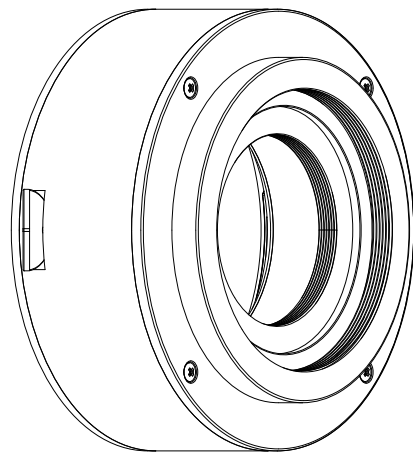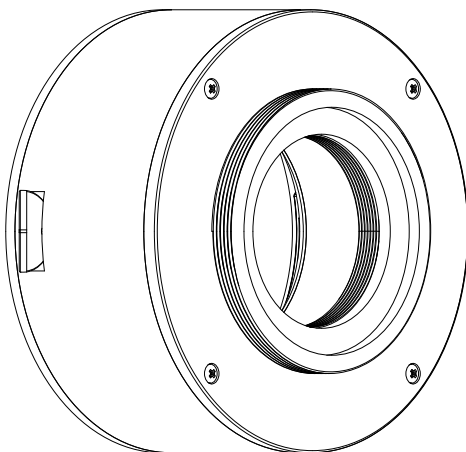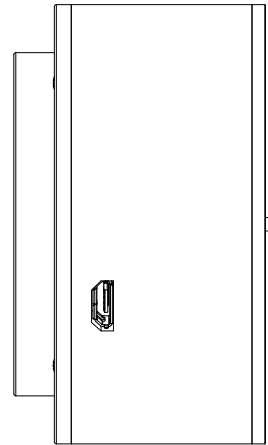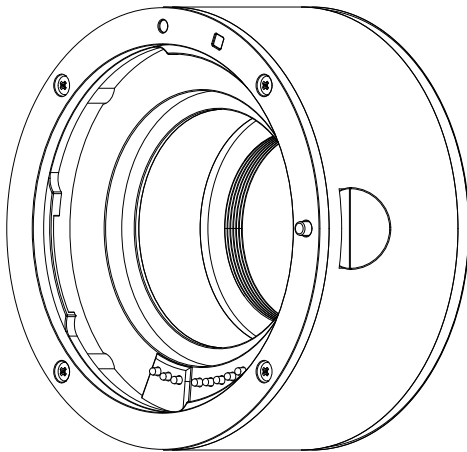# EF / EF-S Lens Controller & Adapter
for Astronomy Camera
(Canon® Lens Compatible)

* Canon is a registered trademark of Canon Inc. This product is not manufactured by, endorsed by, or affiliated with Canon Inc.

Overview

The solution allows Canon EF and EF-S lenses to be used for astrophotography. In addition to mechanical mounting, it provides electronic control of lens focus and aperture via a USB port. Designed for compatibility with astronomical imaging software, the adapter enables users to control lens settings programmatically.

Product Highlights

- **EF/EF-S Lens Compatibility**
  Supports a wide range of Canon DSLR lenses, expanding lens options for astronomers.

- **No External Focuser Needed**
  Uses the lens's internal focus motor, eliminating the need for mechanical focusers.

- **USB-Controlled Focus & Aperture**
  Electronic adjustment of focus and aperture via a standard USB connection — no manual handling required.

- **Software Integration**
  The adapter is designed to work with popular astrophotography software platforms via ASCOM / INDI compliant drivers.

- **Compact Design**
  Secure, low-profile mounting ensures stable alignment and minimal flex, maintaining optical quality.

Adapter variants

To support a wide range of cameras, the adapter is available in different versions, based on camera back focus:

For Cameras with Back Focus	17.5 mm	12.5 mm	6.5 mm
Mounting Interface: T-mount with	male thread	male thread	female thread
Compatible with Cameras such as the QHY®, ZWO® -> or any other camera with M42x0.75 mm thread and a similar back focus.	QHY183 QHY294	ASI120 ASI178 ASI224 ASI290 ASI385 ASI462 ASI662 ASI664 ASI676 ASI678 ASI715	ASI174 ASI183 ASI294 ASI432 ASI482 ASI533 ASI585 ASI990

Filter Support

Each adapter variant can include two integrated holders for:

- 1.25" filter (standard threaded filter)

- 36 mm unmounted filter

This design allows direct filter installation inside the adapter, maintaining a compact optical path without external accessories.

Technical Specification

|	
Power supply	5V, 500 mA
Connector Type	USB Micro
Device Class	USB CDC (Communications Device Class)
No driver required	Native support on Windows, macOS, and Linux
Dimensions	Adapter: 66 x 31.9 or 37.5 mm
Camera mount	T-mount, M42x0.75 mm
Lens mount	Canon EF or EF-S
Adapter Material	Plastic housing with metal components
Durability	Rated for repeated connect/disconnect cycles

Physical Specification
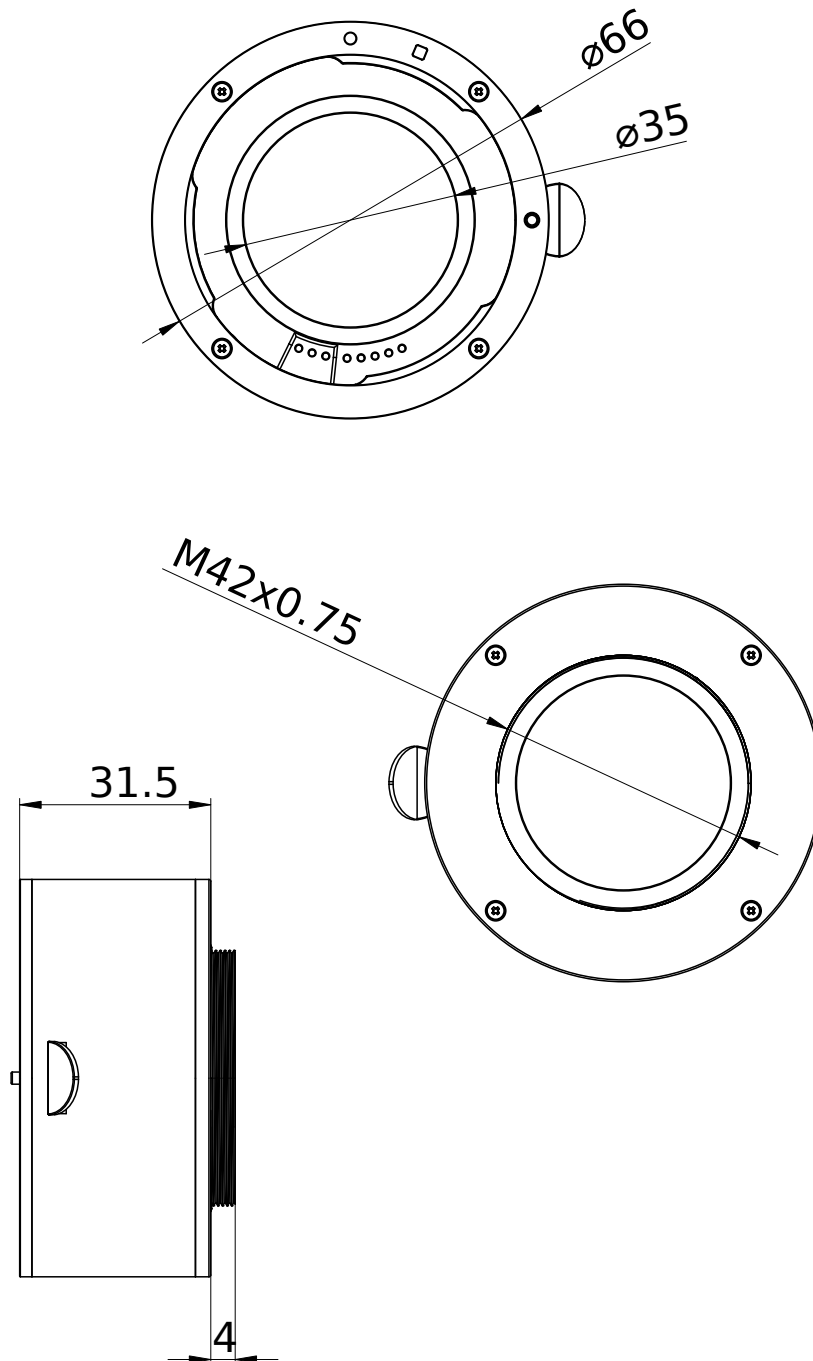
Back focus 17.5 mm, no filter support

ø66

ø35

M42x0.75

26.5

4
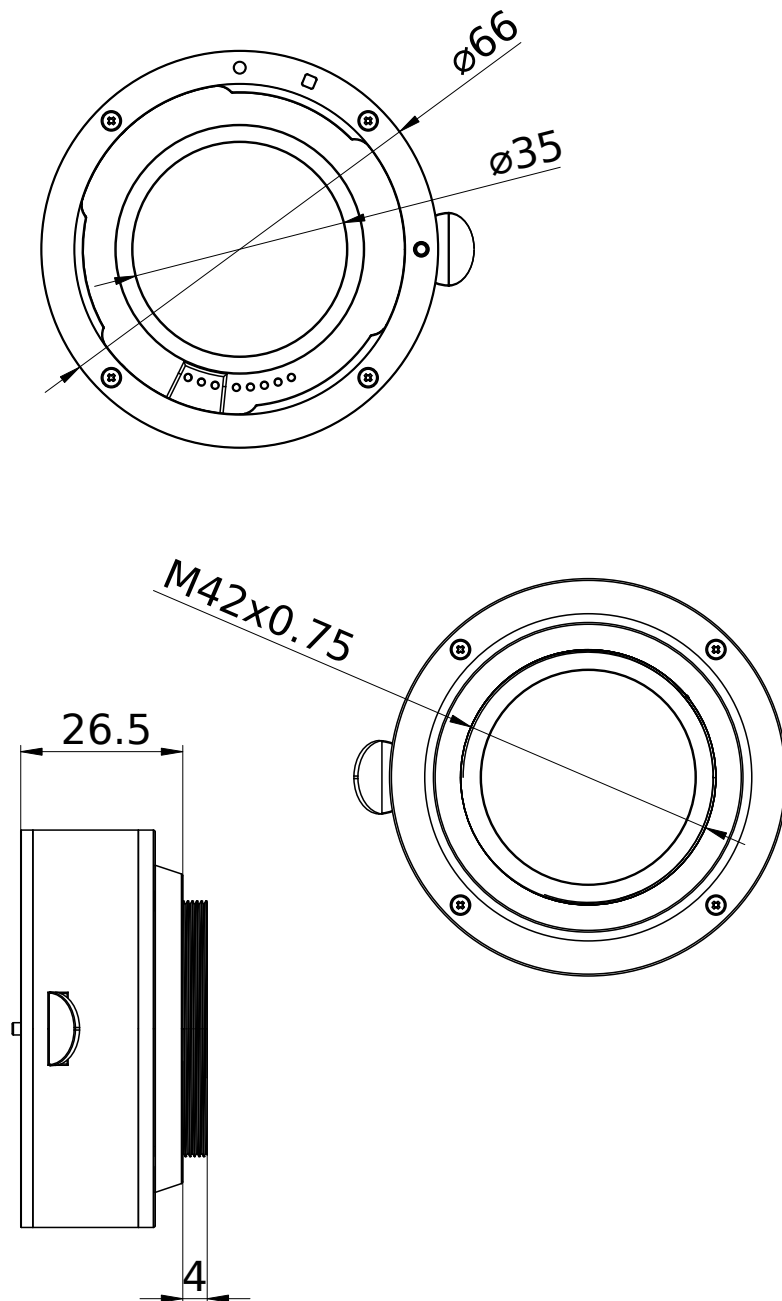
Note: all dimensions in mm, M42x0.75 male thread

Back focus 17.5 mm, supports 1.25" and 36mm filters

M28.5x0.6

ø66

ø35

M42x0.75

ø36.4

26.5

4
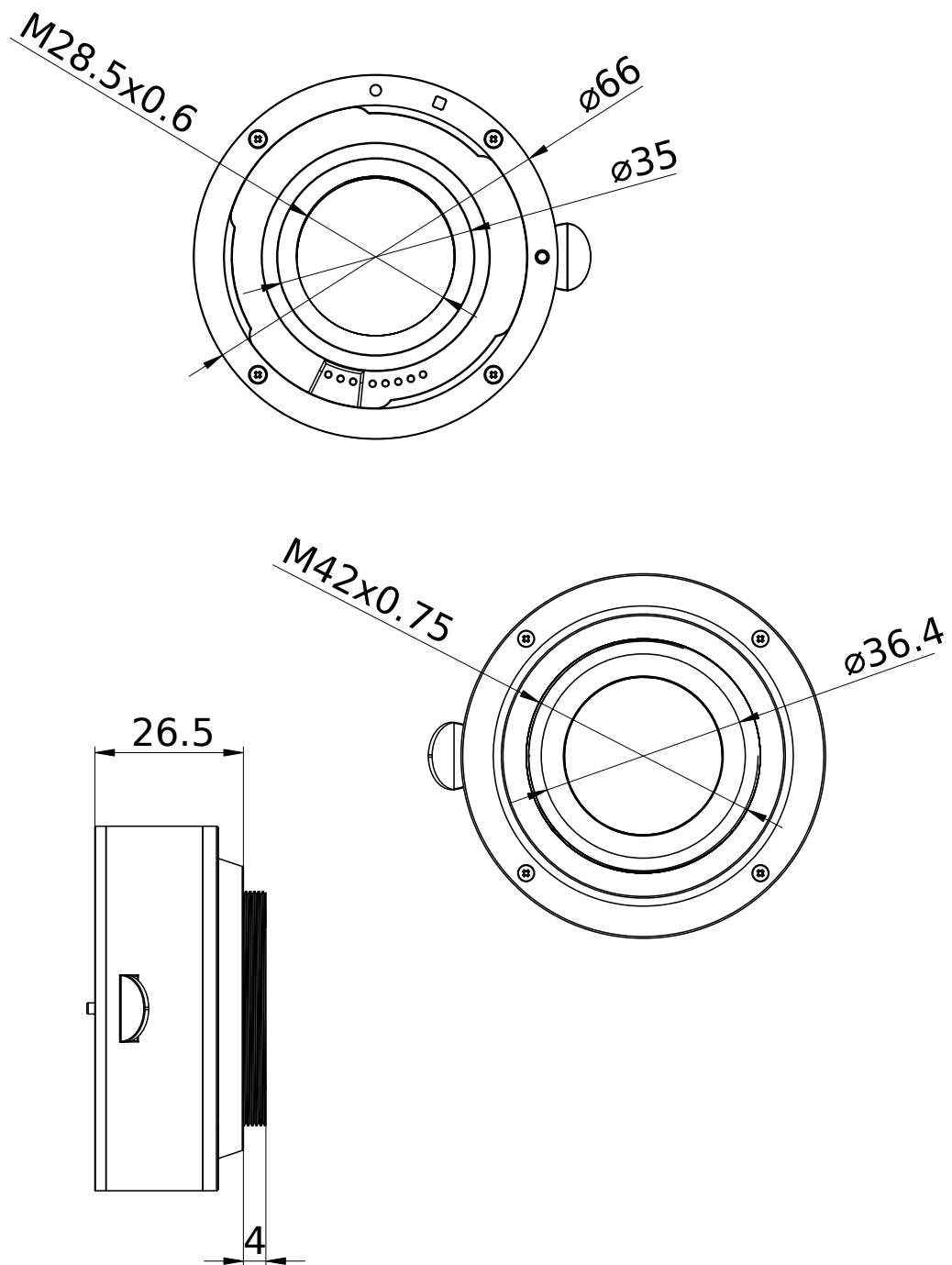
Note: all dimensions in mm, M42x0.75 male thread

Back focus 12.5 mm, no filter support

ø66

ø35

M42x0.75

31.5

4

Note: all dimensions in mm, M42x0.75 male thread

Back focus 12.5 mm, supports 1.25" and 36mm filters

M28.5x0.6

ø66

ø35

M42x0.75

ø36.4

31.5

4
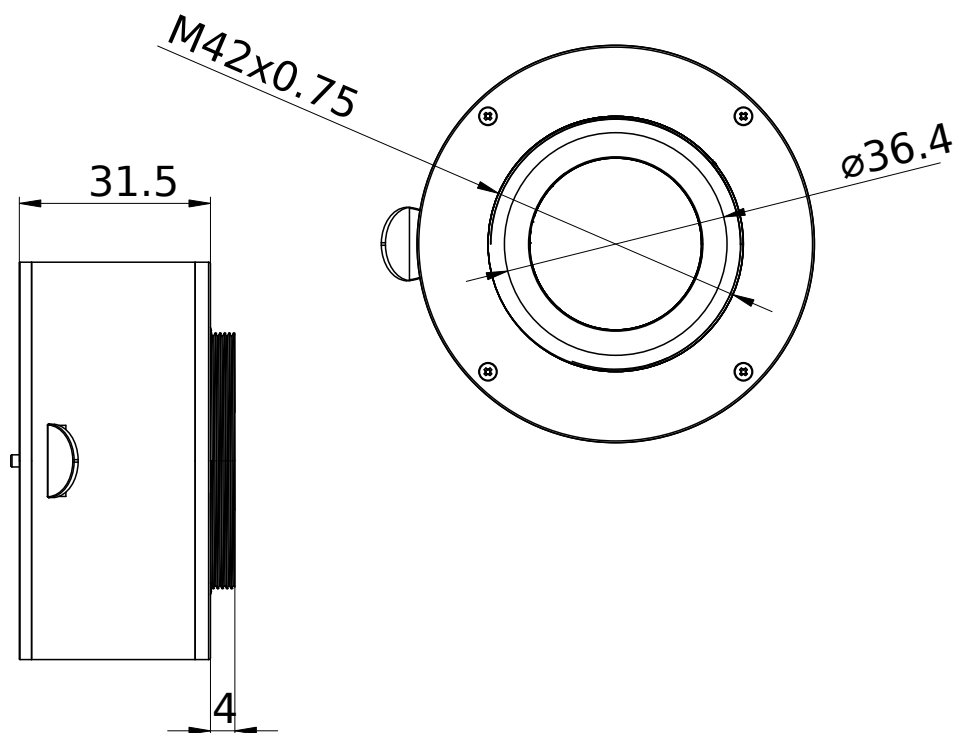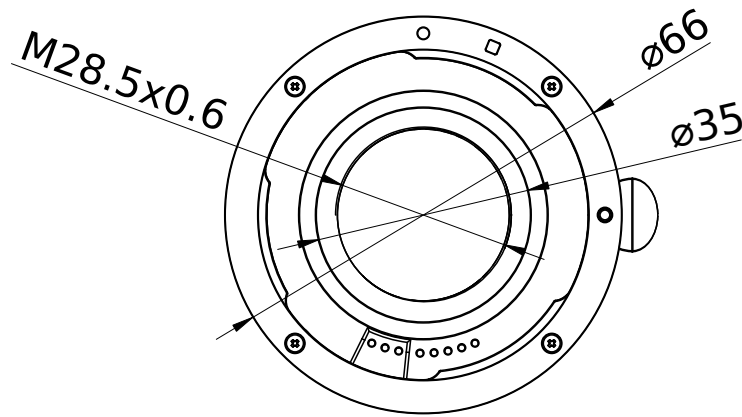
Note: all dimensions in mm, M42x0.75 male thread

Back focus 6.5 mm, no filter support

ø66

ø35

M42x0.75

ø50.8

37.5

31.5
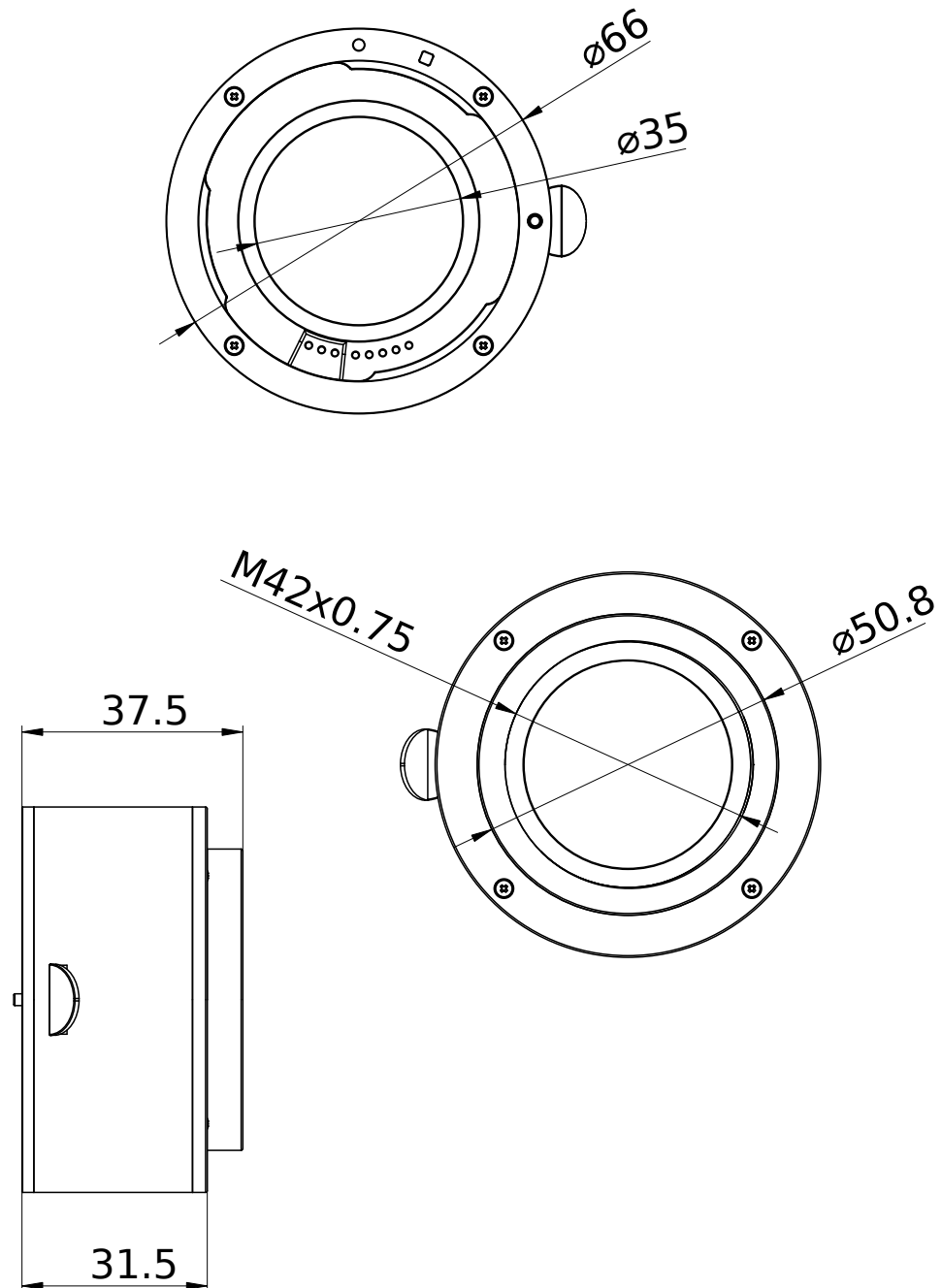
Note: all dimensions in mm, M42x0.75 female thread

Back focus 6.5 mm, supports 1.25" and 36mm filters

M28.5x0.6   ⌀66   ⌀35

M42x0.75   ⌀50.8   ⌀36.4

37.5

31.5
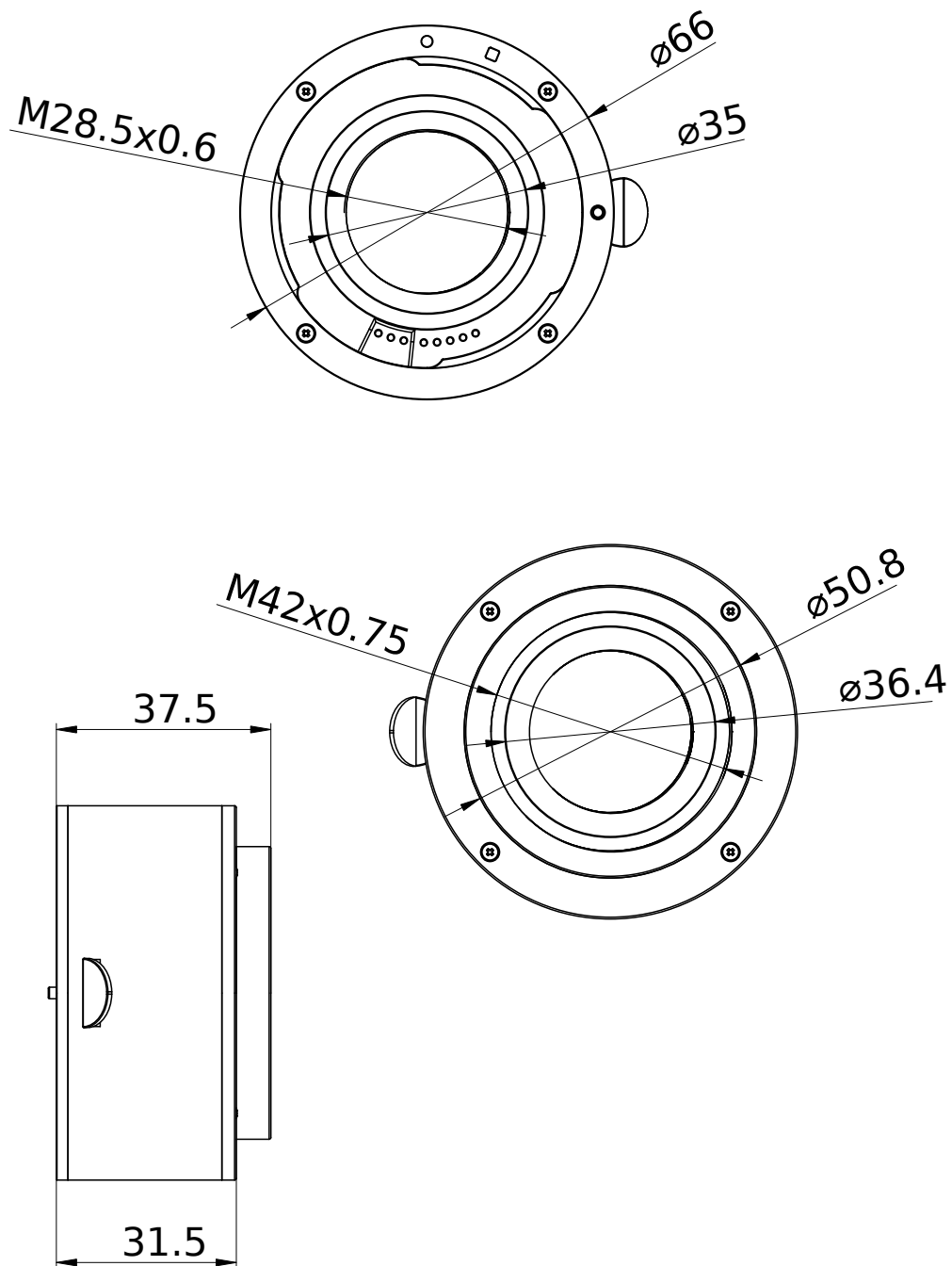
Note: all dimensions in mm, M42x0.75 female thread

Software Support

The adapter is designed for integration with ASCOM and INDI platforms. Software drivers are currently under development and will be released in a future update.

For developers and custom software integrators, detailed documentation of the communication protocol is available at:

https://github.com/pinefeat/cef168/blob/main/doc/serial.md#4-protocol-format

Compliance

- Electromagnetic Compatibility Directive (EMC) 2014/30/EU

- Restriction of Hazardous Substances (RoHS) Directive 2011/65/EU

Warnings

Whilst in use, this product should be firmly secured. Use a Tripod Mount Ring around the lens to properly balance the weight and prevent strain on the adapter.

The connection of incompatible lenses other than Canon EF / EF-S may affect compliance, result in damage to the unit, and invalidate the warranty.

All peripherals used with this product should comply with relevant standards for the country of use and be marked accordingly to ensure that safety and performance requirements are met.

Safety Instructions

To avoid malfunction or damage to this product, please observe the following:

- **Important**: Before connecting the lens, disconnect the adapter from the USB cable.

- This device should be operated in a dry environment at 0–50°C.

- Do not expose to water or moisture, or place on a conductive surface whilst in operation.

- Do not expose to heat from any source; the adapter is designed for reliable operation at normal ambient temperatures.

- Store in a cool, dry location.

- Avoid rapid changes of temperature, which can cause moisture to build up in the adapter.

- Take care when screwing in parts. A cross-thread can cause irreparable damage and void the warranty.

Warranty

This product is covered by a 1-year warranty against manufacturing defects. For warranty claims or support, please contact us.

Manufacturer

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United Kindgom

Contact Details

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support@pinefeat.co.uk

Note: Product specifications are subject to change without notice