

# ExSite Enhanced Bispectral PTZ 2 Series

2 MP

QVGA

VGA

See the unseen: uniting thermal and visual in one explosion-proof camera

Hazardous applications pose a unique set of challenges. Superior visibility and situational awareness is paramount when posed with varying environmental and lighting conditions. The ExSite Enhanced Bispectral PTZ 2 Series is an explosion-proof camera that combines visual and thermal imaging into a single device to optimize contextual insight. The thermal camera can accurately detect a target in most environmental conditions, while the visual camera achieves greater recognition and identification. Built with durable stainless steel, this camera is tailored for hazardous and corrosive industries, such as onshore/offshore oil and gas, manufacturing, chemical and more.



## Features

### Visual Camera



Get clear images in most weather and lighting conditions with 2 MP resolution, LowLight Technology and True Wide Dynamic Range. Get a complete picture with the smooth movement of the PTZ and see afar with long-range zoom.

### Thermal Camera



Detect heat signatures from a long distance with various resolutions, including QVGA and VGA, and choose from a variety of field-of-view options to cover wide areas.

### Explosion-Proof



The heavy-duty housing meets stringent explosion-proof and dust-ignition-proof requirements while complying with international standards (UL, CSA, ATEX, IECEx, EACEx, INMETRO, KCs, UKCA and TS mark).

### Superior Detection



Never miss a single detail with a camera that provides a thermal and a visual vision for better decision-making and reduced false alarm rates.

### Ready For Harsh Conditions



Safe within a wide temperature range, from -40°C to +60°C (-40°F to +140°F), plus Type 4X/6P and IP66/67/68/69 weather rating for maximum durability in tough environments.

### Easy Installation



Simplify installation and ensure cost-efficiency by installing only one camera instead of two. Take advantage of flexible mounting options to suit your facility's needs, particularly in remote and challenging sites.

### Pelco Smart Analytics



Powered by Motorola Solutions. Make quicker, decisive responses with enhanced object detection and classification and leverage your PTZ's full potential with auto-tracking.

### ONVIF® Conformant



ONVIF Profile S, G, T and M conformance for easy integration with leading video management software to maximize existing investments.

ONVIF is a trademark of Onvif, Inc.

For more information, contact your local Pelco sales representative today at [pelco.com/about/contact-us/#form](http://pelco.com/about/contact-us/#form).



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# Specifications

Thermal - Image Performance		QVGA	VGA
Image Sensor	320 x 256 Uncooled VOx Microbolometer	640 x 512 Uncooled VOx Microbolometer	
Dynamic Range	-40°C to 225°C (-40°F to 437°F)[may vary based on operating temperature]		
Image Rate	Up to 30 fps (-1 models up to 9 fps)		
Aspect Ratio	5:4		
3D Noise Reduction Filter	Yes		
Pixel Pitch	12µm		
Spectral Range	8µm to 14µm		
Resolution Scaling	320 x 256, can be scaled up to 640 x 512	640 x 512, can be scaled down to 320 x 256	
Sensitivity	NETD ≤ 50 mK (NETD ≤ 40 mK on 30 fps models when Frame Averager feature is enabled)		
Thermal Palettes	White Hot, Black Hot, Rainbow, RainHC, IronBow, Lava, Artic, GlowBow, GradedFire, Hottest		
Image Uniformity Optimization	Automatic Flat Field Correction (FFC) - Thermal and Temporal		

Thermal - Lens		QVGA		VGA
Lens	6.3 mm	18 mm	14 mm	24,4 mm
Horizontal field of view	34°	12°	32°	18°
Vertical field of view	27.2°	9.6°	25.6°	13.5°
F-number	F/1.01	F/1.04	F/1.00	F/1.00
Person (detection / recognition / identification)	131m / 33m / 20m	381m / 95m / 59m		505m / 126m / 78m
Car (detection / recognition / identification)	608m / 152m / 94m	1753m / 438m / 270m		2506m / 627m / 386m

Visible - Image Performance		2.0 MP
Image Sensor	1/3" progressive scan CMOS	
Active Pixels (H x V)	1944 (H) × 1212 (V)	
Imaging Area (H x V)	5.568 mm (H) × 3.132 mm (V); 0.219 " (H) × 0.123 " (V)	
Minimum Illumination	0.05 lux (1/30s, 60dB) in color mode; 0.005 lux (1/30s, 60dB) in monochrome	
Dynamic Range	Up to 120 dB	
Image Rate	Up to 60 fps	
Aspect Ratio	Down to (16:9) 384×216 or (5:4) 320×256	
Signal Noise (S/N) Ratio	More than 50 dB	
Lens	F1.6, 4.3-129 mm (30x zoom) remote focus and zoom	
Angle of View	Horizontal	(16:9) 2.34° - 65.1°
	Vertical	(16:9) 1.36° - 38.4°
Zoom	Up to 30x	
3D Noise Reduction Filter	Yes	

Visible - Image Control		2.0 MP
Motion Detection	Pixel motion: Selectable sensitivity and threshold. Classified object detection	
Electronic Shutter Control	Automatic, Manual (1/1 to 1/10,000 sec)	
Iris Control	Automatic, Open, Closed	
Day/Night Control	Automatic, Manual	
Flicker Control	60 Hz, 50 Hz	

<b>Visible - Image Control</b>	2.0 MP
White Balance	Automatic, Manual
Backlight Compensation	On/Off
Privacy Zones	3D, up to 64 zones
Digital Zoom	12X
Electronic Image Stabilization	Yes
Digital Defog	Adjustable/Off

<b>Common - Image Control</b>	
Video Compression	H.264 and H.265 Pelco Smart Compression, Motion JPEG
Streaming	Multi-stream H.264, Multi-stream H.265, Motion JPEG
Presets	500 named presets
Tours	10 named tours

<b>Network</b>	
ONVIF	ONVIF compliance Profile S, Profile T, Profile G, and Profile M ( <a href="http://www.onvif.org">www.onvif.org</a> )
Security	Password protection, HTTPS encryption, FIPS 140-2 L1 (with optional camera license), digest authentication, WS authentication, user access log, 802.1x port based authentication. Signed and encrypted firmware.
Protocols	IPv6, IPv4, HTTP, HTTPS, SOAP, DNS, NTP, RTSP, RTCP, RTP, TCP, UDP, IGMPv3, ICMP, DHCP, Zeroconf, SNMP v2c, SNMP v3, NTCIP, SRTP

<b>Mechanical</b>	
Dimensions (LxWxH)	453 mm x 232 mm x 398 mm; 17.84" x 9.13" x 15.7"
Weight	35 kg; 77 lbs
Construction	AISI 316L stainless steel
Finish	Electro-polished surface
Pan Movement	360° continuous, max 100°/s
Vertical Tilt	-90° to 90°
Maximum Pan/Tilt Speed	100°/s
Wiper	Yes
Cable Entry	2 x 3/4" NPT
Pre-set Accuracy	0.2°

<b>Electrical</b>	
Local Storage	Factory installed 128GB, Micro SDXC Card.
Ports	10BASE-T/100BASE-TX, RJ45 connector (CAT5E cabling) and SFP slot
Power Consumption	120 W
Input Voltage (Power)	Ordering options: 230 VAC, 0.54 A, 50/60 Hz 24 VAC, 5A, 50/60 Hz 120 VAC, 1A, 50/60 Hz 220 VAC, 0.54A, 50/60 Hz
Input for Remote Reset	1
Alarm Inputs	1
Relay Outputs	1+1 (one relay reserved for washer pump and one configurable, 1A, 30 VAC/60 VDC max)

<b>Environmental</b>	
Operating Temperature	-40 °C to +55 °C (-40 °F to 131 °F) in enclosed space, - 40 °C to +60 °C (-40 °F to 140 °F) with ambient convection

Environmental	
Storage Temperature	-40 °C to +55 °C (-40 °F to 131 °F)
Humidity	5% - 95% non-condensing
Housing Climate Control	Built-in heater and fan
Cold Start	Up to 2 hour startup delay at temperature lower than -10 °C (14 °F)
Wind Resistance	Pan and tilt operational at a maximum of 210 km/h wind (130.5 mph)
Certifications	
Certifications/Directives	cULus, CE, UKCA, ROHS, RCM, KC (220 VAC only)
Safety	UL/CSA 62368-1, EN/IEC 62368-1
Hazardous	ATEX (EN IEC 60079-0, EN 60079-1, EN 60079-31), IECEx (IEC 60079-0, IEC 60079-1, IEC 60079-31), EAC EX (TR CU 012/2011), INMETRO (ABNT NBR IEC 60079-0, ABNT NBR IEC 60079-1, ABNT NBR IEC 60079-31), UK Ex (EN IEC 60079-0, EN 60079-1, EN 60079-31), KCs (Employment and labor department 2021-22), UL listed for USA (UL 60079-0, UL 60079-1, UL 60079-31), 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)
Environmental and Performance	EN/IEC 60529: IP66, IP67, IP68, IP69 IEC 60068-2-1, IEC 60068-2-2, IEC 60068-2-6, IEC 60068-2-30, IEC 60068-2-52 NEMA TS 2 para 2.2.7 - 2.2.9 UL50E: Type 4X and 6P
Electromagnetic Emissions	FCC Part 15 Subpart B Class A, IC ICES-003 Class A, EN 55032 Class A, EN 61000-6-4, EN 61000-3-2, EN 61000-3-3
Electromagnetic Immunity	EN 50130-4
Vibration Test	EN 50130-5, EN 60068-2-6
Warranty	3-year limited warranty. 5-year extended warranty is available.
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

## Explosion-Proof Certifications

Part Number	Certification	Marking	Ambient Temperature	Cable Entry Temperature
EXBE2-2X30VF14-SPT-M2G-1 EXBE2-2X30VF14-SPT-M2G EXBE2-2X30VF14-SPT-M1G-1 EXBE2-2X30VF14-SPT-M1G EXBE2-2X30VF14-SPT-ACG-1 EXBE2-2X30VF14-SPT-ACG EXBE2-2X30VF14-SPT-M5G-1 EXBE2-2X30VF14-SPT-M5G EXBE2-2X30VF24-SPT-M2G-1 EXBE2-2X30VF24-SPT-M2G EXBE2-2X30VF24-SPT-M1G-1 EXBE2-2X30VF24-SPT-M1G EXBE2-2X30VF24-SPT-ACG-1 EXBE2-2X30VF24-SPT-ACG EXBE2-2X30VF24-SPT-M5G-1 EXBE2-2X30VF24-SPT-M5G EXBE2-2X30QF06-SPT-M2G-1 EXBE2-2X30QF06-SPT-M2G EXBE2-2X30QF06-SPT-M1G-1 EXBE2-2X30QF06-SPT-M1G EXBE2-2X30QF06-SPT-M1G-1 EXBE2-2X30QF06-SPT-ACG-1 EXBE2-2X30QF06-SPT-ACG EXBE2-2X30QF06-SPT-M5G-1 EXBE2-2X30QF06-SPT-M5G	DEMKO 12 ATEX 1031198X	Ex II 2G Ex db IIC T6...T5 Gb Ex II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +50°C or +70°C (T6/T85°C with Ta ≤ +50°C) (T5/T100°C with Ta ≤ +70°C)	+81°C Ta ≤ +70°C or +80°C Ta ≤ +69°C
	IECEx ULD 11.0005X	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	EA9C RU C- IT.HA91.B.00274/22	1Ex db IIC T6...T5 Gb X Ex tb IIIC T85°C...T100°C Db X		
	INMETRO UL-BR 13.0063X	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	16-KA4BO-0309X, 16-KA4BO-0310X	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	UKEx UL21UKEX2216X	Ex II 2G Ex db IIC T6...T5 Gb Ex II 2D Ex tb IIIC T85°C...T100°C Db		
	cULus File E319666 Hazardous Location America	Class I, Zone 1, AEx db IIC T6...T4 Gb Zone 21, AEx tb IIIC T85°C...T135°C Db Class I, Div 2, Group A, B, C, D T6...T4 Class II, Div 2, Group F, G T6...T4	-40°C ≤ Ta ≤ +50°C or +65°C or +70°C (T6/T85°C with Ta ≤ +50°C) (T5/T100°C with Ta ≤ +65°C) (T4/T135°C with Ta ≤ +70°C)	+83°C Ta ≤ +70°C or +80°C Ta ≤ +67°C
	cULus File E319666 Hazardous Location Canada	Ex db IIC T6...T4 Gb X Ex tb IIIC T85°C...T135°C Db X Class I, Div 2, Group A, B, C, D T6...T4 Class II, Div 2, Group F, G T6...T4		
EXBE2230VF14M1H0G EXBE2230VF24M1H0G	DEMKO 12 ATEX 1031198X	Ex II 2G Ex db IIC T6...T5 Gb Ex II 2D Ex tb IIIC T85°C...T100°C Db	-40°C ≤ Ta ≤ +50°C or +70°C (T6/T85°C with Ta ≤ +50°C) (T5/T100°C with Ta ≤ +70°C)	+81°C Ta ≤ +70°C or +80°C Ta ≤ +69°C
	IECEx ULD 11.0005X	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		
	TS mark	Ex db IIC T6...T5 Gb Ex tb IIIC T85°C...T100°C Db		

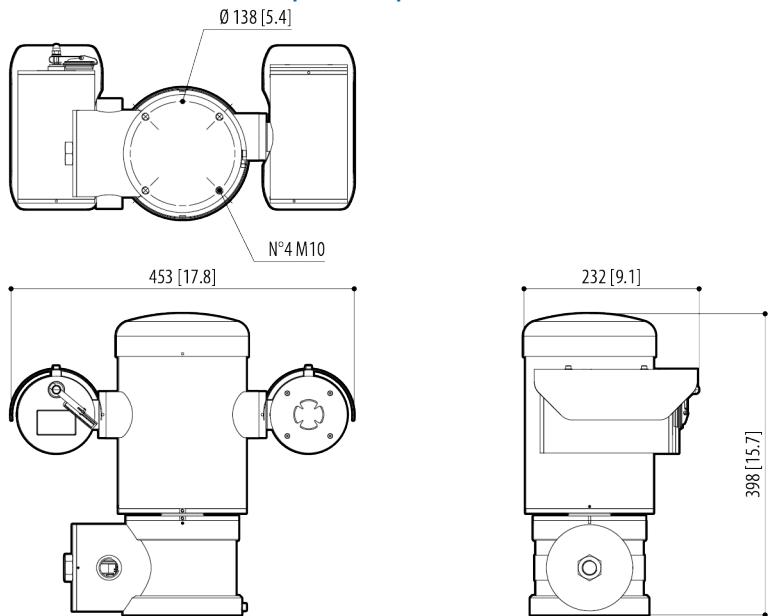
# Analytics Specifications

Supported Analytics Events*	
Objects in Area	The event is triggered when the selected object type moves into the region of interest. This event can be used to count objects.
Object Loitering	The event is triggered when the selected object type moves into the region of interest, then stays for an extended amount of time.
Objects Crossing Beam	The event is triggered when the specified number of objects have crossed the directional beam that is configured over the camera's field of view. The beam can be unidirectional or bidirectional.
Object Appears or Enters Area	The event is triggered by each object that enters the region of interest.
Object Not Present in Area	The event is triggered when no objects are present in the region of interest.
Objects Enter Area	The event is triggered when the specified number of objects have entered the region of interest.
Objects Leave Area	The event is triggered when the specified number of objects have left the region of interest.
Object Stops in Area	The event is triggered when an object moves into a region of interest and then stops moving for the specified threshold time.
Direction Violated	The event is triggered when an object moves in the prohibited direction of travel.
Sabotage Detection	The event is triggered when the scene unexpectedly changes.

\*Pelco Smart Analytics powered by Motorola Solutions.

## Outline Dimensions

Exsite enhanced bispectral ptz 2 series



[X.X]	INCHES
X	MM

# System Model Numbers

Resolution & Lens	Power	fps	Part Number
Sensor VGA 640x512; Lens 32°-14mm.	230 Vac	9Hz	EXBE2-2X30VF14-SPT-M2G-1
		30Hz	EXBE2-2X30VF14-SPT-M2G
	120 Vac	9Hz	EXBE2-2X30VF14-SPT-M1G-1
		30Hz	EXBE2-2X30VF14-SPT-M1G EXBE2230VF14M1H0G
	24 Vac	9Hz	EXBE2-2X30VF14-SPT-ACG-1
		30Hz	EXBE2-2X30VF14-SPT-ACG
	220 Vac	9Hz	EXBE2-2X30VF14-SPT-M5G-1
		30Hz	EXBE2-2X30VF14-SPT-M5G
Sensor VGA 640x512; Lens 18°-24.4mm.	230 Vac	9Hz	EXBE2-2X30VF24-SPT-M2G-1
		30Hz	EXBE2-2X30VF24-SPT-M2G
	120 Vac	9Hz	EXBE2-2X30VF24-SPT-M1G-1
		30Hz	EXBE2-2X30VF24-SPT-M1G EXBE2230VF24M1H0G
	24 Vac	9Hz	EXBE2-2X30VF24-SPT-ACG-1
		30Hz	EXBE2-2X30VF24-SPT-ACG
	220 Vac	9Hz	EXBE2-2X30VF24-SPT-M5G-1
		30Hz	EXBE2-2X30VF24-SPT-M5G
Sensor QVGA 320x256; Lens 34°-6.3mm.	230 Vac	9Hz	EXBE2-2X30QF06-SPT-M2G-1
		30Hz	EXBE2-2X30QF06-SPT-M2G
	120 Vac	9Hz	EXBE2-2X30QF06-SPT-M1G-1
		30Hz	EXBE2-2X30QF06-SPT-M1G
	24 Vac	9Hz	EXBE2-2X30QF06-SPT-ACG-1
		30Hz	EXBE2-2X30QF06-SPT-ACG
	220 Vac	9Hz	EXBE2-2X30QF06-SPT-M5G-1
		30Hz	EXBE2-2X30QF06-SPT-M5G
Sensor QVGA 320x256; Lens 12°-18mm.	230 Vac	9Hz	EXBE2-2X30QF18-SPT-M2G-1
		30Hz	EXBE2-2X30QF18-SPT-M2G
	120 Vac	9Hz	EXBE2-2X30QF18-SPT-M1G-1
		30Hz	EXBE2-2X30QF18-SPT-M1G
	24 Vac	9Hz	EXBE2-2X30QF18-SPT-ACG-1
		30Hz	EXBE2-2X30QF18-SPT-ACG
	220 Vac	9Hz	EXBE2-2X30QF18-SPT-M5G-1
		30Hz	EXBE2-2X30QF18-SPT-M5G

## Mounting Accessories

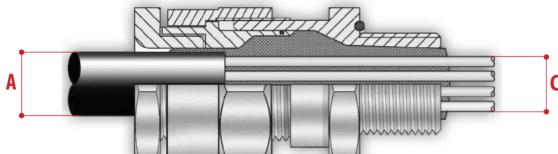
Part #	Description
MPXCW	Corner mount adapter for use with ExSite cameras. Max load 50 kg (110 lb.). AISI 316L stainless steel.
MPXWBA	AISI 316L stainless steel wall bracket.
MPXCOL	Pole mount adapter for use with ExSite cameras. For pole diameters from 110 mm (4.3") to 150 mm (5.9"). Max load 50 kg (110 lb.). AISI 316L stainless steel.
MPXWBTA	AISI 316L stainless steel parapet or ceiling mounting bracket.

# Cabling

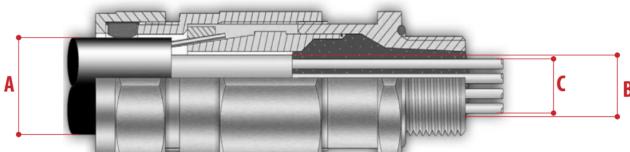
Item	Description
MPX2CABL41	Cabling, 4m (13.1 ft), unarmored cable, barrier cable gland
MPX2CABL101	Cabling, 10m (32.8 ft), unarmored cable, barrier cable gland
MPX2CABLARM41	Cabling, 4m (13.1 ft), armored cable, barrier cable gland
MPX2CABLARM101	Cabling, 10m (32.8 ft), armored cable, barrier cable gland

## Cable Glands and Accessories 3/4" NPT

Type	Certification	Operating Temp.	Cable	Part 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)	Unarmored	OCTEXB3/4P	20.0 mm (0.78 in)	-	17.8 mm (0.7in)
			Armored	OCTEXBA3/4P	16.8 - 23.9 mm (0.66-0.94 in)	20 mm (0.79 in) max	17.8 mm (0.7 in)
Cable Gland with Gasket	IECEx / ATEX / EAC Ex	-60°C (-76°F) / +100°C (+212°F)	Unarmoured	OCTEX3/4C	13.0 - 20.2 mm (0.51-0.79 in)	-	-
		-60°C (-76°F) / +80°C (+176°F)	Armored	OCTEXA3/4C	16.9 - 26.0 mm (0.66-1.02 in)	11.1 - 19.7 mm (0.44-0.78 in)	-
Plug EX 3/4"NPT	IECEx / ATEX / EAC Ex	-100°C (-148°F) / +400°C (+752°F)	-	OEXPLUG3/4P	-	-	-
Conduit Sealing Fitting	IECEx / ATEX / cCSAus / EAC Ex	-60°C (-76°F) / +80°C (+176°F)	-	OCTEXP3/4C	-	-	11.0 mm (0.43 in)
Reduction 3/4" NPT x 1/2" NPT	IECEx / ATEX / EAC Ex	-100°C (-148°F) / +400°C (+752°F)	-	OCTEX1/2-3/4P	-	-	-

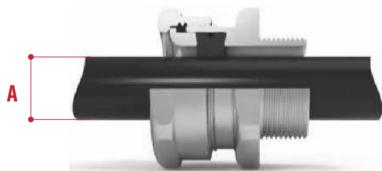


Barrier cable gland with unarmored cable



Barrier cable gland with armored cable

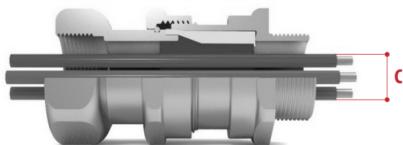
Type	Certification	Operating Temp.	Cable	Part Number	Maximum diameter of the external sheath (A)	Maximum diameter of the internal sheath (B)	Maximum diameter of the conductors bundle (C)
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Cable gland with gasket with unarmored cable



Cable gland with gasket with armored cable



Conduit sealing fitting

## Explosion-Proof Communication Box

A communication box includes a 3-port RJ45 and 1 SFP port Ethernet switch and 24 VAC output for powering up to one of the following:

- 2x EXC2602 fixed compact cameras
- 2x EXF2230 fixed cameras with 2x washer pump
- 1x EXP2230, EXBE2, or EXPE2 PTZ camera with 1x washer pump

Part #	Description
MBX1MAA	AISI 316L stainless steel housing, 230 VAC input.
MBX2MAA	AISI 316L stainless steel housing, 24 VAC input.
MBX3MAA	AISI 316L stainless steel housing, 120 VAC input.
MBXMP	Adapter plate for communication box to MPXCOL or MPXCW mounts. AISI 316L stainless steel housing.
MBXWRE	Wrench for opening communication boxes, MBX.
MPXCOL	Pole mount adapter for use with ExSite cameras. For pole diameters from 110 mm (4.3") to 150 mm (5.9"). Max load 50 kg (110 lb.). AISI 316L stainless steel.
MPXCW	Corner mount adapter for use with ExSite cameras. Max load 50 kg (110 lb.). AISI 316L stainless steel.

## Explosion-Proof Washer

A 10L (2.6 gal) tank with integrated manual pump and delivery up to 20m (66 ft), 24 VAC/VDC input.

Part #	Description
WASEX2T4AT	ATEX certified solenoid valve.
WASEX2T4IC	IECEX certified solenoid valve.
WASEX2T4IN	INMETRO certified solenoid valve.
WASEX2T4KC	KCS certified solenoid valve (only 24 VDC).
WASEX2T4GOR	EAC Ex certified solenoid valve.
WASEX2T4UL	cULus certified solenoid valve.
NXCOL	Pole mount adapter for use with EXF2230 cameras or explosion protected washers. For pole diameters from 110

Part #	Description
	mm (4.3") to 150 mm (5.9"). Max load 50 kg (110 lb.). AISI 316L stainless steel.
NXCW	Corner mount adapter for use with EXF2230 cameras or explosion protected washers. Max load 50 kg (110 lb.). AISI 316L stainless steel.

## Support

Learn more and find additional documentation at [pelco.com](http://pelco.com) or email [support@pelco.com](mailto:support@pelco.com) for specific product support.



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