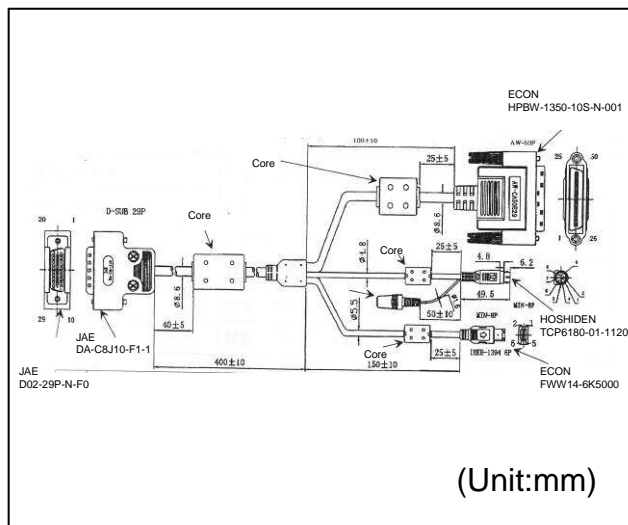
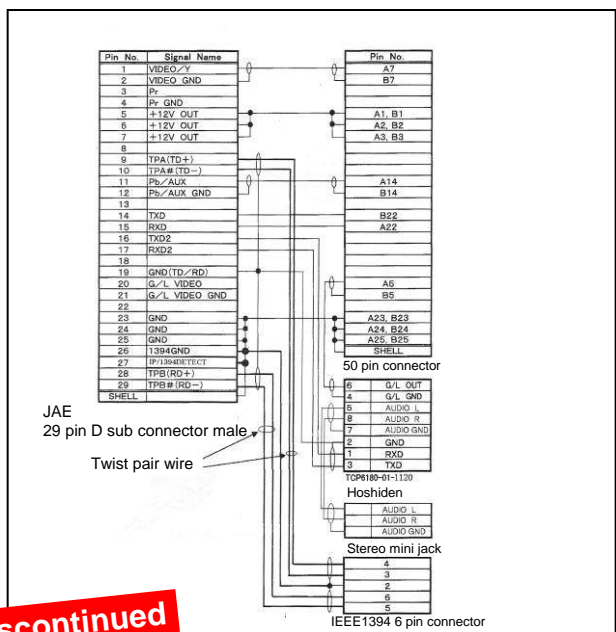


Option Cable

Discontinued

AW-CA50E29(Pan-tilt cable)

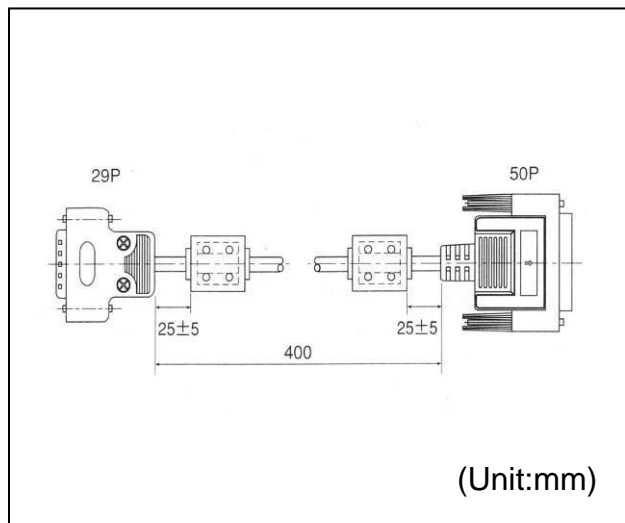
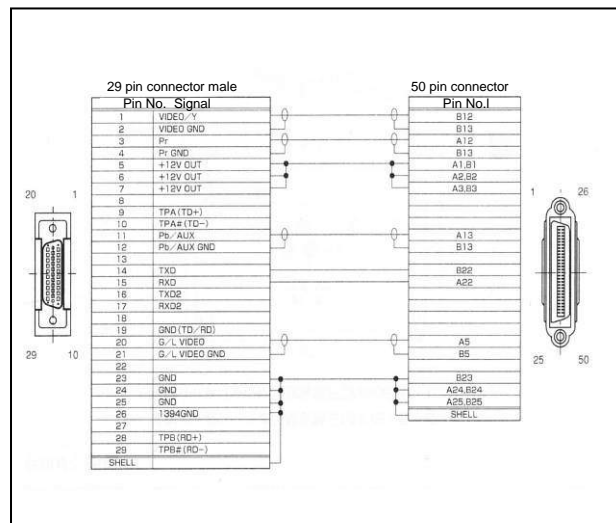
- This cable is used for connection with convertible cameras(AW-E350/E300S/E650/E655/E750/E800A) installed IEEE1394 Card(AW-PB310) and pan-tilt head(AW-PH350) for IEEE1394 control.
- Length:55cm
- Wiring & Signals
- Dimensions



Discontinued

AW-CA50C29(Pan-tilt cable)

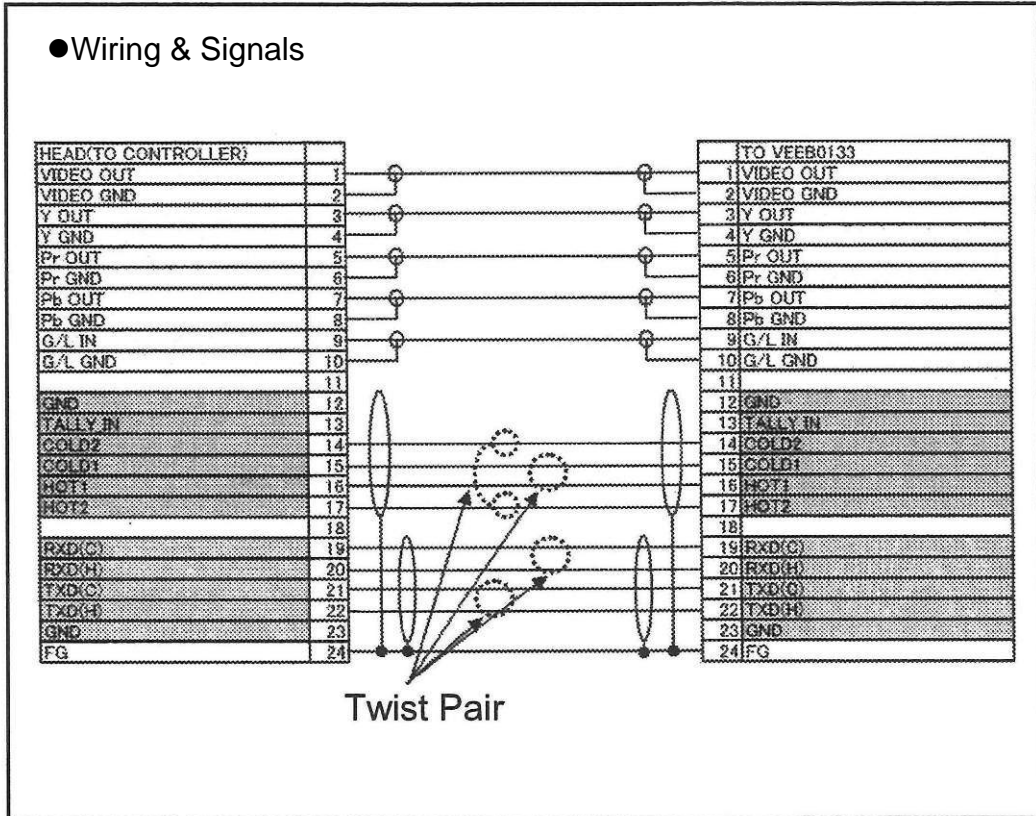
- This cable is used for connection with convertible cameras(AW-E350/E300S/E650/E655/E750/E800A) and pan-tilt head(AW-PH300A/PH600) for component output.
- Cable Length:40cm
- Wiring & Signals
- Dimensions



Option Cable

AW-CA24T24(Control extension cable)

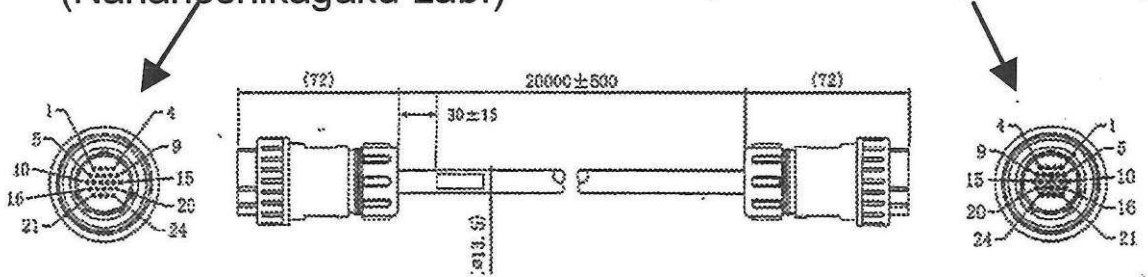
- This cable is used for extension of camera/pan-tilt control cable for outdoor pan-tilt head AW-PH650.
- Length:20m



● Dimensions

NJW-2824-PM14
(Nanahoshikagaku Lab.)

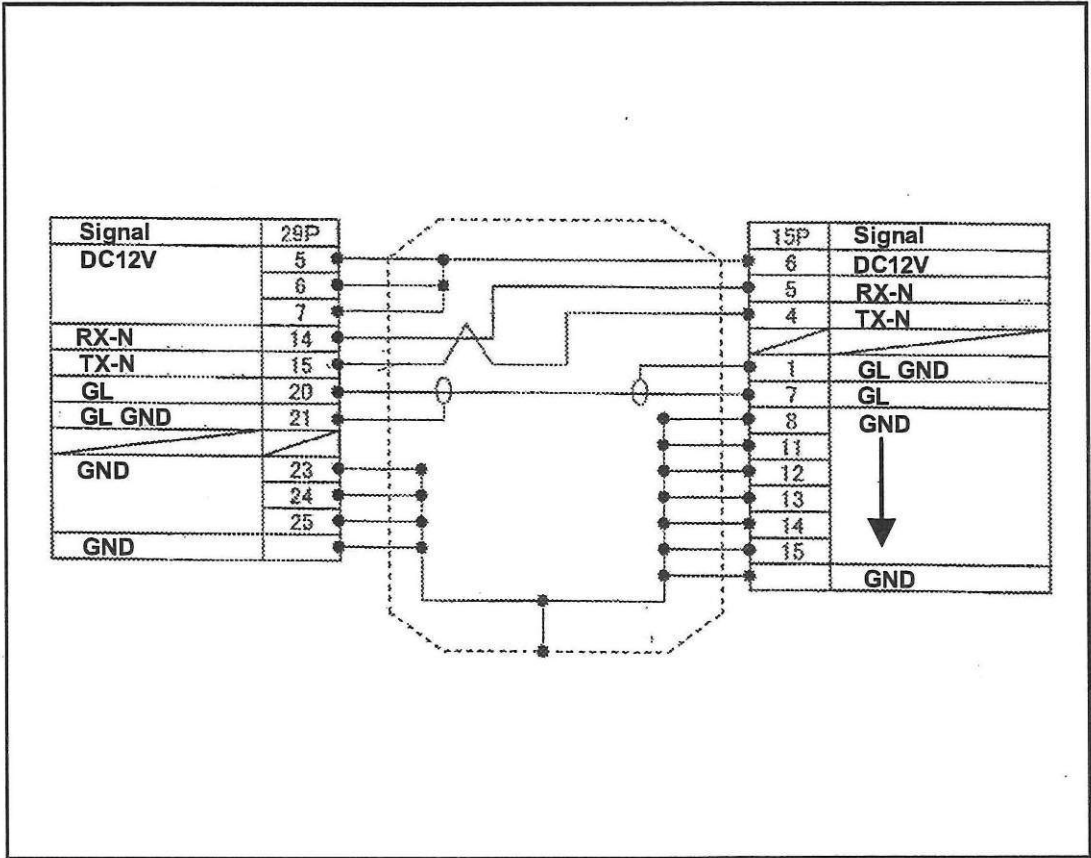
NJW-2824-AdF14
(Nanahoshikagaku Lab.)



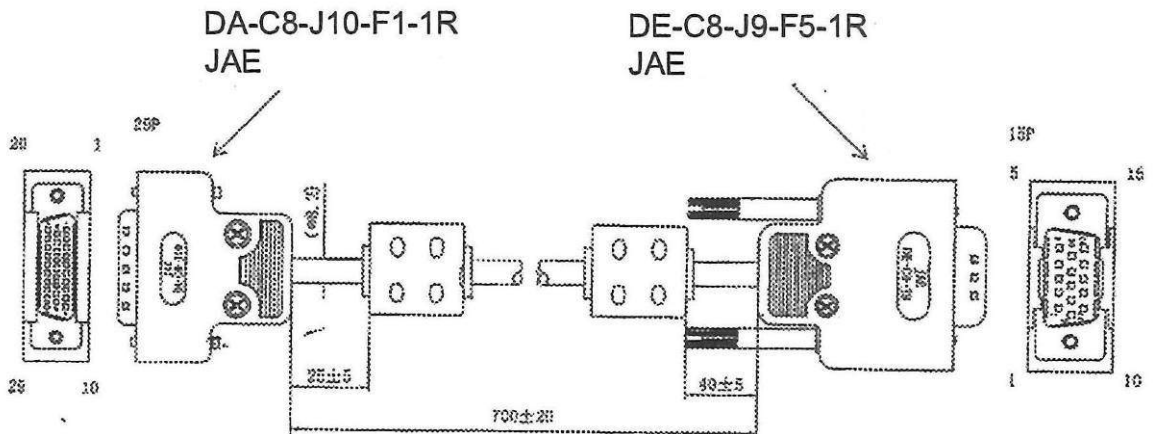
Option Cable

AW-CA15H29(Pan-tilt cable)

- This cable is used for connection with multi-format camera(AK-HC1500/ and pan-tilt head (AW-PH405 and AW-PH400) when the camera controller AW-CB400 is used.
- Cable Length:0.7m
- Wiring & Signals



●Dimensions



Option Cable

AW-CAK4H1 (Pan-tilt cable kit)

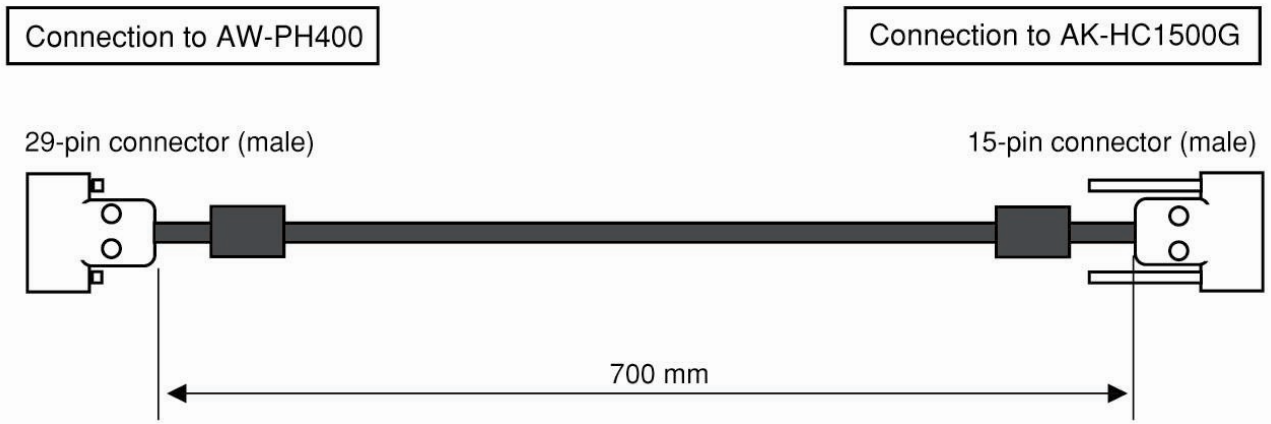
1/2

- This cable is a cable kit for connection with multi-format camera (AK-HC1500) and pan-tilt head (AW-PH405/AW-PH400) when camera controller AK-HRP150 is used.

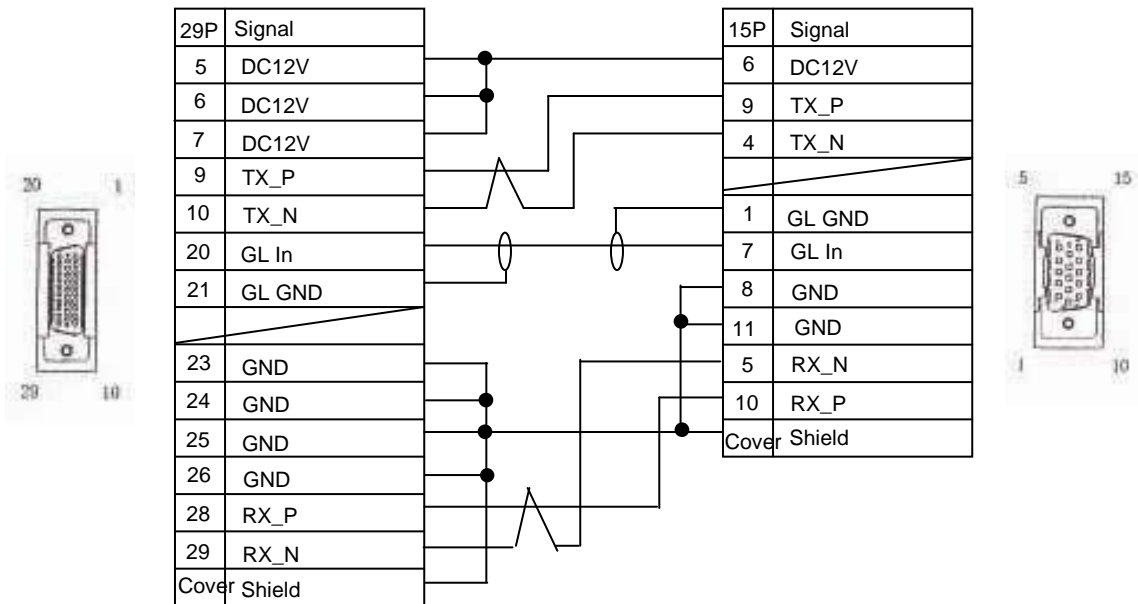
Pan-tilt cable

- Length: 0.7m

- Dimensions



- Wiring & Signals



Option Cable

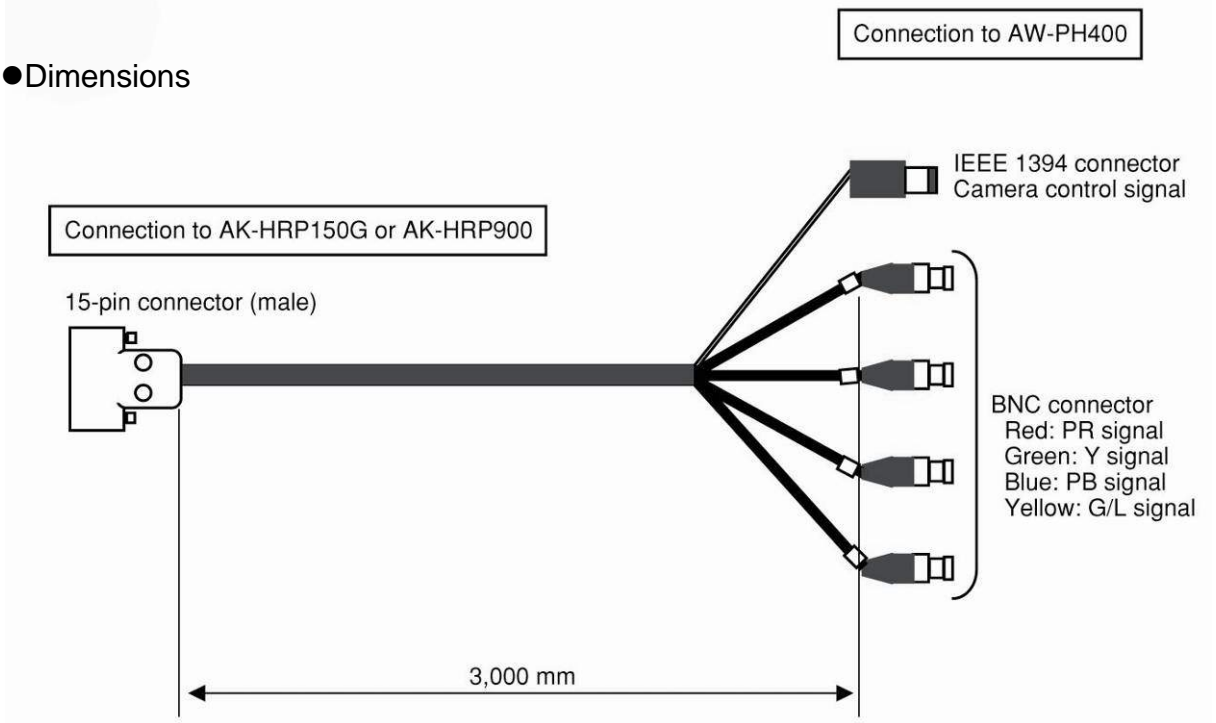
AW-CAK4H1 (Pan-tilt cable kit)

2/2

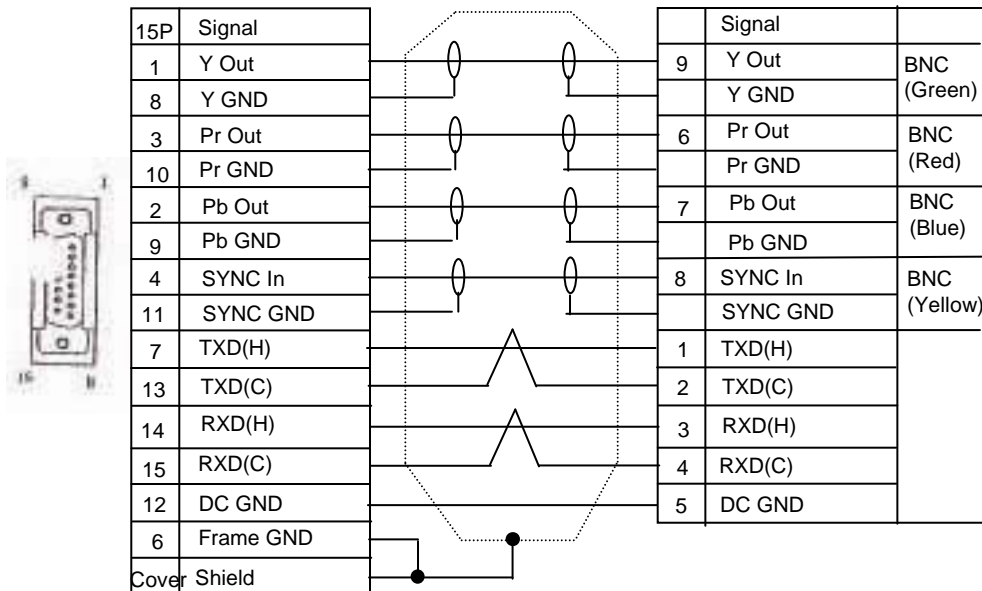
Control cable

●Length:3m

●Dimensions



●Wiring & Signals



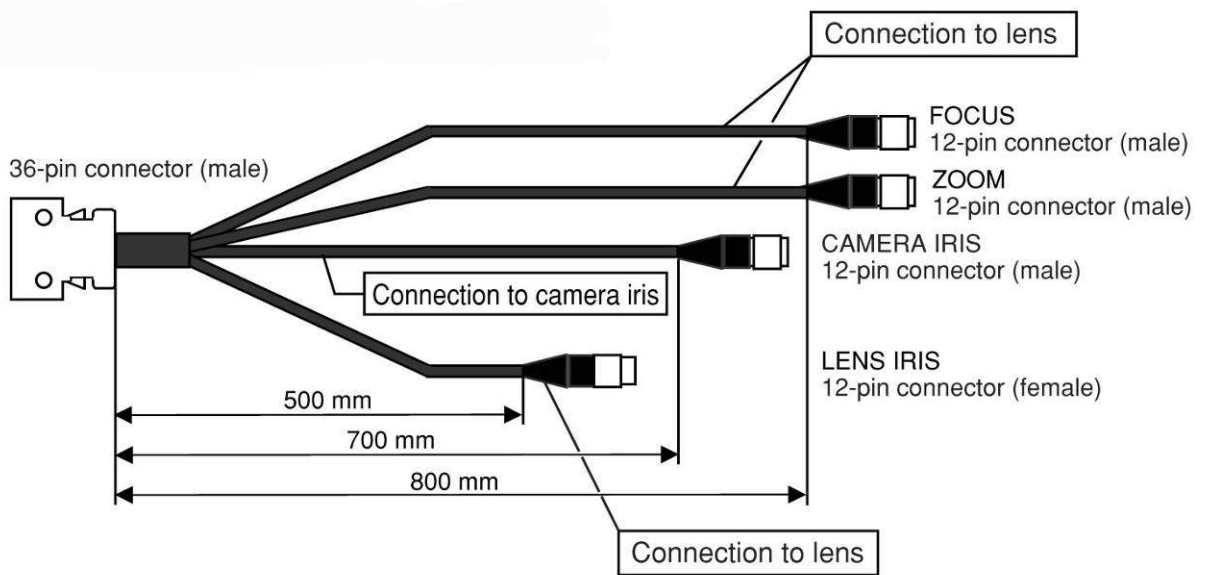
Option Cable

AW-CA4FLZ (ENG lens cable)

<1/2>

- This cable is used for connection with Fujinon broadcast ENG(RD) lens on multi-format camera (AK-HC1500) and pan-tilt head (AW-PH405/AW-PH400)
- Length:0.8m

●Dimensions



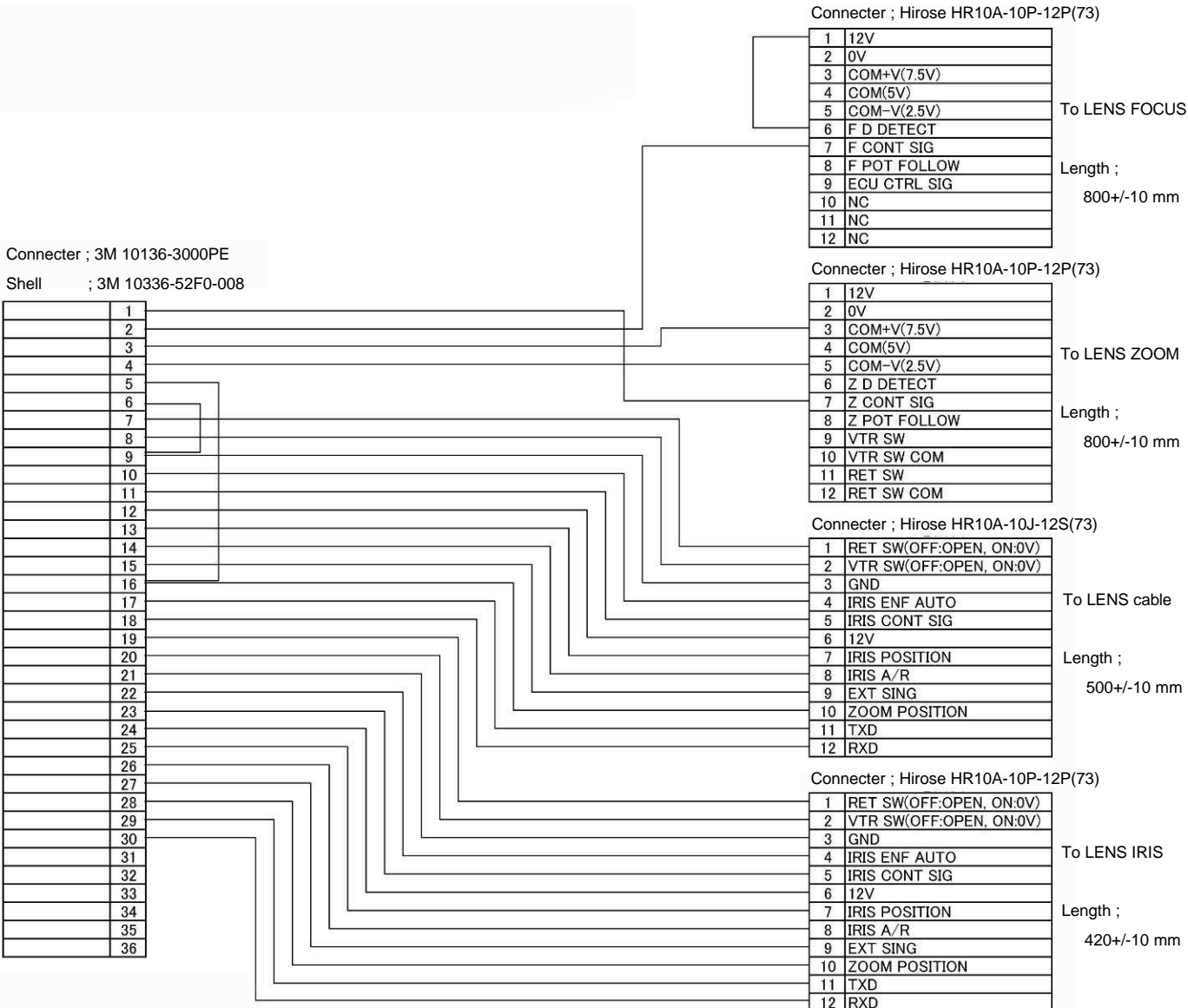
(Unit:mm)

Option Cable

AW-CA4FLZ (ENG lens cable)

<2/2>

●Wiring & Signals

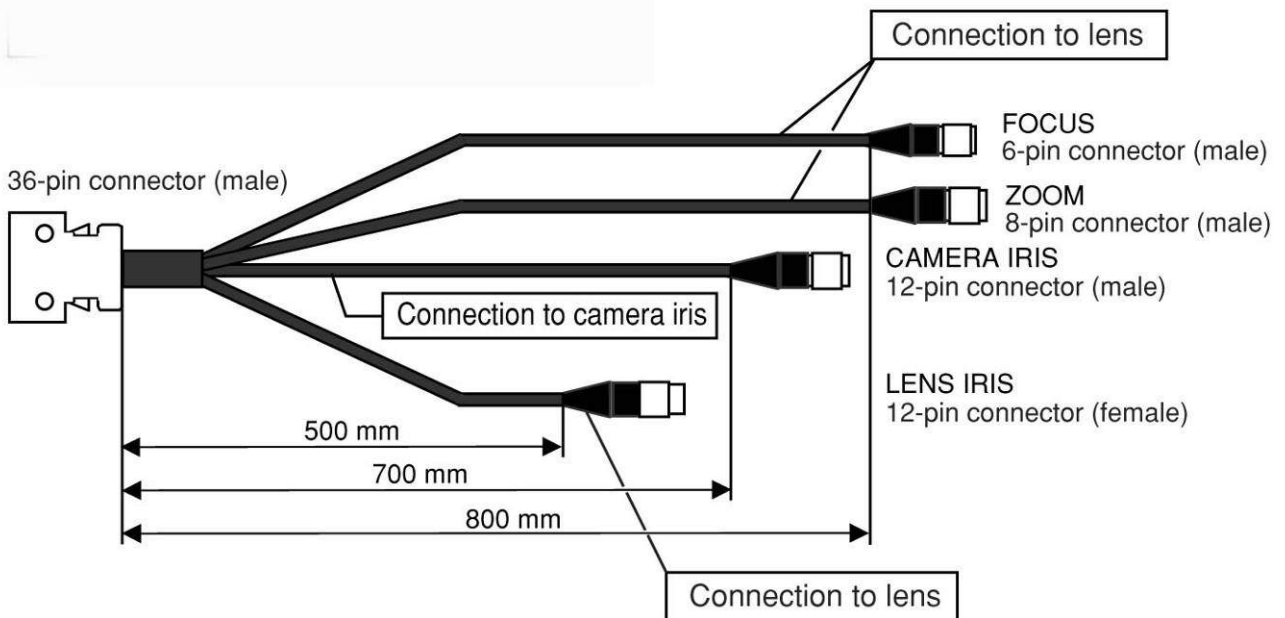


Option Cable

AW-CA4ALZ(ENG lens cable) 1/2

- This cable is used for connection with Canon broadcast ENG (Analog) lens on multi-format camera (AK-HC1500) and pan-tilt head (AW-PH405/AW-PH400)
- Length:0.8m

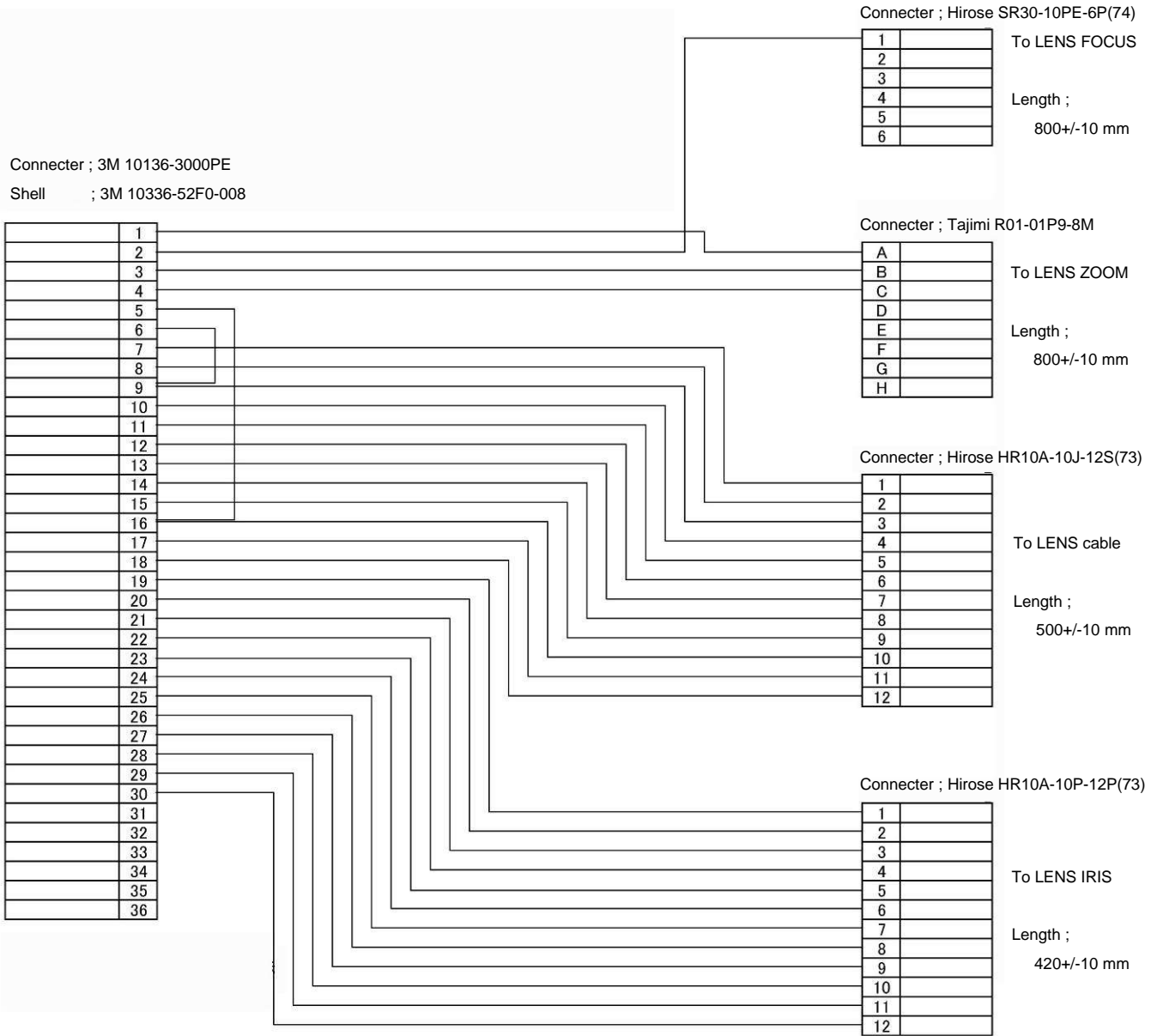
●Dimensions



Option Cable

AW-CA4ALZ(ENG lens cable) 2/2

●Wiring & Signals

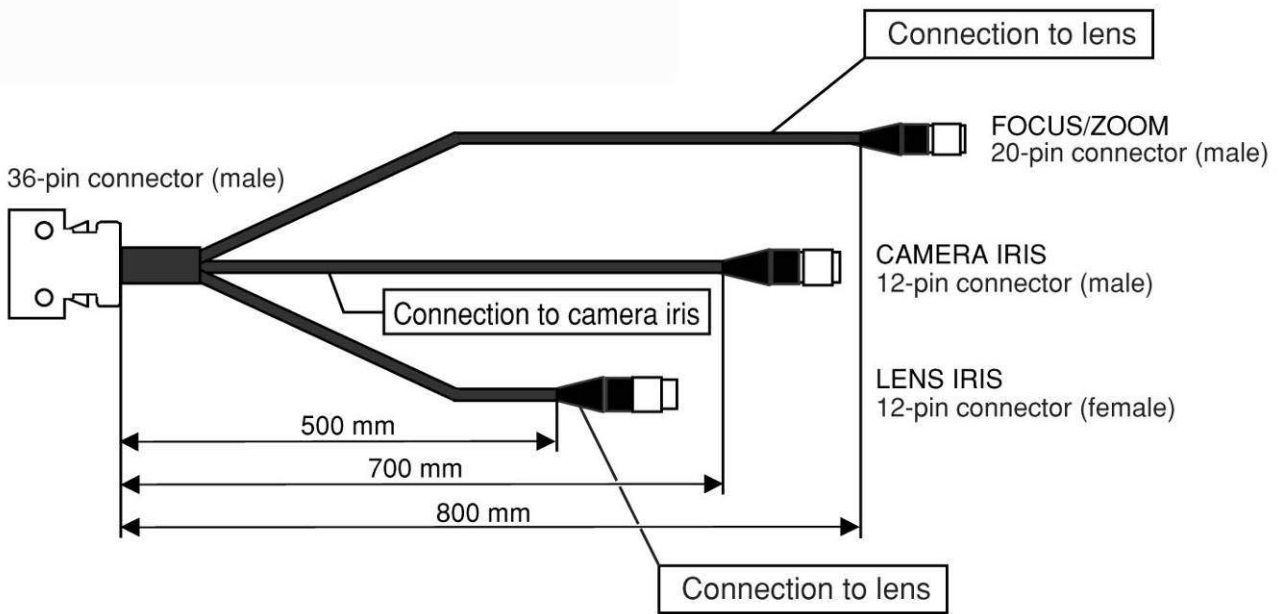


Option Cable

AW-CA4DLZ (ENG lens cable) 1/2

- This cable is used for connection with Canon broadcast ENG (Digital) lens on multi-format camera (AK-HC1500) and pan-tilt head (AW-PH405/AW-PH400)
- Length: 0.8m

- Dimensions



Option Cable

AW-CA4DLZ (ENG lens cable)

2/2

●Wiring & Signals

Connector ; Hirose HR25-9P-20P(72)

To LENS ZOOM/FOCUS

Length ; 800+/-10 mm

Connector ; 3M 10136-3000PE

Shell ; 3M 10336-52F0-008

1
2
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36

1	+Vcc(+10V~+17V)
2	Zoom Speed Control(T→W:+3V, W→T:-3V, at V2)
3	Focus Position Control(N:+2.83V, F:-2.83V, at V2)
4	RET COM(CPU Control)
5	Reserve
6	VTR COM(CPU Control)
7	RET SW(ON:VTR COM, OFF:Open)
8	VTR SW(ON:VTR COM, OFF:Open)
9	Reserve
10	Zoom Position(Wide:2V, Tele:7V)
11	+V1(+8.0V)
12	+V3(+2.0V)
13	Focus Position(Near:2.V, Far:7V)
14	+V2(+5.0V)
15	RS-422 (Demand→Lens)
16	RS-422 (Demand→Lens)
17	RS-422 (Lens→Demand)
18	RS-422 (Lens→Demand)
19	Demand Detect(PC-ROM WRITER:GND, DEM:OPEN)
20	GND

Connector ; Hirose HR10A-10J-12S(73)

1	RET SW(ON:GND, OFF:Open)
2	VTR SW(ON:GND, OFF:Open)
3	GND
4	ENF AUTO IRIS(ON:5V, OFF:GND or Open)
5	Iris Position Control(F2.8:6.2V, F16:3.4V)
6	+Vcc(+10V~+17V)
7	Iris Position(F2.8:6.2V, F16:3.4V)
8	Iris Auto/Remote(Remote:5V, Auto:GND or Open)
9	IE Answer(1x:Open, 2x:GND)
10	Zoom Position(Wide:2V, Tele:7V)
11	Focus Position(Near:2V, Far:7V)
12	Spare

To LENS cable Length ; 500+/-10 mm

1	RET SW(ON:GND, OFF:Open)
2	VTR SW(ON:GND, OFF:Open)
3	GND
4	ENF AUTO IRIS(ON:5V, OFF:GND or Open)
5	Iris Position Control(F2.8:6.2V, F16:3.4V)
6	+Vcc(+10V~+17V)
7	Iris Position(F2.8:6.2V, F16:3.4V)
8	Iris Auto/Remote(Remote:5V, Auto:GND or Open)
9	IE Answer(1x:Open, 2x:GND)
10	Zoom Position(Wide:2V, Tele:7V)
11	Focus Position(Near:2V, Far:7V)
12	Spare

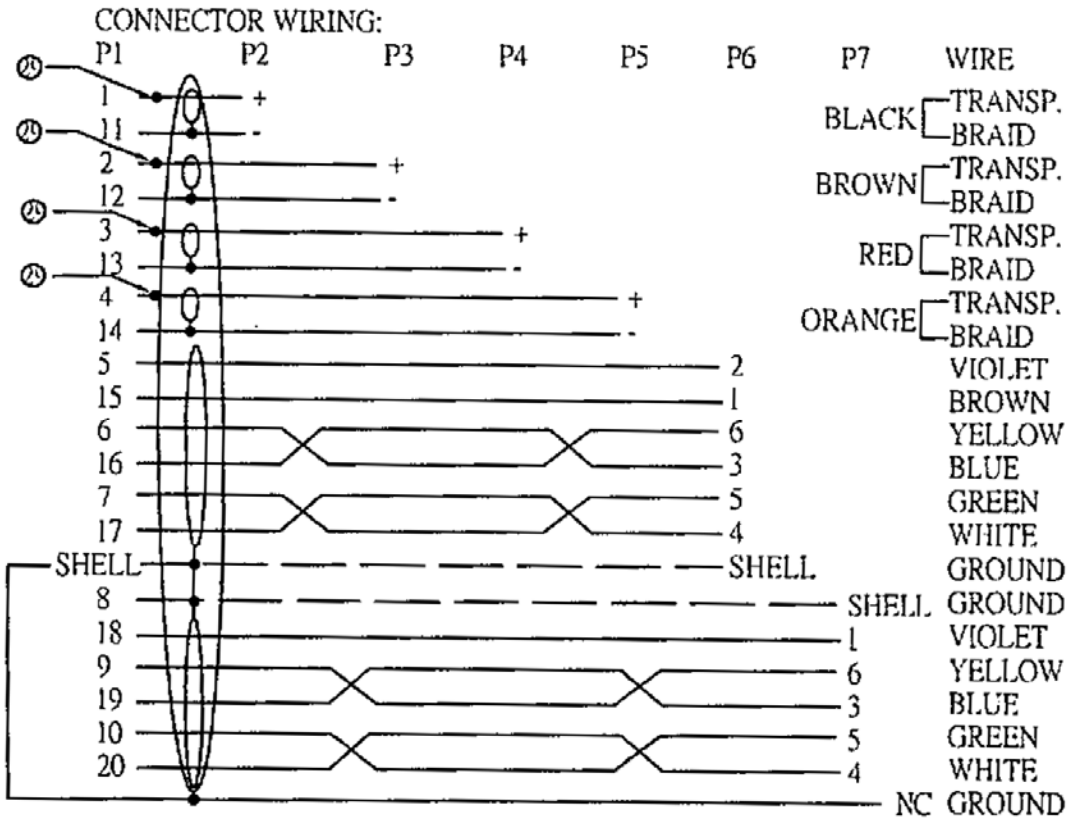
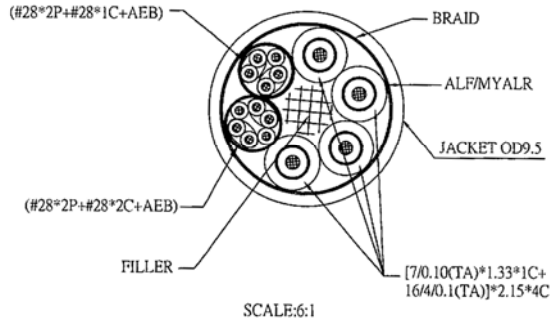
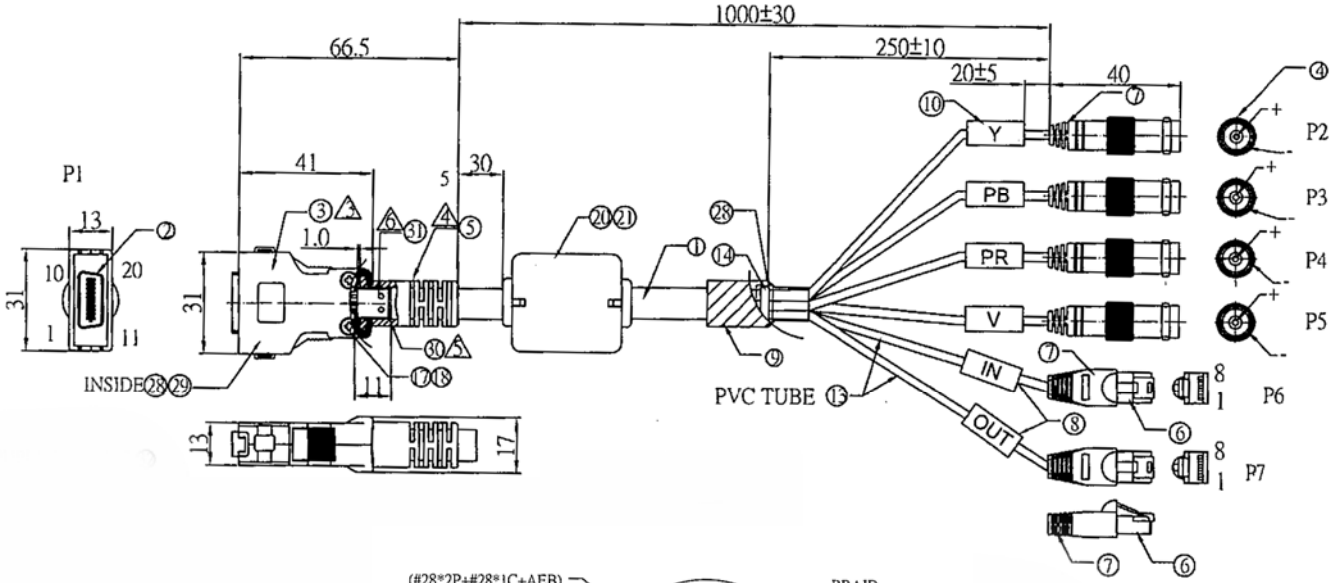
Connector ; Hirose HR10A-10P-12P(73)

To LENS IRIS

Length ; 420+/-10 mm

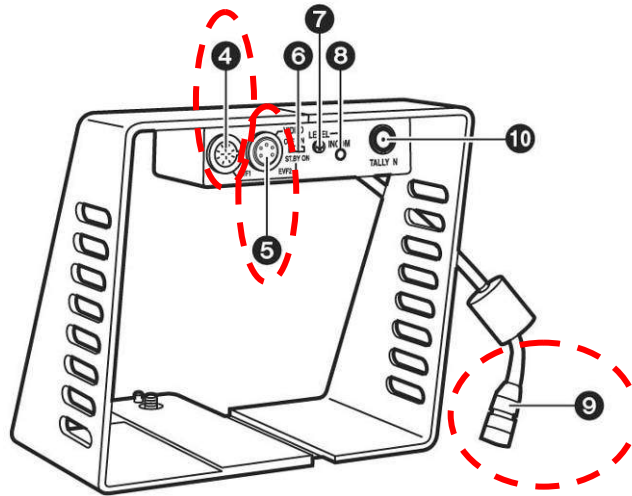
Option Cable

AW-CA20T6G (for AW-HE50)



AW-PB506A Cable (1)

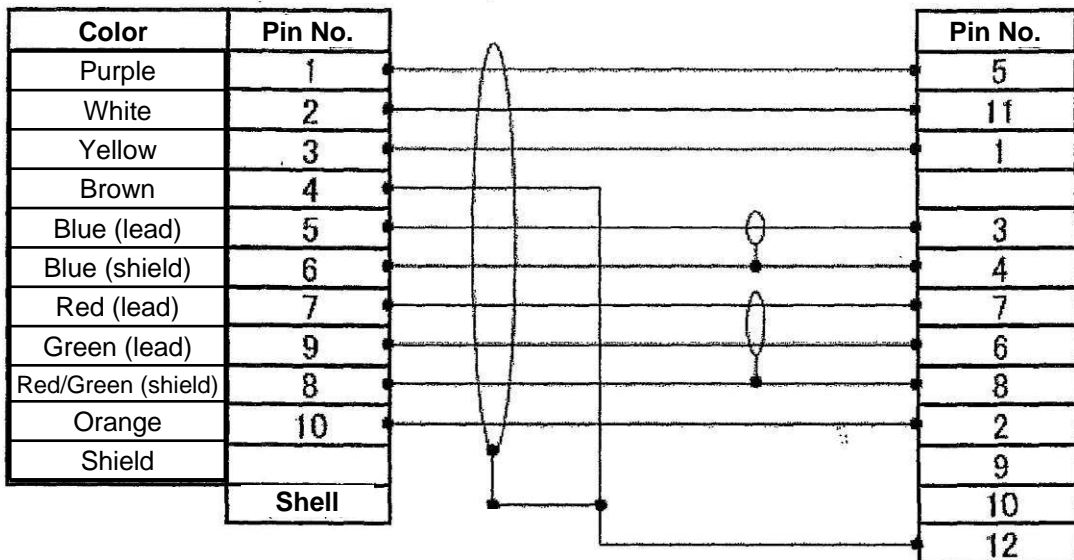
Interface Bracket



Connector (9)

HR10A-10P-10P(73)

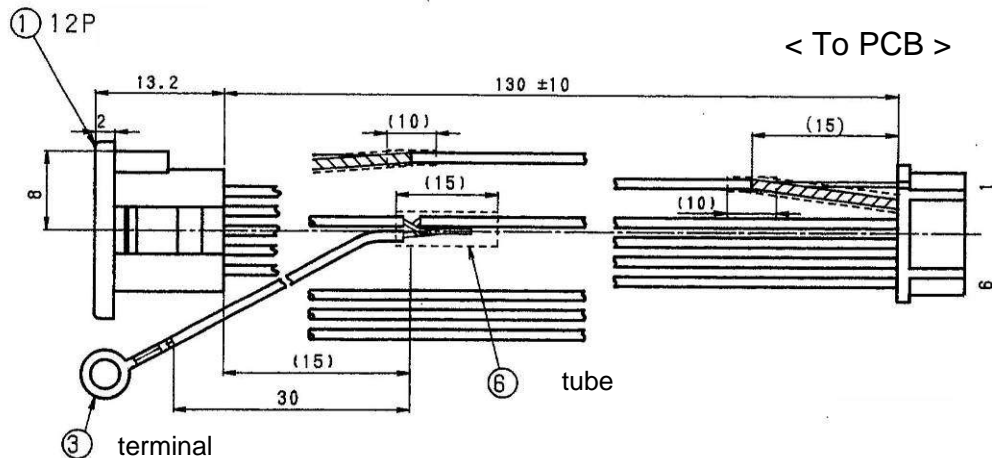
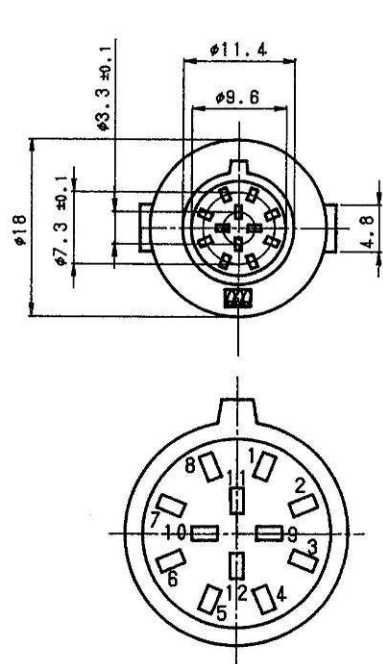
DF3-12S-2C
(to PCB)



< To SDI card >

AW-PB506A Cable (2)

Connector (4) for WV-VF65



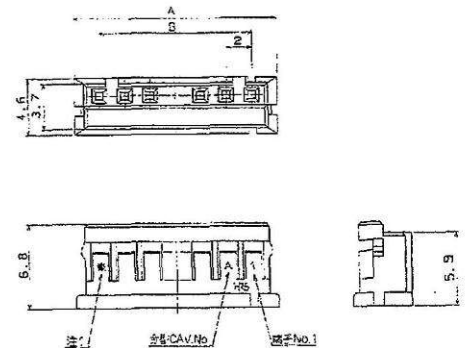
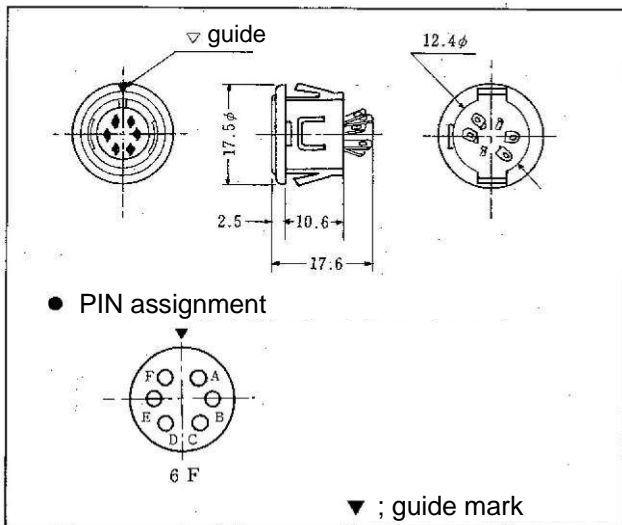
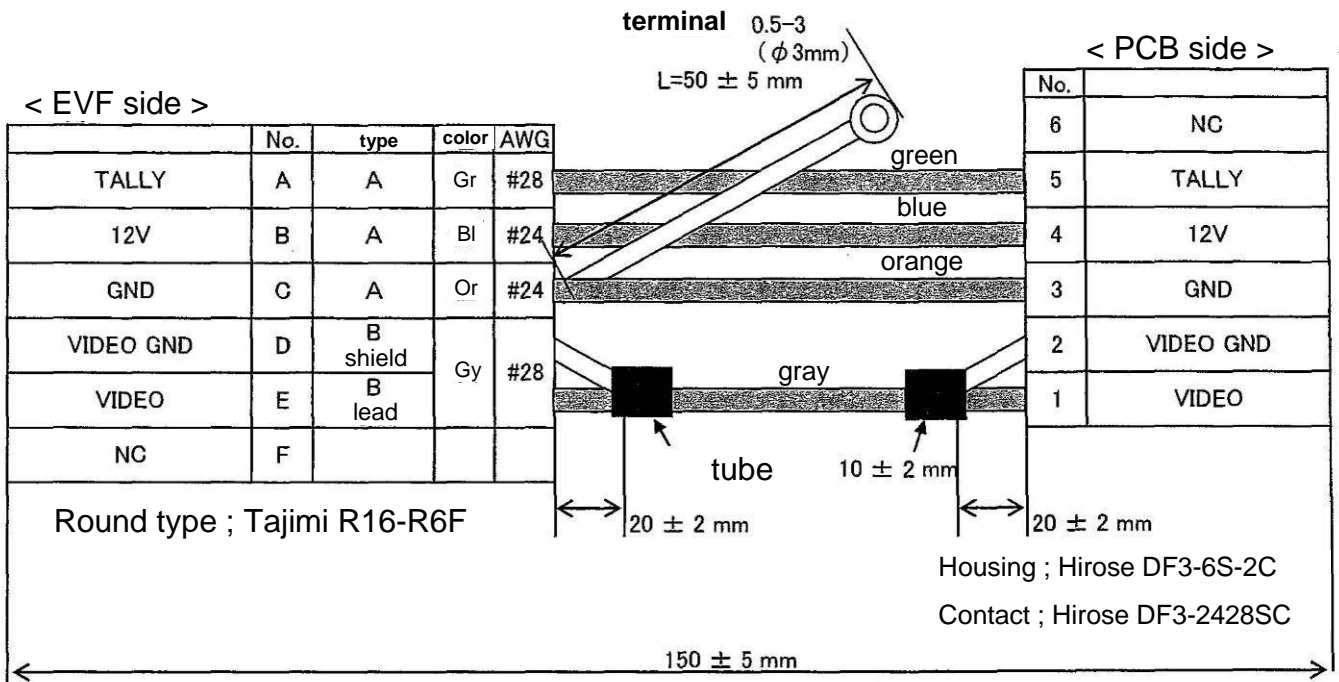
12P round type	Type of wire	color	6P
1	UL1691 AWG28 7/0.13	lead	1
2		Shield	2
3	UL1571 AWG24 11/0.16	Orange	3
4	UL1571 AWG24 11/0.16	Blue	4
8	UL1571 AWG28 7/0.13	Green	5
11	UL1571 AWG28 7/0.13	Blue	6

terminal	UL1571 AWG24 11/0.16	black	3
----------	----------------------	-------	---

Pin No.	Signal
1	Video
2	Video GND
3	GND
4	+12V
8	TALLY
11	NC

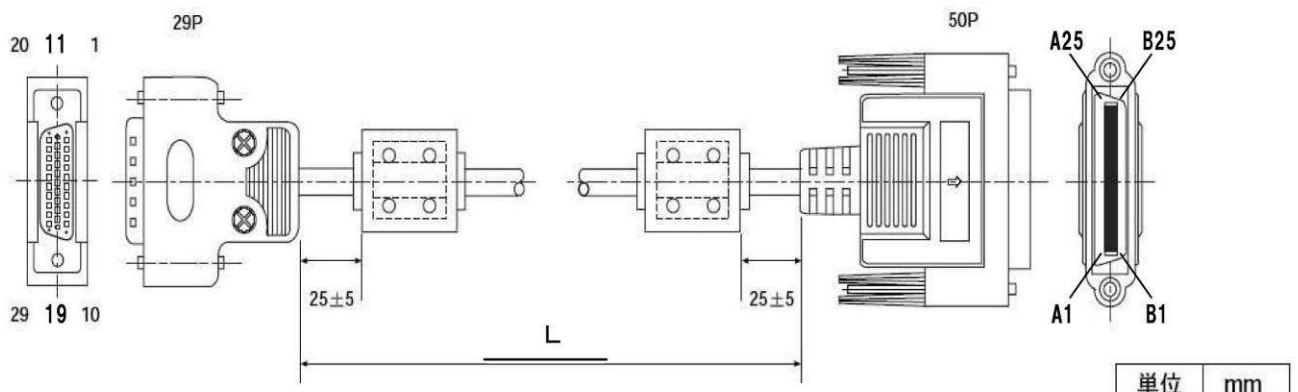
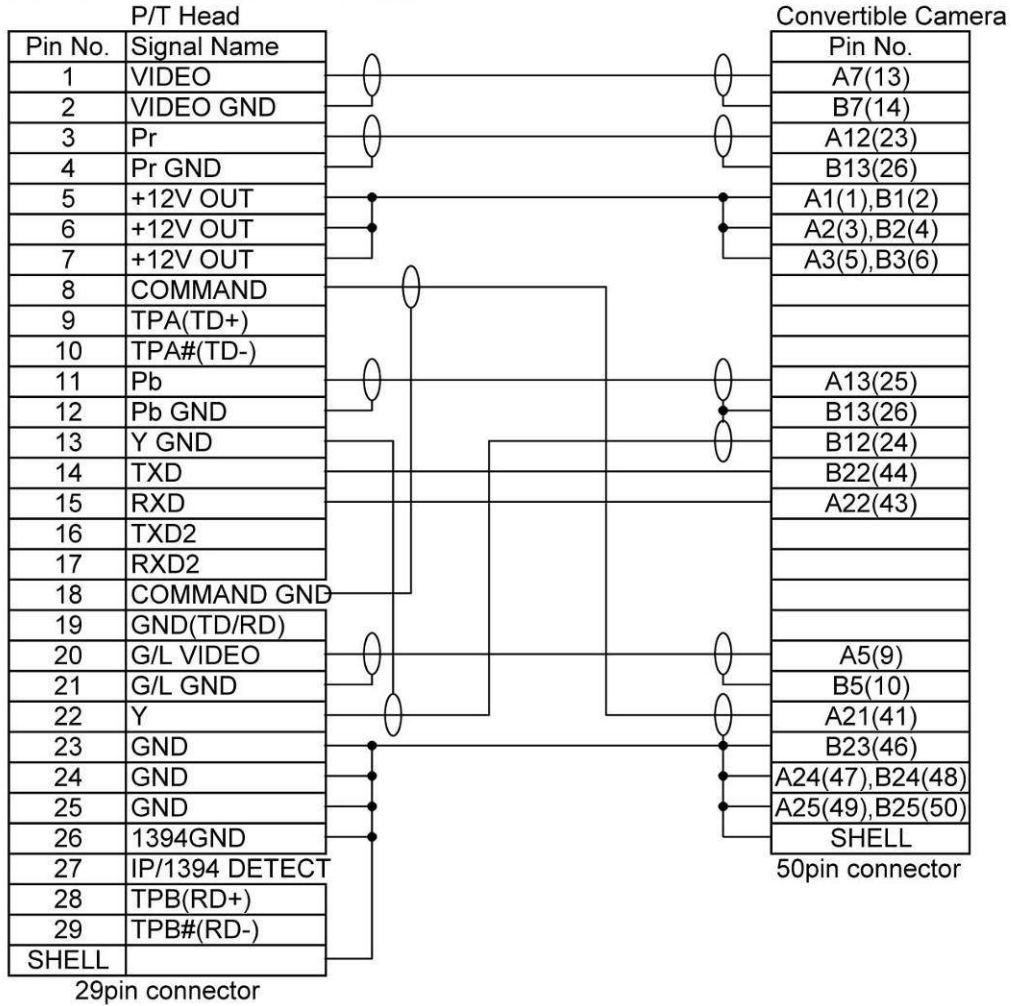
AW-PB506A Cable (3)

Connector (5) for AW-VF64



Pan/Tilt cable for PH360/400

Cable for AW-PH400 VEEB0084 L=600mm
 Cable for AW-PH360 VEEB0085 L=400mm



単位 mm

Unit

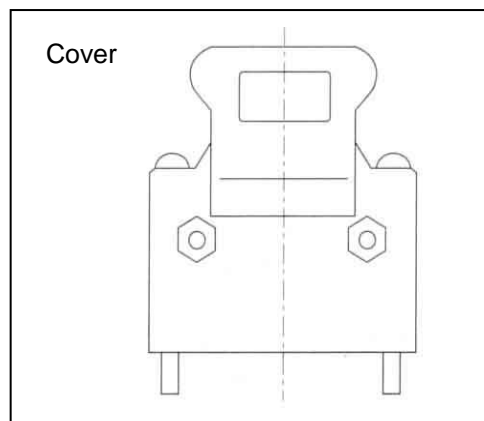
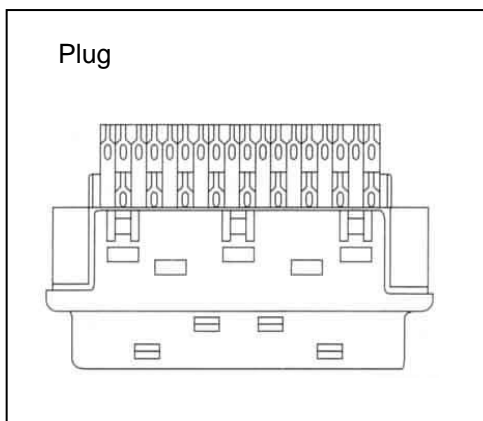
50-pin camera Connector

•50pin Camera Connector (Local procurement)

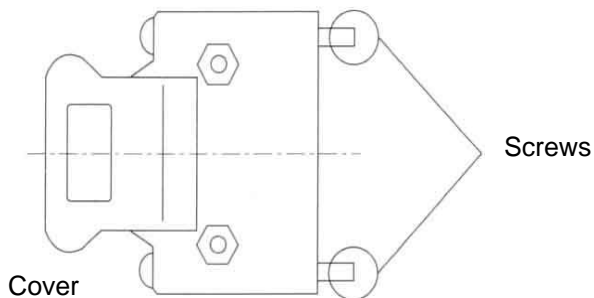
Manufacturer:3M company

Model No. :Plug-----10150-3000VE

Cover---10350-52A0-008

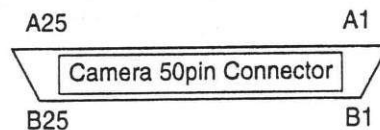


Note:Screws for connector cover(10350-52A0-008) have to be cut to adjust to the connector of convertible camera.



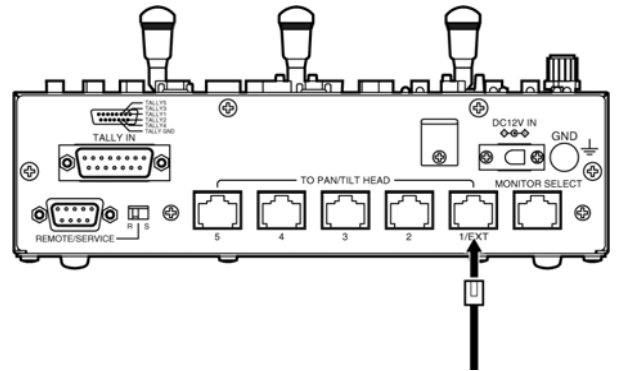
Pin Configuration of 50-pin connector

Pin No.	Signal Name	Contents	Direction
A1	12V IN	DC12V Input	← Power Supply
B1	12V IN	DC12V Input	← Power Supply
A2	12V IN	DC12V Input	← Power Supply
B2	12V IN	DC12V Input	← Power Supply
A3	12V IN	DC12V Input	← Power Supply
B3	+S POWER	+12V	→ RCU
A4	RCB/SENS	RCB Detect Signal	← RCB
B4	NC	Non Connection	
A5	G/L IN	Genlock Video Signal Input	← RCU/RCB/PANTILT
B5	G/L GND	Genlock Video Signal GND	↔ RCU/RCB/PANTILT
A6	7V OUT	+7V Output	→ RCB
B6	7V OUT	+7V Output	→ RCB
A7	VIDEO OUT	Composite Video Signal Output	→ RCU/RCB/PANTILT/Monitor
B7	VIDEO GND	Composite Video Signal GND	↔ RCU/RCB/PANTILT/Monitor
A8	+5V OUT	+5V Output	→
B8	+5V OUT	+5V Output	→
A9	S-Y OUT	S-Y Signal Output	→ RCU/PANTILT/Monitor
B9	S-Y OUT GND	S-Y Signal GND	↔ RCU/PANTILT/Monitor
A10	S-C OUT	S-Chroma Signal Output	→ RCU/PANTILT/Monitor
B10	S-C OUT GND	S-Chroma Signal GND	↔ RCU/PANTILT/Monitor
A11	-5V OUT	-5V Output	→
B11	-5V OUT	-5V Output	→
A12	R/PR/C OUT	R/PR/C Signal Selectable Output	→ RCU/PANTILT/Monitor
B12	G/Y/Y OUT	G/Y/Y Signal Selectable Output	→ RCU/PANTILT/Monitor
A13	B/PB/- OUT	B/PB Signal Selectable Output	→ RCU/PANTILT/Monitor
B13	RGB GND	RGB GND	↔ RCU/PANTILT/Monitor
A14	AUX VID IN	Auxiliary Video Signal Input	← RCU
B14	AUX GND	Auxiliary Video Signal GND	↔ RCU
A15	INCOM MIC	Intercom Audio Signal Output	→ RCU
B15	INCOM SP	Intercom Audio Signal Input	← RCU
A16	INCOM GND	Intercom Audio GND	↔ RCU
B16	PWE	CPU Write Enable Control	Do not Use
A17	NC	Non Connection	
B17	SYNC OUT	Composite SYNC Output	→ Monitor
A18	SYNC GND	Composite SYNC GND	↔ Monitor
B18	VD A/M	Non Connection	
A19	EXT SUB	VD Reset Signal Input	← Signal Generator
B19	VRST SW	VD Reset Control Input	← Signal Generator
A20	REM-TXD	TXD(for RCB) Output	→ RCB
B20	REM-RXD	RXD(for RCB) Input	← RCB
A21	COMMAND	Command(for RCU) Input/Output	↔ RCU
B21	TALLY OUT	Tally Control Signal Output	→ PANTILT
A22	RS-TXD	RS-232C TXD Output	→ PC/PANTILT
B22	RX-RXD	RS-232C RXD Input	← PC/PANTILT
A23	-S POWER	GND	↔ RCU
B23	GND	GND	↔ Power Supply
A24	12V IN	GND	↔ Power Supply
B24	12V IN	GND	↔ Power Supply
A25	12V IN	GND	↔ Power Supply
B25	12V IN	GND	↔ Power Supply

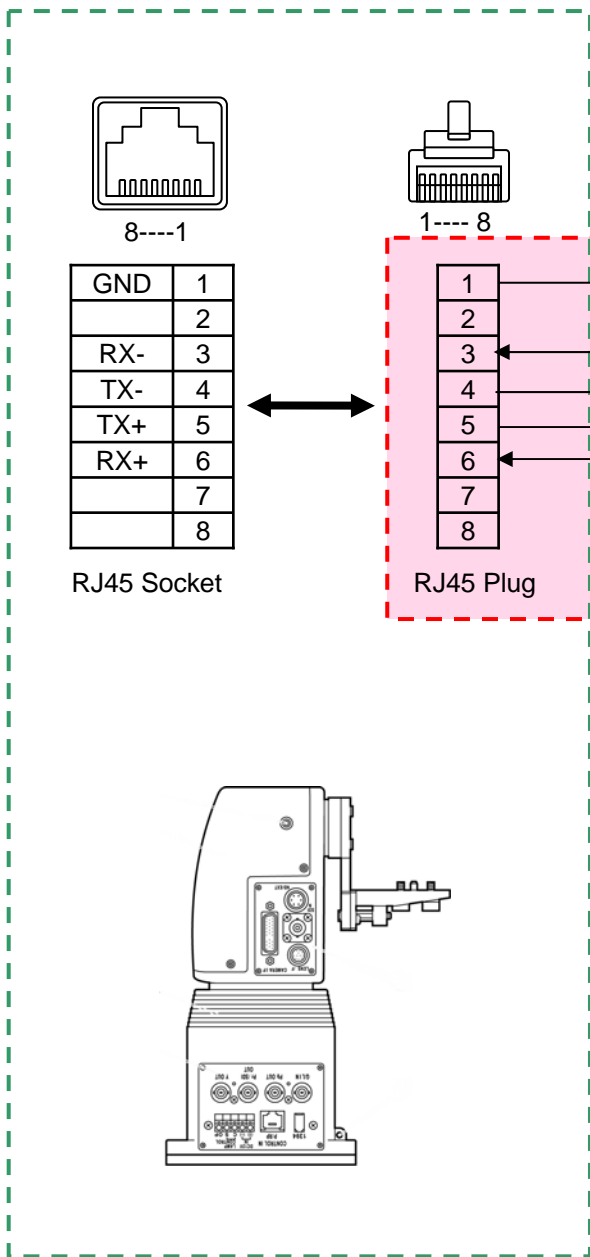


Pan/Tilt & Controller Interface

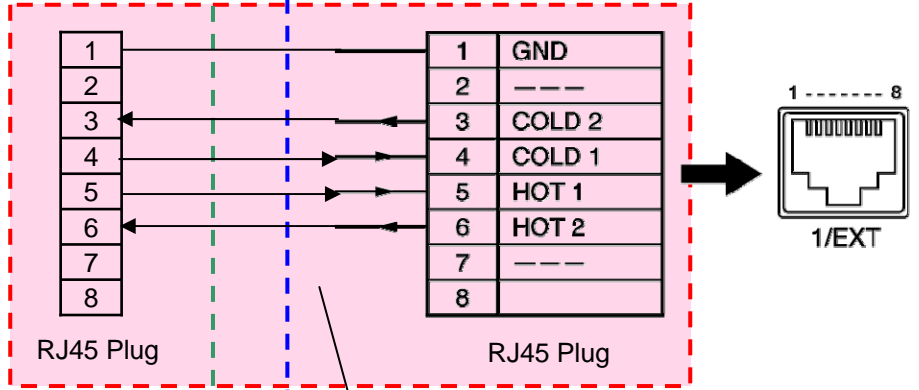
Controller



Pan/Tilt



Rear connector panel: modular connector 8-pin plug



CAT-5 Straight cable

Note;
Interface EIA/TIA-422A
(RS-422A)

Lens control connector

Camera connector (HR10A-10P-12P, HIROSE)

(C; camera L; Lens)

No.	Signal	Direction	Specification
1	NC	--	--
2	NC	--	--
3	GND	--	Power GND (0V)
4	ENF AUTO	C -> L	ON ; +5V, OFF ; open
5	IRIS CTRL	C -> L	F16 ; +3.4V +/-0.1V, F2.8 ; +6.2V +/-0.1V
6	+12V (POWER)	C -> L	DC+12V (DC+10V to +17V)
7	IRIS POSITION	C -> L	F16 ; +3.4V +/-0.1V, F2.8 ; +6.2V +/-0.1V
8	ARIS A/R	C -> L	Auto Iris ; open Remote Iris ; +5V
9	NC	--	--
10	NC	--	--
11	NC	--	--
12	NC	--	--

Control connector (HR10A-10P-12S, HIROSE)

(CB ; control box L; Lens)

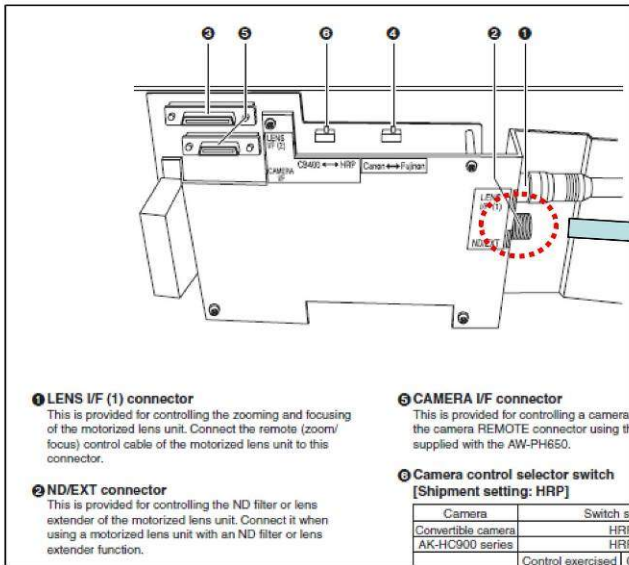
No.	Signal	Direction	Specification
1	FOCUS P/S	C.B -> L	Position control (P) ; +V (power supply voltage) Speed control (S) ; 0V
2	ZOOM P/S	C.B -> L	Position control (P) ; +V (power supply voltage) Speed control (S) ; 0V
3	GND (0V)	--	Power GND (0V)
4	IRIS C/L	C.B -> L	Camera control ; open Control box (S) ; 0V
5	IRIS CTRL	--	Open ; COM+V, Close ; COM-V
6	+12V (POWER)	C.B -> L	DC+12V (DC+10V to +17V)
7	COM	C.B -> L	Lens reference voltage (DC+5V +/-0.02V)
8	FOCUS CTRL	C.B -> L	Infinity ; COM+V, Near ; COM-V
9	ZOOM CTRL	C.B -> L	Tele ; COM+V, Wide ; COM-V
10	IRIS P/S	C.B -> L	Position control (P); +V (power supply voltage) Speed control (S) ; 0V
11	COM+V	C.B -> L	Lens reference voltage (DC+2.5V +/-0.1V)
12	COM-V	C.B -> L	Lens reference voltage (DC-2.5V +/-0.1V)

SECTION 2

System information (AW camera series)

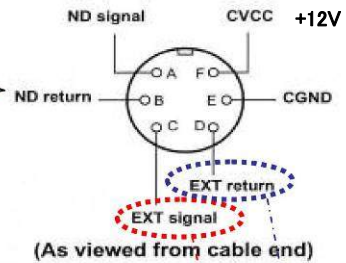


AW-PH650 ND/EXT connector



① ND/EXT connector

This is for controlling the ND filter and lens extender of the power lens unit. Connect it when using a power lens unit equipped with an ND filter and lens extender function.



Specification of EXT signal

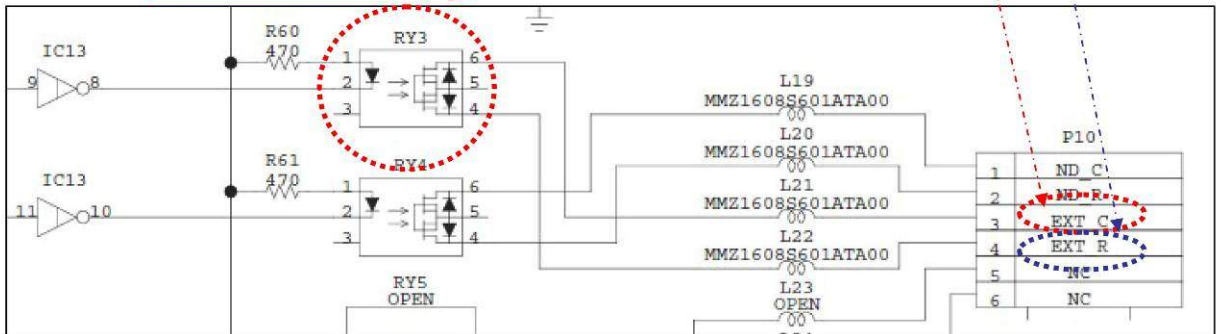
Max. Voltage : +60V
Max. Load Current] : 350mA

Connector Parts information

Cable side : R03-P6M or R03-PB6M (Male, Tajimi)

PH650 side : R03-R6F (Female, Tajimi)

Photo Mos Relay

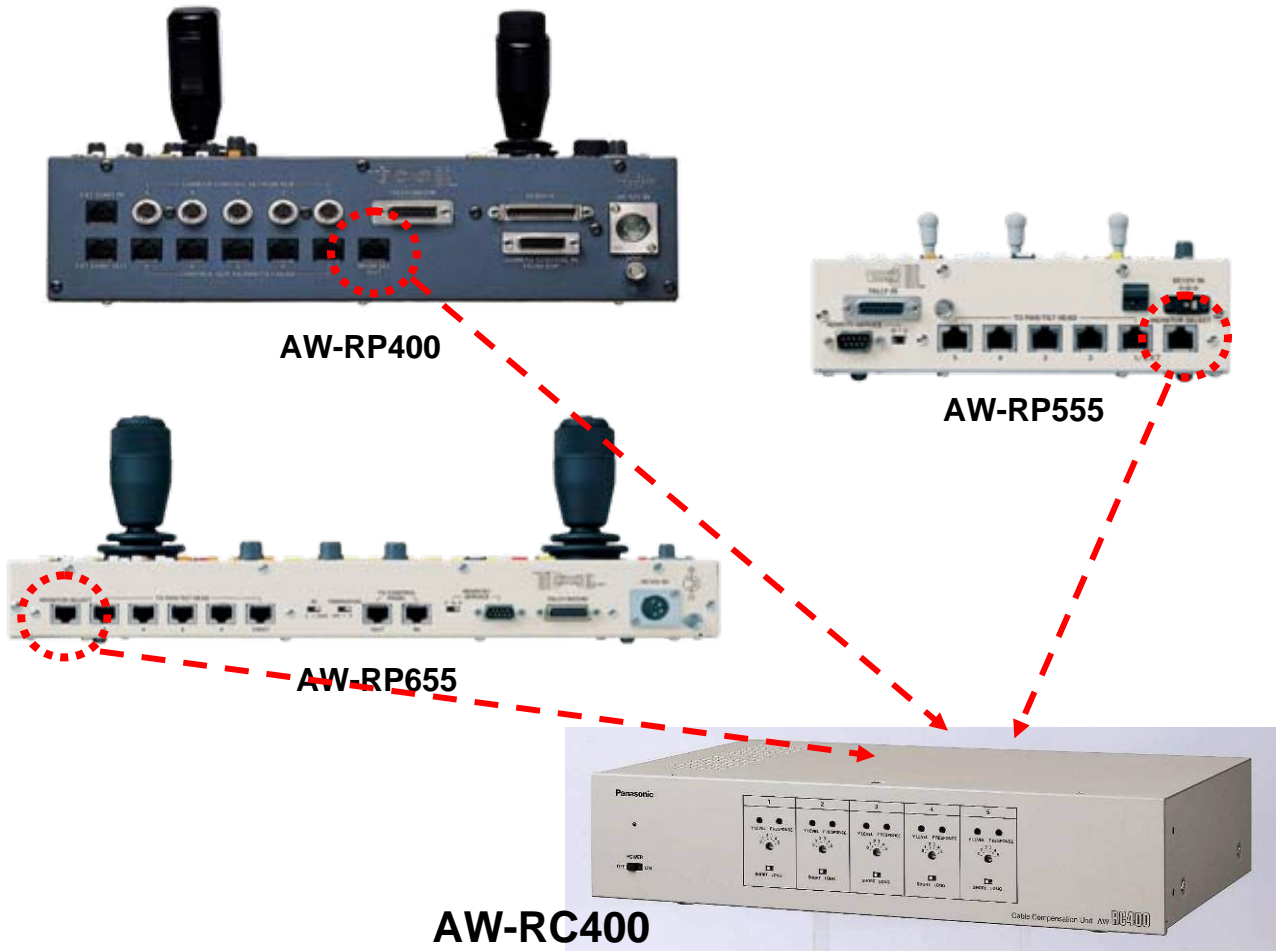


Note

ND/EXT connector of AW^PH360 has same pin assignment.
But CVCC voltage is +15V, not +12V

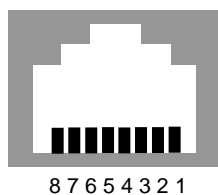
AW-RC400 Monitor outputs control (1)

MONI SEL OUT



Each controller has "MONI SEL OUT", and this signal can be connected to AW-RC400. AW-RC400 selects input camera signal according to controller.

RJ-45 connector pin assignment

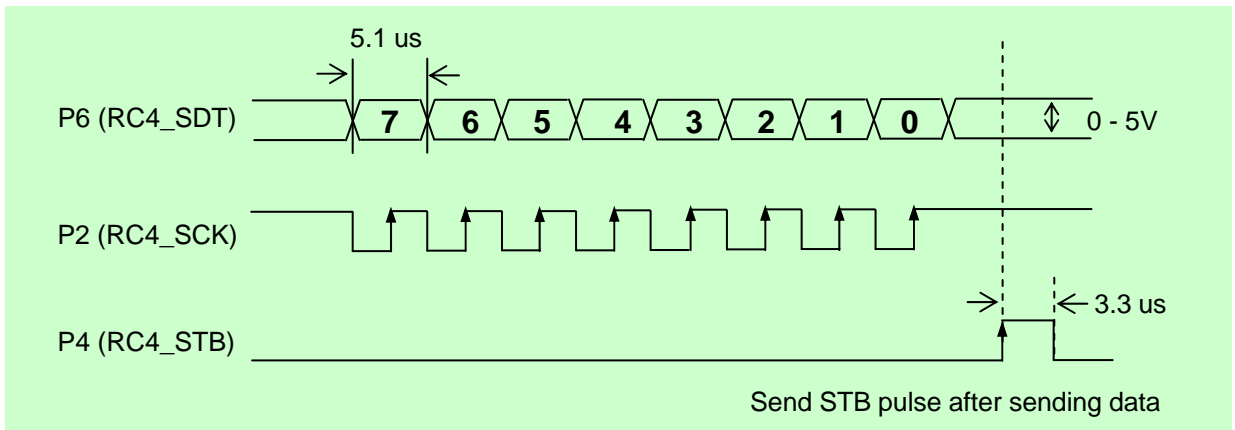


- 1 ; GND
- 2 ; RC4_SCK
- 3 ; GND
- 4 ; RC4_STB
- 5 ; GND
- 6 ; RC4_SDT
- 7 ; NC
- 8 ; NC

AW-RC400 Monitor outputs control (2)

AW-RP400 sends data to AW-RC400 in following procedure to switch monitor output selection. Monitor1 data selects Monitor1 output of RC400, and Monitor2 data selects Monitor2 output of RC400.

- Control Procedure :3 wire (data/clock/strobe)
- Cable / Connector :CAT-5 / RJ45
- Signal Level : 0 - 5V (CMOS LEVEL)
- Strobe signal (STB) : Approx. 3.3us
- Data timing : Approx. 5.1us
- RP400 will refresh (send data) every 100ms.



Bit7	Not used
Bit6	Select Monitor 1
Bit5	bit 6 5 4
Bit4	1 0 1 Camera 5
	1 0 0 Camera 4
	0 1 1 Camera 3
	0 1 0 Camera 2
	0 0 1 Camera 1
Bit3	Not used
Bit2	Select Monitor 2
Bit1	bit 6 5 4
bit0	1 0 1 Camera 5
	1 0 0 Camera 4
	0 1 1 Camera 3
	0 1 0 Camera 2
	0 0 1 Camera 1

Monitor1 : Camera selection of RP400 Master

Monitor2 : Depend on system;

a) One RP400 only : Same selection as Monitor1

b) One of Each RP400 and CB400

: Camera selection of CB400

c) Two RP400 (Master/Slave)

: Camera selection of RP400(Slave)

Multi Function Control System (AW-RP655)

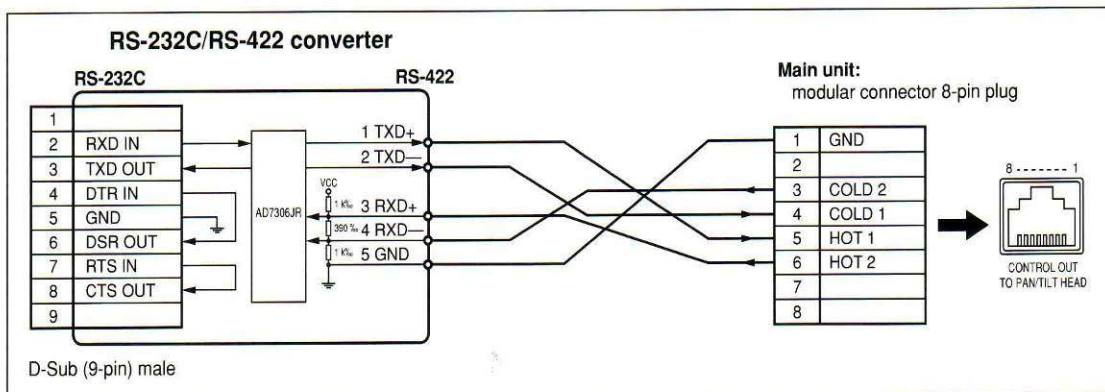
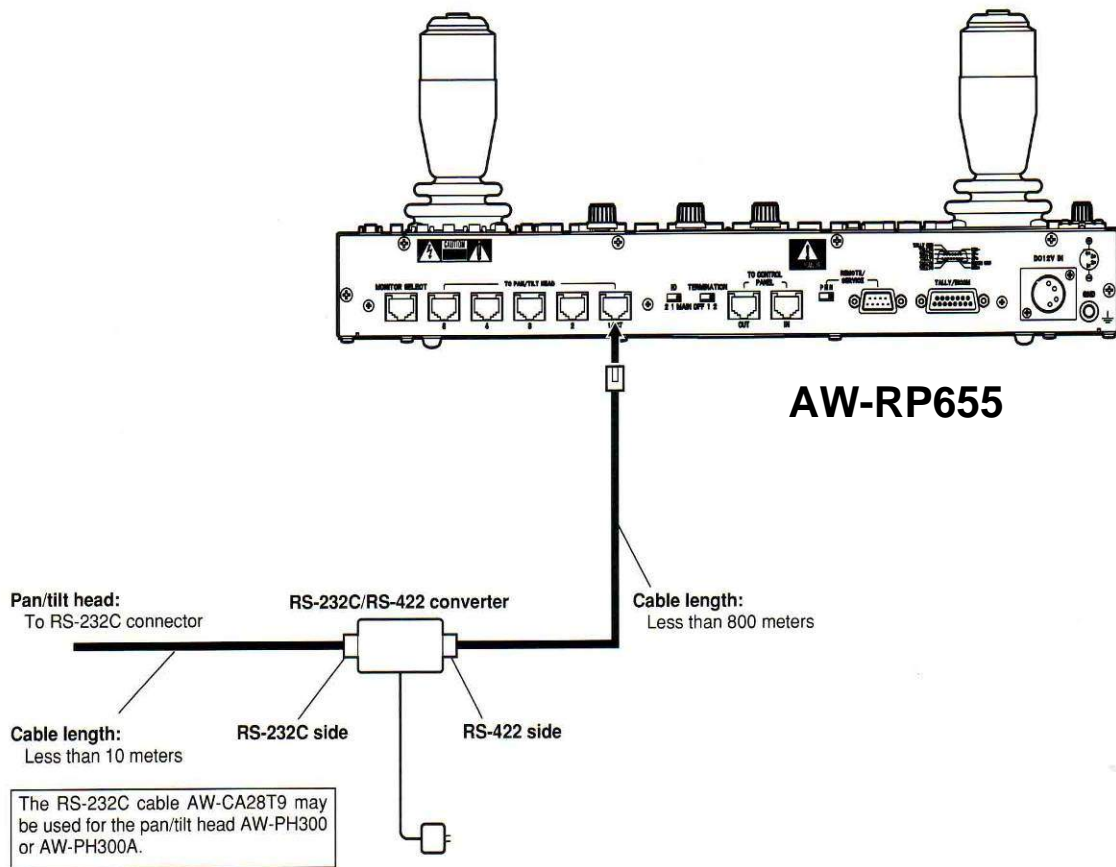
Connections

When using the **AW-PH300, AW-PH300A, AW-PH500** or the **AW-PH600** pan/tilt head

The control signal from this unit must be converted from RS-422 to RS-232C.

Consult with your dealer concerning the RS-232C/RS-422 converter and connecting cable.

Shown below is an example of the connections performed by the RS-232C/RS-422 converter.



Pan-tilt System Connection(AW-RP555)

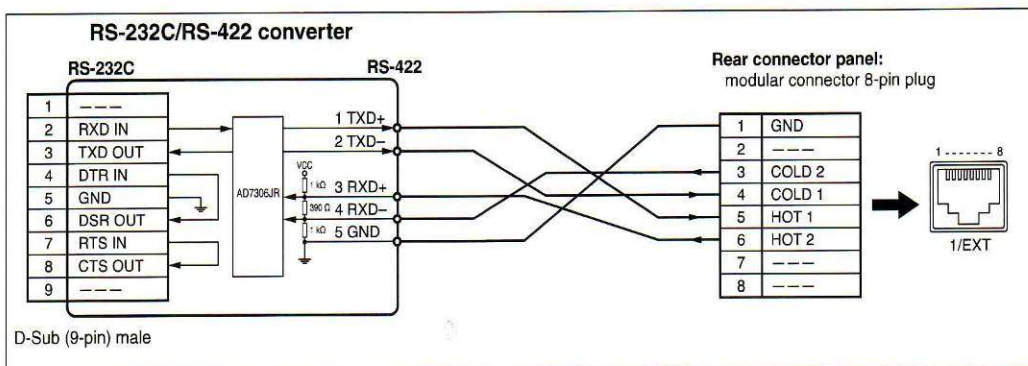
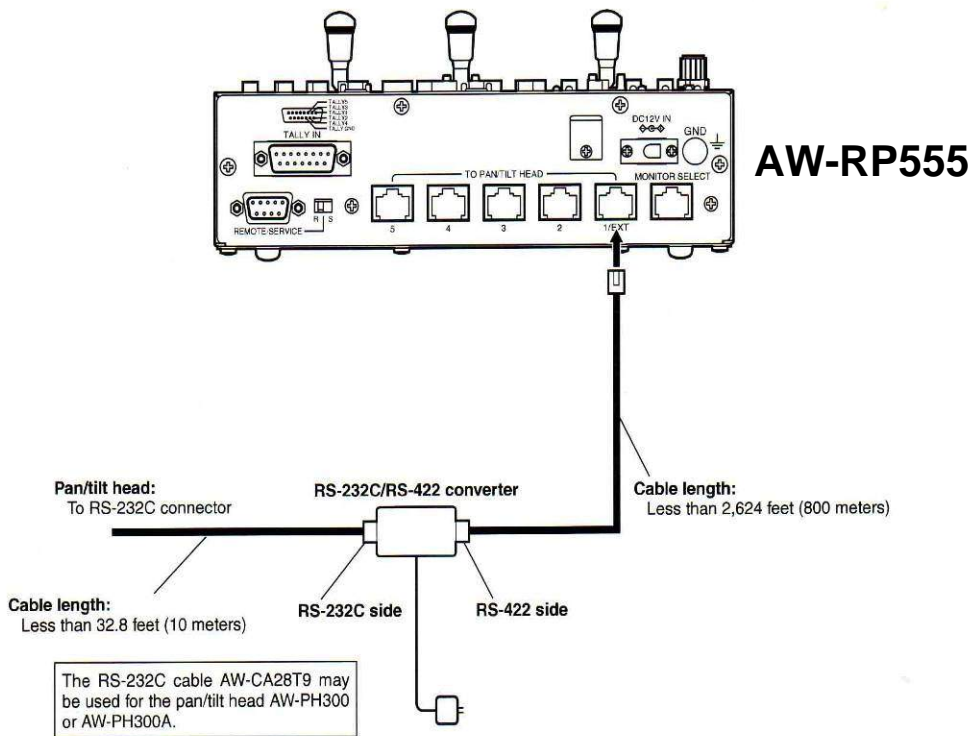
Connections

When using the AW-PH300, AW-PH300A, AW-PH500 or the AW-PH600 pan/tilt head

The control signal from this unit must be converted from RS-422 to RS-232C.

Consult with your dealer concerning the RS-232C/RS-422 converter and connecting cable.

Shown below is an example of the connections performed by the RS-232C/RS-422 converter.



SECTION 3

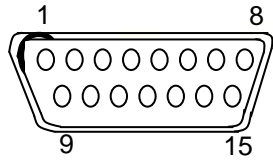
AK Box camera



HC1500/1800 control cable

(Standard accessory cable)

(AK-HRP150 Side)



15P Connector(Male)
(17JE-23150-02(D8A6)-CG (DDK))

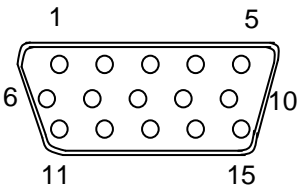
Pin No	Signal	Pin No	Signal
1	Not used	8	Not used
2	Not used	9	Not used
3	Not used	10	Not used
4	Sync signal input	11	Sync signal GND
5	DC 12V	12	DC GND
6	Frame GND	13	TXD (C)
7	TXD (H)	14	RXD (H)
		15	RXD (C)

TXD: Data from camera to remote controller.
RXD: Data from remote controller to camera.

Camera Control Cable

(AK-HC1500 Side)

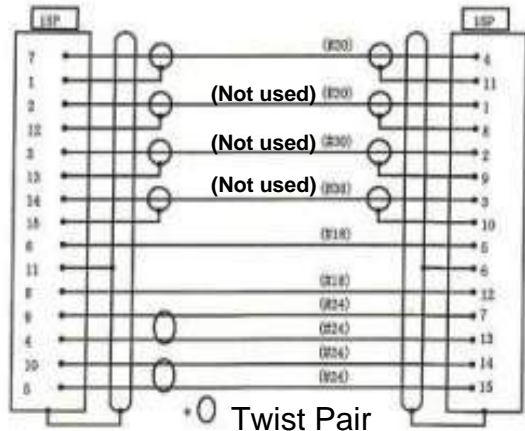
(AK-HRP150 Side)



15P Connector(Female)
(DHW10-153F200 (ACON))

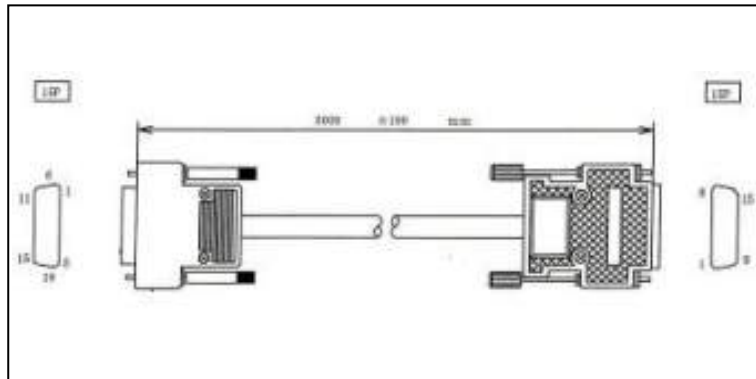
(AK-HC1500 Side)

Pin No.	Signal
1	DC GND
2	TC IN
3	CAM WP
4	Not used
5	RX_N
6	DC 12V
7	SL IN
8	GND
9	TX_P
10	RX_P
11	GND
12	TC GND
13	GND
14	GND
15	GND



(Male)

(Male)



Non Lead
PVC sheath

Tin Plated Copper Wire
Shield Stranded Wire

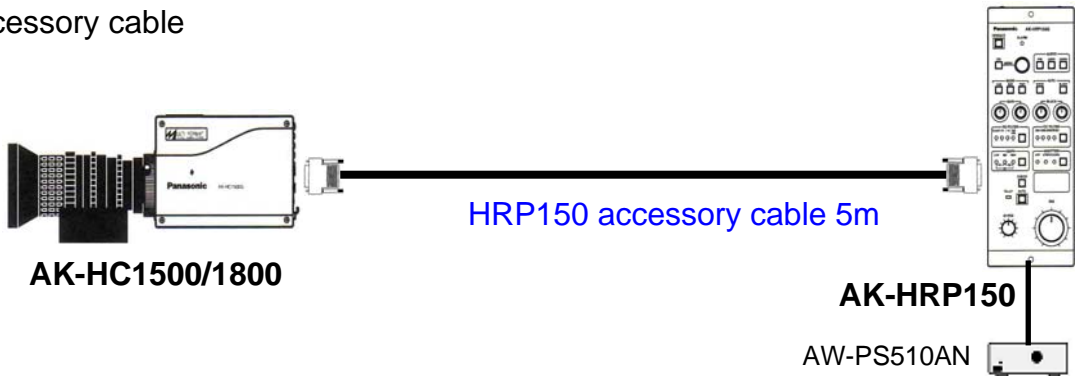
Paper Tape Winding

Space Strings

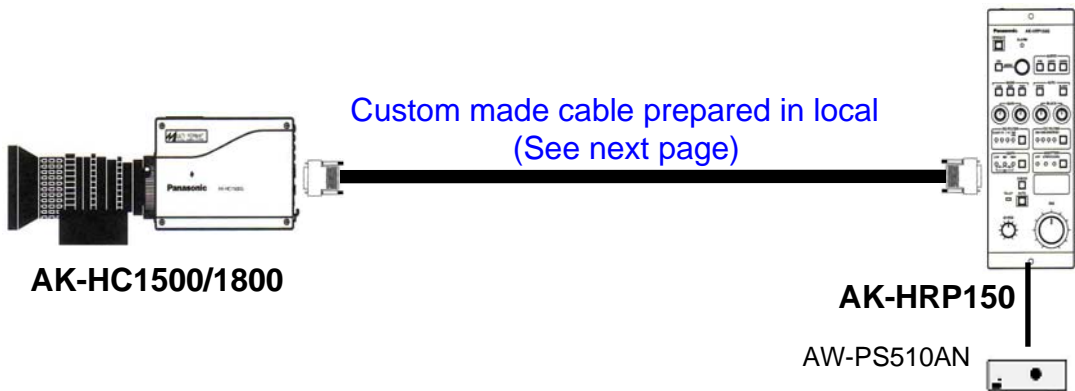
Note: This cable(5m) is Included in AK-HRP150.

Connection with AK-HRP150 (1)

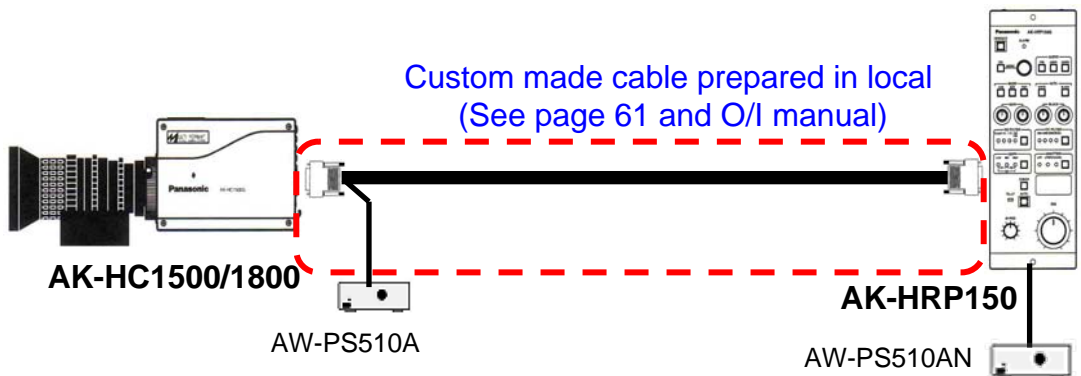
1) Accessory cable



2) Up to 20m extension

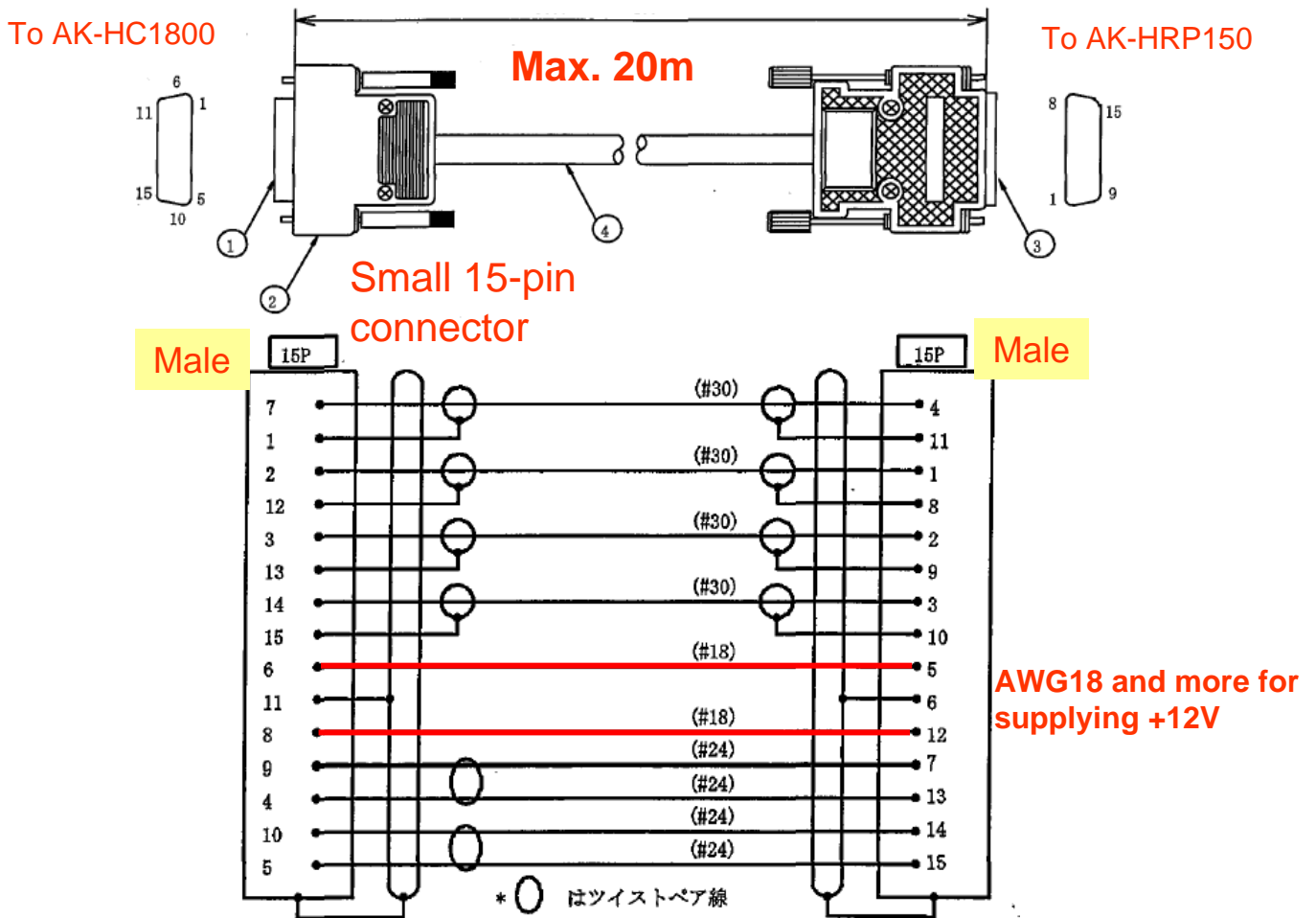


3) More than 20m extension (Up to 500m)

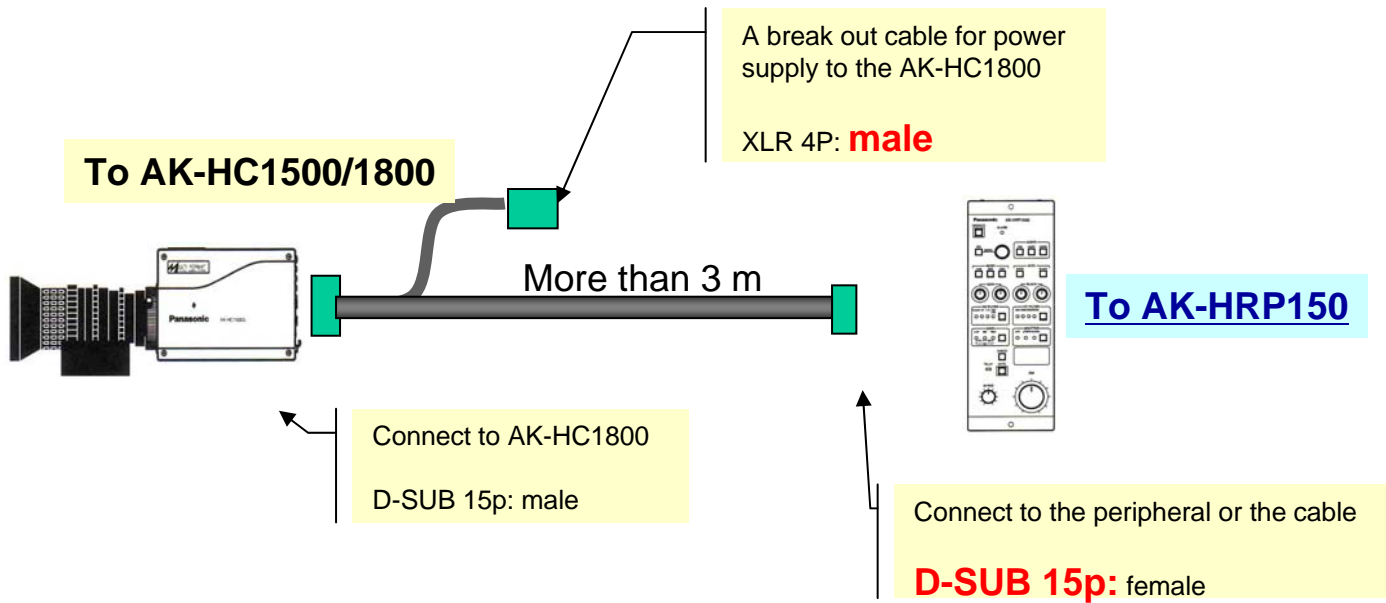


Connection with AK-HRP150 (2)

Custom made cable for connecting AK-HC1500/1800 and AK-HRP150



Power supply break out cable for HC1500/1800



To AK-HC1500/1800

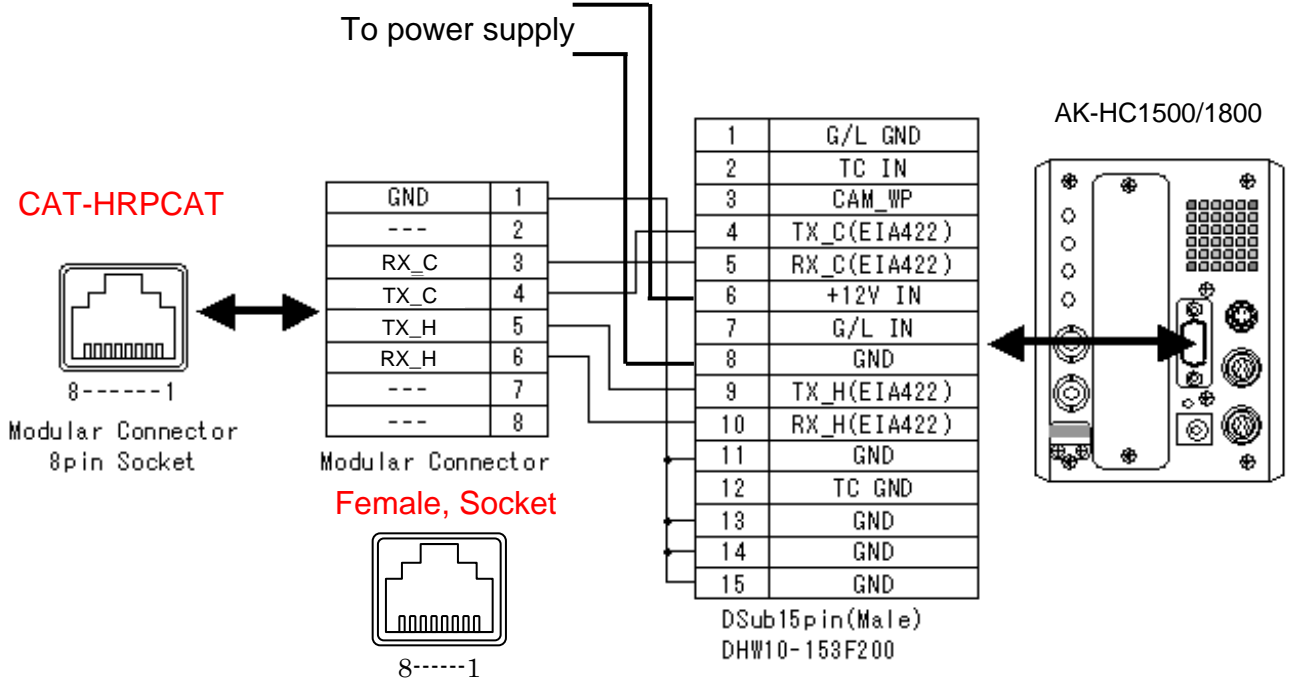
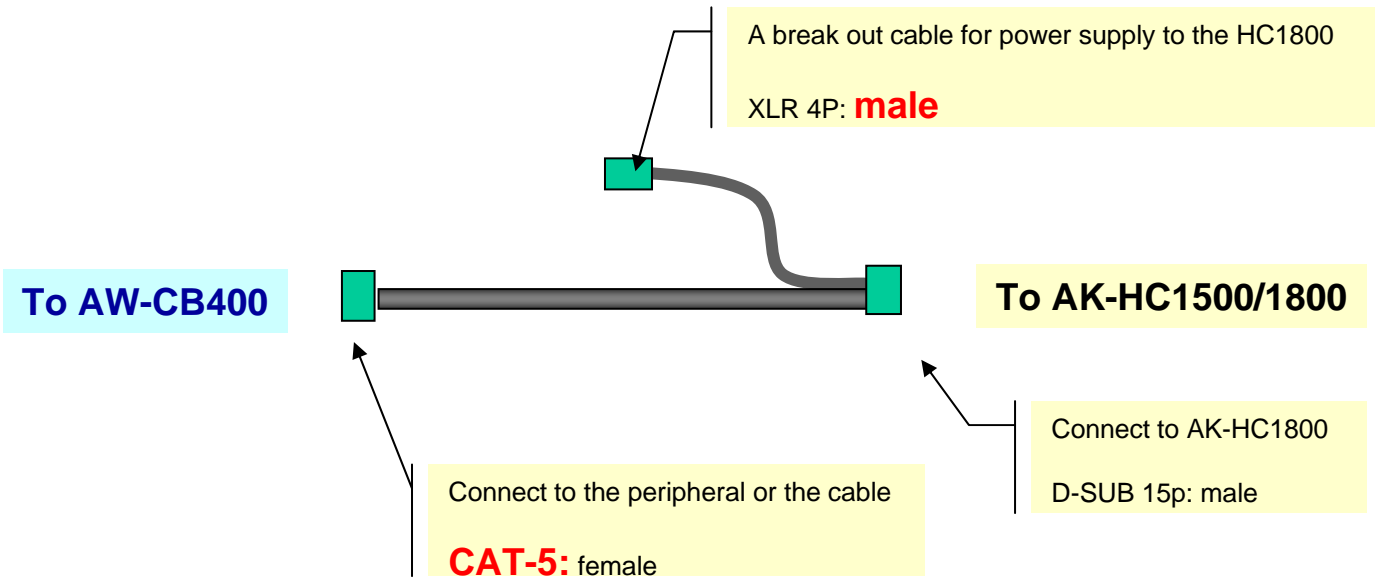
To power supply

To AK-HRP150

Pin No.	Signal
1	Gen-lock signal GND
2	Time code signal input
3	Not used
4	TX_N (EIA422)/TXD (EIA232) output
5	RX_N (EIA422)/RXD (EIA232) output
6	Camera power supply input (DC +12 V)
7	Gen-lock signal input
8	GND
9	TX_P (EIA422) output
10	RX_P (EIA422) input
11	GND
12	Time code signal GND
13	GND
14	GND
15	GND

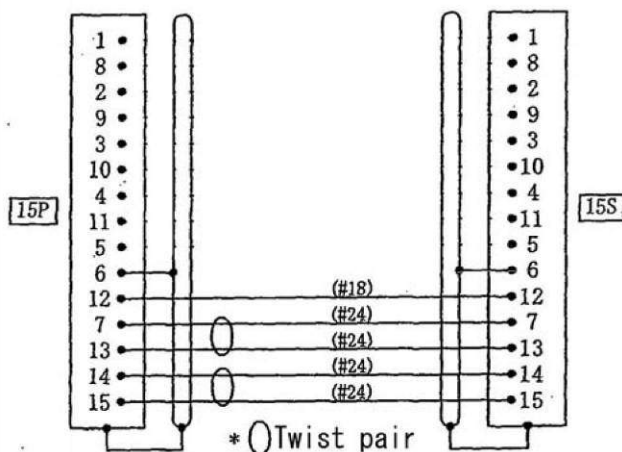
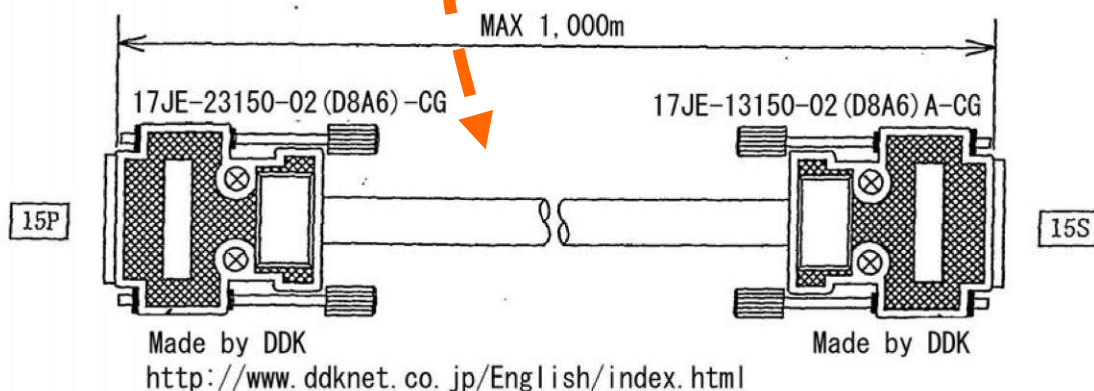
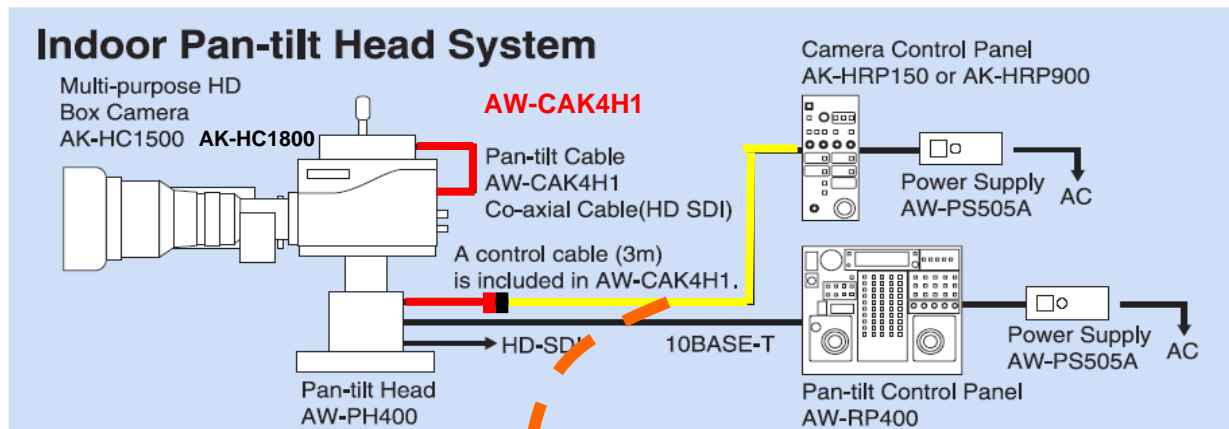
Signal	Pin No.
Gen-lock signal GND	1
Time code signal input	2
Not used	3
TX_N (EIA422)/TXD (EIA232) output	4
RX_N (EIA422)/RXD (EIA232) output	5
Camera power supply input (DC +12 V)	6
Gen-lock signal input	7
GND	8
TX_P (EIA422) output	9
RX_P (EIA422) input	10
GND	11
Time code signal GND	12
GND	13
GND	14
GND	15

Power supply break out cable for CB400



AK-HRP150 extension cable for AW-CAK4H1

One cable of AW-CAK4H1 is 3m length.
If longer cable necessary, please prepare in local.

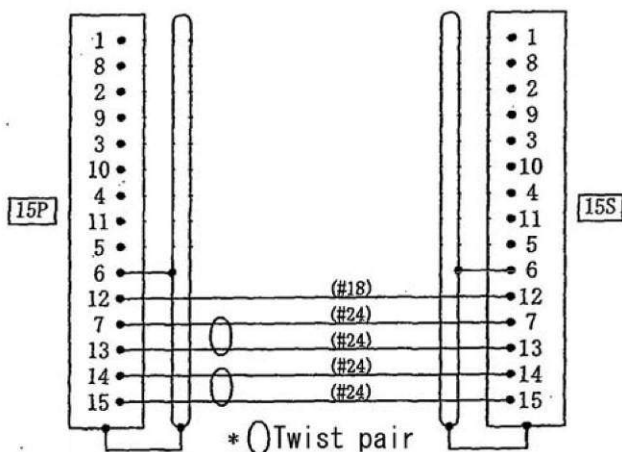
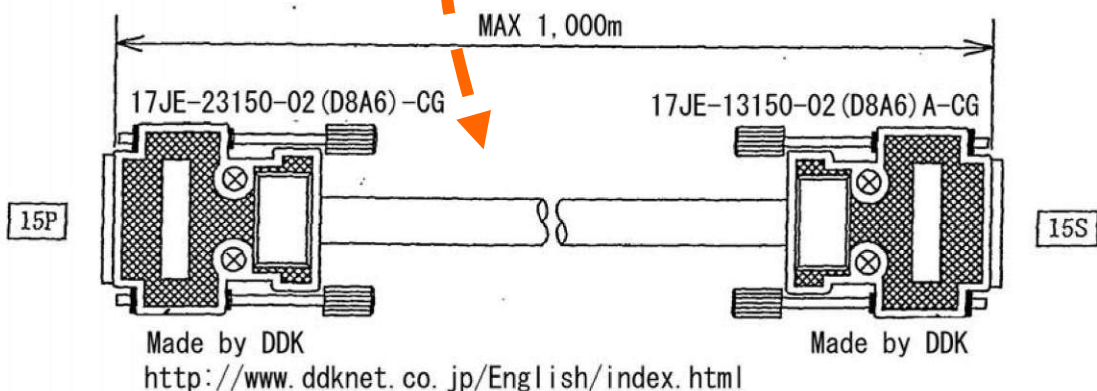
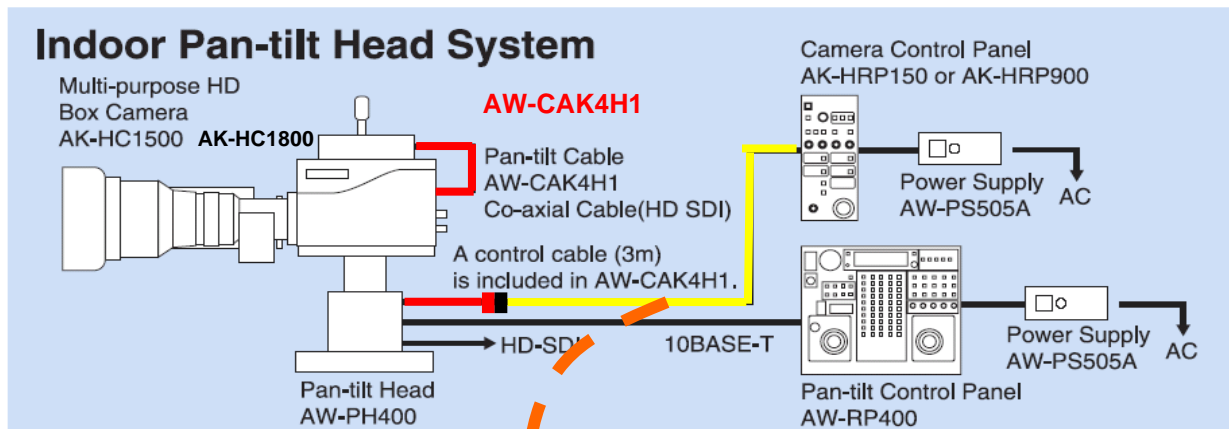


Note.

- Power supply cannot be performed
- Gen^lock cannot be performed

AK-HRP150 extension cable for AW-CAK4H1

One cable of AW-CAK4H1 is 3m length.
If longer cable necessary, please prepare in local.

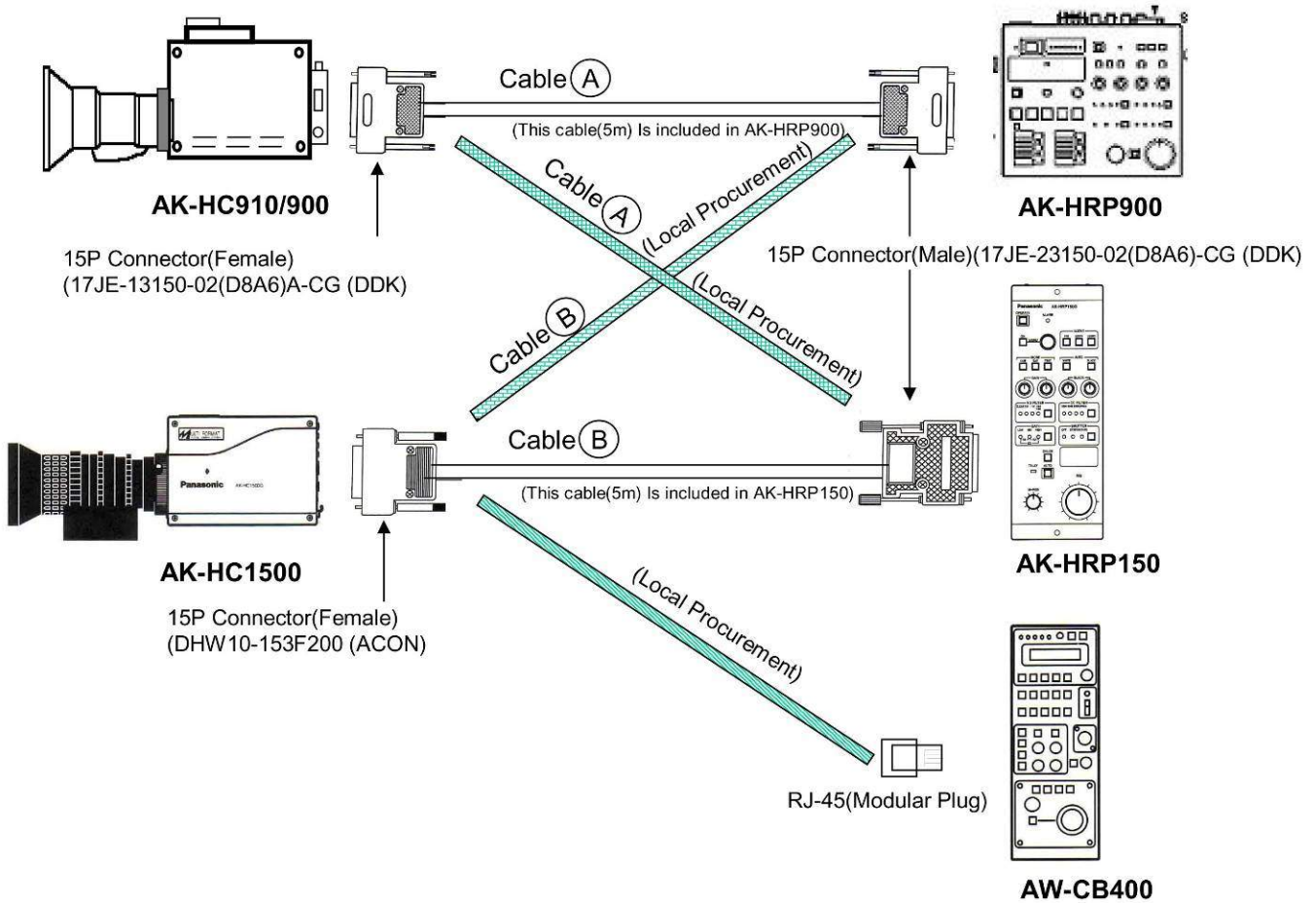


Note.

- Power supply cannot be performed
- Gen^lock cannot be performed

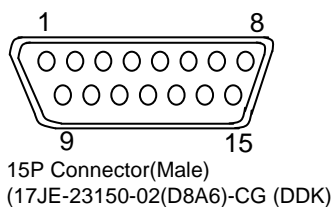
Connection with HRP900/150

Multi-format, Multi-purpose Camera Cable



Control cable for AK-HC900 (Cable A)

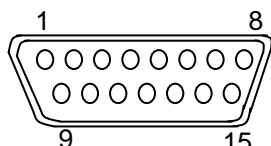
(AK-HRP900 Side)



Pin No	Signal	Pin No	Signal
1	Y signal output	8	Y signal GND
2	Pb signal output	9	Pb signal GND
3	Pr signal output	10	Pr signal output
4	Sync signal input	11	Sync signal GND
5	DC 12V	12	DC GND
6	Frame GND	13	TXD (C)
7	TXD (H)	14	RXD (H)
		15	RXD (C)

TXD: Data from camera to remote controller.
RXD: Data from remote controller to camera.

(AK-HC900 Side)

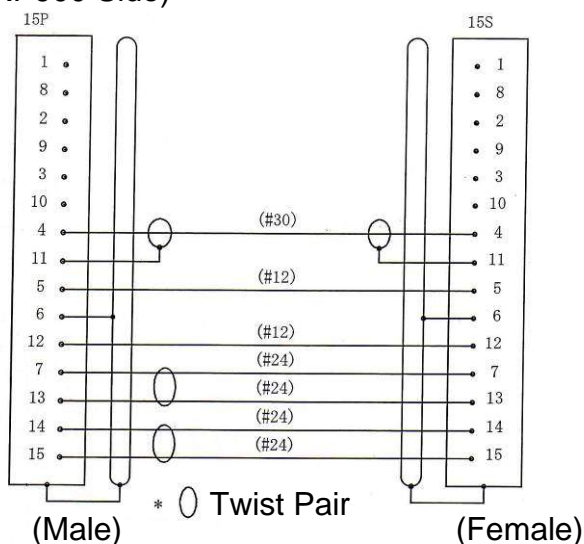


Pin No.	Signal	Pin No.	Signal
1	Y signal output	8	Y signal GND
2	Pb signal output	9	Pb signal GND
3	Pr signal output	10	Pr signal GND
4	Sync signal input	11	Sync signal GND
5	DC 12V	12	DC GND
6	Frame GND	13	TXD (C)
7	TXD (H)	14	RXD (H)
		15	RXD (C)

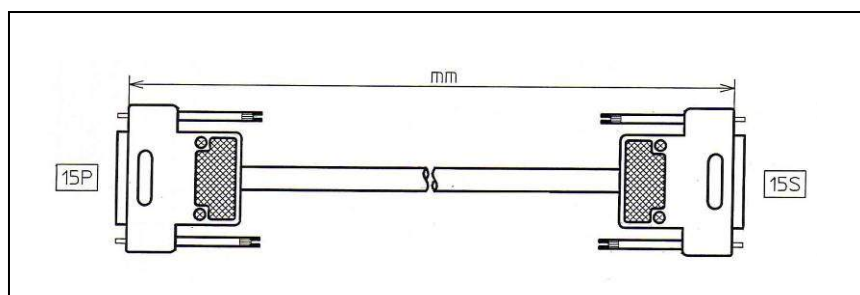
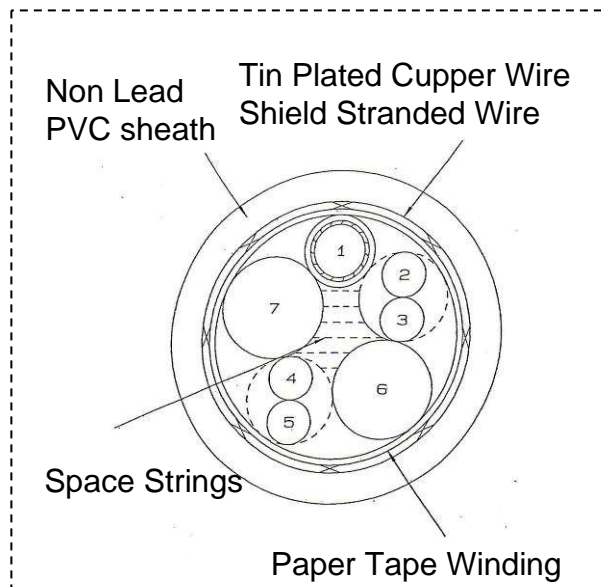
TXD: Data from Camera to remote controller
RXD: Data from remote controller to camera

(AK-HRP900 Side)

(AK-HC900 Side)

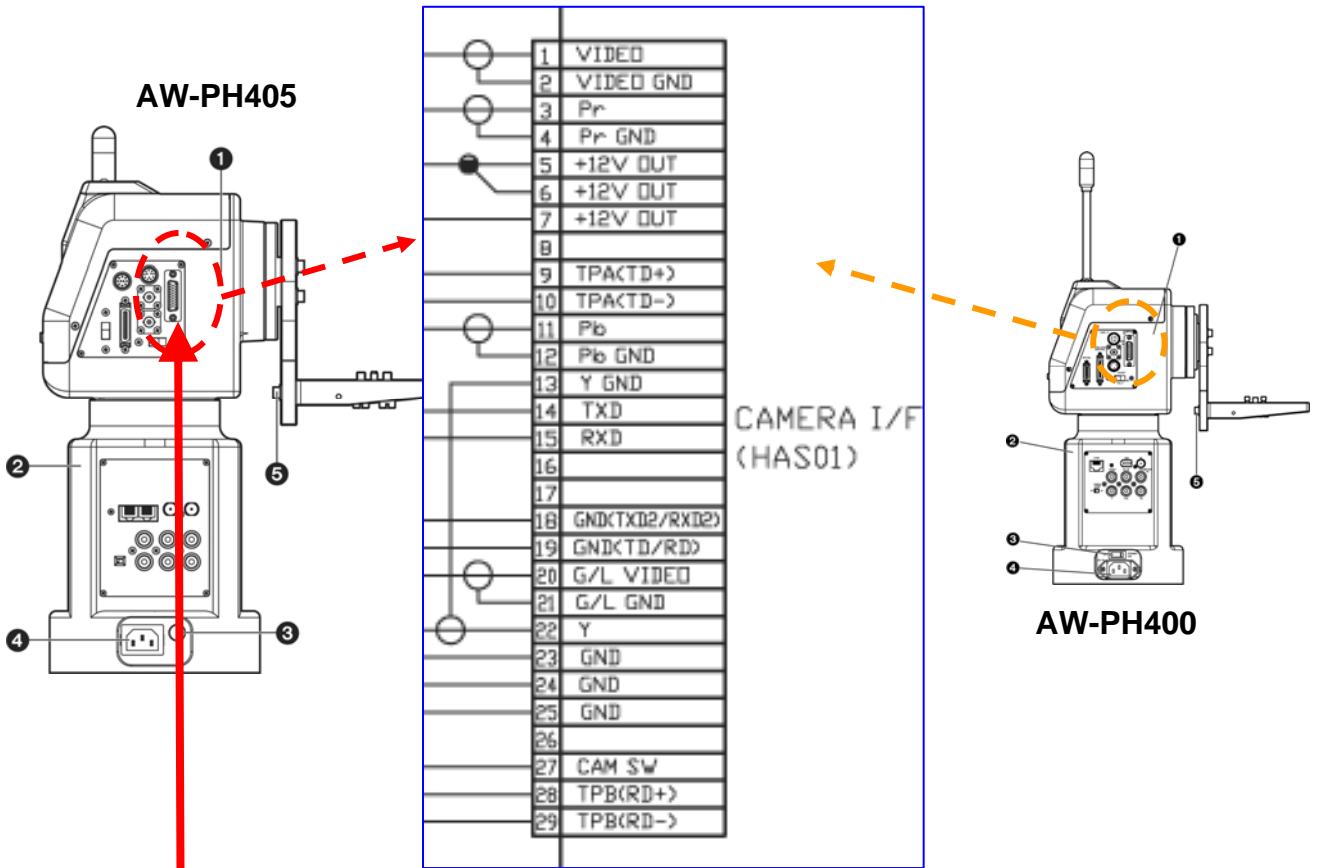


Cable Construction

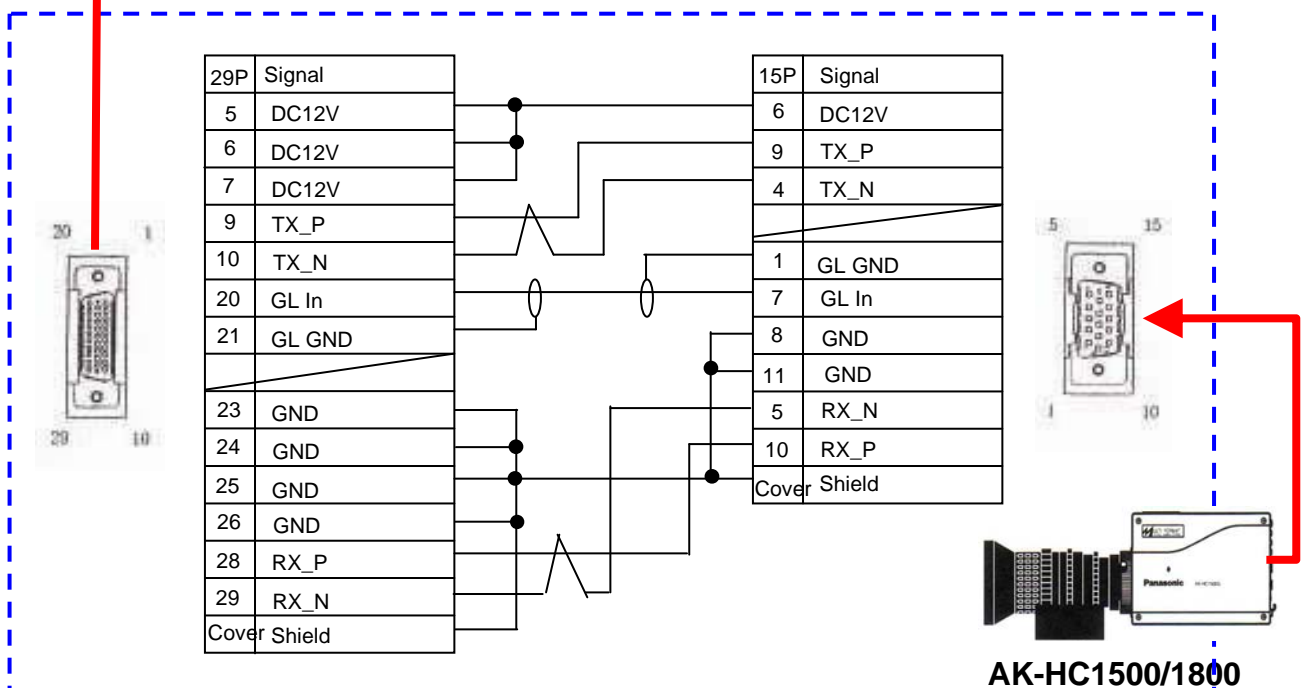


Connection between PH405 and HRP150 (1)

Connection between PH405 and HC1500/1800



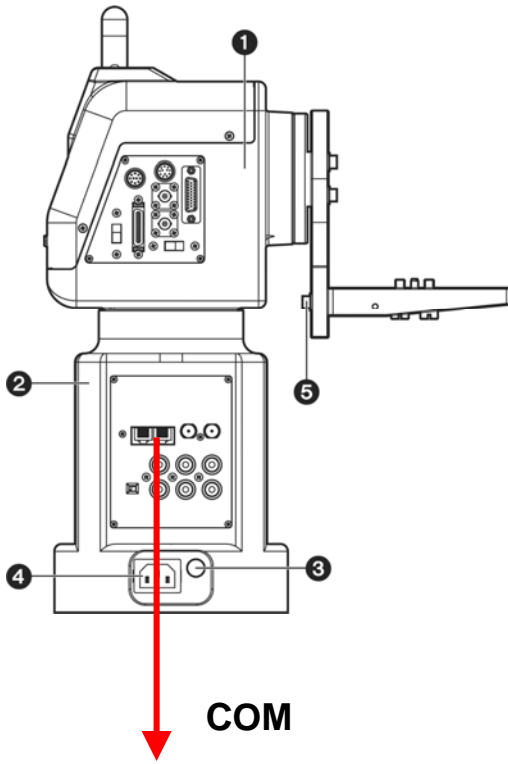
Camera I/F of PH405 is same as PH400.



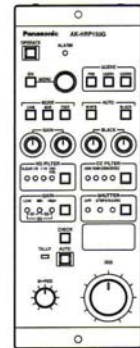
One piece of AW-CAK4H1 can be connected between PH405 and HC1500/1800.

Connection between PH405 and HRP150 (2)

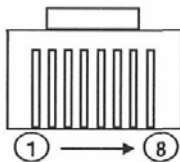
Connection between PH405 and HRP150



AK-HRP150



GND /TD+	1
TALLY IN /TD-	2
COLD2 /RD+	3
COLD1 /NC	4
HOT1 /NC	5
HOT2 /RD-	6
NC	7
NC	8



RJ-45

1	Y Signal output
2	Pb signal output
3	Pr signal output
4	Sync signal input
5	DC 12V
6	Frame GND
7	TXD(H)
8	Y signal GMD
9	Pb signal GND
10	Pr signal GND
11	Sync signal GND
12	DC GND
13	TXD(C)
14	RXD(H)
15	RXD(C)
	SHELL

D-sub 15-pin

Connector ; JAE DA-15P-NR

Case ; JAE DA-C8-J10-F1-1R

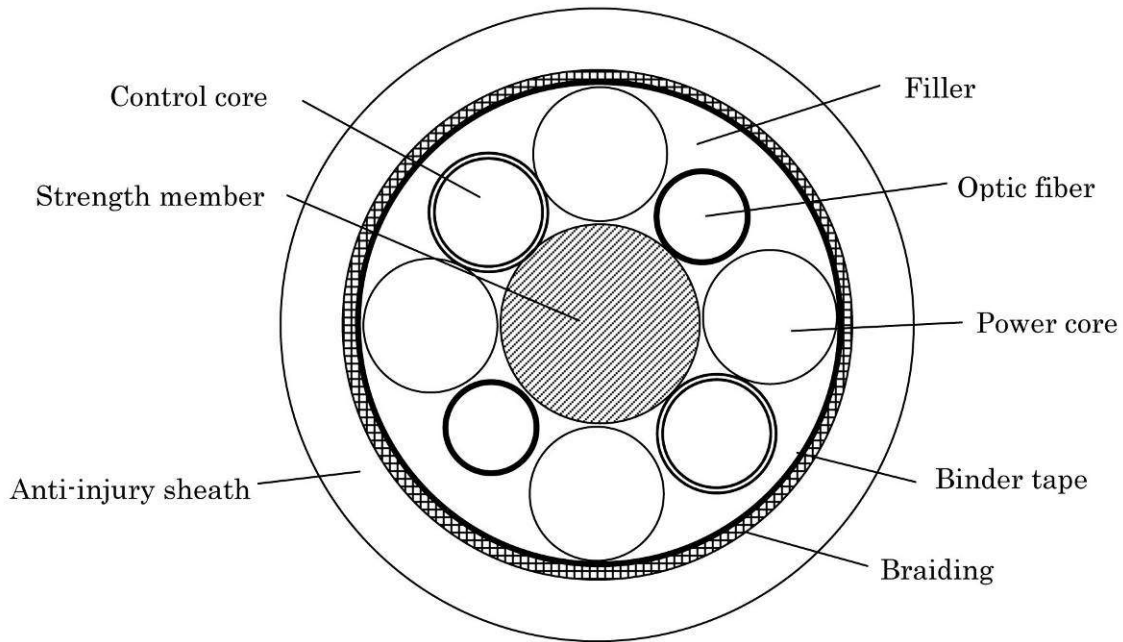
SECTION 4

AK studio camera

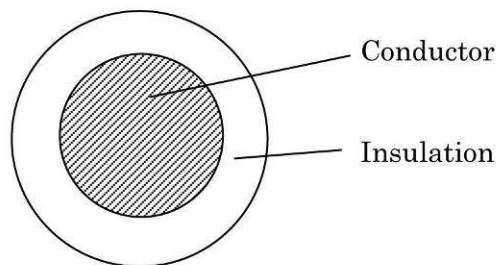


Optical cable

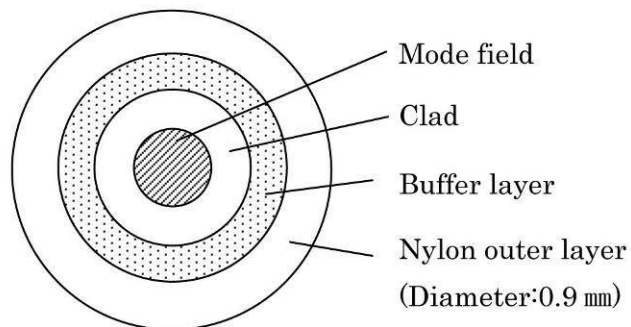
Attached drawing Cross section drawing of 2SM-9.2-37.5



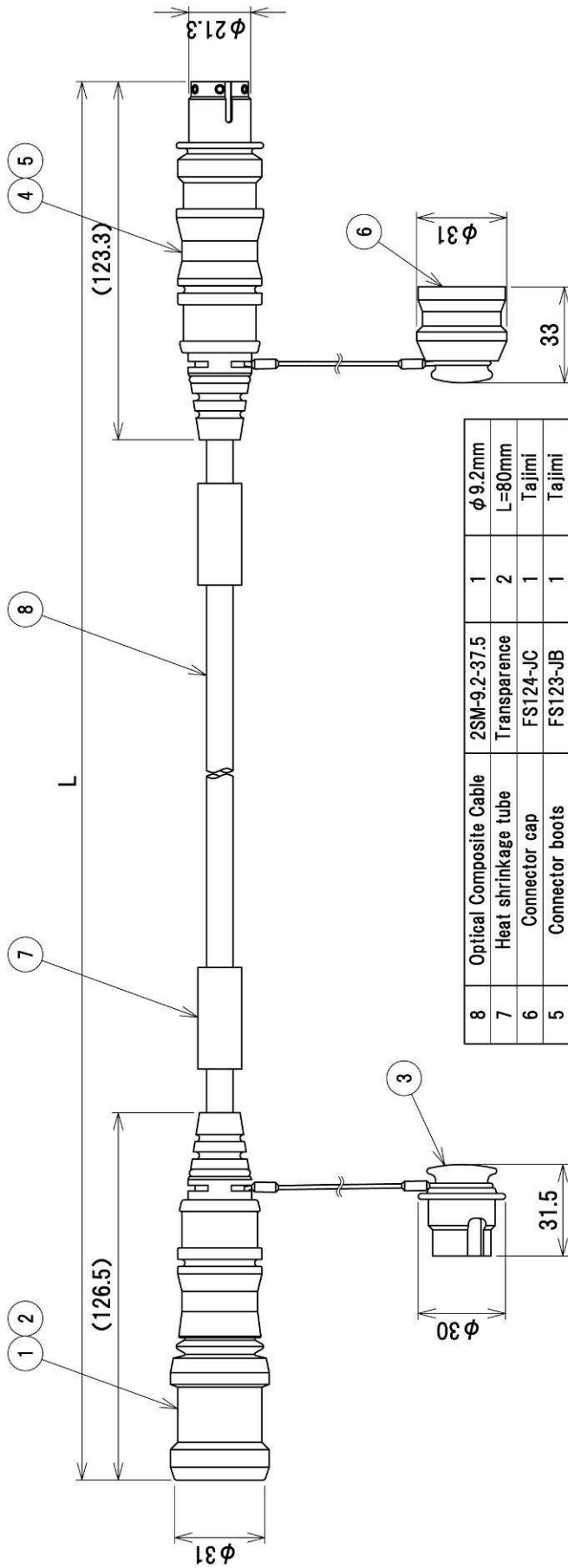
Cross section drawing of power core, control core and strength member



Cross section drawing of optic fiber



Tajimi optical Cable



8	Optical Composite Cable	2SM-9.2-37.5	1	φ9.2mm	Remarks
7	Heat shrinkage tube	Transparence	2	L=80mm	
6	Connector cap	FS124-JC	1	Tajimi	
5	Connector boots	FS123-JB	1	Tajimi	
4	OPS series jack connector	OPS2403-J	1	Tajimi	
3	Connector cap	FS122-PC	1	Tajimi	
2	Connector boots	FS121-PB	1	Tajimi	
1	OPS series plug connector	OPS2401-P	1	Tajimi	
No.	Product name	Type number	Amount		

Wiring list

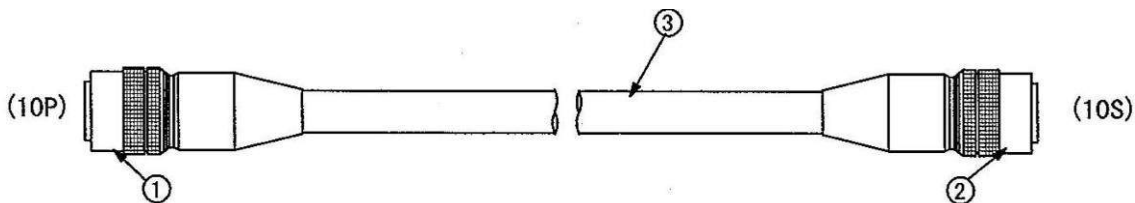
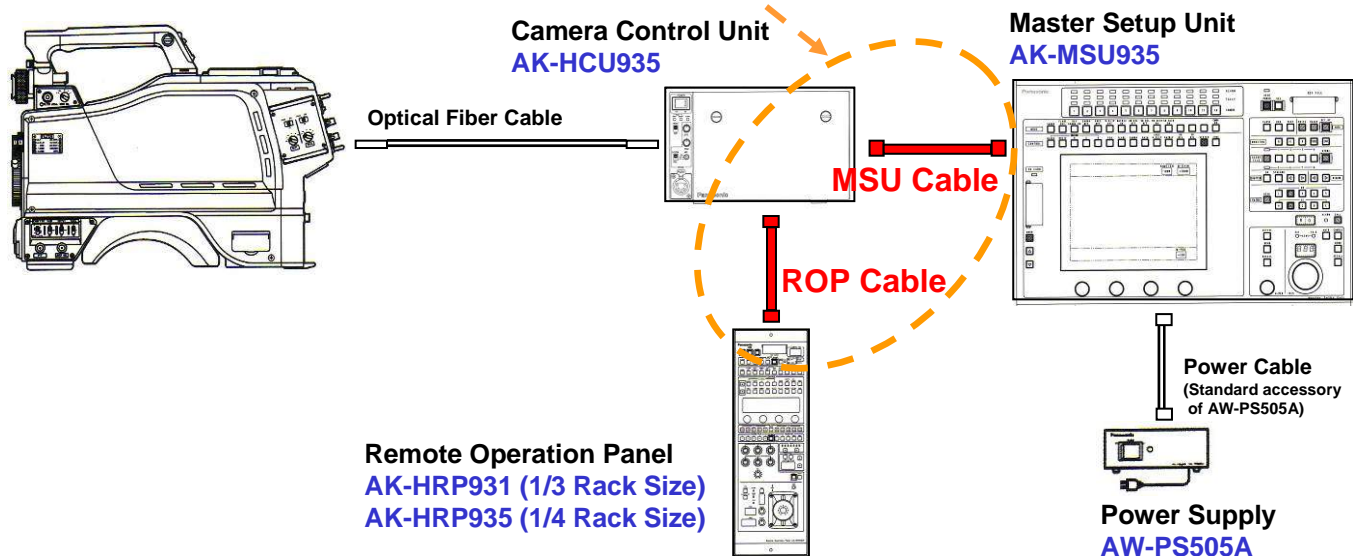
6	White	Power line
5	Black	
4	Green	Control line
3	Red	
2	Blue	Optical fiber
1	Yellow	
No.	Color	Core name

※ A cable assumes it designated length

ROP Cable specification

ROP and MSU cable has same specification.

Multi-format Camera



	Item	Manufacture	Model number	NOTE
(1)	Connector	HIROSE ELECTRIC	HR10A-10P-10P	
(2)	Connector	HIROSE ELECTRIC	HR10A-10P-10S	
(3)	Cable	HIRAKAWA HEWTECH	20379-FG-SV-10	(recommended)

HIROSE ELECTRIC

<http://www.hirose.com/index.html>

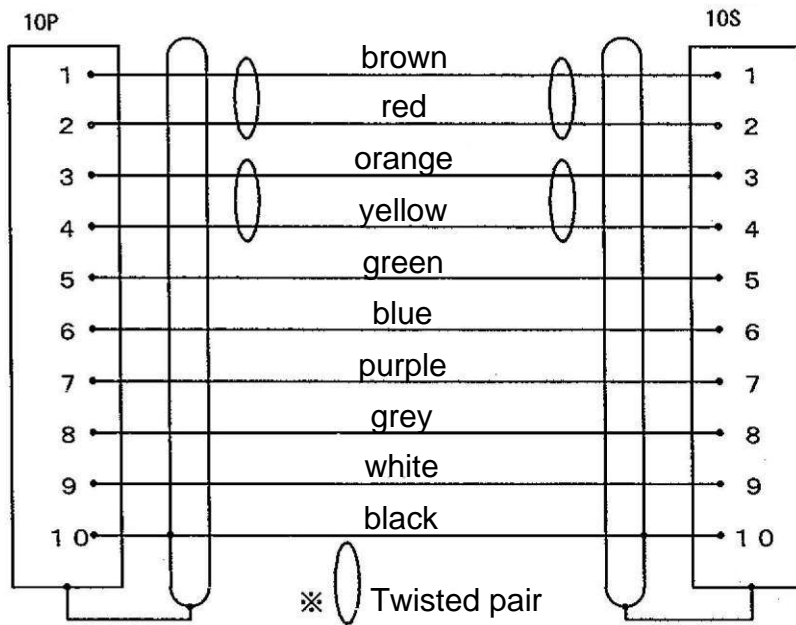
HIRAKAWA HEWTECH CORP.

<http://www.hewtech.co.jp/e/index.html>

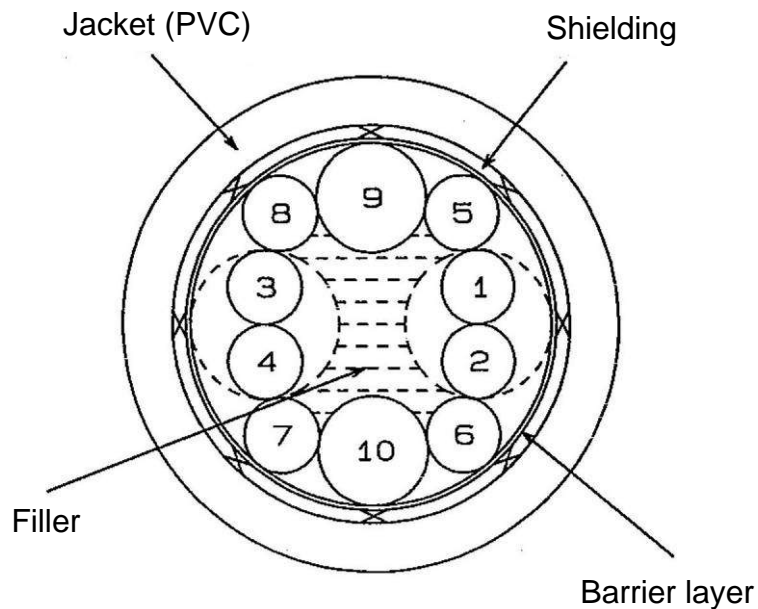


ROP Cable specification

Pin assignment

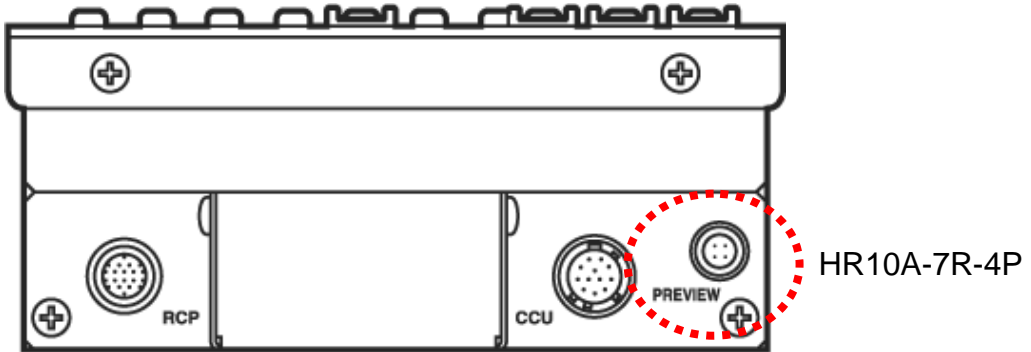


Cable construction

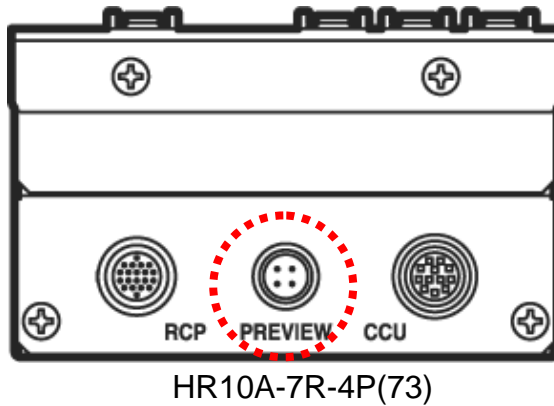


ROP "PREVIEW" connecter

AK-HRP931



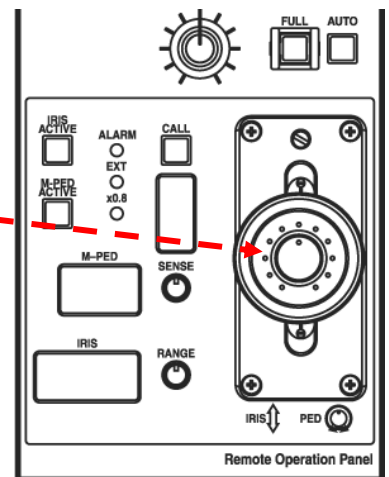
AK-HRP935



"PREVIEW" pin assignment

No.	Signal	Remark
1	PREVIEW1	Closed, when joystick knob is pressed.
2	PREVIEW2	
3	(NC)	
4	(NC)	

Plug connector ; HR10A-7P-4S(73) (HIROSE)



SECTION 5

Live switcher



Editing control Cable

External Control Device

Ex) Editing controller
AG-A850



AV-HS400A/300

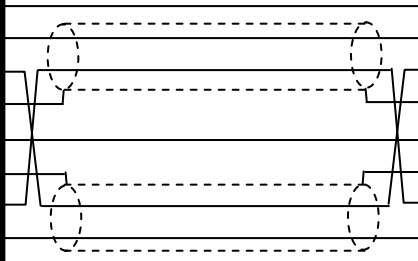


External Control Device

<Connection specifications>
AV-HS400A

Pin No.	Signal
1	FRAME GND
2	RXD -
3	TXD +
4	GND
5	NC
6	GND
7	RXD +
8	TXD -
9	FRAME GND

Pin No.	Signal
1	FRAME GND
2	TXD -
3	RXD +
4	GND
5	NC
6	GND
7	TXD +
8	RXD -
9	FRAME GND



D-sub 9-pin male



D-sub 9-pin male

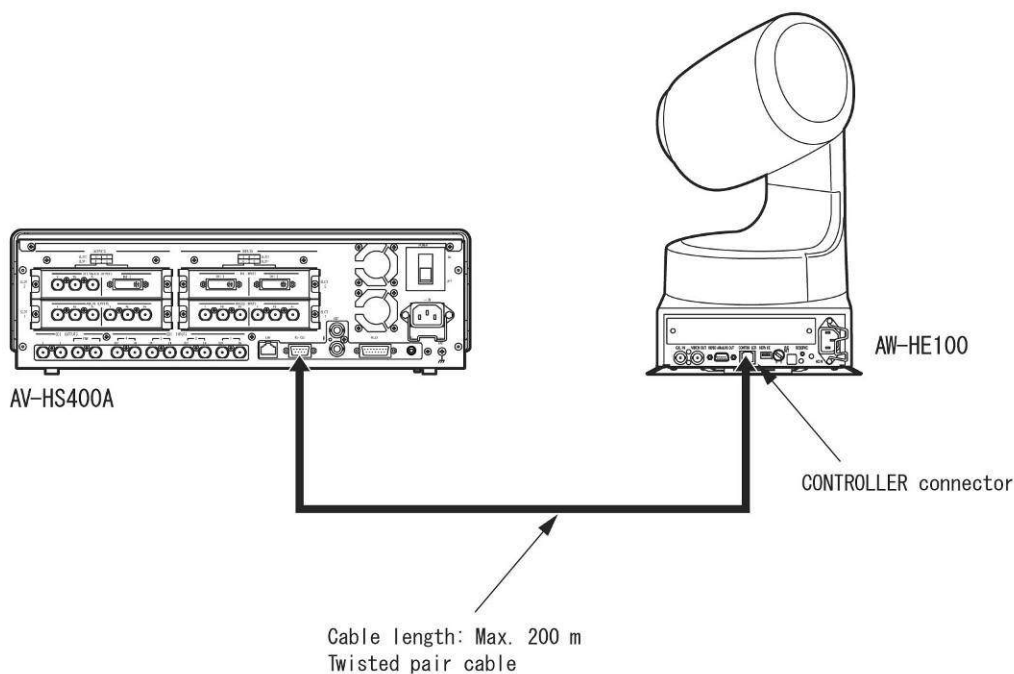
Single camera control (HE100)

Single Camera Control Configuration

Example of connections (when the unit and a pan-tilt head are connected)

Pan-tilt heads that can be connected: AW-HE100, AW-PH400, AW-PH405, AW-PH360

1. Connections for AW-HE100, AW-PH405 or AW-PH360



<Connection specifications>

AV-HS400A

Pin No.	Signal
1	FRAME GND
2	TXD -
3	RXD +
4	GND
5	NC
6	GND
7	TXD +
8	RXD -
9	FRAME GND



AW-HE100, AW-PH405, AW-PH360

Pin No.	Signal
1	GND
2	—
3	RXD -
4	TXD -
5	TXD +
6	RXD +
7	—
8	—

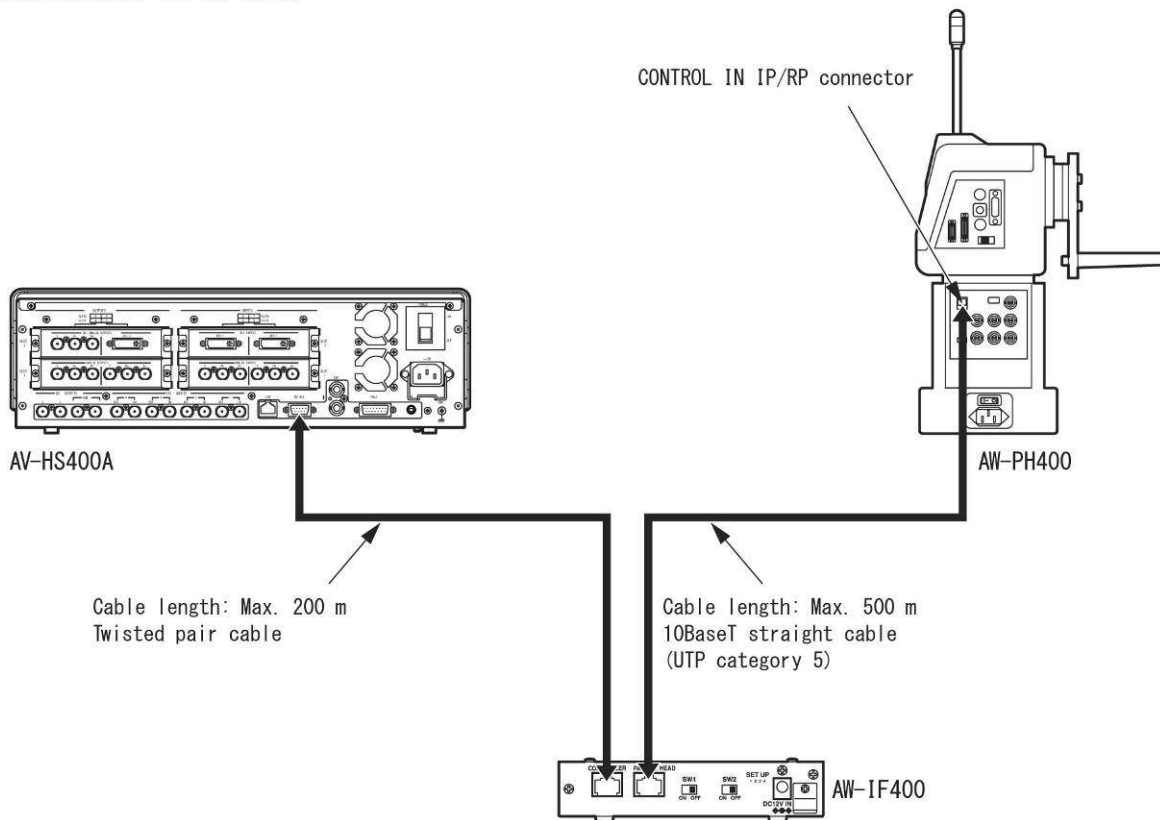


CONTROLLER
(CONTROL IN IP/FP)

Single camera control (PH400)

Single Camera Control Configuration

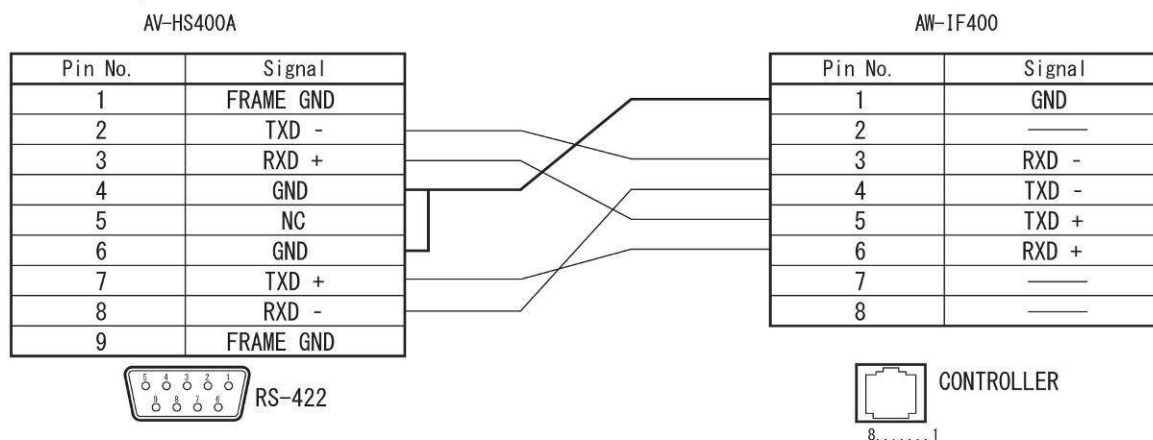
2.Connections for AW-PH400



Switch settings

SW1	SW2	SET UP			
		1	2	3	4
OFF	OFF	ON	OFF	ON (300 deg)	OFF (190 deg)
					OFF

<Connection specifications>



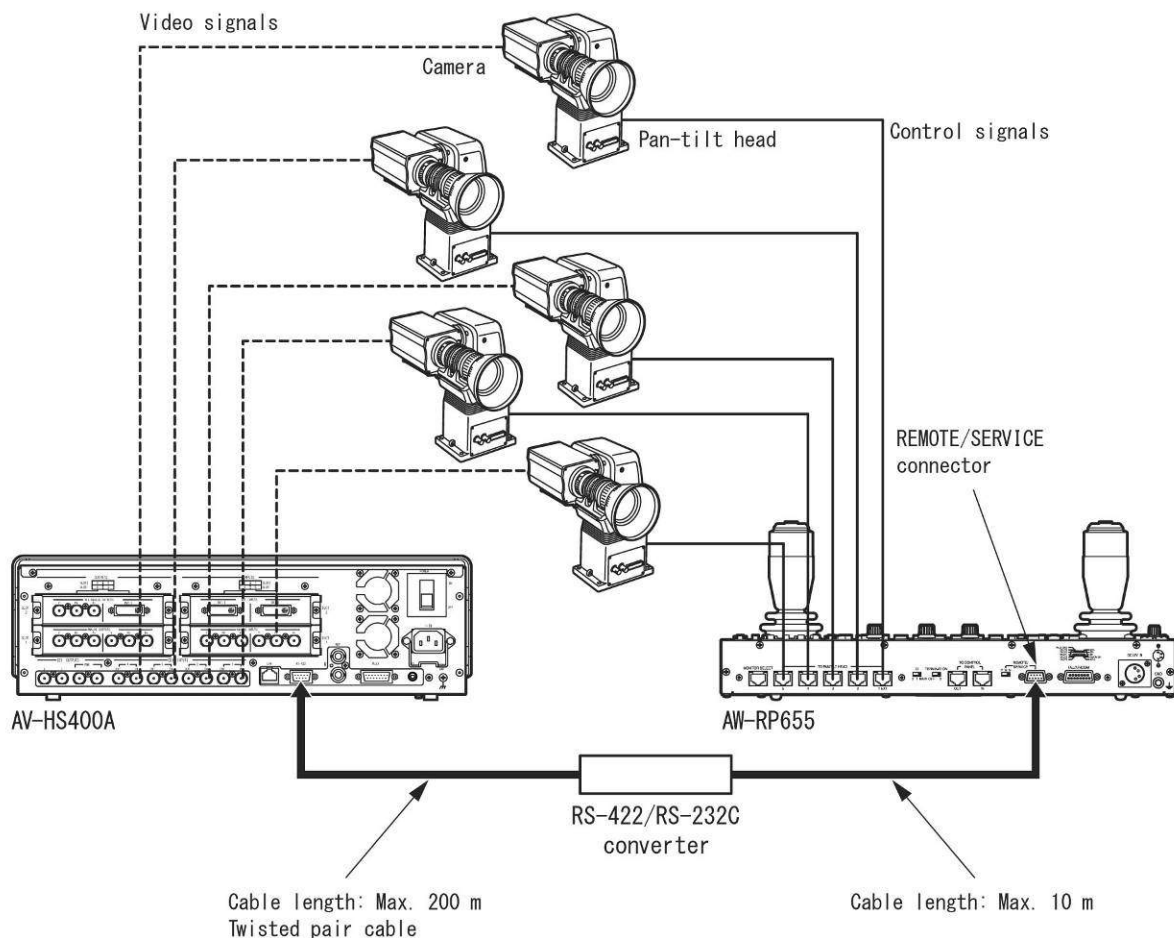
Multi-camera Control

Multi-Camera Control Configuration

Example of connections (when the unit and a controller are connected)

Controllers that can be connected: AW-RP655, AW-RP555

For details on connecting the pan-tilt heads and controller or connecting the pan-tilt heads and cameras, refer to the operating instructions of each device.



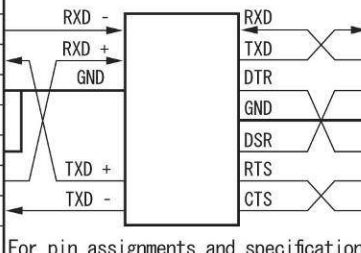
<Connection specifications>

AV-HS400A

AW-RP655

Pin No.	Signal
1	FRAME GND
2	TXD -
3	RXD +
4	GND
5	NC
6	GND
7	TXD +
8	RXD -
9	FRAME GND

RS-422/RS-232C converter



Pin No.	Signal
1	—
2	RXD IN
3	TXD OUT
4	DTR
5	GND
6	DSR
7	RTS
8	CTS
9	—



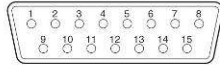
For pin assignments and specifications of the RS-422/RS-232C converter, refer to the operating instructions of the converter used.



Connection for tally control (AW-CB400 & AV-HS400)

Tally connector

The tally connector comes with tally output, output enable, power supply or fan alarm output pins. The output signals from the tally output pins are for lighting the tally lamps, and these outputs are open collector outputs. (D-sub 15-pin male)

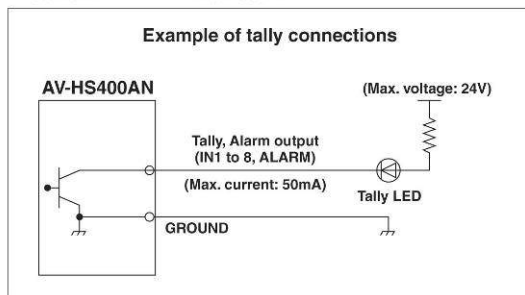


Pin assignment

Pin No.	Signal name	Input/output	Description of signal
1	IN1	Open collector output	Tally output of input video 1
2	IN2	Open collector output	Tally output of input video 2
3	IN3	Open collector output	Tally output of input video 3
4	IN4	Open collector output	Tally output of input video 4
5	IN5	Open collector output	Tally output of input video 5
6	IN6	Open collector output	Tally output of input video 6
7	IN7	Open collector output	Tally output of input video 7
8	IN8	Open collector output	Tally output of input video 8
9	ALARM	Open collector output	Fan alarm or power supply alarm output
10, 11, 12	RESERVED		Keep these pins unconnected.
13	ENABLE	Input	Enable signal of tally output and alarm output Open: Output; GND: no output
14, 15	GROUND	GROUND	Ground

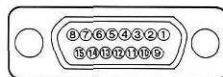
Pins 1 to 9 must satisfy the following conditions:
Dielectric strength: Max. DC 24 V
Current: Max. 50 mA

Example of tally connections



28 TALLY/INCOM connector

Connect this to the TALLY/INCOM connector on the video switcher or other units. When the TALLY connector is set to the GND level, the (1) TALLY lamp lights. Do not apply a voltage in excess of 5V to this connector.



Pin layout as seen from the back panel of AW-CB400

Pin No.	Signal Name
1	TALLY1
2	TALLY2
3	TALLY3
4	TALLY4
5	TALLY5
6	TALLY GND
7	---
8	---
9	---
10	---
11	---
12	---
13	---
14	MIC +
15	MIC -
16	INCOM GND
17	SP -
18	SP +

Tally Configuration (AW-CB400 & AV-HS400)

When "CAM 2" on HS400 PGM is pressed, TALLY 2 become active, and CAM2 Tally turn on.

