

INSTRUCTION MANUAL

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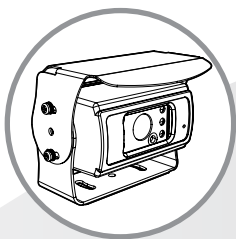
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INSTRUCTION MANUAL

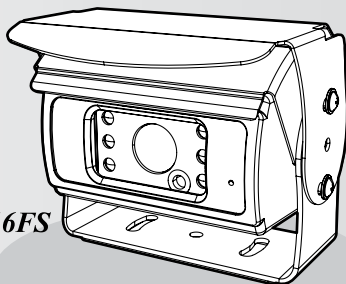
Thank you for purchasing this product.
For proper usages and application,
Please read this instruction manual thoroughly.

CM-116FS / CM-116F

SHUTTER CAMERA FOR VEHICLE



CM-116F



CM-116FS



PRINTED IN KOREA



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SHUTTER CAMERA FOR VEHICLE

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SAFEGUARD INSTRUCTIONS

SHUTTER CAMERA FOR VEHICLE

Please pay attention to the warnings and cautions listed in order to prevent the potential risks.

“WARNING” and “CAUTION” symbols are divided according to the different level of risk.



WARNING

May cause bodily harm or even death if user ignores cautions in the safety rules.



CAUTION

May cause damage or shorten usage time of product if user ignores cautions in the safety rules.



WARNING



When the power cable cord touches a metal case, cover it with a friction tape.
- **Short circuit or disconnection of wire may cause a fire or accident.**



Do not use bolts or nuts from a parts for vehicle.
- **Using bolt or nuts from steering column or break may cause an accident.**



Let professional engineers or the sale store install the camera.
- **It require the experience and skills from professional engineers for proper installation and wiring.**



After installing the camera, check if break lamp, head lamp and wipe works properly.



Install this camera to the vehicle with DC 12V.



CAUTION



Do not disassemble the device.
- **It may cause a fire or malfunction of device.**



Do not install the camera projected out from the vehicle.
- **It may harm the pedestrians.**



Do not let the extension cable pass through the seat rail. Properly wire the cables.
- **It may cause a fire or and accident.**



Do not install the camera bracket on the surface of glass.
- **Use the screws to install the camera bracket.**

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FEATURE

SHUTTER CAMERA FOR VEHICLE

- 1/3" SONY COLOR CCD image sensor
- 6 pcs of IR LEDs for night.
- Audio Function(Optional)
- Heating function Built-in
- Waterproof (IP-67)
- Aluminum die-casting housing
- Night vision using the CdS sensor.
- Automatic shutter open(close) while moving reverse(forward).

Close Shutter

Shutter is closing while moving forward.

**Open Shutter**

Shutter is opening while putting into rear gear.



* only CM-116FS

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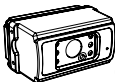
BOX CONTENTS

SHUTTER CAMERA FOR VEHICLE

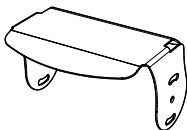


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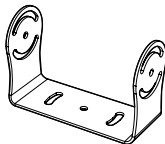
CM-116FS



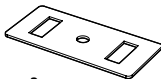
CM-116F



Sun Visor



Camera Bracket

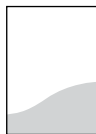


- x3
- x3
- x3
- x4

Accessory Pack



Extension Cable



Instruction Manual

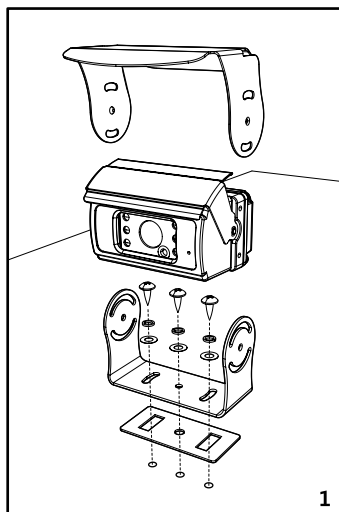
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INSTALLATION

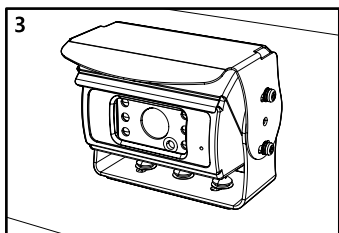
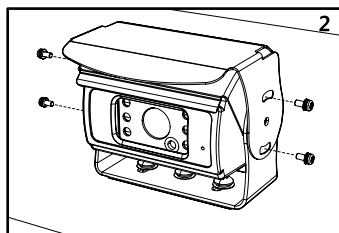
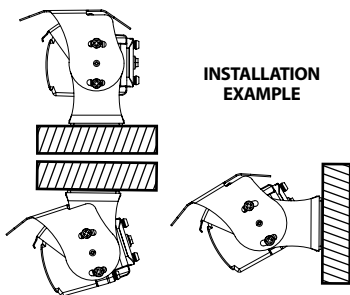
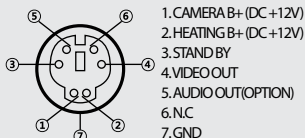
SHUTTER CAMERA FOR VEHICLE

1. Determine a position and a direction of installation so that the rear view can be effectively seen on the monitor screen.
2. Fix the camera bracket to the vehicle using the provided adhesive tape and tapping screws.
3. Place a camera and sun visor to fixed bracket and assemble them with enclosed screws.
4. Run the cable from the monitor to the camera.

*** When you install the sun visor, please be careful not to touch with shutter moving area.**



CM-116FS Camera Connector

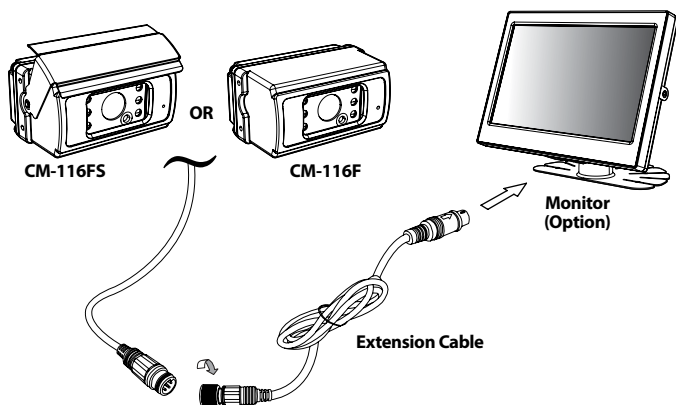


*** The installation is same way with CM-116FS/CM-116F.**

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CONNECTION

SHUTTER CAMERA FOR VEHICLE



Before making the connection, disconnect the ground terminal of the car battery to avoid short circuiting.



Before inserting plug, should check pin specification and the plug should insert to jack or connector firmly. If forced insert wrong direction, it may cause malfunction.



When connect extension cable, turn it right direction as described arrow.

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CLEANING and GENERAL MAINTENANCE

SHUTTER CAMERA FOR VEHICLE

- If your vehicle has been parked in direct sun light resulting in a considerable rise in temperature inside the vehicle, allow the unit to cool off before operating.
- Clean the unit with a slightly damp soft cloth. Use a mild household detergent. Never use strong solvents such as thinner or benzine as they might damage the finish of the unit.

OBJECT and LIQUID ENTRY

Never push objects of any kind into this monitor equipment through holes as they may touch dangerous voltage points or short-out parts that could result in a fire or electric shock. Never spill liquid of any kind on the product.

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SPECIFICATION

SHUTTER CAMERA FOR VEHICLE

| | NTSC | PAL |
|-----------------------|----------------------------------------|-------------------------------|
| Pick-up device | 1/3" 250,000 pixels COLOR CCD | 1/3" 290,000 pixels COLOR CCD |
| View of angle | 95°(H) / 70°(V) / 120°(D) | |
| Minimum illumination | 0.1 lux | |
| Input voltage | DC 12V / 200mA Max. | |
| Operating temperature | -10°C ~ 60°C | |
| Dimension | 78(W) x 40(H) x 54(D) mm (Camera Only) | |
| Weight | 282g (Camera Only) | |

* Design and specifications are subject to change without notice.