



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.:  issue No.:  Certificate history:

Status:

Date of Issue:  Page 1 of 4

Applicant: **Video Marine International Ltd**  
4 Hornsby Square  
Southfields  
Laindon  
Essex  
SS15 6SD  
United Kingdom

Electrical Apparatus: **VMI-2410-xx Camera Housing and VMI-2420-xx Pan/Tilt Unit**  
*Optional accessory:*

Type of Protection: **Flameproof**

Marking: **Ex d IIC T4/5\* -60°C ≤ Ta ≤ +60°C Gb**  
**Ex tb IIIC T135°C Db IP6x**  
**\*dependant on maximum internal power dissipation**

Approved for issue on behalf of the IECEx Certification Body:

Position:

Signature:   
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**Intertek Testing & Certification Limited**  
ITS House, Cleeve Road,  
Leatherhead,  
Surrey, KT22 7SB  
United Kingdom





# IECEx Certificate of Conformity

Certificate No.: IECEx ITS 10.0053X

Date of Issue: 2010-11-15

Issue No.: 0

Page 2 of 4

Manufacturer: **Video Marine International Ltd**  
4 Hornsby Square  
Southfields  
Laindon  
Essex  
SS15 6SD  
**United Kingdom**

Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

#### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

**IEC 60079-0 : 2007-10** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition: 5  
**IEC 60079-1 : 2007-04** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition: 6  
**IEC 60079-31 : 2008** Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'  
Edition: 1

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

Test Report:

[GB/ITS/ExTR10.0052/00](#)

Quality Assessment Report:

[GB/ITS/QAR10.0021/00](#)



# IECEx Certificate of Conformity

Certificate No.: IECEx ITS 10.0053X

Date of Issue: 2010-11-15

Issue No.: 0

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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The VMI-2410 series Camera Housing is constructed from stainless steel AISI316L with glass windows and designed to accommodate a range of CCTV cameras, Infra- red cameras, lenses and associated ancillary equipment to allow their deployment in harsh environmental conditions. The housing has facilities for optional items such as window demister/heater, internal window wiper mechanism, integral window washer pump and external sunshield. The unit is 260mm to 600mm in length (dependant on model) and is constructed from 139.7mm diameter cylindrical tube and 154mm diameter end covers. The unit has a cemented window assembly in one end cover, with the opposite end cover being either a blank end plate, end plate with 3x M20 entries, integral assembly containing the window washer pump. The cable entry to the housing is via an M20 cable entry adaptor in the side of the housing tube or via the tilt motor shaft attachment flange when mounted to the VMI-2420 Pan/Tilt unit. When fitted with Germanium windows, for use with Infra-red cameras, a protective guard plate is factory fitted on the window end cover and secured in place. The Camera Housing has welded joints and is therefore to be subjected to routine overpressure tests. The VMI-2420 integrated Pan & Tilt Unit would be used in conjunction with the 2410 Camera Housing where installations require a moveable camera. This Pan & Tilt Unit is also constructed from AISI316L stainless steel and can be fitted with either AC fixed speed or DC variable speed motors. The Pan & Tilt Unit with integral base mount is 300mm wide and 485mm high. It comprises of one cable entry in the base mount which is one M25 threaded flame path. There are four spigot flame paths, two where the end covers fit into the housing and two where the motor/gearbox assemblies connect to the housing. In addition there are 2 cylindrical flame paths for the motor shafts allowing for the pan and tilt movement. The Pan & Tilt Unit has welded joints and is therefore to be subjected to routine overpressure tests.

### CONDITIONS OF CERTIFICATION: YES as shown below:

1. No modifications must be made to the flame paths of the unit without consultation of the drawings listed in ExTR Test Report Cover GB/ITS/ExTR10.0052/00.
2. Temperatures could exceed 70°C at the cable gland or 80°C at the branching point, suitably rated cable must be selected.
3. Use only hex socket head fasteners with property class of A4-70 for securing end covers & shafts to housings.
4. No electromagnetic or ultrasonic energy radiating equipment to be fitted into the enclosures.
5. A routine overpressure test in accordance with IEC 60079-1:2007 Clause 16.1 shall be carried out on all enclosures, including all cemented window assemblies, at a pressure of 27.3bar for a period of between 10 and 60 seconds and must be recorded. There shall be no deformation or damage to the enclosures and no leakage through the cement of any of the window assemblies



# IECEx Certificate of Conformity

Certificate No.: IECEx ITS 10.0053X

Date of Issue: 2010-11-15

Issue No.: 0

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## EQUIPMENT(continued):

The models covered by this certification are:

Model No.	Description
2410-00	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With or without mounting plate for swivel joint.
2410-TI	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Large Infra Red Transparent Window & front window guard.
2410-TI-50	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Small Infra Red Transparent Window & front window guard.
2410-01	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump. With or without mounting plate for swivel joint.
2410-02	Standalone, Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper only. With or without mounting plate for swivel joint.
2410-03	Medium Length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump. With or without mounting plate for swivel joint.
2410-04	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater.
2410-04-TI	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Large Infra Red Transparent Window & front window guard.
2410-04-TI-50	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Small 50mm Infra Red Transparent Window & front window guard.
2410-05	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper.
2410-DI-00	Long length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater.
2410-DI-01	Long length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump.
2410-DI-02	Medium length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater.
2410-DI-03	Medium length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump.
2420-00	Stainless Steel 316L Pan & Tilt Unit Exd IIC, 24VAC, Fixed speed, 6 deg/sec pan, 3 deg/sec Tilt .
2420-01	Stainless Steel 316L Integrated Pan & Tilt Unit Exd IIC, 24VDC Variable speed, 24 deg/sec pan, 12 deg/sec Tilt.

T-Class is dependant on power rating and is as per the following table:

Max Internal Power Dissipation	T-Class
20W	T5
40W	T4
60W	T4



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx ITS 10.0053X issue No.:1

Status: **Current**

Certificate history:  
Issue No. 1 (2013-3-14)  
Issue No. 0 (2010-11-15)

Date of Issue: **2013-03-14** Page 1 of 5

Applicant: **Oxalis Group Ltd**  
Masons Road,  
Stratford Upon Avon,  
Warwickshire,  
CV37 9NB  
**United Kingdom**

Electrical Apparatus: **VMI-2410-xx Camera Housing and VMI-2420-xx Pan/Tilt Unit**  
*Optional accessory:*

Type of Protection: **Flameproof - Ex d**

Marking: Ex d IIC T4/5/6\* Gb  
Ex tb IIIC T135°C Db IP6x  
-\*\*°C ≤ Ta ≤ +\*\*°C  
\*dependant on ambient temp, assembly configuration and maximum internal power dissipation  
\*\* See schedule  
IECEX ITS 10.0053X

Approved for issue on behalf of the IECEx  
Certification Body:

K R Spence

Position:

Certification Officer

Signature:  
(for printed version)

  
14<sup>th</sup> MARCH 2013

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

**Intertek Testing & Certification Limited**  
ITS House, Cleeve Road,  
Leatherhead,  
Surrey, KT22 7SB  
United Kingdom





# IECEX Certificate of Conformity

Certificate No.: IECEx ITS 10.0053X

Date of Issue: 2013-03-14

Issue No.: 1

Page 2 of 5

Manufacturer: **Oxalis Group Ltd**  
Masons Road,  
Stratford Upon Avon,  
Warwickshire,  
CV37 9NB  
**United Kingdom**

Additional Manufacturing location  
(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

#### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

**IEC 60079-0 : 2007-10** Explosive atmospheres - Part 0: Equipment - General requirements  
Edition: 5  
**IEC 60079-1 : 2007-04** Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"  
Edition: 6  
**IEC 60079-31 : 2008** Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'  
Edition: 1

*This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

Test Report:

GB/ITS/ExTR10.0052/00

GB/ITS/ExTR10.0052/01

Quality Assessment Report:

GB/BAS/QAR12.0018/00



# IECEX Certificate of Conformity

Certificate No.: IECEx ITS 10.0053X

Date of Issue: 2013-03-14

Issue No.: 1

Page 3 of 5

## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The VMI-2410 series Camera Housing is constructed from stainless steel AISI316L with glass windows and designed to accommodate a range of CCTV cameras, Infra- red cameras, lenses and associated ancillary equipment to allow their deployment in harsh environmental conditions. The housing has facilities for optional items such as window demister/heater, internal window wiper mechanism, integral window washer pump and external sunshield. The unit is 260mm to 600mm in length (dependant on model) and is constructed from 139.7mm diameter cylindrical tube and 154mm diameter end covers. The unit has a cemented window assembly in one end cover, with the opposite end cover being either a blank end plate, end plate with 3x M20 entries, integral assembly containing the window washer pump. The cable entry to the housing is via an M20 cable entry adaptor in the side of the housing tube or via the tilt motor shaft attachment flange when mounted to the VMI-2420 Pan/Tilt unit. When fitted with Germanium windows, for use with Infra-red cameras, a protective guard plate is factory fitted on the window end cover and secured in place. The Camera Housing has welded joints and is therefore to be subjected to routine overpressure tests.

The VMI-2420 integrated Pan & Tilt Unit would be used in conjunction with the 2410 Camera Housing where installations require a moveable camera. This Pan & Tilt Unit is also constructed from AISI316L stainless steel and can be fitted with either AC fixed speed or DC variable speed motors. The Pan & Tilt Unit with integral base mount is 300mm wide and 485mm high. It comprises of one cable entry in the base mount which is one M25 threaded flamepath. There are four spigot flamepaths, two where the end covers fit into the housing and two where the motor/gearbox assemblies connect to the housing. In addition there are 2 cylindrical flamepaths for the motor shafts allowing for the pan and tilt movement. The Pan & Tilt Unit has welded joints and is therefore to be subjected to routine overpressure tests.

### CONDITIONS OF CERTIFICATION: YES as shown below:

1. No modifications must be made to the flamepaths of the unit without consultation of the drawings listed in ExTR Test Report Cover GB/ITS/ExTR10.0052/00.
2. Temperatures could exceed 70°C at the cable gland or 80°C at the branching point, suitably rated cable must be selected.
3. Use only hex socket head fasteners with property class of A4-70 for securing end covers & shafts to housings.
4. No electromagnetic or ultrasonic energy radiating equipment to be fitted into the enclosures.
5. A routine overpressure test in accordance with IEC 60079-1:2007 Clause 16.1 shall be carried out on all enclosures, including all cemented window assemblies, at a pressure of 27.3bar for a period of between 10 and 60 seconds and must be recorded. There shall be no deformation or damage to the enclosures and no leakage through the cement of any of the window assemblies



# IECEX Certificate of Conformity

Certificate No.: IECEx ITS 10.0053X

Date of Issue: 2013-03-14

Issue No.: 1

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## EQUIPMENT(continued):

The models covered by this certification are:

Model No.	Description
2410-00	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With or without mounting plate for swivel joint.
2410-TI	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Large Infra Red Transparent Window & front window guard.
2410-TI-50	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Small Infra Red Transparent Window & front window guard.
2410-01	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump. With or without mounting plate for swivel joint.
2410-02	Standalone, Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper only. With or without mounting plate for swivel joint.
2410-03	Medium Length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump. With or without mounting plate for swivel joint.
2410-04	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater.
2410-04-TI	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Large Infra Red Transparent Window & front window guard.
2410-04-TI-50	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Small 50mm Infra Red Transparent Window & front window guard.
2410-05	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper.
2410-DI-00	Long length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater.
2410-DI-01	Long length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump.
2410-DI-02	Medium length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater.
2410-DI-03	Medium length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump.
2420-00	Stainless Steel 316L Pan & Tilt Unit Exd IIC, 24VAC, Fixed speed, 6 deg/sec pan, 3 deg/sec Tilt .
2420-01	Stainless Steel 316L Integrated Pan & Tilt Unit Exd IIC, 24VDC Variable speed, 24 deg/sec pan, 12 deg/sec Tilt.

This certificate also includes hybrid models (see drawings 1410-10, 1410-10-TI-50, 1410-25, 1420-10 and 1420-11) which have the capability to be used with both model ranges in the 24xx series or the smaller version 14xx series (see Certificate IEC ITS 10.0063X for further details of the 14xx models).

T-Class is dependant on power rating and is as per the following tables;

Pan & Tilt fitted with camera housing in an upper ambient of 40°C

		Max Camera power dissipation		
		20W	40W	60W
Max Pan & Tilt unit power dissipation	10W	T6	T5	T4
	20W	T6	T5	T4
	40W	T4	T5	T4
	60W	T4	T4	T4

Pan & Tilt fitted with camera housing in an upper ambient of 60°C

		Max Camera power dissipation		
		20W	40W	60W
Max Pan & Tilt unit power dissipation	10W	T5	T5	T4
	20W	T5	T5	T4
	40W	T4	T4	T4
	60W	T4	T4	T4

Stand-alone camera housing

Max Camera power dissipation	Upper ambient of 60°C	Upper ambient of 40°C
20W	T5	T6
40W	T4	T5
60W	T4	T4



# IECEx Certificate of Conformity

Certificate No.: IECEx ITS 10.0053X

Date of Issue: 2013-03-14

Issue No.: 1

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## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

### Issue 1

- To allow change of company name and address from Video Marine International Ltd, 4 Hornsby Square, Southfields, Laidon, Essex, SS15 6SD to Oxalis Group Ltd. Masons Road, Stratford Upon Avon, Warwickshire, CV37 9NB The label drawings have been updated to reflect this change as have the title blocks of all drawings.
- To allow use of CILS-8500-ULT-MET as an alternative material for the marking plate.
- Additional temperature ranges added (-40°C to +40°C, -60°C to +40°C, -40°C to +60°C and -60°C to +60°C)
- The Pan and tilt unit and the Camera housing have been assigned separate T classes based upon the wattages of the equipment fitted and the assembly configuration.
- Blind holes and recesses for the affixing of guards in certain configurations have been made optional.



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx ITS 10.0053X issue No.:2

Status: **Current**

Date of Issue: **2013-07-26** Page 1 of 5

Certificate history:  
Issue No. 3\* (2013-7-25)  
Issue No. 2 (2013-7-26)  
Issue No. 1 (2013-3-14)  
Issue No. 0 (2010-11-15)

Applicant: **Oxalis Group Ltd**  
Masons Road,  
Stratford Upon Avon,  
Warwickshire,  
CV37 9NB  
**United Kingdom**

Electrical Apparatus: **VMI-2410-xx Camera Housing and VMI-2420-xx Pan/Tilt Unit**  
Optional accessory:

Type of Protection: **Flameproof - Ex d**

Marking: Marking for VMI-2410-xx Camera Housing and the VMI-2420-xx Pan/Tilt Unit:  
Ex d op pr IIC T6...T4\* Gb ##°C ≤ Ta ≤ +##°C  
Ex tb IIIC T135°C Db IP6x  
Marking for LED illuminator module, model 2410-04-IR:  
Ex d IIC T4 Gb ##°C ≤ Ta ≤ +##°C  
Ex tb IIIC T135°C Db IP6X  
Note: T class and ambient temp, is dependant on the assembly configuration and maximum internal power dissipation.  
\* = T Class (see schedule)  
## = Ambient temperature range (see schedule)  
IECEX ITS 10.0053X

Approved for issue on behalf of the IECEx Certification Body: K R Spence

Position: Certification Officer

Signature:  
(for printed version)

Date:

  
26th JULY 2013

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**Intertek Testing & Certification Limited**  
ITS House, Cleeve Road,  
Leatherhead,  
Surrey, KT22 7SB  
United Kingdom





# IECEX Certificate of Conformity

Certificate No.: IECEx ITS 10.0053X

Date of Issue: 2013-07-26

Issue No.: 2

Page 2 of 5

Manufacturer: **Oxalis Group Ltd**  
Masons Road,  
Stratford Upon Avon,  
Warwickshire,  
CV37 9NB  
**United Kingdom**

Additional Manufacturing location  
(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

#### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

<b>IEC 60079-0 : 2007-10</b> Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
<b>IEC 60079-1 : 2007-04</b> Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-28 : 2006-08</b> Edition: 1	Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
<b>IEC 60079-31 : 2008</b> Edition: 1	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure 't'

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

Test Report:

[GB/ITS/ExTR10.0052/02](#)

Quality Assessment Report:

[GB/BAS/QAR12.0018/01](#)



# IECEx Certificate of Conformity

Certificate No.: IECEx ITS 10.0053X

Date of Issue: 2013-07-26

Issue No.: 2

Page 3 of 5

## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The VMI-2410 series Camera Housing is constructed from stainless steel AISI316L with glass windows and designed to accommodate a range of CCTV cameras, Infra-red cameras, lenses and associated ancillary equipment to allow their deployment in harsh environmental conditions. The housing has facilities for optional items such as window demister/heater, internal window wiper mechanism, integral window washer pump and external sunshield. The unit is 260mm to 600mm in length (dependant on model) and is constructed from 139.7mm diameter cylindrical tube and 154mm diameter end covers. The unit has a cemented window assembly in one end cover, with the opposite end cover being either a blank end plate, end plate with 3x M20 entries, integral assembly containing the window washer pump. The cable entry to the housing is via an M20 cable entry adaptor in the side of the housing tube or via the tilt motor shaft attachment flange when mounted to the VMI-2420 Pan/Tilt unit. When fitted with Germanium windows, for use with Infra-red cameras, a protective guard plate is factory fitted on the window end cover and secured in place. The Camera Housing has welded joints and is therefore to be subjected to routine overpressure tests.

The 2410-04-IR model is an infrared LED Illuminator which is fitted in place of a camera within the smaller housing option of the VMI-2410 series housing.

The VMI-2420 integrated Pan & Tilt Unit would be used in conjunction with the 2410 Camera Housing where installations require a moveable camera. This Pan & Tilt Unit is also constructed from AISI316L stainless steel and can be fitted with either AC fixed speed or DC variable speed motors. The Pan & Tilt Unit with integral base mount is 300mm wide and 485mm high. It comprises of one cable entry in the base mount which is one M25 threaded flame path. There are four spigot flame paths, two where the end covers fit into the housing and two where the motor/gearbox assemblies connect to the housing. In addition there are 2 cylindrical flame paths for the motor shafts allowing for the pan and tilt movement. The Pan & Tilt Unit has welded joints and is therefore to be subjected to routine overpressure tests.

The VMI-2410 series Camera Housing and the VMI-2420 integrated Pan & Tilt Unit have the option of being provided fitted with an optical output for data transmission purposes.

### CONDITIONS OF CERTIFICATION: YES as shown below:

1. No modifications must be made to the flame paths of the unit without consultation of the drawings listed in ExTR Test Report Cover GB/ITS/ExTR10.0052/00.
2. Temperatures could exceed 70°C at the cable gland or 80°C at the branching point, suitably rated cable must be selected.
3. Use only hex socket head fasteners with property class of A4-70 for securing end covers & shafts to housings.
4. No electromagnetic or ultrasonic radiating equipment other than that detailed in the schedule drawings to be fitted into the enclosures. However, a fibre optic transmitter may be fitted (not permitted in the IR Illuminator model number 2410-04-IR), the output from which must always be routed out of the enclosure via armoured cable or conduit and must be terminated within a suitably certified enclosure or in a safe area.
5. A routine overpressure test in accordance with IEC 60079-1:2007 Clause 16.1 shall be carried out on all enclosures, including all cemented window assemblies, at a pressure of 27.3bar for a period of between 10 and 60 seconds and must be recorded. There shall be no deformation or damage to the enclosures and no leakage through the cement of any of the window assemblies



# IECEx Certificate of Conformity

Certificate No.: IECEx ITS 10.0053X

Date of Issue: 2013-07-26

Issue No.: 2

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## EQUIPMENT(continued):

The models covered by this certification are:

Model No.	Description
2410-00	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With or without mounting plate for swivel joint.
2410-TI	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Large Infra Red Transparent Window & front window guard.
2410-TI-50	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Small Infra Red Transparent Window & front window guard.
2410-01	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump. With or without mounting plate for swivel joint.
2410-02	Standalone, Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper only. With or without mounting plate for swivel joint.
2410-03	Medium Length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump. With or without mounting plate for swivel joint.
2410-04	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater.
2410-04-TI	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Large Infra Red Transparent Window & front window guard.
2410-04-TI-50	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Small 50mm Infra Red Transparent Window & front window guard.
2410-04-IR	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, fitted with a infrared LED illuminator..
2410-05	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper.
2410-DI-00	Long length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater.
2410-DI-01	Long length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump.
2410-DI-02	Medium length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater.
2410-DI-03	Medium length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump.
2420-00	Stainless Steel 316L Pan & Tilt Unit Exd IIC, 24VAC, Fixed speed, 6 deg/sec pan, 3 deg/sec Tilt .
2420-01	Stainless Steel 316L Integrated Pan & Tilt Unit Exd IIC, 24VDC Variable speed, 24 deg/sec pan, 12 deg/sec Tilt.

This certificate also includes hybrid models (see drawings 1410-10, 1410-10-TI-50, 1410-25, 1420-10 and 1420-11) which have the capability to be used with both model ranges in the 24xx series or the smaller version 14xx series (see Certificate IEC ITS 10.0063X for further details of the 14xx models).

The equipment can be provided for the following ambient ranges;

-40°C to +40°C, -40°C to +60°C, -60°C to +40°C or -60°C to +60°C.

T-Class is dependant on power rating and upper ambient as per the following tables;

Pan & Tilt fitted with camera housing in an upper ambient of +40°C

		Max Camera power dissipation		
		20W	40W	60W
Max Pan & Tilt unit power dissipation	10W	T6	T5	T4
	20W	T6	T5	T4
	40W	T4	T5	T4
	60W	T4	T4	T4

Pan & Tilt fitted with camera housing in an upper ambient of +60°C

		Max Camera power dissipation		
		20W	40W	60W
Max Pan & Tilt unit power dissipation	10W	T5	T5	T4
	20W	T5	T5	T4
	40W	T4	T4	T4
	60W	T4	T4	T4

Stand-alone camera housing

Max Camera power dissipation	Upper ambient of +60°C	Upper ambient of +40°C
20W	T5	T6
40W	T4	T5
60W	T4	T4



# IECEX Certificate of Conformity

Certificate No.: IECEx ITS 10.0053X

Date of Issue: 2013-07-26

Issue No.: 2

Page 5 of 5

## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

### Issue 2

Addition of the following;

- Option of fitting an optical output to the VMI-2410-xx Camera Housing and the VMI-2420-xx Pan/Tilt Unit for data transmission purposes. The inclusion of the optical output data transmission unit has modified the equipment marking to include the safety marking "op pr".
- Standard IEC 60079-28:2007 has been added to the assessment to cover the optical output data transmission unit.
- Addition of a new Infrared LED illuminator module, model "2410-04-IR".

NOTE: The 2410-04-IR Illuminator has its own label and is marked;

Ex d IIC T4 Gb -##°C ≤ Ta ≤ +##°C

Ex tb IIIC T135°C Db IP6X

### Issue 1

- To allow change of company name and address from Video Marine International Ltd, 4 Hornsby Square, Southfields, Laindon, Essex, SS15 6SD to Oxalis Group Ltd, Masons Road, Stratford Upon Avon, Warwickshire, CV37 9NB The label drawings have been updated to reflect this change as have the title blocks of all drawings.
- To allow use of CILS-8500-ULT-MET as an alternative material for the marking plate.
- Additional temperature ranges added (-40°C to +40°C, -60°C to +40°C, -40°C to +60°C and -60°C to +60°C)
- The Pan and tilt unit and the Camera housing have been assigned separate T classes based upon the wattages of the equipment fitted and the assembly configuration.
- Blind holes and recesses for the affixing of guards in certain configurations have been made optional.



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx ITS 10.0053X issue No.:3

Status: **Current**

Date of Issue: 2013-09-03 Page 1 of 5

Certificate history:  
Issue No. 3 (2013-9-3)  
Issue No. 2 (2013-7-26)  
Issue No. 1 (2013-3-14)  
Issue No. 0 (2010-11-15)

Applicant: **Oxalis Group Ltd**  
Masons Road,  
Stratford Upon Avon,  
Warwickshire,  
CV37 9NB  
United Kingdom

Electrical Apparatus: **VMI-2410-xx Camera Housing and VMI-2420-xx Pan/Tilt Unit**  
Optional accessory:

Type of Protection: **Flameproof - Ex d**


Marking: Marking for VMI-2410-xx Camera Housing and the VMI-2420-xx Pan/Tilt Unit:  
Ex d op pr IIC T6...T4\* Gb ##°C ≤ Ta ≤ +##°C  
Ex tb IIIC T135°C Db IP6x  
Marking for LED illuminator module, model 2410-04-IR:  
Ex d IIC T4 Gb ##°C ≤ Ta ≤ +##°C  
Ex tb IIIC T135°C Db IP6X  
Note: T class and ambient temp, is dependant on the assembly configuration and maximum internal power dissipation.  
\* = T Class (see schedule)  
## = Ambient temperature range (see schedule)  
IECEX ITS 10.0053X

Approved for issue on behalf of the IECEx Certification Body: K R Spence

Position: Certification Officer

Signature:  
(for printed version)

Date:

  
03/SEPT/2013

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the Official IECEx Website.

Certificate issued by:

**Intertek Testing & Certification Limited**  
ITS House, Cleeve Road,  
Leatherhead,  
Surrey, KT22 7SB  
United Kingdom



# IECEX Certificate of Conformity

Certificate No.: IECEx ITS 10.0053X

Date of Issue: 2013-09-03

Issue No.: 3

Page 2 of 5

Manufacturer: **Oxalis Group Ltd**  
Masons Road,  
Stratford Upon Avon,  
Warwickshire,  
CV37 9NB  
United Kingdom

Additional Manufacturing location  
(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

#### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

<b>IEC 60079-0 : 2007-10</b> Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
<b>IEC 60079-1 : 2007-04</b> Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-28 : 2006-08</b> Edition: 1	Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
<b>IEC 60079-31 : 2008</b> Edition: 1	Explosive atmospheres - Part 31: Equipment dust ignition protection by enclosure 't'

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

Test Report:

[GB/ITS/ExTR10.0052/03](#)

Quality Assessment Report:

[GB/BAS/QAR12.0018/01](#)



# IECEX Certificate of Conformity

Certificate No.: IECEx ITS 10.0053X

Date of Issue: 2013-09-03

Issue No.: 3

Page 3 of 5

## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The VMI-2410 series Camera Housing is constructed from stainless steel AISI316L with glass windows and designed to accommodate a range of CCTV cameras, Infra-red cameras, lenses and associated ancillary equipment to allow their deployment in harsh environmental conditions. The housing has facilities for optional items such as window demister/heater, internal window wiper mechanism, integral window washer pump and external sunshield. The unit is 260mm to 600mm in length (dependant on model) and is constructed from 139.7mm diameter cylindrical tube and 154mm diameter end covers. The unit has a cemented window assembly in one end cover, with the opposite end cover being either a blank end plate, end plate with 3x M20 entries, integral assembly containing the window washer pump. The cable entry to the housing is via an M20 cable entry adaptor in the side of the housing tube or via the tilt motor shaft attachment flange when mounted to the VMI-2420 Pan/Tilt unit. When fitted with Germanium windows, for use with Infra-red cameras, a protective guard plate is factory fitted on the window end cover and secured in place. The Camera Housing has welded joints and is therefore to be subjected to routine overpressure tests. The 2410-04-IR model is an infrared LED Illuminator which is fitted in place of a camera within the smaller housing option of the VMI-2410 series housing. The VMI-2420 integrated Pan & Tilt Unit would be used in conjunction with the 2410 Camera Housing where installations require a moveable camera. This Pan & Tilt Unit is also constructed from AISI316L stainless steel and can be fitted with either AC fixed speed or DC variable speed motors. The Pan & Tilt Unit with integral base mount is 300mm wide and 485mm high. It comprises of one cable entry in the base mount which is one M25 threaded flame path. There are four spigot flame paths, two where the end covers fit into the housing and two where the motor/gearbox assemblies connect to the housing. In addition there are 2 cylindrical flame paths for the motor shafts allowing for the pan and tilt movement. The Pan & Tilt Unit has welded joints and is therefore to be subjected to routine overpressure tests.

The VMI-2410 series Camera Housing and the VMI-2420 integrated Pan & Tilt Unit have the option of being provided fitted with an optical output for data transmission purposes.

### CONDITIONS OF CERTIFICATION: YES as shown below:

1. No modifications must be made to the flame paths of the unit without consultation of the drawings listed in ExTR Test Report Cover GB/ITS/ExTR10.0052/00.
2. Temperatures could exceed 70°C at the cable gland or 80°C at the branching point, suitably rated cable must be selected.
3. Use only hex socket head fasteners with property class of A4-70 for securing end covers & shafts to housings.
4. No electromagnetic or ultrasonic energy radiating equipment to be fitted into the enclosures.
5. A routine overpressure test in accordance with IEC 60079-1:2007 Clause 16.1 shall be carried out on all enclosures, including all cemented window assemblies, at a pressure of 27.3bar for a period of between 10 and 60 seconds and must be recorded. There shall be no deformation or damage to the enclosures and no leakage through the cement of any of the window assemblies



# IECEX Certificate of Conformity

Certificate No.: IECEX ITS 10.0053X

Date of Issue: 2013-09-03

Issue No.: 3

Page 4 of 5

## EQUIPMENT(continued):

The models covered by this certification are:

Model No.	Description
2410-00	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With or without mounting plate for swivel joint.
2410-TI	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Large Infra Red Transparent Window & front window guard.
2410-TI-50	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Small Infra Red Transparent Window & front window guard.
2410-01	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump. With or without mounting plate for swivel joint.
2410-02	Standalone, Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper only. With or without mounting plate for swivel joint.
2410-03	Medium Length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump. With or without mounting plate for swivel joint.
2410-04	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater.
2410-04-TI	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Large Infra Red Transparent Window & front window guard.
2410-04-TI-50	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Small 50mm Infra Red Transparent Window & front window guard.
2410-05	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper.
2410-DI-00	Long length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater.
2410-DI-01	Long length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump.
2410-DI-02	Medium length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater.
2410-DI-03	Medium length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump.
2420-00	Stainless Steel 316L Pan & Tilt Unit Exd IIC, 24VAC, Fixed speed, 6 deg/sec pan, 3 deg/sec Tilt .
2420-01	Stainless Steel 316L Integrated Pan & Tilt Unit Exd IIC, 24VDC Variable speed, 24 deg/sec pan, 12 deg/sec Tilt.

This certificate also includes hybrid models (see drawings 1410-10, 1410-10-TI-50, 1410-25, 1420-10 and 1420-11) which have the capability to be used with both model ranges in the 24xx series or the smaller version 14xx series (see Certificate IEC ITS 10.0063X for further details of the 14xx models).

T-Class is dependant on power rating and is as per the following tables;

Pan & Tilt fitted with camera housing in an upper ambient of 40°C

		Max Camera power dissipation		
		20W	40W	60W
Max Pan & Tilt unit power dissipation	10W	T6	T5	T4
	20W	T6	T5	T4
	40W	T4	T5	T4
	60W	T4	T4	T4

Pan & Tilt fitted with camera housing in an upper ambient of 60°C

		Max Camera power dissipation		
		20W	40W	60W
Max Pan & Tilt unit power dissipation	10W	T5	T5	T4
	20W	T5	T5	T4
	40W	T4	T4	T4
	60W	T4	T4	T4

Stand-alone camera housing

Max Camera power dissipation	Upper ambient of 60°C	Upper ambient of 40°C
20W	T5	T6
40W	T4	T5
60W	T4	T4



# IECEX Certificate of Conformity

Certificate No.: IECEx ITS 10.0053X

Date of Issue: 2013-09-03

Issue No.: 3

Page 5 of 5

## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

### Issue 3

- To allow the removal of the interior weld on the base of the small camera housing 2410-04, 2410-04-TI, 2410-04-TI-50 & 2410-05 (the weld remains unaffected).



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

Certificate No.: IECEx ITS 10.0053X issue No.:4

Status: Current

Date of Issue: 2015-01-15 Page 1 of 5

Certificate history:  
Issue No. 4 (2015-1-15)  
Issue No. 3 (2013-9-3)  
Issue No. 2 (2013-7-26)  
Issue No. 1 (2013-3-14)  
Issue No. 0 (2010-11-15)

Applicant: Oxalis Group Ltd  
Masons Road,  
Stratford Upon Avon,  
Warwickshire,  
CV37 9NB  
United Kingdom

Electrical Apparatus: VMI-2410-xx Camera Housing and VMI-2420-xx Pan/Tilt Unit  
Optional accessory:


Type of Protection: Flameproof - Ex d

Marking: Marking for VMI-2410-xx Camera Housing and the VMI-2420-xx Pan/Tilt Unit:  
Ex d op pr IIC T6...T4\* Gb -##°C ≤ Ta ≤ +##°C  
Ex tb IIIC T135°C Db IP6x  
Marking for LED illuminator module, model 2410-04-IR:  
Ex d IIC T4 Gb -##°C ≤ Ta ≤ +##°C  
Ex tb IIIC T135°C Db IP6X  
Note: T class and ambient temp, is dependant on the assembly configuration and maximum internal power dissipation.  
\* = T Class (see schedule)  
## = Ambient temperature range (see schedule)  
IECEX ITS 10.0053X

Approved for issue on behalf of the IECEx Certification Body: A Dickinson

Position: Certification Officer

Signature:  
(for printed version)

  
15 Jan 2015

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).

Certificate issued by:

**Intertek Testing & Certification Limited**  
ITS House, Cleeve Road,  
Leatherhead,  
Surrey, KT22 7SB  
United Kingdom





# IECEX Certificate of Conformity

Certificate No.: IECEX ITS 10.0053X

Date of Issue: 2015-01-15

Issue No.: 4

Page 2 of 5

Manufacturer: **Oxalis Group Ltd**  
Masons Road,  
Stratford Upon Avon,  
Warwickshire,  
CV37 9NB  
United Kingdom

Additional Manufacturing location  
(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEX Quality system requirements. This certificate is granted subject to the conditions as set out in IECEX Scheme Rules, IECEX 02 and Operational Documents as amended.

#### STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

<b>IEC 60079-0 : 2007-10</b> Edition: 5	Explosive atmospheres - Part 0: Equipment - General requirements
<b>IEC 60079-1 : 2007-04</b> Edition: 6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
<b>IEC 60079-28 : 2006-08</b> Edition: 1	Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
<b>IEC 60079-31 : 2008</b> Edition: 1	Explosive atmospheres – Part 31: Equipment dust ignition protection by enclosure 't'

*This Certificate **does not** indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

#### TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

#### Test Report:

[GB/ITS/ExTR10.0052/04](#)

#### Quality Assessment Report:

[GB/BAS/QAR12.0018/01](#)



# IECEx Certificate of Conformity

Certificate No.: IECEx ITS 10.0053X

Date of Issue: 2015-01-15

Issue No.: 4

Page 3 of 5

## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The VMI-2410 series Camera Housing is constructed from stainless steel AISI316L with glass windows and designed to accommodate a range of CCTV cameras, Infra- red cameras, lenses and associated ancillary equipment to allow their deployment in harsh environmental conditions. The housing has facilities for optional items such as window demister/heater, internal window wiper mechanism, integral window washer pump and external sunshield. The unit is 260mm to 600mm in length (dependant on model) and is constructed from 139.7mm diameter cylindrical tube and 154mm diameter end covers. The unit has a cemented window assembly in one end cover, with the opposite end cover being either a blank end plate, end plate with 3x M20 entries, integral assembly containing the window washer pump. The cable entry to the housing is via an M20 cable entry adaptor in the side of the housing tube or via the tilt motor shaft attachment flange when mounted to the VMI-2420 Pan/Tilt unit. When fitted with Germanium windows, for use with Infra-red cameras, a protective guard plate is factory fitted on the window end cover and secured in place. The Camera Housing has welded joints and is therefore to be subjected to routine overpressure tests. The 2410-04-IR model is an infrared LED Illuminator which is fitted in place of a camera within the smaller housing option of the VMI-2410 series housing. The VMI-2420 integrated Pan & Tilt Unit would be used in conjunction with the 2410 Camera Housing where installations require a moveable camera. This Pan & Tilt Unit is also constructed from AISI316L stainless steel and can be fitted with either AC fixed speed or DC variable speed motors. The Pan & Tilt Unit with integral base mount is 300mm wide and 485mm high. It comprises of one cable entry in the base mount which is one M25 threaded flame path. There are four spigot flame paths, two where the end covers fit into the housing and two where the motor/gearbox assemblies connect to the housing. In addition there are 2 cylindrical flame paths for the motor shafts allowing for the pan and tilt movement. The Pan & Tilt Unit has welded joints and is therefore to be subjected to routine overpressure tests. The VMI-2410 series Camera Housing and the VMI-2420 integrated Pan & Tilt Unit have the option of being provided fitted with an optical output for data transmission purposes.

### CONDITIONS OF CERTIFICATION: YES as shown below:

1. No modifications must be made to the flame paths of the unit without consultation of the drawings listed in ExTR Test Report Cover GB/ITS/ExTR10.0052/00.
2. Temperatures could exceed 70°C at the cable gland or 80°C at the branching point, suitably rated cable must be selected.
3. Use only hex socket head fasteners with property class of A4-70 for securing end covers & shafts to housings.
4. No electromagnetic or ultrasonic energy radiating equipment to be fitted into the enclosures.
5. A routine overpressure test in accordance with IEC 60079-1:2007 Clause 16.1 shall be carried out on all enclosures, including all cemented window assemblies, at a pressure of 27.3bar for a period of between 10 and 60 seconds and must be recorded. There shall be no deformation or damage to the enclosures and no leakage through the cement of any of the window assemblies



# IECEx Certificate of Conformity

Certificate No.: IECEx ITS 10.0053X

Date of Issue: 2015-01-15

Issue No.: 4

Page 4 of 5

## EQUIPMENT(continued):

The models covered by this certification are:

Model No.	Description
2410-00	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With or without mounting plate for swivel joint.
2410-T1	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Large Infra Red Transparent Window & front window guard.
2410-T1-50	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Small Infra Red Transparent Window & front window guard.
2410-01	Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump. With or without mounting plate for swivel joint.
2410-02	Standalone, Long length, Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper only. With or without mounting plate for swivel joint.
2410-03	Medium Length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump. With or without mounting plate for swivel joint.
2410-04	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater.
2410-04-T1	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Large Infra Red Transparent Window & front window guard.
2410-04-T1-50	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater. With Small 50mm Infra Red Transparent Window & front window guard.
2410-05	Short length Stainless Steel 316L Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper.
2410-DI-00	Long length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater.
2410-DI-01	Long length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump.
2410-DI-02	Medium length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater.
2410-DI-03	Medium length Stainless Steel 316L Dual imager Camera Housing Unit Exd IIC, Sunshield & 24VAC Heater, with integral window wiper & washer pump.
2420-00	Stainless Steel 316L Pan & Tilt Unit Exd IIC, 24VAC, Fixed speed, 6 deg/sec pan, 3 deg/sec Tilt .
2420-01	Stainless Steel 316L Integrated Pan & Tilt Unit Exd IIC, 24VDC Variable speed, 24 deg/sec pan, 12 deg/sec Tilt.

This certificate also includes hybrid models (see drawings 1410-10, 1410-10-T1-50, 1410-25, 1420-10 and 1420-11) which have the capability to be used with both model ranges in the 24xx series or the smaller version 14xx series (see Certificate IEC ITS 10.0063X for further details of the 14xx models).

T-Class is dependant on power rating and is as per the following tables;

Pan & Tilt fitted with camera housing in an upper ambient of 40°C

		Max Camera power dissipation		
		20W	40W	60W
Max Pan & Tilt unit power dissipation	10W	T6	T5	T4
	20W	T6	T5	T4
	40W	T4	T5	T4
	60W	T4	T4	T4

Pan & Tilt fitted with camera housing in an upper ambient of 60°C

		Max Camera power dissipation		
		20W	40W	60W
Max Pan & Tilt unit power dissipation	10W	T5	T5	T4
	20W	T5	T5	T4
	40W	T4	T4	T4
	60W	T4	T4	T4

Stand-alone camera housing

Max Camera power dissipation	Upper ambient of 60°C	Upper ambient of 40°C
20W	T5	T6
40W	T4	T5
60W	T4	T4



# IECEX Certificate of Conformity

Certificate No.: IECEx ITS 10.0053X

Date of Issue: 2015-01-15

Issue No.: 4

Page 5 of 5

## DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):

### Issue 4

- Use of helicoils to repair damaged or worn M5 and M6 threads.
- Optional tolerances on housing boss to shaft and gearbox hole to shaft flameproof joints.
- Option of additional surface finishes (Electroplating or painting).

### Issue 3

- To allow the removal of the interior weld on the base of the small camera housing 2410-04, 2410-04-TI, 2410-04-TI-50 & 2410-05 (the weld remains unaffected).

### Issue 2

- Option of fitting an optical output to the VMI-2410-xx Camera Housing and the VMI-2420-xx Pan/Tilt Unit for data transmission purposes. The inclusion of the optical output data transmission unit has modified the equipment marking to include the safety marking "op pr".
- Standard IEC 60079-28:2007 has been added to the assessment to cover the optical output data transmission unit.
- Addition of a new Infrared LED illuminator module, model "2410-04-IR".

### Issue 1

- To allow change of company name and address from Video Marine International Ltd, 4 Hornsby Square, Southfields, Laindon, Essex, SS15 6SD to Oxalis Group Ltd. Masons Road, Stratford Upon Avon, Warwickshire, CV37 9NB The label drawings have been updated to reflect this change as have the title blocks of all drawings.
- To allow use of CILS-8500-ULT-MET as an alternative material for the marking plate.
- Additional temperature ranges added (-40°C to +40°C, -60°C to +40°C, -40°C to +60°C and -60°C to +60°C)
- The Pan and tilt unit and the Camera housing have been assigned separate T classes based upon the wattages of the equipment fitted and the assembly configuration.
- Blind holes and recesses for the affixing of guards in certain configurations have been made optional.



# IECEX Certificate of Conformity

## INTERNATIONAL ELECTROTECHNICAL COMMISSION IEC Certification Scheme for Explosive Atmospheres

for rules and details of the IECEx Scheme visit [www.iecex.com](http://www.iecex.com)

<b>Certificate No.:</b>	IECEX ITS 10.0053X	<b>Issue No:</b> 5	<b>Certificate history:</b>
<b>Status:</b>	Current	Page 1 of 6	Issue No. 5 (2016-11-22)
<b>Date of Issue:</b>	2016-11-22		Issue No. 4 (2015-01-15)
<b>Applicant:</b>	Eaton MEDC Ltd (Oxalls) Unit B, Sutton Parkway, Oddicroft Lane, Sutton-in-Ashfield, NG17 5FB. United Kingdom		Issue No. 3 (2013-09-03)
<b>Equipment:</b>	VMI-2410-xx Camera Housing and VMI-2420-xx Pan/Tilt Unit		Issue No. 2 (2013-07-26)
<b>Optional accessory:</b>			Issue No. 1 (2013-03-14)
<b>Type of Protection:</b>	Flameproof - Ex d		Issue No. 0 (2010-11-15)
<b>Marking:</b>	Marking for VMI-2410-xx Camera Housing and the VMI-2420-xx Pan/Tilt Unit:		
	Ex d op pr IIC T6...T4* Gb -##°C ≤ Ta ≤ +##°C		
	Ex tb IIIC T135°C Db IP6x		
	Marking for LED illuminator module, model 2410-04-IR:		
	Ex d IIC T4 Gb -##°C ≤ Ta ≤ +##°C		
	Ex tb IIIC T135°C Db IP6X		
	Note: T class and ambient temp, is dependant on the assembly configuration and maximum internal power dissipation.		
	* = T Class (see schedule)		
	## = Ambient temperature range (see schedule)		
	IECEX ITS 10.0053X		

Approved for issue on behalf of the IECEx  
Certification Body:

A T Austin

Position:

Certification Officer

Signature:  
(for printed version)

Date:

1. This certificate and schedule may only be reproduced in full.
2. This certificate is not transferable and remains the property of the issuing body.
3. The Status and authenticity of this certificate may be verified by visiting the [Official IECEx Website](http://www.iecex.com).



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Certificate issued by:

**Intertek Testing & Certification Limited**  
ITS House, Cleeve Road,  
Leatherhead,  
Surrey, KT22 7SB  
United Kingdom





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Manufacturer: Eaton MEDC Ltd (Oxalls)  
Unit B, Sutton Parkway, Oddicroft Lane, Sutton-in-Ashfield, NG17 5FB,  
United Kingdom

Additional Manufacturing location(s):

This certificate is issued as verification that a sample(s), representative of production, was assessed and tested and found to comply with the IEC Standard list below and that the manufacturer's quality system, relating to the Ex products covered by this certificate, was assessed and found to comply with the IECEx Quality system requirements. This certificate is granted subject to the conditions as set out in IECEx Scheme Rules, IECEx 02 and Operational Documents as amended.

## STANDARDS:

The electrical apparatus and any acceptable variations to it specified in the schedule of this certificate and the identified documents, was found to comply with the following standards:

IEC 60079-0 : 2007-10 Edition:5	Explosive atmospheres - Part 0:Equipment - General requirements
IEC 60079-1 : 2007-04 Edition:6	Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures "d"
IEC 60079-28 : 2006-08 Edition:1	Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation
IEC 60079-31 : 2008 Edition:1	Explosive atmospheres – Part 31: Equipment dust Ignition protection by enclosure "t"

*This Certificate does not indicate compliance with electrical safety and performance requirements other than those expressly included in the Standards listed above.*

## TEST & ASSESSMENT REPORTS:

*A sample(s) of the equipment listed has successfully met the examination and test requirements as recorded in*

### Test Report:

[GB/ITS/ExTR10.0052/05](#)

### Quality Assessment Report:

[GB/BAS/QAR06.0023/07](#)



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## Schedule

### EQUIPMENT:

*Equipment and systems covered by this certificate are as follows:*

The VMI-2410 series Camera Housing is constructed from stainless steel AISI316L with glass windows and designed to accommodate a range of CCTV cameras, Infra-red cameras, lenses and associated ancillary equipment to allow their deployment in harsh environmental conditions. The housing has facilities for optional items such as window demister/heater, internal window wiper mechanism, integral window washer pump and external sunshield. The unit is 260mm to 600mm in length (dependant on model) and is constructed from 139.7mm diameter cylindrical tube and 154mm diameter end covers. The unit has a cemented window assembly in one end cover, with the opposite end cover being either a blank end plate, end plate with 3x M20 entries, integral assembly containing the window washer pump. The cable entry to the housing is via an M20 cable entry adaptor in the side of the housing tube or via the tilt motor shaft attachment flange when mounted to the VMI-2420 Pan/Tilt unit. When fitted with Germanium windows, for use with Infra-red cameras, a protective guard plate is factory fitted on the window end cover and secured in place. The Camera Housing has welded joints and is therefore to be subjected to routine overpressure tests. The 2410-04-IR model is an infrared LED illuminator which is fitted in place of a camera within the smaller housing option of the VMI-2410 series housing. The VMI-2420 integrated Pan & Tilt Unit would be used in conjunction with the 2410 Camera Housing where installations require a moveable camera. This Pan & Tilt Unit is also constructed from AISI316L stainless steel and can be fitted with either AC fixed speed or DC variable speed motors. The Pan & Tilt Unit with integral base mount is 300mm wide and 485mm high. It comprises of one cable entry in the base mount which is one M25 threaded flamepath. There are four spigot flamepaths, two where the end covers fit into the housing and two where the motor/gearbox assemblies connect to the housing. In addition there are 2 cylindrical flamepaths for the motor shafts allowing for the pan and tilt movement. The Pan & Tilt Unit has welded joints and is therefore to be subjected to routine overpressure tests.

The VMI-2410 series Camera Housing and the VMI-2420 integrated Pan & Tilt Unit have the option of being provided fitted with an optical output for data transmission purposes.

### CONDITIONS OF CERTIFICATION: YES as shown below:

1. No modifications must be made to the flamepaths of the unit without consultation of the drawings listed in ExTR Test Report Cover GB/ITS/ExTR10.0052/00.
2. Temperatures could exceed 70°C at the cable gland or 80°C at the branching point, suitably rated cable must be selected.
3. Use only hex socket head fasteners with property class of A4-70 for securing end covers & shafts to housings.
4. No electromagnetic or ultrasonic energy radiating equipment to be fitted into the enclosures.
5. A routine overpressure test in accordance with IEC 60079-1:2007 Clause 16.1 shall be carried out on all enclosures, including all cemented window assemblies, at a pressure of 27.3bar for a period of between 10 and 60 seconds and must be recorded. There shall be no deformation or damage to the enclosures and no leakage through the cement of any of the window assemblies



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**EQUIPMENT (continued):**



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**DETAILS OF CERTIFICATE CHANGES (for issues 1 and above):**

Issue 5

Change of company name and address to:

Oxalis Group Ltd

Oxalis House, Masons Road, Stratford upon Avon, Warwickshire, CV37 9NB.

to

Eaton MEDC Ltd (Oxalis)  
Unit B, Sutton Parkway, Oddicroft Lane, Sutton-in-Ashfield, NG17 5FB.