

**TYPE APPROVAL CERTIFICATE****This is to certify:****That the Security/ Surveillance Camera**with type designation(s)  
**OXALIS Camera Stations, fixed & pan+tilt**

Issued to

**Eaton MEDC Ltd**  
**Sutton-in-Ashfield, Nottinghamshire, United Kingdom**is found to comply with  
**DNV GL rules for classification – Ships, offshore units, and high speed and light craft****Application :****Product(s) approved by this certificate is/are accepted for installation on all vessels classed by DNV GL.****Location classes:**

<b>Temperature</b>	<b>D</b>
<b>Humidity</b>	<b>B</b>
<b>Vibration</b>	<b>A</b>
<b>EMC</b>	<b>B</b>
<b>Enclosure</b>	<b>C</b>

Issued at **Høvik** on **2019-10-02**for **DNV GL**This Certificate is valid until **2024-09-03**.  
DNV GL local station: **Southampton**Approval Engineer: **Nils Jarem**

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**Trond Sjøvåg**  
**Head of Section**

This Certificate is subject to terms and conditions overleaf. Any significant change in design or construction may render this Certificate invalid. The validity date relates to the Type Approval Certificate and not to the approval of equipment/systems installed.



Job Id: **262.1-016978-4**  
 Certificate No: **TAA000010D**  
 Revision No: **1**

**Product description**

Camera Stations :

Pan & Tilt Camera Assembly:

- With & Without Wash Wipe
- XC, XP, XT: Explosion Proof
- SC, SP, ST: Safe Area

Fixed Camera Housing:

- With & Without Wash Wipe
- XF: Explosion Proof
- SF: Safe Area

PART NO.	OPTIONS
<b>Explosion Protected Fixed Camera Stations - XP Range</b>	
XF26*****	XF26 explosion-protected 316L stainless steel fixed camera station, includes sunshield and demister. IP66/67.
XF40*****	XF40 explosion-protected 316L stainless steel fixed camera station, includes sunshield and demister. IP66/67.
XF60*****	XF60 explosion-protected 316L stainless steel fixed camera station, includes sunshield and demister. IP66/67.
<b>Explosion Protected PTZ Camera Stations - XC Range</b>	
XC26*****	XC26 explosion protected 316L stainless steel PTZ camera station, variable speed pan-tilt, includes demister and sunshield. IP66/67.
XC40*****	XC40 explosion protected 316L stainless steel PTZ camera station, variable speed pan-tilt, includes demister and sunshield. IP66/67.
<b>Explosion Protected PTZ Camera Stations - XP Range</b>	
XP26*****	XP26 explosion protected 316L stainless steel PTZ camera station, variable speed pan-tilt, fixed cable entry, includes demister and sunshield. IP66/67.
XP40*****	XP40 explosion protected 316L stainless steel PTZ camera station, variable speed pan-tilt, fixed cable entry, includes demister and sunshield. IP66/67.
XP60*****	XP60 explosion protected 316L stainless steel PTZ camera station, variable speed pan-tilt, fixed cable entry, includes demister and sunshield. IP66/67.
<b>Explosion Protected PTZ Camera Stations - XT Range</b>	
XT26*****	XP26 explosion protected 316L stainless steel PTZ camera station, variable speed pan-tilt, fixed cable entry, includes demister and sunshield, integral camera station mounted illuminator, IP66/67.
XT40*****	XP26 explosion protected 316L stainless steel PTZ camera station, variable speed pan-tilt, fixed cable entry, includes demister and sunshield, integral camera station mounted illuminator, IP66/67.
<b>Safe Area Fixed Camera Stations</b>	
SF26*****	SF26 Safe Area 316L stainless steel fixed camera station, includes sunshield and demister, IP66/67.
SF40*****	SF40 Safe Area 316L stainless steel fixed camera station, includes sunshield and demister, IP66/67.
SF60*****	SF60 Safe Area 316L stainless steel fixed camera station, includes sunshield and demister, IP66/67.
<b>Safe Area PTZ Camera Stations - SC Range</b>	
SC26*****	SC26 Safe Area 316L stainless steel PTZ camera station, variable speed pan-tilt, includes demister and sunshield. IP66/67.
SC40*****	SC40 Safe Area 316L stainless steel PTZ camera station, variable speed pan-tilt, includes demister and sunshield. IP66/67.
<b>Safe Area PTZ Camera Stations - SP Range</b>	
SP26*****	SP26 Safe Area 316L stainless steel PTZ camera station, variable speed pan-tilt, fixed cable entry, includes demister and sunshield. IP66/67.

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	SP40*****	SP40 Safe Area 316L stainless steel PTZ camera station, variable speed pan-tilt, fixed cable entry, includes demister and sunshield. IP66/67.
	SP60*****	SP60 Safe Area 316L stainless steel PTZ camera station, variable speed pan-tilt, fixed cable entry, includes demister and sunshield. IP66/67.
<b>Safe Area PTZ Camera Stations - ST Range</b>		
	ST26*****	ST26 Safe Area 316L stainless steel PTZ camera station, variable speed pan-tilt, fixed cable entry, includes demister and sunshield, integral camera station mounted illuminator, IP66/67.
	ST40*****	ST40 Safe Area 316L stainless steel PTZ camera station, variable speed pan-tilt, fixed cable entry, includes demister and sunshield, integral camera station mounted illuminator, IP66/67.
<b>Camera Station Configuration Options</b>		
<b>Camera Housing Type 2nd Digit</b>		
V	*V*****	Visual (Day-Night) camera housing with toughened glass.
T	*T*****	Thermal Imaging housing with 50mm Germanium window.
H	*H*****	Thermal Imaging housing with 102mm Germanium window.
D	*D*****	Dual Imaging Housing - 50mm precision polished toughened glass and 50mm Germanium window for thermal imaging side.
P	*p*****	Visual (Day-Night) camera housing with precision polished toughened glass with integral washer pump.
Q	*Q*****	Dual Imaging Housing - 50mm precision polished toughened glass and 50mm Germanium window for thermal imaging side with integral washer pump.
<b>Wiper Options 3rd Digit</b>		
W	**W*****	Wiper.
E	**E*****	Wiper and spray nozzle for external washer pump.
N	**N*****	No wiper.
<b>Video Type 4th Digit</b>		
A	***A*****	ANALOGUE VIDEO
I	***I*****	IP HD VIDEO
<b>Day-Night Camera Module Options 5th Digit</b>		
1	****1*****	Analogue 1/4" double density interline transfer block module, 650TVL (680TVL B/W), 37X optical zoom (3.5-129.5mm F1.6-F3.9), 16X digital zoom.
2	****2*****	Analogue 1/3" super HAD II CCD 10X optical zoom (12X digital) block module (5.1-51mm F1.8 - 2.1).
4	****4*****	Analogue 1/4" EXview HAD CCD (progressive scan) block module, 36x optical zoom, , f=3.4 mm (wide) to 122.4 mm (tele), F1.6 to F4.5, 12X digital zoom.
5	****5*****	Analogue 1/3" CMOS HD analogue block module, 700TVL, 30x optical zoom, f=4.3 mm (wide) to 129 mm (tele), F1.6 to F4.7, 32X digital zoom.
#	****#*****	# =HD Camera
N	****N*****	No D/N camera fitted
<b>Thermal Core Module Options 6th Digit</b>		
1	*****1*****	Thermal Core: Uncooled VOx microbolometer thermal imaging camera, including TCI Interface PCB for functionality over standard RS485 protocol Commands. 324 x 256 resolution, 25µ pixel size, 7.5Hz NTSC/8.3Hz PAL exportable frame rate, digital detail enhancement.
2	*****2*****	Thermal Core: Uncooled VOx microbolometer thermal imaging camera, including TCI Interface PCB for functionality over standard RS485 protocol Commands. 640 x 512 resolution (PAL), 17µ pixel size, 7.5Hz NTSC/8.3Hz PAL exportable frame rate, digital detail enhancement.

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3	*****3*****	Thermal Core: Uncooled VOx microbolometer thermal imaging camera, including TCI Interface PCB for functionality over standard RS485 protocol Commands. 324 x 256 resolution, 25µ pixel size, 30Hz NTSC/25Hz PAL frame rate, digital detail enhancement.
4	*****4*****	Thermal Core: Uncooled VOx microbolometer thermal imaging camera, including TCI Interface PCB for functionality over standard RS485 protocol Commands. 640 x 512 resolution (PAL), 17µ pixel size, 30Hz NTSC/25Hz PAL frame rate, digital detail enhancement.
C	*****C*****	Fitting of customer specific thermal camera, subject to acceptance, conformity to regulation and testing.
N	*****N*****	No Thermal Core.
<b>Thermal Core Lens Options 7th Digit</b>		
1	*****1*****	19mm lens: FoV 24° x 18° (324 x 256) / FoV 32° x 26° (640 x 512). Detection of object 4m x 1.5m: 1280m (324 x 256) / 1550m (640 x 512).
2	*****2*****	25mm lens: FoV 18° x 14° (324 x 256) / FoV 25° x 20° (640 x 512). Detection of object 4m x 1.5m: 1650m (324 x 256) / 2200m (640 x 512).
3	*****3*****	35mm lens: FoV 13° x 10° (324 x 256) / FoV 18° x 14° (640 x 512). Detection of object 4m x 1.5m: 2250m (324 x 256) / 3000m (640 x 512).
4	*****4*****	50mm lens: FoV 9.1° x 6.9° (324 x 256) / FoV 12.4° x 9.9° (640 x 512). Detection of object 4m x 1.5m: 3100m (324 x 256) / 3900m (640 x 512).
5	*****5*****	100mm lens: FoV 4.6° x 3.4° (324 x 256) / FoV 6.2° x 5.0° (640 x 512). Detection of object 4m x 1.5m: 5300m (324 x 256) / 6000m (640 x 512).
C	*****C*****	Fitting of customer specific thermal imaging lens, subject to acceptance, conformity to regulation and testing.
N	*****N*****	No thermal imaging lens.
<b>Video System 8th Digit</b>		
P	*****P*****	PAL.
N	*****N*****	NTSC.
I	*****I*****	IP.
<b>Supply Voltage 9th Digit</b>		
1	*****1*****	24VAC supply.
2	*****2*****	110VAC supply.
3	*****3*****	230VAC supply.
4	*****4*****	24VDC supply.
S	*****S*****	Special Supply voltage (within approved limits)
<b>Camera Rotation 10th Digit</b>		
1	*****1****	Continuous rotation (unrestricted)
2	*****2****	350° rotation restricted to +/- 175°
N	*****N****	Not applicable
<b>Protocol Requirements 11th Digit</b>		
#	*****#***	# = Any option, as this does not affect DNV GL
<b>Certification Requirements 12th Digit</b>		
#	*****#**	# = Any option, as this does not affect DNV GL
<b>Temperature Ranges (T Class) 13th Digit</b>		
#	*****#*	# = Any option, if within the tested DNV GL range
<b>Transmission 14th Digit</b>		
0	*****0	Standard electrical connection compatible with build
<b>Subsequent digits used are non-cert related</b>		

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## Approval conditions

The Type Approval covers hardware listed under Product description. When the hardware is used in applications to be classed by DNV GL, documentation for the actual application is to be submitted for approval by the manufacturer of the application system in each case. Reference is made to DNV GL rules for classification of ships Pt.4 Ch.9 Control and monitoring systems

## Application/Limitation

Ex-certification is not covered by this certificate. Application in hazardous area to be approved in each case according to the Rules and Ex-Certification/ Special Condition for Safe Use listed in valid Ex-certificate issued by a notified/recognized Certification Body.

## Type Approval documentation

Product Type	Datasheet number	Revision Level	Description
XF**	DSOX0033	F	XF26 analogue
	DSOX0034	G	XF26 HD IP
	DSOX0035	F	XF26 TI
	DSOX0027	F	XF40 analogue
	DSOX0032	G	XF40 DI
	DSOX0029	F	XF40 HD IP
	DSOX0030	F	XF40 TI
	DSOX0020	F	XF60 analogue
	DSOX0025	F	XF60 DI
	DSOX0022	G	XF60 HD IP
	DSOX0023	F	XF60 TI
	XC**	DSOX0037	F
DSOX0036		F	XC40 analogue
XP**	DSOX0018	F	XP26 analogue
	DSOX0019	F	XP26 TI
	DSOX0012	G	XP40 analogue
	DSOX0017	F	XP40 DI
	DSOX0014	H	XP40 IP HD
	DSOX0015	F	XP40 TI analogue
	DSOX0005	G	XP60 analogue
	DSOX0010	G	XP60 DI
	DSOX0007	F	XP60 HD IP
	DSOX0008	G	XP60 TI
XT**	DSOX0004	H	XT26 analogue
	DSOX0001	G	XT40 analogue
	DSOX0003	G	XT40 HD IP
SF**	DSOX0063	F	SF26 analogue
	DSOX0064	E	SF26 TI
	DSOX0057	E	SF40 analogue
	DSOX0062	E	SF40 DI
	DSOX0059	F	SF40 HD IP
	DSOX0060	E	SF40 TI
DSOX0050	E	SF60 analogue	

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<b>Product Type</b>	<b>Datasheet number</b>	<b>Revision Level</b>	<b>Description</b>
	DSOX0055	E	SF60 DI
	DSOX0052	F	SF60 HD IP
	DSOX0053	E	SF60 TI
SC**	DSOX0066	E	SC26 analogue
	DSOX0065	E	SC40 analogue
	DSOX0067	F	SC40 HD IP
SP**	DSOX0048	F	SP26 analogue
	DSOX0049	E	SP26 TI
	DSOX0047	G	SP40 DI analogue
	DSOX0044	F	SP40 HD IP
	DSOX0042	E	SP40 PTZ analogue
	DSOX0045	E	SP40 TI IP
ST**	DSOX0041	E	ST26 analogue
	DSOX0038	E	ST40 analogue
	DSOX0040	G	ST40 HD IP

**Test reports:** 11051426A1 dated 2011-03-23  
TL14052A-SALT dated 2015-01-26  
TL14052A-EMC-ENV dated 2015-01-26  
TL15068-Dry Heat dated 2015-06-26  
TL16138-Issue 1 dated 2017-01-05

**Instructions:** IM-SF-SC-SP-ST issue 4, dated 2018-05-16  
IM-ADD-6 issue 4, dated 2018-06-08  
IMI+70-XF-XC-XP-XT issue 8, dated 2018-06-07

**Drawings:** GA-SP40TN ver. A  
GA-SC40 ver. A  
GA-ST26VE ver. A  
GA-SF26 ver. A  
GA-XC26VW ver. A  
GA-XF40VN ver. A  
GA-XP60VW ver. A  
GA-XT40VE ver. A

Type approval renewal assessment report for TAA000010D, DNV GL Manchester 2019-09-02.

## Tests carried out

Applicable tests according to class guideline DNVGL-CG-0339, November 2016.

## Marking of product

The products to be marked with:

- model name
- manufacturer name
- serial number

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### **Periodical assessment**

The scope of the periodical assessment is to verify that the conditions stipulated for the type are complied with, and that no alterations are made to the product design or choice of systems, software versions, components and/or materials.

The main elements of the assessment are:

- Ensure that type approved documentation is available
- Inspection of factory samples, selected at random from the production line (where practicable)
- Review of production and inspection routines, including test records from product sample tests and control routines
- Ensuring that systems, software versions, components and/or materials used comply with type approved documents and/or referenced system, software, component and material specifications
- Review of possible changes in design of systems, software versions, components, materials and/or performance, and make sure that such changes do not affect the type approval given
- Ensuring traceability between manufacturer's product type marking and the type approval certificate

Periodical assessment is to be performed after 2 years and after 3.5 years. A renewal assessment will be performed at renewal of the certificate.

END OF CERTIFICATE