# MAXIMUS MPXR SERIES2

# NEW GENERATION OF EXPLOSION-PROOF PTZ WITH THERMAL CAMERA













- Certified explosion-proof for use in Zones 1 and 2, Group IIC (Gas), Zones 21 and 22, Group IIIC (Dust)
- Certified up to a temperature of +80°C
- Maximum resistance in corrosive environments
- · Possibility of direct connection via fiber optic
- Thermal camera with radiometric functions



#### CERTIFICATIONS













#### MAXIMUM RESISTANCE IN THE MOST CRITICAL ENVIRONMENTS

MAXIMUS MPXR SERIES2 is a certified explosion-proof PTZ thermal camera, ideal for effective video surveillance and process control in the Oil & Gas, marine or industrial sectors, in environments where the atmosphere is potentially explosive due to the presence of flammable gas or dust.

MAXIMUS MPXR SERIES2 offers maximum resistance in corrosive environments with industrial and marine environments thanks to construction in AISI 316L stainless steel and micro-shot peened and electro-polished surfaces. Furthermore, the IP66/IP67/IP68/IP69, NEMA Type 4X and Type 6P certification guarantees complete protection against water and dust entry, even in difficult conditions.

#### **CERTIFIED OUALITY**

Every version of MAXIMUS MPXR SERIES2 PTZ is explosion-proof certified with a ambient temperature of up to  $+80^{\circ}$ C. They have international certifications for use in Zone 1 and 2, Group IIC for gas, Zone 21 and 22, Group IIIC for dust. Thanks to the double cable entry, both 120Vac and 230Vac voltage supply versions are compliant with UL/CSA standards. MAXIMUS MPXR SERIES2 products are certified Lloyd's Register Marine Type Approval System Test Specification Number 1 and can be used in Marine and Offshore applications for type ENV1, ENV2, ENV3 and ENV5 environmental categories (for example passenger ships, open decks, enclosed spaces, technical premises subject to heat generated by other

equipment, areas at risk of explosion and as visual support for mooring manoeuvres).

#### RADIOMETRIC FUNCTIONS FOR MEASURING TEMPERATURE

The integrated thermal camera can identify targets moving in the dark or at distance with extreme accuracy. As well as this, it has radiometric functions that allow precise temperature detection based on the image's 4 main pixels. The device can be configured so that it independently generates a Radiometric Alarm and/or Warning via ONVIF Events on the VMS. For example, an event can be sent when: the temperature is below a settable value; the temperature is above a settable value; the temperature is outside two settable values. This function is particularly useful when monitoring industrial processes.

In camera models with advanced radiometric functions, up to 5 ROIs (Regions of Interest) can be set for each preset position. The defined ROIs are scaled proportionally to the digital zoom. So, when zooming in the ROI is increased and when zooming out the ROI is decreased. PTZ ROIs are set to preset PAN and TILT positions (not zoom) so they then change in relation to the zoom. In camera models with advanced radiometric functions, thermal cameras offer three temperatures: minimum, average and maximum. Radiometric rules can be linked to exceeding one of these three temperature thresholds.

# **INSTALLATION FLEXIBILITY**

The SERIES2 range of cameras can easily connect the PTZ via fibre optic thanks to the SFP module slot installed directly into the junction box integrated into the base of the unit.

The double cable entry and the numerous accessories and supports available (washing system, communication box, pre-wired cables, cable glands, wall supports, railing supports, corners and pole), allow exceptional installation flexibility.

#### **GEOMOVE FUNCTION**

The GeoMove function offered by the new MAXIMUS MPXR SERIES2 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 can be used with fixed or PTZ cameras that have VIDEOTEC ANALYTICS and

GeoMove can be used with fixed or PTZ cameras 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 MAXIMUS MPXR SERIES2 PTZ that uses them to frame the target.

The GeoMove 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).

# **100% MADE IN VIDEOTEC**

SERIES2 offers an integrated certified all-in-one professional solution. Since everything from mechanics to electronics, positioning and networking, software and firmware are all proudly developed end-to-end by Videotec's internal teams, as is the case for all the company's products, these PTZs come with the Videotec guarantee of being reliable, cyber-safe, future-proof and easily integrated with third-party products.

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.

In the SERIES2, Videotec has expanded the list of compatible software, but has not changed the tested and proven software functions and protocols already found in the MAXIMUS MPX series. As a result, Videotec can guarantee complete compatibility and interchangeability between the previous and new generations of PTZ, while protecting the investments made by its customers when it comes to validation and integration of MAXIMUS MPX.

# TECHNICAL DATA

#### **GENERAL**

AISI 316L stainless steel construction

External surfaces micro-shot peened and electro-polished

Dynamic positioning control system

Maximum number of presets: 250

Radiometric analysis:

- on the 4 central pixels, if the thermal camera has radiometric functions
- definition of a specific area, if the thermal camera has advanced radiometric functions

Radiometric alarm activation: if the temperature is over the threshold set, under the threshold set, between two thresholds set or outside the two thresholds set.

Actions on alarm: activation of digital output, preset tour recall, home position recall, preset position recall and http qet request.

#### MECHANICAL

Cable inputs: 2 x 3/4" NPT

Zero backlash

Horizontal rotation: 360°, continuous rotation

Vertical rotation: from -90° up to +90°

Horizontal speed (variable): from 0.1°/s to 100°/s

Tilt speed (variable): from 0.1°/s to 100°/s

Accuracy of preset positions: 0.02°

Unit weight: 26.5kg (58lb)

# **HOUSING'S WINDOW**

Germanium window

- Thick: 8mm (0.3in)
- External treatment: antiscratch (Hard Carbon Coating DLC)
- Internal treatment: antireflection
- Spectral range: from 7.5  $\mu m$  up to 14  $\mu m$
- Medium transmittance (from 7.5μm up to 11.5μm): 87.5%
- Medium transmittance (from 11.5  $\mu m$  up to 14  $\mu m$  ): 72.1%

#### **ELECTRICAL**

Supply voltage/Current consumption:

- 230Vac ±10%, 0.5A, 50/60Hz
- 24Vac ±10%, 5A, 50/60Hz
- 120Vac ±10%, 1A, 50/60Hz
- 220Vac ±10%, 0.54A, 50/60Hz
- 100Vac ±10%, 1.2A, 50/60Hz

Power consumption:

• 120W max

#### **NETWORK**

RJ45 port

• Ethernet connection: 10BASE-T/100BASE-T

Slot SFP (SMALL FORM FACTOR PLUGGABLE)

- Ethernet connection:100BASE-FX
- Supply voltage: 3.3V
- · Standard: MSA compliant

The SFP module (not supplied by VIDEOTEC) must meet the following requirements:

- Laser: Class 1, complies with EN60825-1
- Certification: UL/IEC 60950-1 or UL/IEC 62368-1

# **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**

Video encoder

- Communication protocol: ONVIF, Profile Q, Profile S and Profile T, ONVIF Thermal Service
- Device configuration: TCP/IPv4-IPv6, UDP/IPv4-IPv6, HTTP, HTTPS, NTP, DHCP, WSDISCOVERY, 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
- Image resolution: from 160x120pixel up to 720x480pixel in 5 steps
- Selectable frame rate from 1 to 30 images per second (fps)
- Web Server
- Directional OSD (maximum 4 settable areas)
- · Motion Detection
- QoS: Differentiated DSCPs for streaming and device management
- SNMP and NTCIP protocols

### **CAMERAS**

Please refer to the relevant table.

# I/O INTERFACE

Input for remote reset: 1

Alarm inputs: 1

Relay outputs: 1+1 (1A, 30Vac/60Vdc max, one relay reserved for washer pump and one configurable)

#### **ENVIRONMENT**

For indoors and outdoors installation

Certification temperature: from -40°C (-40°F) up to +80°C (+176°F)

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))

De-icing function intervention (cold start): from -40°C (-40°F) up to -10°C (14°F) Wind resistance

- PTZ static: 230km/h (143mph) max.
- PTZ operational at the maximum speed: 210km/h (130.5mph) max.

Relative humidity: from 5% up to 95%

#### CERTIFICATIONS

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

Electromagnetic compatibility (CE): EN50130-4, EN55032 (Class A), EN61000-6-4, EN61000-3-2, EN61000-3-3

RoHS (CE): EN IEC 63000

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

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

UL certification (UL60950-1, CAN/CSA C22.2 No. 60950-1-07 ) (not available for 100Vac versions): cULus Listed

UL certification (UL62368-1, CAN/CSA C22.2 No. 62368-1-14 ) (not available for 100Vac versions): cULus Listed

Electromagnetic compatibility (North America) (not available for 100Vac versions): FCC part 15 (Class A), ICES-003 (Class A)

IP protection degree (EN/IEC60529): IP66, IP67, IP68, IP69

Level of protection Type (UL50E) (not available for 100Vac versions): 4X, 6P

RCM (Australian and New Zealand Regulatory Compliance Mark)

KC certification (certification only valid for the code: MPXT32UA0R1CH)

NDAA-compliant

#### **CERTIFICATIONS - EXPLOSION-PROOF APPLICATIONS**

ATEX (EN IEC 60079-0, EN 60079-1, EN 60079-31)

IECEX (IEC 60079-0, IEC 60079-1, IEC 60079-31)

UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31) (not available for 100Vac versions)

UL listed for Canada (CAN/CSA-C22.2 NO. 60079-0, CAN/CSA-C22.2 NO. 60079-1, CAN/CSA-C22.2 NO. 60079-31) (not available for 100Vac versions)

EAC Ex (TR CU 012/2011)

INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31)

KCs (Employment and labor department 2021-22)

UK Ex (EN IEC 60079-0, EN 60079-1, EN 60079-31)

For further details on certifications and markings, consult the relevant table.

#### **CERTIFICATIONS - MARINE APPLICATIONS**

Lloyd's Register Marine Type Approval certification (with MAXIMUS MBX communication box or with FM1010 filter):

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

Electromagnetic compatibility: EN60945

Salty fog resistance: EN60068-2-52

MBX1MAA Explosion-proof communication box in stainless steel, IN 230Vac, with EMC filter for marine certification  MBX2MAA Explosion-proof communication box in stainless steel, IN 24Vac, with EMC filter for marine certification  MBX3MAA Explosion-proof communication box in stainless steel, IN 120Vac, with EMC filter for marine certification  MBA1SSA Explosion-proof communication box in aluminium, IN 230Vac  MBA2SSA Explosion-proof communication box in aluminium, IN 24Vac  MBA3SSA Explosion-proof communication box in aluminium, IN 120Vac  OCTEX3/4C Cable gland in nickel-plated brass with gasket EX 3/4" NPT, unarmoured cable IECEX-ATEX-EAC Ex  OCTEXA3/4C Cable gland in nickel-plated brass with gasket EX 3/4" NPT, armoured cable IECEX-ATEX-EAC Ex  OCTEXB3/4P Barrier cable gland in nickel-plated brass EX 3/4" NPT, unarmoured cable IECEX-ATEX-EAC Ex  OCTEXB3/4P Barrier cable gland in nickel-plated brass EX 3/4" NPT, armoured cable IECEX-ATEX-EAC Ex  OCTEXB3/4P Cable gland in nickel-plated brass with gasket EX 3/4" NPT, unarmoured cable ATEX  OCTEX3/4 Cable gland in nickel-plated brass with gasket EX 3/4" NPT, armoured cable ATEX  OCTEXA3/4 Cable gland in nickel-plated brass with gasket EX 3/4" NPT, armoured cable ATEX  OCTEXA3/4 Cable gland in nickel-plated brass with gasket EX 3/4" NPT, armoured cable ATEX  OCTEXA3/4 Cable gland in nickel-plated brass with gasket EX 3/4" NPT, armoured cable ATEX  OCTEXA3/4 Cable gland in nickel-plated brass S/4" NPT IECEX-ATEX-EAC Ex  OCTEXA3/4 Cable gland in nickel-plated brass S/4" NPT IECEX-ATEX- c CSA us - EAC Ex (operating temperature: from -60°C (-76°F) up to +80°C (+176°F))  OEXPLUG1/2P Plug EX 1/2" NPT IECEX-ATEX-EAC Ex  OEXPLUG3/4P Plug EX 3/4" NPT IECEX-ATEX-EAC Ex	ACCESSORIES	
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EMC filter for marine certification  MBX3MAA  Explosion-proof communication box in stainless steel, IN 120Vac, with EMC filter for marine certification  MBA1SSA  Explosion-proof communication box in aluminium, IN 230Vac  MBA2SSA  Explosion-proof communication box in aluminium, IN 24Vac  MBA3SSA  Explosion-proof communication box in aluminium, IN 120Vac  OCTEX3/4C  Cable gland in nickel-plated brass with gasket EX 3/4" NPT, unarmoured cable IECEX-ATEX-EAC Ex  OCTEXA3/4C  Cable gland in nickel-plated brass with gasket EX 3/4" NPT, armoured cable IECEX-ATEX-EAC Ex  OCTEXB3/4P  Barrier cable gland in nickel-plated brass EX 3/4" NPT, unarmoured cable IECEX-ATEX-EAC Ex  OCTEXBA3/4P  Cable gland in nickel-plated brass with gasket EX 3/4" NPT, unarmoured cable IECEX-ATEX-EAC Ex  OCTEX3/4  Cable gland in nickel-plated brass with gasket EX 3/4" NPT, unarmoured cable ATEX  OCTEXA3/4  Cable gland in nickel-plated brass with gasket EX 3/4" NPT, armoured cable ATEX  OCTEXA3/4  Cable gland in nickel-plated brass with gasket EX 3/4" NPT, armoured cable ATEX  OCTEXA3/4  Cable gland in nickel-plated brass with gasket EX 3/4" NPT, armoured cable ATEX  OCTEXA3/4  Cable gland in nickel-plated brass with gasket EX 3/4" NPT, armoured cable ATEX  OCTEXA3/4  Cable gland in nickel-plated brass S/4" NPT IECEX-ATEX- c CSA us - EAC Ex (operating temperature: from -60°C (-76°F) up to +80°C (+176°F))  OEXPLUG1/2P  Plug EX 1/2" NPT IECEX-ATEX-EAC Ex  OEXPLUG3/4P  Plug EX 3/4" NPT IECEX-ATEX-EAC Ex	MBX1MAA	
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armoured cable IECEX-ATEX-EAC Ex  OCTEXB3/4P  Barrier cable gland in nickel-plated brass EX 3/4" NPT, unarmoured cable IECEX-ATEX-EAC Ex  OCTEXBA3/4P  Barrier cable gland in nickel-plated brass EX 3/4" NPT, armoured cable IECEX-ATEX-EAC Ex  OCTEX3/4  Cable gland in nickel-plated brass with gasket EX 3/4" NPT, unarmoured cable ATEX  OCTEXA3/4  Cable gland in nickel-plated brass with gasket EX 3/4" NPT, armoured cable ATEX  OCTEX1/2-3/4P  Cable glands reduction in nickel-plated brass Ex 3/4" - 1/2" NPT IECEX-ATEX-EAC Ex  OCTEXP3/4C  Conduit cable gland nickel-plated brass 3/4" NPT IECEX-ATEX- c CSA us - EAC Ex (operating temperature: from -60°C (-76°F) up to +80°C (+176°F))  OEXPLUG1/2P  Plug EX 1/2" NPT IECEX-ATEX-EAC Ex  OEXPLUG3/4P  Plug EX 3/4" NPT IECEX-ATEX-EAC Ex	OCTEX3/4C	
cable IECEX-ATEX-EAC Ex  OCTEXBA3/4P  Barrier cable gland in nickel-plated brass EX 3/4" NPT, armoured cable IECEX-ATEX-EAC Ex  OCTEX3/4  Cable gland in nickel-plated brass with gasket EX 3/4" NPT, unarmoured cable ATEX  OCTEXA3/4  Cable gland in nickel-plated brass with gasket EX 3/4" NPT, armoured cable ATEX  OCTEX1/2-3/4P  Cable glands reduction in nickel-plated brass Ex 3/4" - 1/2" NPT IECEX-ATEX-EAC Ex  OCTEXP3/4C  Conduit cable gland nickel-plated brass 3/4" NPT IECEX-ATEX- c CSA us - EAC Ex (operating temperature: from -60°C (-76°F) up to +80°C (+176°F))  OEXPLUG1/2P  Plug EX 1/2" NPT IECEX-ATEX-EAC Ex  OEXPLUG3/4P  Plug EX 3/4" NPT IECEX-ATEX-EAC Ex	OCTEXA3/4C	
cable IECEX-ATEX-EAC Ex  OCTEX3/4  Cable gland in nickel-plated brass with gasket EX 3/4" NPT, unarmoured cable ATEX  OCTEXA3/4  Cable gland in nickel-plated brass with gasket EX 3/4" NPT, armoured cable ATEX  OCTEX1/2-3/4P  Cable glands reduction in nickel-plated brass Ex 3/4" - 1/2" NPT IECEX-ATEX-EAC Ex  OCTEXP3/4C  Conduit cable gland nickel-plated brass 3/4" NPT IECEX-ATEX- c CSA us - EAC Ex (operating temperature: from -60°C (-76°F) up to +80°C (+176°F))  OEXPLUG1/2P  Plug EX 1/2" NPT IECEX-ATEX-EAC Ex  Plug EX 3/4" NPT IECEX-ATEX-EAC Ex	OCTEXB3/4P	
unarmoured cable ATÉX  OCTEXA3/4  Cable gland in nickel-plated brass with gasket EX 3/4" NPT, armoured cable ATEX  OCTEX1/2-3/4P  Cable glands reduction in nickel-plated brass Ex 3/4" - 1/2" NPT IECEX-ATEX-EAC Ex  OCTEXP3/4C  Conduit cable gland nickel-plated brass 3/4" NPT IECEX-ATEX- c CSA us - EAC Ex (operating temperature: from -60°C (-76°F) up to +80°C (+176°F))  OEXPLUG1/2P  Plug EX 1/2" NPT IECEX-ATEX-EAC Ex  Plug EX 3/4" NPT IECEX-ATEX-EAC Ex	OCTEXBA3/4P	
armoured cable ATEX  OCTEX1/2-3/4P  Cable glands reduction in nickel-plated brass Ex 3/4" - 1/2" NPT IECEX-ATEX-EAC Ex  OCTEXP3/4C  Conduit cable gland nickel-plated brass 3/4" NPT IECEX-ATEX- c CSA us - EAC Ex (operating temperature: from -60°C (-76°F) up to +80°C (+176°F))  OEXPLUG1/2P  Plug EX 1/2" NPT IECEX-ATEX-EAC Ex  Plug EX 3/4" NPT IECEX-ATEX-EAC Ex	OCTEX3/4	
IECEX-ÁTEX-EAC EX  OCTEXP3/4C  Conduit cable gland nickel-plated brass 3/4" NPT IECEX-ATEX- c CSA us - EAC Ex (operating temperature: from -60°C (-76°F) up to +80°C (+176°F))  OEXPLUG1/2P  Plug EX 1/2" NPT IECEX-ATEX-EAC Ex  OEXPLUG3/4P  Plug EX 3/4" NPT IECEX-ATEX-EAC Ex	OCTEXA3/4	
us - EAC Ex (operating temperature: from -60°C (-76°F) up to +80°C (+176°F))  0EXPLUG1/2P Plug EX 1/2" NPT IECEX-ATEX-EAC Ex  0EXPLUG3/4P Plug EX 3/4" NPT IECEX-ATEX-EAC Ex	OCTEX1/2-3/4P	
0EXPLUG3/4P Plug EX 3/4" NPT IECEX-ATEX-EAC Ex	OCTEXP3/4C	us - EAC Ex (operating temperature: from -60°C (-76°F) up to +80°C
· · · · · · · · · · · · · · · · · · ·	OEXPLUG1/2P	Plug EX 1/2" NPT IECEX-ATEX-EAC Ex
	OEXPLUG3/4P	Plug EX 3/4" NPT IECEX-ATEX-EAC Ex
FM1010 EMC filter for Marine certification	FM1010	EMC filter for Marine certification

MPX2CABL101	Cabling for MAXIMUS MPX SERIES2, 10m (32.8ft), unarmoured cable, barrier cable gland: 1 Ethernet cable, 3 power supply conductors, 8 I/O conductors
MPX2CABL41	Cabling for MAXIMUS MPX SERIES2, 4m (13.1ft), unarmoured cable, barrier cable gland: 1 Ethernet cable, 3 power supply conductors, 8 I/O conductors
MPX2CABLARM101	Cabling for MAXIMUS MPX SERIES2, 10m (32.8ft), armoured cable, barrier cable gland: 1 Ethernet cable, 3 power supply conductors, 8 I/O conductors
MPX2CABLARM41	Cabling for MAXIMUS MPX SERIES2, 4m (13.1ft), armoured cable, barrier cable gland: 1 Ethernet cable, 3 power supply conductors, 8 I/O conductors
CMSN2200	Unarmoured black cable, available by the metre (minimun order 10m (32.8ft)): 2 Ethernet cables, 3 power supply wires, 2 coaxial video cable, 15 wires for alarms, relays and telemetry
CMAN1300	Armoured black cable, available by the metre (minimum order 10m (32.8ft)): 1 Ethernet cable, 3 power supply conductors, 1 coaxial video cable, 8 conductors for alarms and relay
For further details ab	out cable glands part numbers, please refer to the relevant table.
For further details on	cable codes please refer to the relevant datasheet.
BRACKETS AND A	DAPTORS
MPXCW	AISI 316L stainless steel corner adapter module

BRACKETS AND ADAPTORS								
MPXCW	AISI 316L sta	ninless steel corner adapter mo	odule					
MPXWBA	AISI 316L sta	ainless steel wall bracket						
MPXCOL	AISI 316L sta	ainless steel pole adapter mod	ule					
MPXWBTA	AISI 316L sta	AISI 316L stainless steel parapet or ceiling mounting bracket						
PACKAGE								
Model Number	Weight	Weight Dimensions (WxHxL) Master carton						
MPXR	29kg (64lb)	50x42x26cm (19.7x16.5x10.2in)	-					

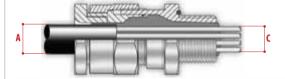
Lens	9mm	13mm	19mm	25mm	35mm
VOx microbolometer sensor not cooled	√	√	√	√	√
Interpolated resolution	720x480	720x480	720x480	720x480	720x480
Pixel dimensions	17μm	17μm	17µm	17μm	17μm
Spectral response - long wave infrared (LWIR)	from 7.5μm to 13.5μm	from 7.5μm to 13.5μm	from 7.5μm to 13.5μm	from 7.5μm to 13.5μm	from 7.5μm to 13.5μm
Internal shutter (only for sensor compensation)	Video stop <1s	Video stop <1s	Video stop <1s	Video stop <1s	Video stop <1s
Digital Detail Enhancement (DDE)	V	√	√	√	√
Digital Zoom	2x, 4x	2x, 4x	2x, 4x	2x, 4x	2x, 4x
Image updating frequency	7.5fps	7.5fps	7.5fps	7.5fps	7.5fps
Image updating high frequency	30fps	30fps	30fps	30fps	30fps
Scene range (High Gain)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)
Scene range (Low Gain)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)
Horizontal field of view (HFOV)	35°	25°	17°	13°	9.3°
Vertical field of view (VFOV)	27°	19°	13°	10°	7.1°
f-number	f/1.25	f/1.25	f/1.25	f/1.1	f/1.2
Thermal sensitivity (NETD), thermal camera with radiometric functions	<50mK at f/1.0	<50mK at f/1.0	<50mK at f/1.0	<50mK at f/1.0	<50mK at f/1.0
Thermal sensitivity (NETD), thermal camera with advanced radiometric functions	<30mK at f/1.0	<30mK at f/1.0	<30mK at f/1.0	<30mK at f/1.0	<30mK at f/1.0
Person (detection / recognition / identification)	285m / 71m / 36m (935ft / 233ft / 118ft)	440m / 112m / 56m (1443ft / 2368ft / 183ft)	640m / 160m / 80m (2099ft / 524ft / 262ft)	930m / 230m / 116m (3051ft / 754ft / 380ft)	1280m / 320m / 160m (4199ft / 1050ft / 525ft)
Car (detection / recognition / identification)	880m / 220m / 108m (2887ft / 722ft / 354ft)	1340m / 340m / 170m (4396ft / 1115ft / 557ft)	1950m / 500m / 250m (6397ft/ 1640ft/ 820ft)	2800m / 710m / 360m (9186ft / 2329ft / 1181ft)	3850m / 950m / 295m (12631ft / 3116ft / 967ft)

Radiometric analysis does not affect camera performance.

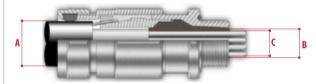
Lens	19mm	25mm	35mm
VOx microbolometer sensor not cooled	√	√	√
Interpolated resolution	720x480	720x480	720x480
Pixel dimensions	17μm	17μm	17μm
Spectral response - long wave infrared (LWIR)	from 7.5μm to 13.5μm	from 7.5μm to 13.5μm	from 7.5μm to 13.5μm
Internal shutter (only for sensor compensation)	Video stop <1s	Video stop <1s	Video stop <1s
Digital Detail Enhancement (DDE)	$\checkmark$	√	√
Digital Zoom	2x, 4x, 8x	2x, 4x, 8x	2x, 4x, 8x
Image updating frequency	7.5fps	7.5fps	7.5fps
Image updating high frequency	30fps	30fps	30fps
Scene range (High Gain)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)	-40°C ÷ +160°C (-40°F ÷ +320°F)
Scene range (Low Gain)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)	-40°C ÷ +550°C (-40°F ÷ +1022°F)
Horizontal field of view (HFOV)	32°	25°	18°
Vertical field of view (VFOV)	26°	20°	14°
f-number	f/1.25	f/1.1	f/1.2
Thermal sensitivity (NETD), thermal camera with radiometric functions	<50mK at f/1.0	<50mK at f/1.0	<50mK at f/1.0
Thermal sensitivity (NETD), thermal camera with advanced radiometric functions	<30mK at f/1.0	<30mK at f/1.0	<30mK at f/1.0
Person (detection / recognition / identification)	570m / 144m / 72m (1870 / 472 / 236ft)	820m / 210m / 104m (2690ft / 689ft / 341ft)	1140m / 280m / 142m (3740ft / 919ft / 466ft)
Car (detection / recognition / identification)	1550m / 400m / 200m (5085ft / 1312ft / 656ft)	2200m / 580m / 290m (7218ft / 1903ft / 951ft)	3000m / 800m / 200m (9843ft / 2625ft / 656ft)

 $Radiometric\ analysis\ does\ not\ affect\ camera\ performance.$ 

CABLE GLANDS AND A	CABLE GLANDS AND ACCESSORIES 3/4" NPT								
Туре	Certification	Operating temperature	Cable	Model Number	Maximum diameter of the external sheath (A)	Maximum diameter of the internal sheath (B)	Maximum diameter of the conductors bundle (C)		
Barrier cable gland	IECEX/ATEX/EAC Ex	-60°C (-76°F) / +135°C (+275°F)	Unarmoured cable	OCTEXB3/4P	20.0mm (0.78in)	-	17.8mm (0.7in)		
			Armoured cable	OCTEXBA3/4P	16.8 - 23.9mm (0.66-0.94in)	20mm (0.79in) max	17.8mm (0.7in)		
Cable gland with gasket	IECEX/ATEX/EAC Ex	-60°C (-76°F) / +100°C (+212°F)	Unarmoured cable	OCTEX3/4C	13.0 - 20.2mm (0.51-0.79in)	-	-		
		-60°C (-76°F) / +80°C (+176°F)	Armoured cable	OCTEXA3/4C	16.9 - 26.0mm (0.66-1.02in)	11.1 - 19.7mm (0.44 - 0.78in)	-		
	ATEX	-40°C (-40°F) / +100°C (+212°F)	Unarmoured cable	OCTEX3/4	14.0 - 17.0mm (0.55-0.67in)	-	-		
			Armoured cable	OCTEXA3/4	18.0 - 23.0mm (0.71-0.91in)	14.0 - 17.0mm (0.55-0.67in)	-		
Plug EX 3/4"NPT	IECEX/ATEX/EAC Ex	-100°C (-148°F) / +400°C (+752°F)	-	OEXPLUG3/4P	-	-	-		
Conduit sealing fitting	IECEX-ATEX- c CSA us - EAC Ex	-60°C (-76°F) / +80°C (+176°F)	-	OCTEXP3/4C	-	-	11.0mm (0.43in)		
Reduction 3/4" NPT x 1/2" NPT	IECEX/ATEX/EAC Ex	-100°C (-148°F) / +400°C (+752°F)	-	OCTEX1/2-3/4P	-	-	-		



# Barrier cable gland with unarmoured cable



Barrier cable gland with armoured cable



Cable gland with gasket with unarmoured cable



Cable gland with gasket with armoured cable



Conduit sealing fitting

Part number	Certification	Marking	Ambient temperature	Cable entry temperature	
PXR1*A0**C*,	ATEX	©    2 G Ex db   C T6T5 Gb	-40°C ≤ Ta ≤ +60°C or +70°C	+80°C	
PXR2*A0**C*,		© II 2D Ex tb IIIC T85°CT100°C Db			
PXR3*A0**C*,	IECEx	Ex db IICT6T5 Gb			
PXR5*A0**C*		Ex tb IIIC T85°CT100°C Db			
	EAC Ex	1Ex db IIC T6T5 Gb X			
		Ex tb IIIC T85°CT100°C Db X			
	INMETRO	Ex db IIC T6T5 Gb			
		Ex tb IIIC T85°CT100°C Db			
	KCs	Ex db IICT6T5 Gb			
		Ex tb IIIC T85°CT100°C Db			
	UK Ex	© II 2 G Ex db IICT6T5 Gb			
	III Harardous Location Amonica	© II 2D Ex tb IIIC T85°CT100°C Db		1 00°C with T 1 C0°C	
	UL Hazardous Location America	Class I, Zone 1, AEx db IICT6T5 Gb Zone 21, AEx tb IIICT85°CT100°C Db		$+80^{\circ}$ C with Ta $\leq +69^{\circ}$ C $+81^{\circ}$ C with Ta $\leq +70^{\circ}$ C	
		Class I, Div 2, Group A, B, C, D T6T5		TOT CWILLIAS TIOC	
		Class II, Div 2, Group F, G T6T5			
	UL Hazardous Location Canada	Ex db IIC T6T5 Gb X			
		Ex tb IIIC T85°CT100°C Db X			
		Class I, Div 2, Group A, B, C, D T6T5			
		Class II, Div 2, Group F, G T6T5			
PXR6*A0**C*	ATEX		$-40$ °C $\leq$ Ta $\leq$ $+60$ °C or $+70$ °C	+80°C	
	IECEx	Ex db IIC T6T5 Gb			
		Ex tb IIIC T85°CT100°C Db			
	EAC Ex	1Ex db IIC T6T5 Gb X			
	INMETER	Ex tb IIIC T85°CT100°C Db X			
	INMETRO	Ex db IICT6T5 Gb Ex tb IIICT85°CT100°C Db			
	VCc				
	KCs	Ex db IICT6T5 Gb Ex tb IIICT85°CT100°C Db			
	UK Ex	© II 2 G Ex db IIC T6T5 Gb			
	ON EX	© II 2D Ex tb IIIC T85°CT100°C Db			
MPXR1*D0**C*,	ATEX		-40°C ≤ Ta ≤ +80°C	+90°C	
1PXR2*D0**C*,					
MPXR3*D0**C*, MPXR5*D0**C*, MPXR6*D0**C*	IECEx	Ex db IIC T4 Gb			
		Ex tb IIIC T135°C Db			
	EAC Ex	1Ex db IIC T4 Gb X			
		Ex tb IIIC T135°C Db X			
	INMETRO	Ex db IIC T4 Gb			
		Ex tb IIIC T135°C Db			
	KCs	Ex db IICT4 Gb			
		Ex tb IIIC T135°C Db			
	UK Ex	⑤ II 2G Ex db IIC T4 Gb			

	Voltage	Thermal Camera	Temperature class and ambient temperature	Radiometry	ONVIF Profiles		Frequency
MPXR	1 230Vac	A 9.3° HFOV, Thermal camera 35mm, 336x256	A T6T5 -40°C/+60°C or +70°C	00 Thermal camera with radiometric functions	O Complies with ONVIF, Profile Q, Profile S and Profile T	C	- 7.5Hz
	2 24Vac	B 13° HFOV, Thermal camera 25mm, 336x256	D T4-40°C/+80°C	OR Thermal camera with advanced radiometric functions	1 Complies with ONVIF, Profile S and Profile T		<b>H</b> 30Hz
	<b>3</b> 120Vac	V 17° HFOV, Thermal camera 19mm, 336x256					
	<b>5</b> 220Vac	F 25° HFOV, Thermal camera 13mm, 336x256					
	6 100Vac	C 35° HFOV, Thermal camera 9mm, 336x256					
		D 18° HFOV, Thermal camera 35mm, 640x512					
		E 25° HFOV, Thermal camera 25mm, 640x512					
		U 32° HFOV, Thermal camera 19mm, 640x512					

Not all combinations are possible.

# TECHNICAL DRAWINGS

The indicated measurements are expressed in millimetres.

