

Operating Manual

Meta Mount Adapter

E-to-PL with built-in electronics for lens meta data

Product number: MA-EPL-HR12



Version 4





Dear Customer,

Thank you for purchasing a quality product from Chrosziel. We appreciate the trust you placed in us.

This manual provides valuable information and instructions to ensure that you will get the most out of your Chrosziel Mount Adapter. Before using the device for the first time please read this manual carefully. We kindly ask you to keep the manual handy for quick reference, and keep all documents supplied with the device in a safe place.

We hope you will enjoy your new Mount Adapter!

Sincerely yours, Chrosziel GmbH

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2. Key to symbols

Important!



This symbol highlights important instructions that must be followed for smooth, trouble-free operation of the device. Please observe these instructions to avoid malfunctions.

Notice!



This Symbol highlights information which should be noted for perfect usage.

3. Product Description

3.1 General

The Chrosziel Meta Mount is a Sony E camera to PL lens "hot mount" adapter with metadata communication. The adapter features the required interfaces and sockets necessary to exchange lens data between camera and lens. It also provides lens control through a 12-pin Hirose lens port compatible socket or the 4pin PL- mount interface to an ENG lens.

When the Meta Mount is combined with cine lenses equipped with LDS or Cooke/i Data the metadata such as iris setting, focus distance and zoom focal length are received through the adapter and are displayed in the viewfinder. Depending on the used camera those metadata are recorded to the footage and therefore can be used in post-production.

When the Meta Mount is used with an PL servo-controlled broadcast lens (like Fujinon ZK/XK or Canon CN models) the Focus/Iris/Zoom servo's can be controlled through the camera and are compatible with the Sony FX9 / FX6 / FX3 hand grips, RCP, or camera's web GUI. This allows for an easy integration of PL broadcast lenses into the typical broadcast workflow in combination with a Sony E mount camera.

The Meta Mount is shim-able with the included shim set for the E-mount.

Key- features are:

- ✓ User installable unit
- ✓ Sony E Mount Camera to PL mount Lens
- ✓ Electronic contacts for metadata communication and lens control
- ✓ Lens metadata displayed in camera and recorded to file
- ✓ Shim-able with the included shim set for the E-mount.
- ✓ Full focus/Iris/Zoom/REC control on servo motor ENG lenses
- ✓ Software updates via USB through user in the field



3.2 Serial Number

The serial number and other manufacturer information are placed at the E-Mount side.

3.3 Applications / Intended Use

The Meta Mount Adapter is designed to reflect the state of the art and comply with recognized technical safety rules. However, improper use of the device or use of the device for other than the intended purpose may cause damage to the device itself and/or other objects or persons.

The Meta Mount Adapter can be used with all Sony E Mount cameras and compatible PL mount lenses. Other use, or use beyond this scope, is deemed to be used for other than the intended purpose and is entirely at the user's risk. Intended use also comprises observation of the instructions for use and installation and compliance with maintenance conditions.

3.4 Benefits from using the Chrosziel E/PL Meta Mount

- ✓ Use PL Cine Style lenses with their special look and feel on a Sony E- Mount camera and no longer lose the lens data
- ✓ The Meta Mount can be adjusted regarding flange depths (shimming). Tolerances of the e-mount flange on the camera can be eliminated. So, lenses with properly adjusted flange depths can be swapped in/out across the set without taking care about different flange depths on different cameras
- ✓ On Fujinon ZK/XK and Canon CN series lenses, the use of a Lens Port cable can be omitted for most of the functionality, because data exchange and control are possible via the 4pin PL interface as well
- ✓ The Zoom rocker of the original grip AND the top handle of the camera can be used again, the top handle rocker also allows for zooming in "Low Mode" situations
- ✓ Cine PL lenses with servo drive can be remote controlled through the camera's original remote interfaces like WEB- GUI, Mobile app or RCPs again
- ✓ Auto-Iris available with PL Cine Style lenses on SONY e-mount cameras again.



3.5 Product safety instructions

Short circuit protection is performed by a protective fuse which insulates the device from power supply in case of over-current events caused by unexpected internal failures. In addition, power input is polarity protected. The nominal input voltage of the Meta Mount Adapters is 10–18V. At temperatures below -10° Celsius or above 40° Celsius, optimum functioning of the product can no longer be guaranteed. The device can be used in moderate outdoor conditions.



Improper use of the Meta Mount Adapter may result in serious and extensive damage to health or can cause enormous damage to property. Please ensure you read the following instructions carefully and familiarize yourself with the device before operating it. By doing so, you will ensure safe and smooth operation of your Meta Mount Adapter.

To protect the E-mount interface on the camera **ALWAYS** use the attached 3/8" support thread on the Meta Mount with a mating bracket on the support rods of the cameras bridge plate.

Observe general safety and accident prevention regulations. In addition to the instructions given in this operating manual, ensure that general safety and accident prevention regulations are observed.

Provide this operating manual to third parties. Please ensure that any third parties using the Meta Mount Adapter only do so after reading and understanding the instructions.

Keep away from children and protect against unauthorized use. Keep away from children. Children must not be permitted to operate the Meta Mount Adapter. Protect it from unauthorized access or use. The Meta Mount Adapter is not intended for use by persons (including children) with reduced physical, sensory, or mental capabilities, or lack of experience and knowledge, unless a person supervises them responsible for their safety or have received instruction concerning use of the Meta Mount Adapter from that person.

Never leave in operation unattended. Never leave the Meta Mount Adapter unattended in operational condition or in operation.

Take care and always concentrate when using the device. Do not work with the Meta Mount Adapter while having difficulties in concentrating or under the influence of drugs, alcohol, or medication. A single moment of inattention while using the Meta Mount Adapter may result in accident and injury.

Ensure the unit is firmly affixed to lens and camera. When affixing the Meta Mount Adapter between the lens and the camera, ensure the unit is mounted securely and properly.

Watch out for damage. Check your Meta Mount Adapter for damage before installation and operating. Do not use the unit if there are any signs of damage.

Use for the intended purpose. Ensure you use the Meta Mount Adapter for the intended purpose described in this operating manual, only.

Only use original parts. For your own safety, only use accessories and add-ons that are specified in this operating manual or recommended by the manufacturer.



4. Setting Up the Meta Mount Adapter

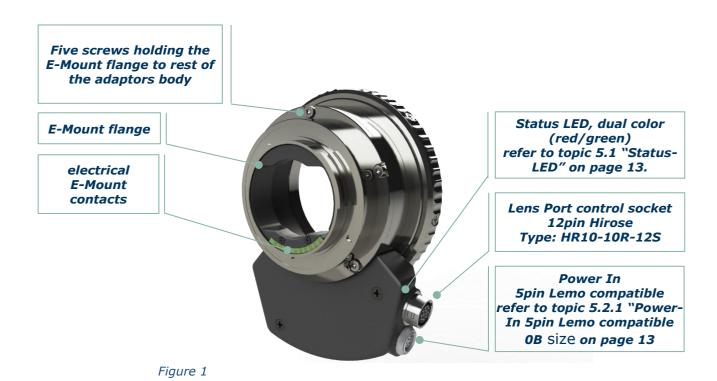
4.1 In the Box

After opening the package, immediately check if all accessories and parts listed below are complete and in a good condition. If anything is missing, faulty, or damaged, contact your retailer. Do not operate the device if it is or appears to be faulty.

In the box:

- ✓ 1x Meta Mount E-to-PL adapter (Chrosziel Part # MA-EPL-HR12)
- ✓ 1x MN-AB (power supply cable 12 Volt D-Tap 0B 5-pin Lemo compatible)
- ✓ 1x F55-A2-P-CAM (power supply cable 12 Volt Hirose 4-pin 0B 5-pin Lemo compatible
- √ 1x Shim Set, E-Mount side (Part# E4511000)
- ✓ 1x USB "Mini A/B" to "A" Adapter
- ✓ Protection cover E-Mount flange
- ✓ Protection cover PL-Mount flange

4.2 Overview about operational elements





Overview about operational elements - continued:

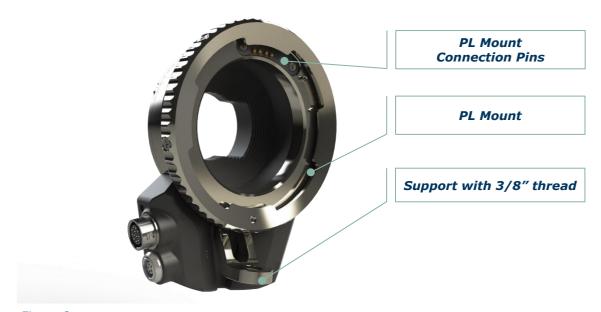


Figure 2

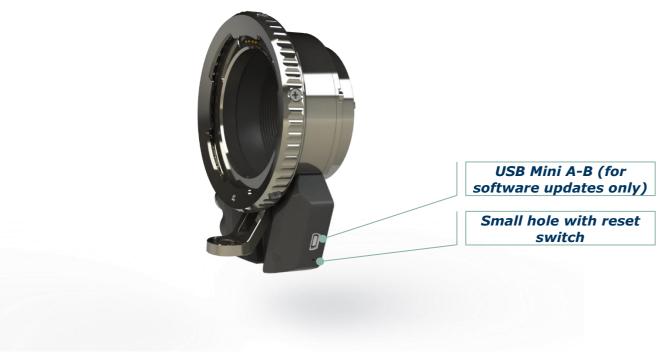


Figure 3



4.3 Mounting

Follow these steps to mount the Meta Mount Adapter:

- 1. Recommended: disconnect all cables from the Meta Mount and power down the camera
- 2. Remove the protecting covers on camera mount and Meta Mount.
- 3. Make sure, connection pins on the camera flange and the Meta Mount are clean and not damaged.
- 4. Install the Meta Mount onto the camera using the E-Mount locking mechanism.
- 5. Recommended: screw on the 3/8" support of the adapter to a lens support bracket
- 6. Install the lens onto the Meta Mount Adapter.
- 7. Recommended: attach a second rod support bracket to the lens itself
- 8. If existing, connect the 12pin Lensport cable to the adapter
- 9. Connect the power cable to the adapter
- 10. After switching on the camera, lens data should appear in the display. If connection is not established after a couple of seconds, checkout the trouble shooting section of this document.



If a heavy lens is mounted on the Meta Mount Adapter without any support bracket the E-mount flange of the camera or the Meta Mount can get damaged.

4.4 Shimming

One of the outstanding features the Chrosziel Meta Mount is the ability to shim it for equalizing tolerances of the e-mount flange depth on different camera bodies or lenses. This gives the advantage to swap in/out different lenses (of course with a properly adjusted flange depth) across all cameras on set without concerning about an error in back focus setting. The Meta Mount of course needs to stay paired to the respective camera. So, each camera should have its own shimmed adaptor.

The MA-EPL-HR12 leaves the factory with the standard flange depth for PL to E standard. It comes with a set of additional shims. Each shim has a different thickness (refer to color schema on the shim package). It is recommended to shim the Meta Mount by a trained technician.



To shim the mount, follow these steps:

- 1. Determine the needed amount and direction of the needed shimming
- 2. Open the five screws (Allen-key 2mm) holding the E-Mount flange to the rest of the adaptors body (refer to Figure 1 on page 9Figure 1 above).
- 3. Combine a new set of shims incl. the already installed one to form a new offset
- 4. Install the new combination
- 5. Reassemble the flange
- 6. Check out, whether flange depth it corrected as intended, if not repeat from step 3



5. Operation

5.1 Status-LED

LED State	Meaning
Constantly green	power on, status OK, Lens data and e-mount link established
Constantly Off	No Power
Green + fast red flashing	Powered, Meta Mount scanning PL pins and Lensport socket for a connected lens, no data link established yet
Green + short red blink every 2 seconds.	Lens connected, no e-mount data link established (camera switched off; Meta Mount not or not properly mounted to camera flange)
Green flash every 2 seconds	Meta Mount in Stand By mode
Red + Green (Orange) static on	VTR-button pressed on ENG style lenes (if 1ipin Lensport interface is used)

5.2 Connectors

5.2.1 Power-In 5pin Lemo compatible 0B size

Unlike e-mount lenses are powered directly through the electronics of the e-mount interface, larger TV lenses expect higher operating voltages and currents. Therefore, external power needs to be applied to those lenses through the Meta Mount. The 5pin 0B Lemo compatible power socket accepts operating voltages from 10-18V. The power input is reverse polarity and over/under voltage protected. Additionally, this socket carries a set of contact closure pins for camera R/S support.

Figure 4

Type: Lemo compatible 0B 305 - female on Mount

Pin 1: + Power in

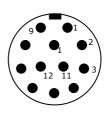
Pin 2 & 3: Relay closure contacts 100mA max.

Pin 4: - Power /GND



5.2.2 Lens Port interface 12pin Hirose

As a typical broadcast or TV camera this socket provides a data connection via the Lens Port cable of common broadcast lenses like Canon CN or Fujinon ZK/XK lenses. This socket supports a digital connection link only. Unlike on the PL- 4pin Interface the power out on Pin 6 is always present if mount is powered.



```
Type: Hirose HR10-10R-12S – female on Mount
```

```
Pin 1
      RET in
Pin 2
      VTR in
Pin 3
      GND
Pin 4
Pin 5
Pin 6
      Power (10 - 18V)
Pin 7
Pin 8
Pin 9
Pin 10
Pin 11 Serial Data Lens → Mount
Pin 12 Serial Data Mount → Lens
```

Figure 5

5.3 Hints for best performance – How to ...

- ✓ For best performance always connect the lens port cable to the 12-pin lens port socket of the Meta Mount.
- ✓ On Fujinon Lenses, if no cable existing for the lens port, get in contact with your Chrosziel dealer to order the cable CAB-LP-FJN20.
- ✓ Make sure to configure the lens' servo drive for the intended usage with setup switches or setup display (refer to section trouble shooting below).
- ✓ On Fujinon lenses (ZK/XK), if the usage of the extra cable shall be omitted, lens can be powered & controlled through 4-pin PL interface as well but without the full functionality of the lens port control interface. This depends on the firmware installed on that particular lens.
- ✓ To switch between metric and imperial focus distance display the camera needs to be set up in the user display setting of the camera accordingly, the Meta Mount does not provide an automatic switch over between metric & imperial units related to the used lens
- ✓ Use the VTR button of the lens' servo for record start stop (R/S) on your Fx6/9 again: get in contact with your Chrosziel dealer to order the cable CAB-COFL-AB-0B5
- ✓ On firmware versions >= 1.9 the VTR button of ENG lenses can trigger the REC start/stop without the need of the extra cable CAB-COFL-AB-0B5. Configure camera's "Lens Button" or "Focus Hold Button" to "REC" function.





5.4 Optional accessories

Item	Chrosziel Part Number
Lens support 15/19 mm	401-49
Universal Lens support, Quick-fit for Ø 15mm rods	401-22
Combined D-Tap & LANC - R/S cable	CAB-COFL-AB-0B5
Combined power & serial data lens port cable for Fujinon ZK/XK lenses	CAB-LP-FJN20
Shim Set, E-Mount side	E4511000

6. Maintenance

The Meta Mount Adapter is usually maintenance-free. In the case of wear and tear to specific parts, please send the device to an authorized service department. There are no special maintenance tasks to be done by the user/owner with one exception regarding the cleaning of the housing if needed.

- Only, clean the device when it is disconnected from power.
- Never use harsh or abrasive cleaning agents.
- Be careful at the sockets not to blow or wipe in dust and detergents into the electric contacts



Only, Chrosziel Customer Service operatives may perform any further maintenance or repair tasks. All warranty claims are voided if maintenance tasks are performed during the warranty period by persons or companies without Chrosziel Customer Service authorization. Wear parts are not included in the warranty.

6.1 Checking for current software version

If Meta Mount is used together with a SONY Fx9, the software version installed on the Mount can be obtained from the view finders display of the camera as follows:



Figure 6 (typical on-screen display Fx9)

After installing the lens and connecting power to the Meta Mount the on-screen display in the viewfinder is extended by the data of the connected lens. In the upper left corner, the current focal distance (in this case 1.0 meter) is displayed. On the right side of that information a four-digit number shows the software version of the mount for about 3



seconds. In this case "+1402" means version 01.04.02. Afterwards this display turns into the normalized position value of the focus ring (+3277). The value of the information ranges from 0 to 6553.

6.2 Software update via USB

Chrosziel is continuously improving the software of the system based on the demands of the industry including customer-requested improvements. The user can easily install an update to the latest software. The only requested items are the software files supplied by Chrosziel and a standard USB- Stick flash drive. Contact your dealer or Chrosziel directly to obtain new files or get registered for the respective newsletter. To register for update notifications, please draft an e-mail to info@chrosziel.com. Include product serial number, name, company, and email address. We comply with all statutory data protection laws.

Copy the provided software file "eplimg.hex" into the root of an USB stick flash drive (FAT/FAT32 formatted).

Update procedure:



- Update procedure can be done with or without lens and/or camara connected
- Power down the adapter
- Use a needle or something like, pierce the small hole next to the USB socket (there is a small switch behind it) and apply power.
- Green LED turns static on, no further operations are available
- Put USB stick with firmware into socket and wait for a couple of seconds until flashing pattern for the update procedure finishes and adaptor returns to normal behavior (might show a flashing pattern, if no lens is connected)
- If connection to lens and e-mount is established afterwards, LED shows a static green light, otherwise there is a red flashing pattern.
- At this point procedure has been finished successfully



7. Warranty

7.1 Scope

Chrosziel GmbH grants the owner of the product a standard warranty of **12 months** from the date of invoice. During this period, material or production defects identified on the Meta Mount Adapter will be remedied free of charge by the Chrosziel customer service.

The terms of the warranty exclude faults or defects from causes other than material or production defects, like

- Damage of any kind during transportation
- Faults caused by improper installation
- Faults caused by use for other than the intended purpose
- Faults caused by improper treatment
- Faults caused by unprofessionally performed repairs or attempts at repair by persons or companies without authorization from Chrosziel GmbH
- Normal wear and tear
- Cleaning of components
- Alignment to nationally diverging technical or safety-relevant requirements if the device is not used in the country for which it was designed and manufactured.

We do not accept liability for devices with serial numbers that are falsified, changed, or removed. All warranty claims are voided if the device is opened.

Warranty claims beyond free repair of faults, e.g., compensation claims, do not fall within the scope of the warranty.

7.2 Customer Service

In case there are operating issues with the Meta Mount Adapter occurring, proceed as follows:

a) Contact Customer Service

Mail: <u>info@chrosziel.com</u> / phone: +49 (0) 89 / 901 091 0 (Mon. - Fri.: 9 am - 5 pm CET)

Please give a detailed description of the issue, include a picture or video, and the invoice.

b) Pack the device carefully

Pack up your device, making sure the packaging is well padded and protected from impact. N.B.: Warranty does not cover transport damage!

c) Ship the device

After response from the Chrosziel Customer Service Center, proceed as instructed.



8. Troubleshooting, known issues 8.1 General

- No Power LED, even if power cord is connected and power available
 - → Power supply voltage higher than 18 V, power applied reversely
- No focus (speed +/- mode) control via Web GUI with PL interface connection only
 - → The PL- interface connection does not support any kind of focus control, use Lens-Port cable connection instead
- Auto Focus function not working, cannot be activated
 - → The Cine PL- TV Lenses do not support the direct Auto Focus feature, so this mode cannot be activated on your Fx3/6/9
- Record Start Stop (R/S) not working from the VTR button of the lens' servo drive
 - → get in contact with your Chrosziel dealer to order the cable CAB-COFL-AB-0B5
- Auto Iris cannot be activated either through RCP control or "Auto-Iris" button on camera
 - → Check for position of the A/M switch on the servo, also check the direction setup of this switch in setup menu of the drive (Canon) or dipswitch setting (Fujinon), Lenses without a servo driven Iris axis cannot be remote controlled and therefore cannot support the "Auto-Iris" feature.
- The firmware update does not install
 - → Format USB flash drive to FAT16 or FAT32; Ensure the file is saved in the root of USB flash drive, not in a sub-folder; try a different USB flash drive; use a clean USB stick without any additional files & folders.
- Scale ring values for Iris and/or focal length do not correspond to the displayed values in the view finder
 - → Check / correct setting of the extender setting of the lens, if existing.
- ENG-lens's VTR button does not trigger the REC- function of the camera
 - → Check / update firmware of your MA-EPL-HR12 (needs to be higher than 1.9)
 - → Assign the user button "Lens Button"/" Focus Hold Button" to REC function.



8.2 Using Canon lenses

No Lens Data connection with Canon lenses via 12pin interface

→ Make sure to activate the serial control line in the setup menu of the servo-drive and set the entry "I/F prior" to "Cable", plug the 12 pin tail into the 12pin socket



of the MA-EPL-HR12:

→ After changes of settings re-power the MA-EPL-HR12

No Lens Data connection with Canon lenses via 4-pin PL Interface

- → Activate Lens Mount communication in the setup menu of the servo drive
- → Plug the 12pin tail into the 12 pin socket of the extender housing of the lens, if existing



- → "Camseri:" can be off as well
- → After changes of settings re-power the MA-EPL-HR12

No Iris remote control, even if A/M switch position is "A"

→ Make sure to set the A/M mode to "Norm" in the setup menu of the servo-drive:



- Extender setting of lens not considered by Fx9 regarding focal length calculation and no Iris correction on lens
 - → This is mainly an issue of the lens servo itself, try to use the PL- Mount interface of the lens instead of 12pin lens port (refer to set-up above)



8.3 Using Fujinon lenses

- No Zoom control (via grip, handle, Web-GUI) on Fujinon lenses @ 4-pin PL interface
 - → Fujinon lenses currently do not support the Zoom control via that interface, get in contact with your Chrosziel dealer to order the cable CAB-LP-FJN20
- No Lens Data communication with Fujinon lenses via 4pin PL interface and/or 12-pin Lensport Interface
 - → Set switch 1 to "On" for enabling the camera Lensport interface and set switch 2 to "off" position (iData-mode on 4 pin interface) [□]



Figure 7 (recommended setup for the dipswitches on Fujinon lenses)



9. Disposal



The packaging and all packaging materials used are from environmentally friendly recyclable materials. At the end of its useful life, the Meta Mount Adapter must be taken to a recycling center for appropriate environmentally friendly disposal. Do not discard the Meta Mount Adapter with household waste. Find your nearest recycling center by searching the Internet or contacting your city hall.

10. Additional Information

Premista product landing page:

https://www.chrosziel.com/Mount-Adapter-E-to-PL-with-built-in-electronics-for-lens-meta-data/MA-EPL-HR12

Subscribe to the newsletter:

https://go.chrosziel.com/newsletter-registration

Enjoy the Chrosziel blog with user stories: https://www.chrosziel.com/userstores

Chrosziel in the social web:

Instagram: https://www.instagram.com/chrosziel

LinkedIn: https://www.linkedin.com/company/chrosziel-qmbh

Facebook: https://www.facebook.com/chrosziel

Twitter: https://twitter.com/Chrosziel

Share your excitement:

@chrosziel | #chrosziel | #hackthelens



11. Technical Data

11.1 USB

Type: min A-B; usage for software updates only

11.2 Specifications

Specification	Value		
Chrosziel Part Number	MA-EPL-HR12		
Weight (Mount Adapter)	approx. 0,4 kg (0,88 lbs.), no cables connected		
Sizes (see Figure 11 and 12 below)	I= 112 mm w= 57 mm h= 54 mm		
Operating Temperature	-10 °C to 40 °C (20 °C is recommended)		
Power supply	10-16V (Lemo compatible 0B 5-pin)		
Power consumption max. approx.	50mA @ 12V, no lens connected		

11.3 Included accessories

Item (one of each)	Chrosziel Part Number
power supply cable 12 Volt A/B D-Tap – 0B 5-pin Lemo compatible)	MN-AB
Combined Cable Aladin2/MagNum/CDM-MK-Z Power + on/off F55	F55-A2-P-CAM
Shim Set, E-Mount side	
USB Mini Adapter	



11.4 Meta Mount – drawings

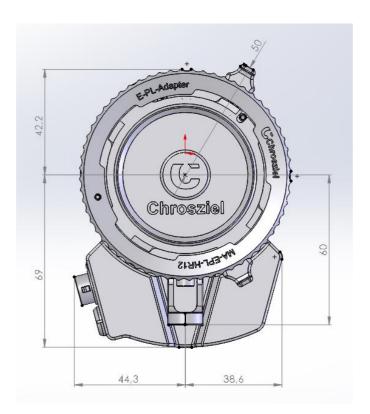
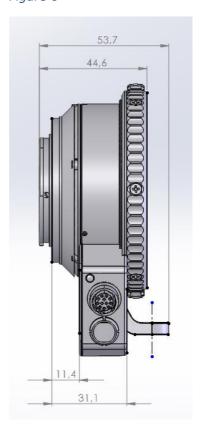


Figure 8



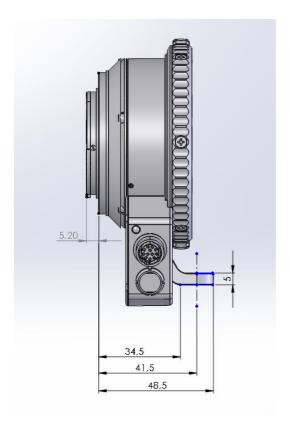


Figure 9 Figure 10

(N.B.: Pictures show the size of the Meta Mount Adapter)



Declaration of Conformity



Manufacturer: Chrosziel GmbH Klausnerring 6 85551 Kirchheim Germany

Product:

Meta Mount Adapter MA-EPL-HR12

Herewith we certify that our product mentioned above comply with CE conformity regulations. And is in conformity with the essential requirements and other relevant provisions of the following EC directive including all applicable amendments:

99/5/EC of 9 March 1999 2011/65/EU of 1 July 2011 EN 300 220-2 V2.4.1 (2012-05) EN 300 328 V1.7.1 (2006-10) EN 300 440-2 V1.4.1 (2010-08) EN 301 489-1 V1.9.2 (2011-09) EN 301 489-3 V1.4.1 (2002-08) EN 60950 (2006) EN 62368-1 (2016) IEC/UL 62368

MA-EPL-HR12 has been assessed to the RoHS2 & RoHS3 directive using the following harmonized standard:

RoHS 2 - (2011/65/EU) + Extension RoHS 3 (EN 50581).

Kirchheim, July 2022

Chrosziel GmbH
Timm Stemann
CEO Chrosziel GmbH
85551 Kirchheim b. München





<u>Notes</u>	