

FUJINON LENS

富士能电视镜头

HZK 25-1000mm

取扱説明書 /Operation Manual/ 使用手册

富士フイルム株式会社

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PRIOR TO USE

(1) Preparing the lens supporter

Use a custom supporter for FUJINON lenses (ELH-112B-*) when installing the lens. Do not install the lens on an older model ELH-112A-* as this could deform or damage the supporter. Also, make sure the Serial/Parallel setting is set to Serial.

(2) Preparing an external power supply

When using this lens with a FUJINON lens supporter (ELH-112B-*) attached, use a power source connector (see “Name and Function of Each Part”) to supply power from the lens side. If power is not supplied, correct operation may not occur. Also, when connecting an external power supply, first power on the external power supply and then the camera.

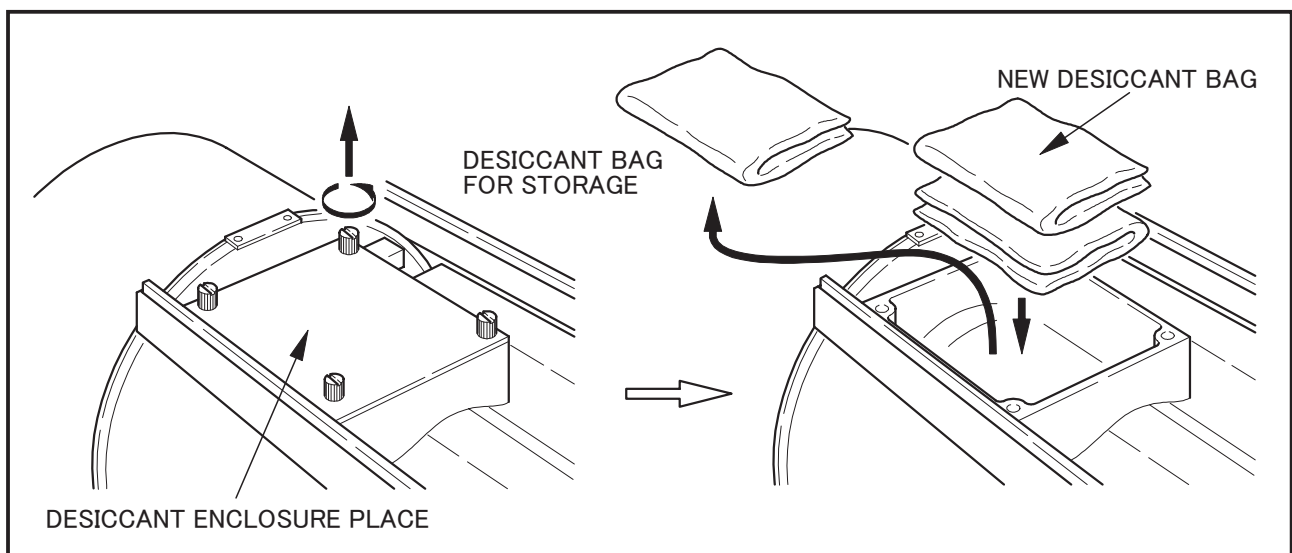
(3) Enclosure of Desiccant

The inside of this lens is able to enclose desiccant in order to eliminate humidity that may mist the surfaces of the internal glasses. A desiccant bag for storage was enclosed in the desiccant enclosure place before shipment at the factory. Prior to use, take out this bag first, and put new desiccant bags in that place as follows:

- a. There are twelve desiccant bags in the trunk. Take out two of them to use. The rest should be used when the exchange of the desiccant is required.
- b. Loosen the two lens shroud attaching knobs on the both sides of the lens. Draw the shroud towards the front of the lens to detach it from the body.
- c. Remove the four screws to take off the lid.
- d. Take out the desiccant bag for storage.
- e. Fold new desiccant bag and put it in the desiccant enclosure place.
- f. Put the detached lid in its place and reinstall the four screws. Finally, reinstall the lens shroud.

Note 1. Perform the above procedure in a dust-free place.

Note 2. In a humid region, it is recommended to change the desiccant bags two times a year. The desiccant being jellied indicates the time when it must be exchanged.



(4) Setting of Camera Mode

If the camera to be used with is not capable of serial communication with a lens, set the communication mode (camera mode) of the lens to OFF.

Setting Method

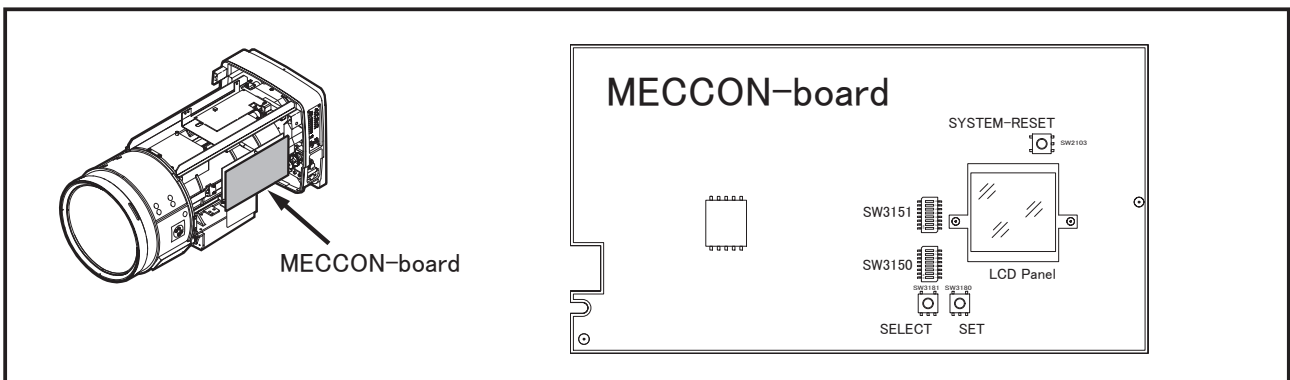
First, remove the shroud.

The shroud can be removed by pulling it towards the front after loosening the two lens shroud attaching knobs on both sides of the lens.

When the shroud is removed, the MECCON board can be seen on the right side surface of the lens (viewed from front of the lens).

Set the dip switch (SW3150) No. 1 (CAMERA-SER) on the MECCON board to “OFF.”

Note. The serial communication function is set to “ON” before shipment at the factory.



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3. SPECIFICATIONS

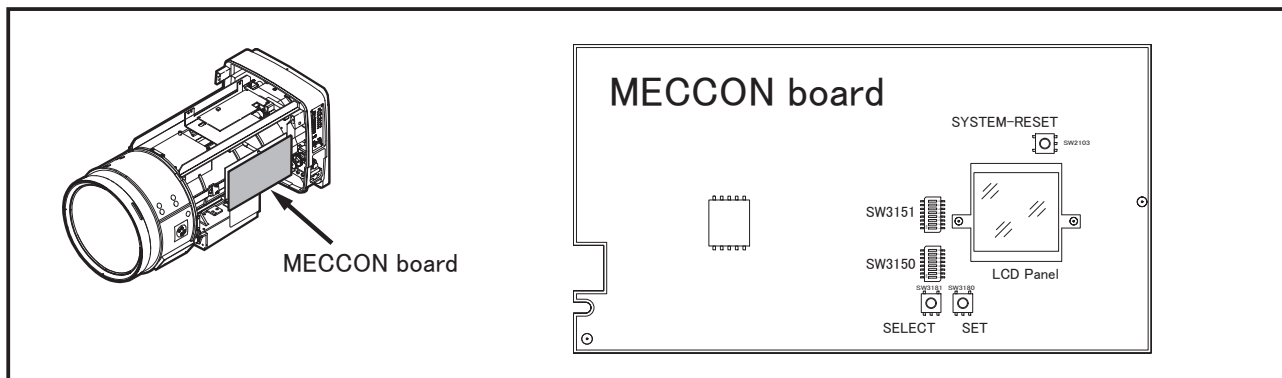
ITEM \ LENS	HZK25-1000mm					
Application	Camera with super 35mm sensor		Camera with 35mm full-size equivalent sensor			
Image Format	Diagonal ϕ 28.55mm		Diagonal ϕ 41.3mm			
Focal Length	25~1000mm [37.5~1500mm] *1		<37.5~1500mm> *2			
Zoom Ratio	40 ×					
Extender/expander magnification Ratio	1.5 ×					
Maximum Relative Aperture (F No.)	F2.8 (25~465mm) ~F5.0 (1000mm) [F4.2 (37.5~697.5mm) ~F7.5 (1500mm)] *1		<F4.2 (37.5~697.5mm) ~F7.5 (1500mm)> *2			
Iris Range	F2.8~F16, close		<F4.2~F24, close> *2			
Flange Focal Length (in Air)	52mm (See Fig. 1.)					
Minimum Object Distance (from Front of Lens)	3.5m (0.7m in Macro Operation)		<3.5m (1.3m in Macro Operation)> *2			
Field Angle (H×V)	Wide	24.88x14.00mm	52.9° ~31.3° [36.7° ~21.1°] *1	36.00x20.25mm	<51.3° ~30.2° > *2	
	Tele		1.4° ~ 0.8° [1.0° ~0.5°] *1		<1.4° ~ 0.8° > *2	
Object Area at M.O.D. (H×V)	Wide		3151 x 1772mm [2209 x 1243mm] *1		<3176 x 1787mm> *2	
	Tele		82 x 46mm [57 x 32mm] *1		<83 x 47mm> *2	
Operation range of tilt	$\pm 45^\circ$					
Iris Control	Servo					
Zoom Control	Servo (Min. Op. Time: Approx. 0.6 s)					
Focus Control	Servo (Min. Op. Time: Approx. 0.8 s)					
Anti-vibration Mechanism						
Direction of Compensation	Vertical+Horizontal or Vertical Only					
Compensation mode	HIGH or STD.					
Mount	See Fig. 1.					
Power Consumption (at 12V DC, Approx.)	Quiescent	9.6 W				
	Maximum	27 W				
Mass (Approx.)	28.0kg					

*1 The values in the brackets ([]) are given when the 1.5 × range extender is used.

*2 The values in the brackets (< >) are given when the 1.5 × range expander is used.

6. SETTING AND ADJUSTMENT OF THE LENS

The various settings of the entire lens are performed using the dip switches installed on the "MECCON" board. The detailed settings and adjustments of the functions of this lens are performed using the menus on the LCD panel.



To operate the dip switches and LCD panel, remove the shroud.

Note. Be sure not to operate switches or control knobs that are not described in this operation manual. If the settings of the switches or control knobs used for the system are changed, the lens may not operate properly.

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6.1 Dip Switch Settings

The functions of the dip switches installed on the MECCON board are described below:

SW3151

Switch No.	Name of function	Default setting	Function	Description
1	CAM[1]	OFF	Reserved	Do not change the default value setting of this switch.
2	CAM[2]	OFF		
3	RESERVE3	OFF		
4	RESERVE4	OFF		
5	RESERVE5	OFF		
6	RESERVE6	OFF		
7	TALLY-ADJUST	OFF	Tally light level adjustment ON/OFF	Sets the light level of the tally lamp. (TALLY-LOW) ON = The tally lamp will turn on at the light level that was set using the menu on the LCD panel. OFF = The tally lamp will turn on at the light level that was set before shipment at the factory.
8	BACKLIGHT	OFF	LCD backlight adjustment ON/OFF	Sets the light level of the LCD panel backlight. ON = The backlight will turn on at the light level that was set using the menu on the LCD panel. OFF = The LCD backlight will turn off.

SW3150

Switch No.	Name of function	Default setting	Function	Description
1	CAMERA-SR	ON	Camera serial communication ON/OFF	Permits or prohibits serial communications with the camera. ON =Enables serial communications. OFF=Disables serial communications.
2	BCT	ON	Field angle compensation function ON/OFF	Compensates for the change in the field angle caused by the focusing operation. (BCT : Breathing Compensation Technology) ON =Enables compensation for change in the field angle. OFF=Disables compensation for change in the field angle.
3	IRIS-GAINUP	ON	Increase Autoiris-gain function ON/OFF	Switches the feedback gain of iris in the auto iris mode. ON =1/8 OFF=1/16
4	IRIS-COMP	ON	Iris compensation function ON/OFF	Compensates for the phenomenon where the transmitted light intensity changes depending on whether the extender is used or not. ON =Compensates iris. OFF=Does not compensate iris.
5	IRIS-CLOSE	ON	Iris forced close function ON/OFF	Sets the characteristic of the control function for closing the iris by either a camera or external device. ON =Forcibly closes the iris when the iris control signal exceeds the threshold. OFF=Closes the iris in accordance with the iris control signal sent from the camera.
6	RESERVE1	ON	Reserved	Do not change the default value setting of this switch.
7	Z/F-CUSTOM	ON	Customization function ON/OFF	Sets whether the operating characteristic curve and starting/stopping speed of zooming and focusing operations are set by a user or fixed to default values. ON =Uses the customization function. OFF=Uses default values for the characteristic of the zooming and focusing operations. (The settings for the characteristic of the zooming and focusing operations can be set to "ON" or "OFF" individually using the menus on the LCD panel.)
8	RESERVE2	ON	Reserved	Do not change the default value setting of this switch.

Note. Even when some of the functions are set to "ON" using the dip switches, those same functions have been set to "OFF" using the menus on the LCD panel. For system operating conditions, check the settings in the respective menus of the LCD panel.

6.2 Settings and Operations Performed by LCD Panel

This lens allows detailed characteristics of the lens (e.g. response characteristics and optical compensation) to be set and adjusted using the menus on the LCD panel of the control board.

Note. For detailed descriptions on the menu operation of the LCD panel, refer to the LCD panel user manual.

You can download the LCD panel user manual from the Fujifilm website.

URL https://www.fujifilm.com/support/optical_devices/tv_cine/manuals/



11. OPTICAL STABILIZER FUNCTION

This lens incorporates the optical stabilizer function that optically compensates for the shakes of the lens and base mount.

This function can be operated using the operation switches of the lens, external stabilizer controller, and either a zoom rate demand unit or a focus position demand unit with a stabilizer control function.

For priorities and detailed descriptions on the operations of each controller, refer to the detailed user manual.

Note. To use the stabilizer function for this product, connect the CN2100 jumper switch 2-3 on the MECCON board.

11.1 Stabilizer ON/OFF Control

11.1.1 Operation by Stabilizer Controller

When the optional stabilizer controller (EA-12A-xxxx) is connected to the connector for stabilizer control ⑮ of this product, the stabilizer function of the lens can be controlled from the stabilizer controller. In addition to the setting of the stabilizer ON/OFF control function, the stabilizing direction (H+V/V) can be set from the stabilizer controller.

Note1. When a stabilizer controller is connected to this product, the stabilizer control switch on the product is disabled.

Note2. When the stabilizer ON/OFF function is provided on the focus control unit or zoom control unit, the stabilizer ON/OFF function can be operated from either one of those units.

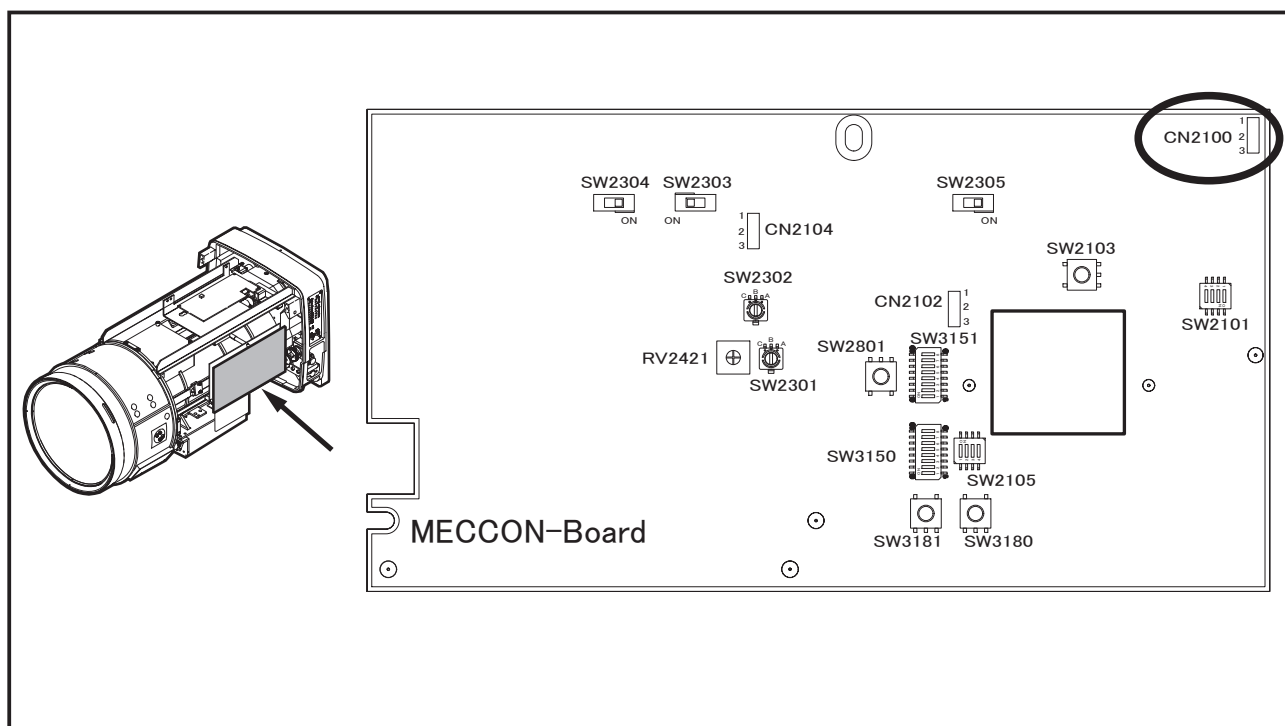
11.1.2 Operation by Lens Switch

When the stabilizer H+V/OFF/V select switch on the lens is set either to “H+V” or “V,” the stabilizer function is activated. When the switch is set to “H+V,” it compensates for vibration in both vertical and horizontal directions; while set to “V,” it compensates for vibration in only the vertical direction. When it is set to “OFF,” the operation of the stabilizer function is stopped.

11.1.3 Operation by Focus Control Unit or Zoom Control Unit

The stabilizer function can be set to “ON” or “OFF” by means of either a zoom rate demand unit or focus position demand unit that has the stabilizer control function, if such a unit is connected to the lens.

Note. Set the stabilizer H+V/OFF/V select switch on the lens either to “H+V” or “V” in advance. The stabilizer ON/OFF function is operated from the control unit in the direction that was set by the stabilizer H+V/OFF/V select switch on the lens.



11.2 Selection of Stabilizing Characteristic

The stabilizing characteristic of the stabilizer function can be selected using the stabilizer HIGH/STD. select switch on the lens or stabilizer controller.

- HIGH mode : This mode is suitable for reducing shake while shooting in a stationary state.
- STD mode : This mode is suitable for suppressing unnatural motion caused by the stabilizer control.

注 . When the stabilizer controller is connected to this product, the lens will operate using the mode that was set by the stabilizer controller.

11.3 Priorities of the switch operation

When the stabilizer controller or a peripheral device equipped with the stabilizer control function is connected to this lens, the priorities of the switch operation are as follows.

	Stabilizer mode selection	Stabilizer ON/OFF control	Direction of stabilizer control
When the stabilizer controller is connected	Operation by Stabilizer Controller Setting	ON/OFF control of all peripheral devices is enabled. (The operation performed later has higher priority.)	Operation by Stabilizer Controller Setting
When the stabilizer controller is not connected	Operation by the Setting of the Lens Switch	The lens switch has higher priority.(When the lens switch is set to "OFF," the stabilizer controller cannot be turned "ON" from a peripheral device.)	The lens switch has higher priority. (The stabilizing direction that was set from the lens switch.)

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12. MAINTENANCE

12.1 DAILY MAINTENANCE

■ Lens Cleaning

Prepare a mixture of 20% alcohol and 80% ether; soft, clean and lint free cloth or lens cleaning paper.

- a. Brush off any dust and dirt from the glass surface with a soft brush.
- b. Fold the cloth to a suitable size and moisten it with the mixture
Lightly wipe the glass surface by moving the cloth in a spiral course from the center to the periphery.
- c. If the glass does not come clean for the first time, use another cloth and wipe similarly. Repeat step 'b' several times until the glass is thoroughly cleaned.

■ Check Connection Cords

Carefully inspect outer covering and terminals for cuts, scratches or other damages.

■ Optional Accessories

When the driving power is achieved by using optional accessories, any meshing part must be normal in shape and free from dust or any other foreign matter. Carefully check all the optional equipment prior to its installation. Any foreign matter should be removed immediately, and any malformed part should be serviced as soon as possible.

■ Lens Cap

If the lens is left in position on the camera body and the camera is not in use, be sure to place the lens cap (or the hood cap when the lens hood is on) in order to protect the front glass surface of the camera.

12.2 ELIMINATION OF WATER

If the moisture contained in the air is collected in the lens unit, it may produce stubborn soils on the glasses and rust on the metal parts.

Remove such moisture in the following manner:

- 1) Wipe away any moisture that has collected on the outside of the lens unit. Then place the lens unit in a sealed vinyl bag together with a drying agent so that the agent can absorb any moisture that remains.
- 2) If ample time is available for dehumidifying, leave the lens unit in a dry room after the moisture on the outside of the unit has been removed.

Note. The time required for total drying will vary according to the size of the lens unit, the amount of moisture present and the quantity of the drying agent used.

However, it is recommended that the lens unit be left in the bag for at least three hours. A new drying agent should be used for maximum effect.

12.3 STORAGE OF LENS

After use, wipe the lens clean, and with the lens cap on, place the unit in its storage box.

For safe storage of the lens, avoid hot or humid place, and avoid places containing corrosive gas or salt.

The lens should be occasionally removed and dried if stored for prolonged periods of time.

12.4 INSPECTION

If an abnormality occurs on the lens, contact the sales agent from which you purchased the lens.

To maintain the high performance for a long term for use, we recommend that a periodic inspection is conducted at least once a year.

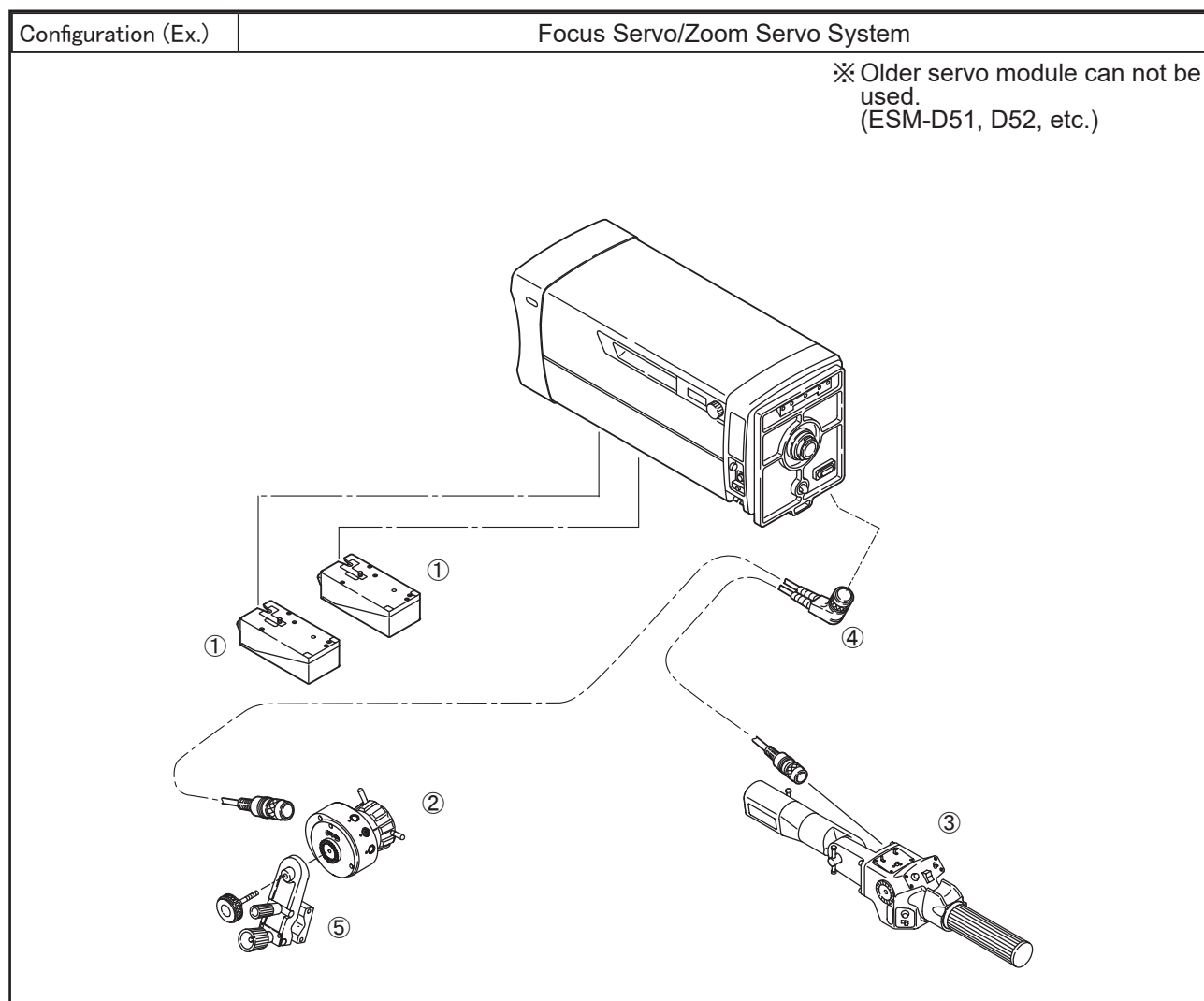
Note that we may not be able to inspect and repair our products that have been remodeled on the user's end.

14. OPTIONAL ACCESSORY

※ Use Fujinon original accessories, otherwise inherent performance of the lens may not be derived.

14.1 Focus Servo / Zoom Servo System

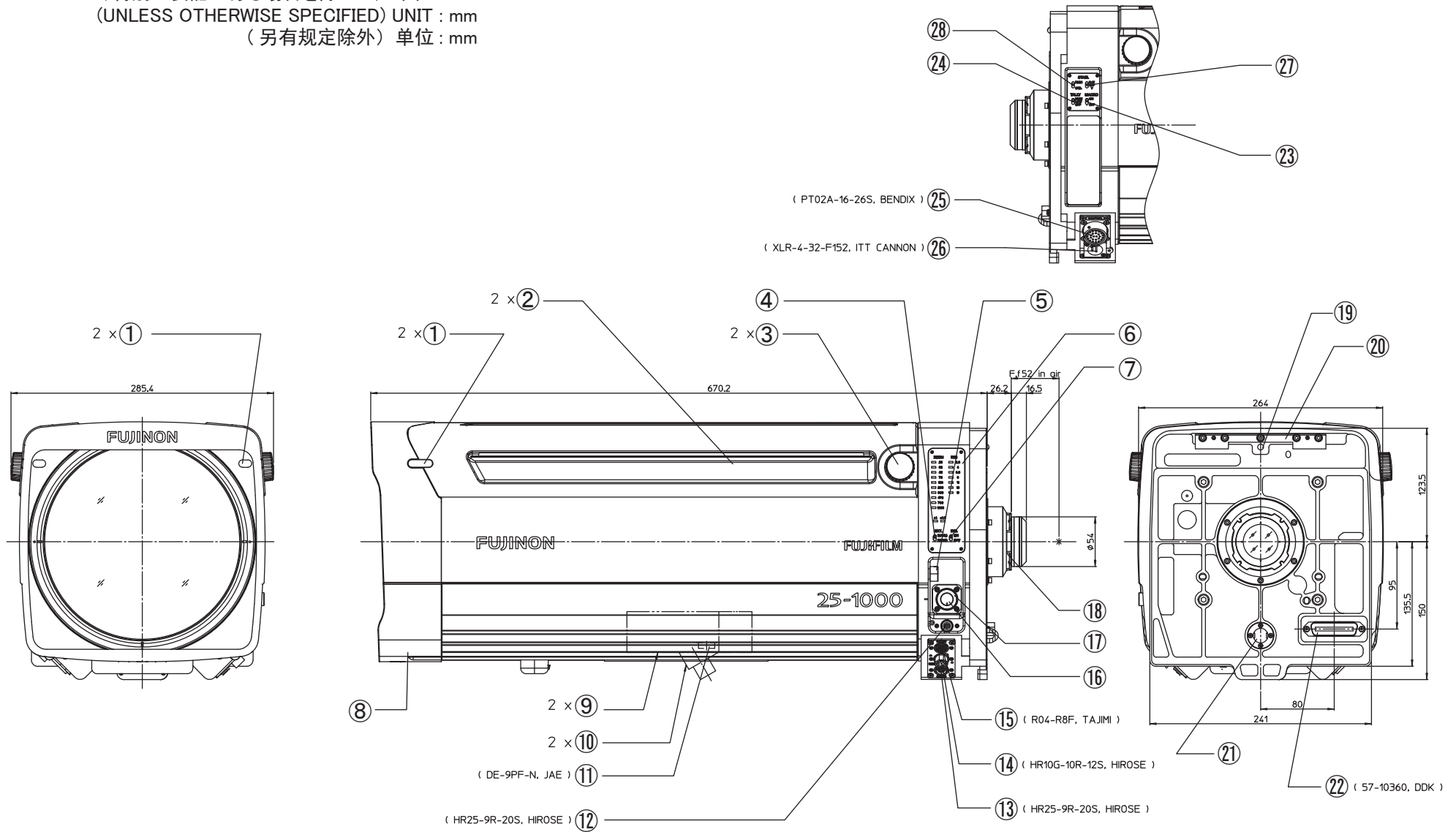
	ACCESSORY NAME	MODEL	REMARKS	
①	Servo Module	ESM-D51B	Module for driving focus.	
		ESM-D52B	High speed module for driving zoom.	
②	Focus Position Demand Unit	EPD-51A-D02	Control unit for focus positional servo control.	having a knob with rods
③	Zoom Rate Demand Unit	ERD-30A-D01	Control unit for zoom rate control.	directly mounted on a pan bar
		ERD-50A-D01		
④	Connection Cable	EFZ-11E	For electrical connection between lens and EPD, ERD,	
⑤	Mounting Clamp	MCA-51	Used with EPD-51A-D02 for its installation.	



技術資料
TECHNICAL DRAWINGS
技术资料

①	タリーライト (2カ所)	Tally Lights (2 places)	TALLY 显示灯 (两处)
②	取 手 (2カ所)	Handles (2 places)	把手 (两处)
③	カバー取付つまみ (2カ所)	Shroud Attaching Knobs (2 places)	护罩固定旋钮 (两处)
④	エクステンダ リモート/マニュアル 切替スイッチ	Extender Remote/Manual Select Switch	倍率镜遥控 / 手动选择开关
⑤	エクステンダ切替つまみ	Extender Select Knob	倍率镜选择旋钮
⑥	ズーム、アイリス、エクステンダ インジケータ	Zoom, Iris, Extender Indicator	变焦, 光圈, 倍率镜指示器
⑦	インジケータ ON / OFF 切替スイッチ	Indicator ON/OFF Select Switch	指示器 ON/OFF 选择开关
⑧	フード	Hood	遮光罩
⑨	サーボモジュール (2カ所)	Servo Modules (2 places)	伺服模块 (两处)
⑩	マニュアルモジュール (2カ所)	Manual Modules (2 places)	手动模块 (两处)
⑪	RS-232C コネクタ	RS-232C Connector	RS-232C 连接口
⑫	マクロコントロール用コネクタ	Connector for Macro Control	微距拍摄控制连接口
⑬	エンコーダ出力用コネクタ	Connector for Encoder Output	编码器输出用接口
⑭	レンジセレクタ用コネクタ	Connector to Range Selector	选择器连接口
⑮	防振コントロール用コネクタ	Connector for Stabilizer Control	减振控制器用插头
⑯	F.f 調整つまみ	F.f Adjusting Knob	镜座距调节旋钮
⑰	F.f 固定つまみ	F.f Locking Knob	镜座距锁定旋钮
⑱	マウント	Mount	卡口座
⑲	ピ ン	Pin	定位梢
⑳	フック	Hook	挂钩
㉑	スプリングピン	Spring Pin	固定梢
㉒	カメラ用コネクタ	Connector to Camera	摄像机连接口
㉓	マクロ ON / OFF 切替スイッチ	Macro ON/OFF Select Switch	微距拍摄 ON/OFF 选择开关
㉔	タリーライト HIGH / LOW / OFF 切替スイッチ	Tally Lights HIGH/LOW/OFF Select Switch	TALLY 显示灯 HIGH/LOW/OFF 选择开关
㉕	フォーカス、ズームコントロール用コネクタ	Connector for Focus, Zoom	聚焦, 变焦控制器连接口
㉖	パワーソース用コネクタ	Control Connector for Power Source	电源连接口
㉗	防振 H+V / OFF / V 切替スイッチ	Stabilizer H+V/OFF/V Select Switch	减振 H+V/OFF/V 切换开关
㉘	防振 HIGH / STD. 切替スイッチ	Stabilizer HIGH/STD. Select Switch	减振 HIGH/STD. 切换开关

(特別に表記がある場合を除いて) 単位 : mm
 (UNLESS OTHERWISE SPECIFIED) UNIT : mm
 (另有規定除外) 单位 : mm



レンズ本体 : 外観図
 Lens package : outline drawing
 镜头体 : 外视图

HZK 25-1000mm

図 1
 Fig. 1
 图 1