# ULISSE EVO with SONY FCB-EV7520 camera

## PTZ CAMERA WITH IMAGE STABILIZER AND DYNAMIC MASKING

IP66
IP67
IP68

TYPE 4X
TYPE 6P

IK10

IP

• **Designed to resist and last**
• **Impeccable quality image**
• **Dynamic privacy masking**
• **Integrated video analysis available**
• **Unbeatable solution for outdoor applications**
• **PoE compatible with standard IEEE.802.3bt**

VIDEO TEC analytics

Onvif® | QST

SONY

LR APPROVED TYPE APPROVAL SCHEME

## DESIGNED TO ENDURE OUTDOOR APPLICATIONS

The PTZ ULISSE EVO video camera is ideal as a video surveillance solution for outdoor applications in urban centres, critical infrastructures, traffic and railways. It is designed to guarantee total reliability and continuous operations in the most challenging outdoor environments. It is ultra-resistant to corrosion and can withstand a wide temperature range (from -40°C to +65°C). The extra-sturdy structure is guaranteed by IK10, IP66/IP67/IP68, NEMA TYPE 4X and TYPE 6P protection ratings. Exceptional wind resistance up to 230km/h with PTZ moving at maximum speed.

ULISSE EVO has obtained Lloyd's Register Marine Type Approval for the maritime and shipping sector and complies with the standard for railway applications.

The modern, linear design of ULISSE EVO combines maximum strength and operational reliability with greatly reduced weight. This means easy and quick assembly and therefore lower installation costs and zero maintenance. It can even be mounted upside down, in the typical speed domes position. The supports can be supplied with quick-fit connectors for Ethernet/PoE, power supply and I/O. This means the unit can be replaced quickly and easily in case of on-site intervention.

ULISSE EVO can be powered with PoE 90W according to the IEEE.802.3bt standard. This guarantees compatibility with the most common power injectors available on the market, while maintaining backwards compatibility with PoH power injectors (OHEP90INJ or OHEP90INJO).

The product is supplied with integrated wiper.

## ADVANCED TECHNOLOGY AND EXCELLENT IMAGE QUALITY

ULISSE EVO with the SONY FCB-EV7520 camera has a 30x optical zoom and a 1/2.8" Exmor R™ CMOS sensor with Full HD 1080/60p resolution that produces the highest image quality, even when surveilling moving objects or in poor lighting conditions. The powerful image stabilization algorithm means even the smallest camera vibrations are detected and any blur in the footage is dynamically corrected. This results in a sharp image of the scene being surveilled.

With ULISSE EVO and the SONY camera, you can set up to 24 dynamic privacy zone masks. These masks change size based on the pan/tilt/zoom position so objects that shouldn't be seen remain hidden. The advanced SONY technology brings Wide Dynamic Range and a configurable High Light Compensation that allows optimal management of contrasting light and dark conditions.

## VIDEOTEC ANALYTICS

The ULISSE EVO video camera with VIDEOTEC ANALYTICS integrates robust algorithms for accurate detection with PTZ and precise, fluid auto-tracking even in the harshest climate conditions, ensuring that the operator has full situation awareness at all times. The detection algorithm, in particular, is especially reliable even in rain and snow, video camera vibration, low contrast, unexpected changes in light or shadow and in the presence of small animals and insects.

Similarly, the auto-tracking feature keeps the target in the centre of the frame by panning and tilting fluidly and controlling the zoom function. This occurs even if the target moves and rapidly changes direction or if the scene is affected by poor lighting, such as low contrast or continual changes in the light.

VIDEOTEC ANALYTICS provides: maximum efficiency in intrusion detection, reduction of costs and human-induced errors, cuts in storage costs, reduction in the time required to monitor and detect unusual events from recordings, plus a drastic drop in false alarms.

## GEOMOVE AND GEOMOVE&TRACK FUNCTIONS

The GeoMove&Track function offered by ULISSE EVO uses two connected cameras that communicate with each other through intelligent language, meaning advanced actions can be carried out in even the most basic surveillance systems.

GeoMove&Track is available on ULISSE EVO PTZs that have VIDEOTEC ANALYTICS and monitor a certain area. When a target is sighted, the camera sends the geo-coordinates of the target to a second Videotec PTZ that uses them to frame the target. If this second PTZ also has analytics functionality, it will in turn activate detection and autotracking.

The GeoMove&Track function can interface with third-party software that gives an objects geo-coordinates, such as Video Management Software (VMS) for traditional video surveillance where a target needs to be shown on a map, or Vessel Tracking Service (VTS) for navigation control services (also combined with radar control systems).

Thanks to GeoMove&Track, the Videotec fixed and PTZ combination offers the advantage of having a complete positioning and tracking solution - all guaranteed by Videotec.

## 100% MADE IN VIDEOTEC

Videotec guarantees the excellent strength and reliability of the entire "all-in-one product" range with hundreds of verification tests. The mechanics, electronics, positioning, networking, software video analysis algorithms and firmware are designed by Videotec's in-house end-to-end team which, therefore, possesses 100% of the know-how of all the network products offered.

At the heart of Videotec's product development is the concept of cyber-sustainability. To help customers protect their video surveillance systems and keep them secure, Videotec provides constant updates, training and support throughout the lifecycle of its products, regardless of how old the device is or whether it is still for sale.

Thanks to digitally signed firmware, password-restricted access, access control, centralised management of certificates and compliance with ONVIF Security Service specifications, Videotec guarantees that all its IP products will have the highest level of security during data transfer and device access.

The products of the ULISSE EVO family are reliable, cyber-safe, future-proof and easily integrated with third-party products.

# TECHNICAL DATA

## GENERAL

Easy installation thanks to the self-centering connector

Zero backlash

Quick configuration and setup

Dynamic positioning control system

Functions: Preset, Preset Tour (Patrol), Autoflip, Autopan via Preset Tour

Maximum number of presets: 250

## MECHANICAL

Constructed from aluminium and technopolymer

Epoxy-polyester powder painted, standard colours grey-white (RAL9002) or black (RAL9005)

Horizontal rotation: 360°, continuous rotation

Vertical rotation: from -90° up to +90° (with ceiling installation, from -40° up to +90°)

Horizontal speed (variable): from 0.1°/s up to 250°/s

Tilt speed (variable): from 0.1°/s up to 250°/s

Accuracy of preset positions: 0.05°

Cable glands: 2xM16 + 1xM20 + special gasket for pre-wired Ethernet cables

Unit weight: 7.1kg (15.6lb) (7.4kg (16.3lb) with LED illuminator)

Integrated wiper

Glass window

- Thick: 6mm (0.24in)

# ELECTRICAL

Supply voltage/Current consumption:

- 24Vac ±20%, 5A, 50/60Hz
- 24Vdc ±10%, 5A
- PoE 90W compatible with standard IEEE802.3bt CLASS 8 (LLDP protocol not supported)
- PoH 90W (backward compatibility mode usable with accessory OHEP90INJ, OHEP90INJO)

Power consumption:

- 21W, PTZ camera stationary, heating switched off (with the ECO-MODE function enabled, energy saving function that is activated only when the PTZ camera is stationary)
- 27W, PTZ camera stationary, heating switched off (with the ECO-MODE function not enabled)
- 27W, PTZ camera moving, heating switched off
- 57W, peak at start-up, heating and de-icing functions switched on

Power consumption with illuminator on:

- 34W, PTZ camera stationary, heating switched off (with the ECO-MODE function enabled, energy saving function that is activated only when the PTZ camera is stationary)
- 40W, PTZ camera stationary, heating switched off (with the ECO-MODE function not enabled)
- 40W, PTZ camera moving, heating switched off
- 70W, peak at start-up, heating and de-icing functions switched on

Power supply cables section: from 0.75mm$^2$ (18AWG) up to 2.5mm$^2$ (13AWG)

Cables signal section: from 0.14mm$^2$ (26AWG) up to 1mm$^2$ (17AWG)

Multipolar cable sheath diameter:

- Cable glands M16: from 4.5mm (0.2in) up to 10mm (0.4in)
- Cable glands M16 with reduction gasket : from 2mm (0.08in) up to 6mm (0.24in)
- Cable glands M20: from 8mm (0.3in) up to 13mm (0.5in)

Alarm inputs: 2 (auto-powered from 12Vdc up to 18Vdc)

Relay outputs: 2 (1A, 30Vac/30Vdc max)

Ethernet cable features

- Minimum cable features: Class D (ISO/IEC11801:1995) or Category 5 (ANSI/EIA/TIA-568-A:1995)
- Shielded twisted cable (STP)
- Pair: 4
- DC loop resistance: 25Ohm max
- Connector: Shielded RJ45

## NETWORK

Ethernet connection: 100 Base-TX

## CYBERSECURITY

Digitally signed firmware

Password restricted access (HTTP digest)

Support of various user access levels

Control of accesses IEEE 802.1X

HTTPS cryptography using TLS1.0, TLS1.1, TLS1.2 and TLS1.3

Centralised certificate management

Complies with ONVIF Security Service specifications

## VIDEO ANALYTICS

Ultra-robust detection algorithms and auto-tracking, specifically for outdoor perimeter control.

Targets Classification: People, vehicles, generic objects

Programmable rules for video analysis, VIDEOTEC ANALYTICS (it is possible to rapidly configure up to ten rules for every preset using an intuitive control management interface)

- Line crossing: the target triggers an alarm if it crosses the line in one or both directions
- Entering/leaving area: the target triggers an alarm if it leaves or enters the configured area
- Appearing in area: the target triggers an alarm if it appears inside the configured area
- Loitering: the target triggers an alarm if it stays inside the configured area over the set time

Detection Mask: disables the detection activity in a portion of the image to prevent false alarms

Video Tampering Detection: a specific ONVIF alarm is triggered if the video camera view is obstructed (e.g. spray)

## VIDEO

Video encoder

- Communication protocol: ONVIF, Profile Q, Profile S and Profile T
- Device configuration: TCP/IPv4-IPv6, UDP/IPv4-IPv6, HTTP, HTTPS, NTP, DHCP, WS-DISCOVERY, DSCP, IGMP (Multicast), SOAP, DNS
- Streaming: RTSP, RTCP, RTP/IPv4-IPv6, HTTP, Multicast
- Video compression: H.264/AVC, MJPEG, MPEG4, snapshot JPEG
- 3 independent video streams Full HD
- Image resolution: from 320x180pixel up to 1920x1080pixel in 8 steps
- Selectable frame rate from 1 to 60 images per second (fps)
- Web Server
- Directional OSD (maximum 4 settable areas)
- Motion Detection
- Video analytics: VIDEOTEC ANALYTICS (optional)
- QoS: Differentiated DSCPs for streaming and device management
- SNMP and NTCIP protocols

## CAMERAS

**SONY FCB-EV7520 Day/Night Full HD 30x**

Resolution: Full HD 1080p (1920x1080)

Image Sensor: 1/2.8" Exmor™ R CMOS sensor

Effective Pixels: approx. 2.13 Megapixels

Minimum Illumination:

- Colour: 0.0013lx (50 IRE, High sensitivity on)
- B/W: 0.0008lx (30 IRE, High sensitivity on)

Focal length: from 4.3mm (wide) up to 129mm (tele)

Zoom:

- 30x
- 36x, with Stable Zoom enabled

Digital Zoom: 12x

Iris: from F1.6 up to F14 (Auto, Manual)

Horizontal Viewing Angle: from 63.7° (wide end) up to 2.3° (tele end)

Vertical Viewing Angle: from 38.5° (wide end) up to 1.3° (tele end)

Shutter speed: from 1/1s up to 1/10000s (Auto, Manual)

White balance: Auto, Auto Tracing, Indoor, Outdoor, Manual, Outdoor Auto, Sodium Lamp (Fix/Auto/Outdoor Auto)

Gain: from 0dB up to 50.0dB (Auto, Manual)

Wide Dynamic Range: 120dB

Focus System: Auto (PTZ Trigger, Full Auto), Manual

Picture Effects: E-flip

Noise removal (2D, 3D): Off, On (from level 1 up to level 5)

Exposure Control: Auto, Manual, Priority (Shutter priority, Iris priority, Brightness priority)

De-fog: Off, Low, Mid, High

Dynamic masking of privacy zones: maximum 24 masks settable, maximum 8 simultaneously displayable

Indoor Flicker Reduction

Gain Limit: from10.7dB up to 50dB

High sensitivity: On/Off

Backlight Compensation: On/Off

Auto Slowshutter: On/Off

Exposure compensation: Off, On (from -10.5dB up to +10.5dB)

Sharpness: from level 0 up to level 15

High Light Compensation (HLC): Off, Low, Mid, High, Masking Level (Off, On, from level 1 up to level 15)

Digital image stabilization: On/Off

## ILLUMINATORS

### LED illuminator

Wavelength: 850nm, 940nm (only UEIxxx), white light

UEIxxx

- Wide beam: 40° (horizontal), 16° (vertical)
- Spot beam: 14° (horizontal), 14° (vertical)

UEIxxxP

- Wide beam: 13° (horizontal), 13° (vertical)
- Spot beam: 13° (horizontal), 13° (vertical)

Wide beam activation: based on the scene brightness, from alarm input or manually

Spot beam activation (can be activated only when the wide beam is active): can be activated on preset, based on the zoom factor or with the wide beam

Automatic and remote switching on

No calibration required for light beam alignment with the camera

The illuminator does not slow down the PTZ camera's rotation speed

Automatic recognition of the type of illuminator installed

## ENVIRONMENT

For indoors and outdoors installation

Operating temperature

- Continuous functioning: from -40°C (-40°F) up to +65°C (149°F) (+50°C (122°F) for versions painted black)
- Temperature test complies with NEMA-TS 2-2003 (R2008) par. 2.1.5.1, test profile fig. 2-1 (from -34°C (-29.2°F) to +74°C (165.2°F)) (not valid for versions with integrated video analysis, VIDEOTEC ANALYTICS)
- De-icing function intervention: from -40°C (-40°F) up to -10°C (14°F)

Wind resistance

- PTZ camera static: 230km/h (143mph) max.
- PTZ camera moving, at the maximum speed, with LED illuminator: 230km/h (143mph) max.

Relative humidity: from 5% up to 95%

## CERTIFICATIONS

Electrical safety (CE): EN60950-1, IEC60950-1, EN62368-1, IEC62368-1

Electromagnetic compatibility (CE): EN61000-6-4, EN50130-4, EN55032 (Class A)

Outdoor installation (CE): EN60950-22, IEC60950-22

Photobiological safety (CE): EN62471, IEC62471

IP protection degree (EN60529): IP66, IP67, IP68

Vibration test: EN50130-5, EN60068-2-6

Salty fog resistance: EN50130-5, EN60068-2-52

IK protection degree: IK10 (except glass window)

UL certification (UL60950-1, CAN/CSA C22.2 No. 60950-1-07,UL62368-1 CAN/CSA C22.2 No. 62368-1-14): cULus Listed

Electromagnetic compatibility (North America): FCC part 15 (Class A), ICES-003 (Class A)

Level of protection Type (UL50E): 4X, 6P

EAC certification

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

Waste Electrical and Electronic Equipment (WEEE), Directive 2012/19/EU

NDAA-compliant

## CERTIFICATIONS - RAILWAY APPLICATIONS

Compliance to railway application standard: EN50121-4 (the product requires the filter accessory SURGEPR)

## CERTIFICATIONS - MARINE APPLICATIONS

Lloyd's Register Marine Type Approval certification (the product requires the filter accessory FM1010 if powered in 24Vac or 24Vdc):

- Test Specification Number 1 (ENV1, ENV2, ENV3, ENV5)

Electromagnetic compatibility: EN60945

Salty fog resistance: EN60068-2-52

Tested at 70°C (158°F) for 16 hours in compliance with EN60068-2-2

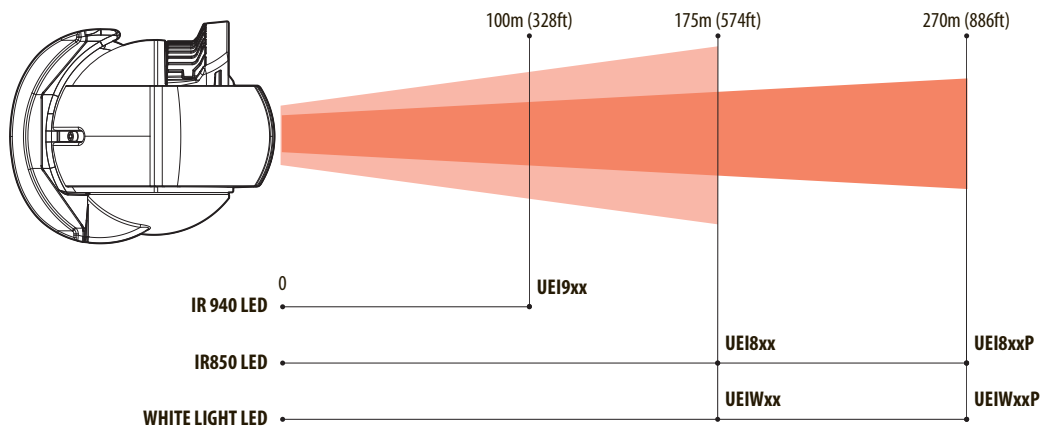| | |
|---|---|
| COMB100A | Communication box in polycarbonate, IN from 220Vac up to 230Vac, OUT 24Vac |
| COMB200A | Communication box in polycarbonate, IN 24Vac, OUT 24Vac |
| COMB300A | Communication box in polycarbonate, IN from 120Vac up to 127Vac, OUT 24Vac |
| UEI8AA | IR illuminator 850nm with uniform lighting for short and long distances up to 175m (574ft) for ULISSE EVO grey-white colour (RAL9002) |
| UEI8AAP | IR illuminator 850nm for long distance lighting up to 270m (885ft) for ULISSE EVO grey-white colour (RAL9002) |
| UEI9AA | IR illuminator 940nm with uniform lighting for short and long distances s up to 100m (328ft) for ULISSE EVO grey-white colour (RAL9002) |
| UEIWAA | White light illuminator with uniform lighting for short and long distances up to 175m (574ft) for ULISSE EVO grey-white colour (RAL9002) |
| UEIWAAP | White light illuminator for long distance lighting up to 270m (885ft) for ULISSE EVO grey-white colour (RAL9002) |
| UEI8FA | IR illuminator 850nm with uniform lighting for short and long distances up to 175m (574ft) for ULISSE EVO black colour (RAL9005) |
| UEI8FAP | IR illuminator 850nm for long distance lighting up to 270m (885ft) for ULISSE EVO black colour (RAL9005) |
| UEI9FA | IR illuminator 940nm with uniform lighting for short and long distances up to 100m (328ft) for ULISSE EVO black colour (RAL9005) |
| UEIWFA | White light illuminator with uniform lighting for short and long distances up to 175m (574ft) for ULISSE EVO black colour (RAL9005) |
| UEIWFAP | White light illuminator for long distance lighting up to 270m (885ft) for ULISSE EVO black colour (RAL9005) |
| OHEP90INJ | Power Injector PoE (90W), 1 channel, for indoor installations |
| OHEP90INJO | Power Injector PoE (90W), 1 channel, for outdoor installations |
| SURGEPR | Lightning surge protection device |
| FM1010 | EMC filter for Marine certification |
| WASPT0V5L5M00 | Water tank 5l (1.3gal), pump with delivery up to 5m (16ft), IN 230Vac-24Vac-120Vac |
| WASPT0V23L5M00 | Water tank 23l (6gal), pump with delivery up to 5m (16ft), IN 230Vac-24Vac-120Vac |
| WASPT0V23L11M00 | Water tank 23l (6gal), pump with delivery up to 11m (36ft) with water floating, IN 230Vac-24Vac-120Vac |
| WASPT1V23L30M00 | Water tank 23l (6gal), pump with delivery up to 30m (98ft) with water floating, IN 230Vac |
| WASPT3V23L30M00 | Water tank 23l (6gal), pump with delivery up to 30m (98ft) with water floating, IN 120Vac |

| | |
|---|---|
| WASNX1V10L20M00 | Tank 10l (2.6gal) with integrated manual pump, controlled by solenoid valve, IN 230Vac, delivery head up to 30m (98ft), with 20m (66ft) antistatic water delivery pipe |
| WASNX2V10L20M00 | Tank 10l (2.6gal) with integrated manual pump, controlled by solenoid valve, IN 24Vac, delivery head up to 30m (98ft), with 20m (66ft) antistatic water delivery pipe |
| WASNX3V10L20M00 | Tank 10l (2.6gal) with integrated manual pump, controlled by solenoid valve, IN 120Vac, delivery head up to 30m (98ft), with 20m (66ft) antistatic water delivery pipe |

| | |
|---|---|
| UEBP0AA | Parapet bracket with internal cable channel for ULISSE EVO, grey-white (RAL9002) |
| UEBP4AA | Parapet bracket with quick connectors RJ45 (Ethernet and PoE) + 4 poles with screw terminal (power supply and I/O) for ULISSE EVO grey-white (RAL9002) |
| UEBP7AA | Parapet bracket with quick connectors RJ45 (Ethernet and PoE) + 7 poles to weld (power supply and I/O) for ULISSE EVO, grey-white (RAL9002) |
| UEBP0FA | Parapet bracket with internal cable channel for ULISSE EVO, black colour (RAL9005) |
| UEBP4FA | Parapet bracket with quick connectors RJ45 (Ethernet and PoE) + 4 poles with screw terminal (power supply and I/O) for ULISSE EVO, black colour (RAL9005) |
| UEBP7FA | Parapet bracket with quick connectors RJ45 (Ethernet and PoE) + 7 poles to weld (power supply and I/O) for ULISSE EVO, black colour (RAL9005) |
| UEBWAA | Wall bracket for ULISSE EVO, grey-white (RAL9002) |
| UEBWFA | Wall bracket for ULISSE EVO, black colour (RAL9005) |
| UEAP | Pole adaptor in stainless steel AISI 316L |
| UEAC | Corner adaptor in stainless steel AISI 316L |
| UEAW | Counter-plate in stainless steel AISI 316L |

| Model Number | Weight | Dimensions (WxHxL) | Master carton |
|---|---|---|---|
| UE22A000A | 9.2kg (20.3lb) | 27x30x50cm (10.6x11.8x19.6in) | - |

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                        100m (328ft)        175m (574ft)          270m (886ft)
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                    0                 UEI9xx
IR 940 LED

                                                UEI8xx                  UEI8xxP
IR850 LED

                                                UEIWxx                  UEIWxxP
WHITE LIGHT LED
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*The distances and the performance depend on the environmental conditions.*

| ULISSE EVO WITH SONY FCB-EV7520 CAMERA - CONFIGURATION OPTIONS | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | Voltage | | Camera | | Colour | | Video analytics | | Revision |
| UE | 2 | 24Vac, 24Vdc, PoE 90W | 2 | SONY FCB-EV7520 camera, FULL HD 1080p, 30x | A | Grey-white (RAL9002) | 000 | Without integrated video analytics (without VIDEO-TEC ANALYTICS) | A | Complies with ONVIF, Profile Q, Profile S and Profile T |
| | | | | | F | Black (RAL9005) | V00 | With integrated video analytics (VIDEOTEC ANALYTICS) | J | Complies with ONVIF, Profile S and Profile T |

# TECHNICAL DRAWINGS

*The indicated measurements are expressed in millimetres.*
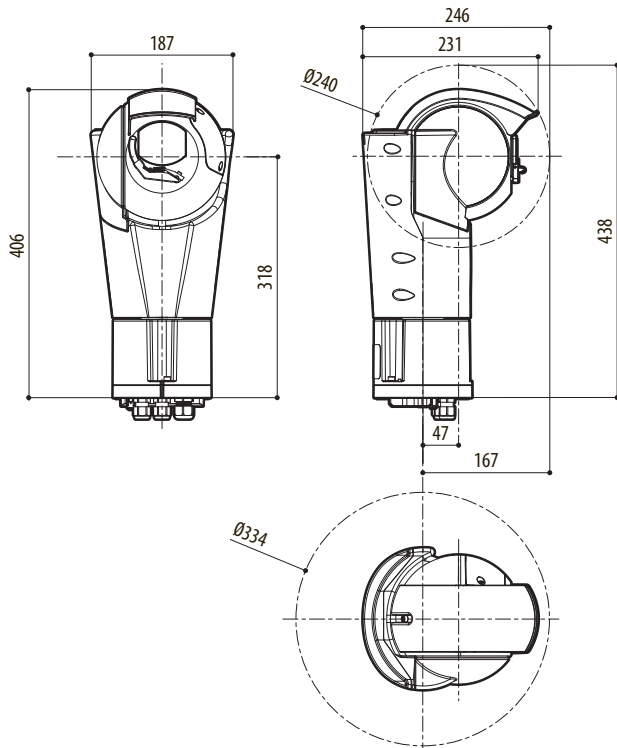
ULISSE EVO
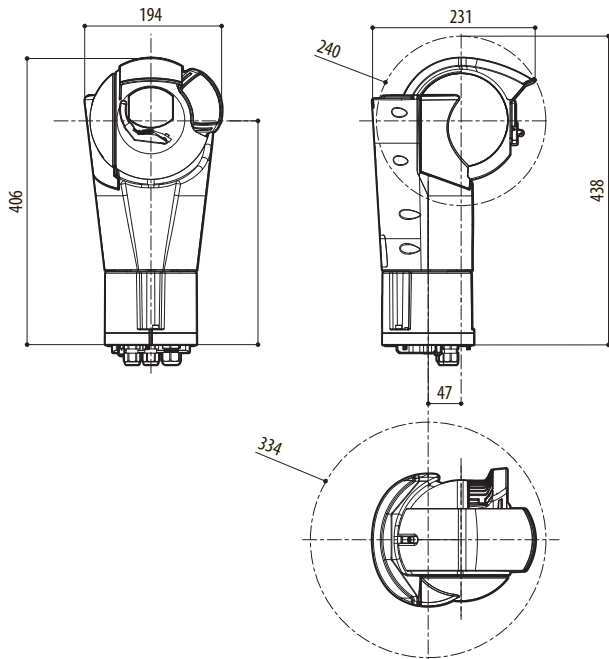
ULISSE EVO WITH LED ILLUMINATOR