MAXIMUS MPXHD is a Full HD ex-proof PTZ which produces high definition images and is ideal for effective video surveillance and process control in harsh settings where the presence of gases or flammable dust can create a potentially explosive environment (a reality often found in the oil and gas industries or marine and industrial sectors).

The Full HD, 1080p, 60fps camera incorporates an outstanding 30x optical zoom, able to accurately identify the smallest details in a scene, with the ability to transmit images via Ethernet, H.264/AVC and MJPEG compression and ONVIF Profile S compatibility to allow for use with third-party products. The response to the operator’s commands is instantaneous, for a fast and accurate detection of a target in all conditions.

The care taken in the design, the choice of high quality components and the strong, the AISI 316L stainless steel construction with IP66 protection guarantees perfect operation and durability in temperatures ranging from -40°C to +60°C. Thanks to the built-in wiper, images are always perfectly clear; also available is the WASEX washer kit with certified explosion-proof pump, which reduces the need for maintenance.

The ATEX/IECEx/EAC Ex/INMETRO certified versions are available as pre-wired options, with armoured cable and barrier cable gland, simplifying installation and making these PTZ cameras the perfect solution for use in the most demanding video surveillance installations, and in the most extreme conditions.

The MAXIMUS MPX series products are Lloyd’s Register Type Approval System Test Specification Number 1 certified and therefore can be used in Marine and Offshore applications for environmental categories ENV1, ENV2, ENV3 and ENV5.

**DESCRIPTION**
MAXIMUS MPXHD is a Full HD ex-proof PTZ which produces high definition images and is ideal for effective video surveillance and process control in harsh settings where the presence of gases or flammable dust can create a potentially explosive environment (a reality often found in the oil and gas industries or marine and industrial sectors).

**CERTIFICATIONS**
Certifications for use in Zone 1 and 2, Group IIC T6 (Gas), and in Zone 21 and 22, Group IIIC T85° (Dust)
Marine Certification: Lloyd’s Register Marine Type Approval
Electropolished AISI 316L stainless steel ex-proof PTZ unit
Camera Full HD 1080p, 30x, 60fps
Minimum Illumination:
- Colour: 1.4lx, F1.6 AGC on, 1/30s 50 IRE (Normal mode)
- Colour: 0.35lx, F1.6 AGC on, 1/30s, 50 IRE (High Sensitivity mode)
- B/W: 0.05lx, F1.6 AGC on, 1/30s, 50 IRE (Normal mode)
- B/W: 0.013lx, F1.6 AGC on, 1/30s, 50 IRE (High sensitivity mode)
Day/Night (Auto ICR: automatic removal of IR filter)
Video compression H.264/AVC and MJPEG
Certified ONVIF, Profile S
Up to 4 simultaneous video streams
1 alarm input and 1 relay output
Variable speed: 0.1°-100°/s Pan and Tilt
Position accuracy: 0.02°
¼” NPT threaded hole for use of cable glands or conduit
Extremely easy electrical connections directly into the unit, thanks to the explosion-proof inspection box
Integrated wiper
Total control of the auxiliary functions through the Videotec PTZ ASSISTANT
Operating temperature: from -40°C (-40°F) up to +60°C (140°F)
Options:
- Prewired versions with armoured cable and barrier cable gland (IEC/EN 60079-14) (except for UL versions). Option supplied as accessory
**Technical Data**

### GENERAL
- AISI 316L stainless steel construction
- Passivated and electropolished external surfaces
- Dynamic positioning control system

### MECHANICAL
- 1 3/4" NPT hole for cable glands
- Zero backlash
- Horizontal rotation: 360°, continuous rotation
- Vertical rotation: from -90° up to +90°
- Horizontal speed (variable): from 0.1° to 100°/s
- Tilt speed (variable): from 0.1° to 100°/s
- Accuracy of preset positions: 0.02°
- 12mm (0.47in) thick tempered glass window
- Integrated wiper
- Unit weight: 27kg (60lb)

### ELECTRICAL
- Supply voltage/Current consumption
  - 230Vac, 0.5A, 50/60Hz
  - 24Vac, 5A, 50/60Hz
  - 120Vac, 1A, 50/60Hz
- Power consumption:
  - 120W max

### NETWORK
- Connector:
  - RJ45, 10BASE-T/100BASE-T

### VIDEO
- Video encoder
  - Communication protocol: ONVIF, Profile S
  - Device configuration: TCP/IPv4-IPv6, UDP/IPv4-IPv6, HTTP, NTP, DHCP, WSDISCOVERY, QoS, IGMP (Multicast)
  - Streaming: RTSP, RTCP, RTP/IPv4
  - Video compression: H.264/AVC, MJPEG
  - 2 independent video streams Full HD or 4 independent video streams depending on the configuration
  - Image resolution: from FullHD to 352x240 in 18 steps
  - Selectable frame rate from 1 to 60 images per second (fps)
  - Web Server

### I/O INTERFACE
- I/O alarm board
  - Alarm inputs: 1
  - Relay outputs: 1 (1A, 30Vac/60Vdc max)

### CAMERAS
- Day/Night Full HD 30x
- Resolution: Full HD 1080p (1920x1080)
- Image Device: 1/2.8 type Exmor™ CMOS sensor
- Effective Pixels: approx. 2.38 Megapixels
- Minimum Illumination, colour (ICR-OFF):
  - 1.4lx, 1/30s, 50 IRE (Normal mode)
  - 0.35lx, 1/30s, 50 IRE (High sensitivity mode)
  - 0.19lx, 1/3s, 50 IRE (Normal mode)
  - 0.05lx, 1/3s, 50 IRE (High sensitivity mode)
- Minimum Illumination, B/W (ICR-ON):
  - 0.05lx, 1/30s, 50 IRE (Normal mode)
  - 0.013lx, 1/30s, 50 IRE (High sensitivity mode)
  - 0.002lx, 1/3s, 30 IRE (High sensitivity mode)
- Lens: f=4.3 mm (wide) -- 129.0 mm (tele), from F1.6 to F4.7
- Zoom: 30x (360x with digital zoom)
- Horizontal Viewing Angle: from 63.7° (wide end) up to 2.3° (tele end)
- Minimum object distance: from 10mm (wide) up to 1200mm (tele)
- Shutter speed: 1/1 to 1/10000 s, 22 steps
- White balance: Auto, ATW, Indoor, Outdoor Auto, Sodium vapor lamp (Fix, Auto, Outdoor Auto), One-push, Manual
- Gain: Auto, Manual, Gain Limit (from 3dB up to 43dB, steps: 3dB)
- Wide Dynamic Range: On/Off/Visibility enhancer, Light level, Brightness Compensation selection, Compensation level
- Focus System: Auto (Sensitivity: Normal, Low), One-push AF, Manual, Focus compensation with ICR On, Interval AF, Zoom trigger AF
- Picture Effects: E-flip, Mirror image, Color enhancement
- Exposure Control: Auto, EV Compensation, Manual, Priority (Shutter priority, Iris priority), Brightness, Slow AE
- S/N Ratio: more than 50dB
- Wide-D (wide dynamic range): Yes (130dB)
- De-fog: Yes (On/Off)
- Backlight Compensation: Yes

### ENVIRONMENT
- For installation indoors and outdoors
- Operating temperature: from -40°C (-40°F) up to +60°C (140°F)
- Relative humidity: from 10% up to 95% (no condensation)
### Certifications & Accessories

**CERTIFICATIONS**


- Ex II 2 G Ex tb IIC T85°C Db T -40°C to +60°C
- Ex II 2 D Ex tb IIC T85°C Db T -40°C to +60°C
- IP66


- Ex db IIC T6 Gb T -40°C to +60°C
- Ex tb IIIC T85°C Db T -40°C to +60°C
- IP66

EAC EX:

- Ex db IIC T6 Gb T -40°C to +60°C, IP66
- Ex tb IIIC T85°C Db T -40°C to +60°C, IP66

INMETRO:

- Ex db IIC T6 Gb ≤ T ≤ +60°C
- Ex tb IIIC T85°C Db ≤ T ≤ +60°C
- IP66

- cULus Listed, Type 4X (only for 24Vac version)

UL listed for USA (only for 24Vac version):

- Class I, Zone 1, AEx d IIC T6
- Zone 21, AEx tb IIC T85°C
- Class I, Division 2, Groups A, B, C, and D, T6
- Class II, Division 2, Groups E, F and G, T6

UL listed for Canada (only for 24Vac version):

- Ex db IIC T6 Gb
- Ex tb IIC T85°C Db
- Class I, Division 2, Groups A, B, C, and D, T6
- Class II, Division 2, Groups E, F and G, T6

KCs 16- KA80-0313X - 16- KA80-0314X

- Ex d IIC T6
- Ex d IIC T85°C
- IP66

- -40°C ≤ T ≤ +60°C

- Lloyd’s Register Marine Type Approval (the 24Vac versions require a filter accessory FM1010)

- Test Specification Number 1:2015 (ENV1, ENV2, ENV3, ENV5)

**BRACKETS AND ADAPTERS**

<table>
<thead>
<tr>
<th>BRACKET/ADAPTER</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPXVBA</td>
<td>AISI 316L stainless steel wall bracket</td>
</tr>
<tr>
<td>MPXCW</td>
<td>AISI 316L stainless steel corner adapter module</td>
</tr>
<tr>
<td>MPXCOL</td>
<td>AISI 316L stainless steel pole adapter module</td>
</tr>
<tr>
<td>MPXWBTA</td>
<td>AISI 316L stainless steel parapet or ceiling mounting bracket</td>
</tr>
</tbody>
</table>

**ACCESSORIES**

<table>
<thead>
<tr>
<th>ACCESSORY</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>WASEX2T4AT</td>
<td>Tank 10l (2.6gal) with integrated manual pump controlled by ATEX certified solenoid valve, delivery head up to 20m (66ft) max, IN 24Vac/Vdc</td>
</tr>
<tr>
<td>WASEX2T4GOR</td>
<td>Tank 10l (2.6gal) with integrated manual pump controlled by EAC EX certified solenoid valve, delivery head up to 20m (66ft) max, IN 24Vac/Vdc</td>
</tr>
<tr>
<td>WASEX2T4IN</td>
<td>Tank 10l (2.6gal) with integrated manual pump controlled by INMETRO certified solenoid valve, delivery head up to 20m (66ft) max, IN 24Vac/Vdc</td>
</tr>
<tr>
<td>OCTX3/4C</td>
<td>Cable gland in nickel-plated brass with gasket EX 3/4” NPT, unarmoured cable IECEx-ATEX-EAC Ex</td>
</tr>
<tr>
<td>OCTX3A/4C</td>
<td>Cable gland in nickel-plated brass with gasket EX 3/4” NPT, armoured cable IECEx-ATEX-EAC Ex</td>
</tr>
<tr>
<td>OCTX83/4C</td>
<td>Barrier cable gland in nickel-plated brass 3/4” NPT, unarmoured cable IECEx-ATEX-EAC Ex</td>
</tr>
<tr>
<td>OCTX8A3/4C</td>
<td>Barrier cable gland in nickel-plated brass 3/4” NPT, armoured cable IECEx-ATEX-EAC Ex</td>
</tr>
<tr>
<td>OCTX3/4</td>
<td>Cable gland in nickel-plated brass with gasket EX 3/4” NPT, unarmoured cable ATEX</td>
</tr>
<tr>
<td>OCTX3A/4</td>
<td>Cable gland in nickel-plated brass with gasket EX 3/4” NPT, armoured cable ATEX</td>
</tr>
<tr>
<td>OCTXB1/2C</td>
<td>Barrier cable gland in nickel-plated brass EX 1/2” NPT, unarmoured cable IECEx-ATEX-EAC Ex</td>
</tr>
<tr>
<td>OCTX1/2C</td>
<td>Cable gland in nickel-plated brass EX 1/2” NPT, unarmoured cable IECEx-ATEX-EAC Ex</td>
</tr>
<tr>
<td>OCTX51/2C</td>
<td>Cable gland in nickel-plated brass EX 1/2” NPT, unarmoured cable IECEx-ATEX-EAC Ex</td>
</tr>
<tr>
<td>OCTXA1/2C</td>
<td>Cable gland in nickel-plated brass EX 1/2” NPT armoured cable IECEx-ATEX-EAC Ex</td>
</tr>
<tr>
<td>OCTX1/2-3/4C</td>
<td>Cable glands reduction in nickel-plated brass 3/4” - 1/2” NPT IECEx-ATEX-EAC Ex</td>
</tr>
<tr>
<td>OCTXP3/4C</td>
<td>Conduit cable gland nickel-plated brass 3/4” NPT IECEx-ATEX- c CSA us - EAC Ex (operating temperature: from -60°C (-76°F) up to +80°C (+176°F))</td>
</tr>
<tr>
<td>OEXPUG3/4</td>
<td>Plug EX 3/4” NPT IECEx-ATEX-EAC Ex</td>
</tr>
<tr>
<td>MPXCABLRM4</td>
<td>Cabling for MPX/MPXHD, 4m (13ft) (armoured cable and barrier cable gland): 1 Ethernet cable, 3 power supply wires, 1 coaxial video cable, 7 wires for alarms, relay and telemetry</td>
</tr>
<tr>
<td>MPXCABLRM10</td>
<td>Cabling for MPX/MPXHD, 10m (394in) (armoured cable and barrier cable gland): 1 Ethernet cable, 3 power supply wires, 1 coaxial video cable, 7 wires for alarms, relay and telemetry</td>
</tr>
<tr>
<td>FM1010</td>
<td>EMC filter for Marine certification</td>
</tr>
</tbody>
</table>

For further details about cable glands part numbers, please refer to the relevant table.

**PACKAGE**

<table>
<thead>
<tr>
<th>MODEL NUMBER</th>
<th>WEIGHT</th>
<th>DIMENSIONS (WxHxL)</th>
<th>MASTER CARTON</th>
</tr>
</thead>
<tbody>
<tr>
<td>MPXHD1FYW0200A</td>
<td>30.4kg (67lb)</td>
<td>54x31x49cm (21x12x19in)</td>
<td>-</td>
</tr>
</tbody>
</table>

DrillVision™

Onshore, Offshore, Facilities, Pipelines

A Southern Electronics Company
# Gland Selection Data

### 1/2" NPT Cable Gland Selection Guide

<table>
<thead>
<tr>
<th>Cable gland type</th>
<th>Certification</th>
<th>Operating temperature</th>
<th>Cable</th>
<th>Cable glands product code</th>
<th>Diameter of the external cable (mm)</th>
<th>Under armor cable diameter (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barrier</td>
<td>IECEX/ATEX/EAC Ex</td>
<td>-60°C / +80°C (-76°F / +176°F)</td>
<td>Unarmoured cable</td>
<td>OCTEXB1/2C</td>
<td>3 - 8 (0.12 - 0.3in)</td>
<td>--</td>
</tr>
<tr>
<td>With gasket</td>
<td>IECEX/ATEX/EAC Ex</td>
<td>-60°C / +100°C (-76°F / +212°F)</td>
<td>Unarmoured cable</td>
<td>OCTEX1/2C</td>
<td>3.2 - 8 (0.13 - 0.3in)</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Unarmoured cable</td>
<td>OCTEXS1/2C</td>
<td>6.5 - 11.9 (0.26 - 0.47in)</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Armoured cable</td>
<td>OCTEXA1/2C</td>
<td>12.5 - 20.5 (0.49 - 0.8in)</td>
<td>10 - 14.3 (0.4 - 0.56in)</td>
</tr>
</tbody>
</table>

### 3/4" NPT Cable Gland Selection Guide

<table>
<thead>
<tr>
<th>Cable gland type</th>
<th>Certification</th>
<th>Operating temperature</th>
<th>Cable</th>
<th>Cable glands product code</th>
<th>Diameter of the external cable (mm)</th>
<th>Under armor cable diameter (mm)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Barrier</td>
<td>IECEX/ATEX/EAC Ex</td>
<td>-60°C / +80°C (-76°F / +176°F)</td>
<td>Unarmoured cable</td>
<td>OCTEXB3/4C</td>
<td>13 - 20.2 (0.5 - 0.8in)</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Armoured cable</td>
<td>OCTEXBA3/4C</td>
<td>16.9 - 26 (0.67 - 1in)</td>
<td>--</td>
</tr>
<tr>
<td>With gasket</td>
<td>IECEX/ATEX/EAC Ex</td>
<td>-60°C / +100°C (-76°F / +212°F)</td>
<td>Unarmoured cable</td>
<td>OCTEX3/4C</td>
<td>13 - 20.2 (0.5 - 0.8in)</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Armoured cable</td>
<td>OCTEXA3/4C</td>
<td>16.9 - 26 (0.67 - 1in)</td>
<td>11.1 - 19.7 (0.44 - 0.78in)</td>
</tr>
<tr>
<td></td>
<td>ATEX</td>
<td>-40°C / +100°C (-40°F / +212°F)</td>
<td>Unarmoured cable</td>
<td>OCTEX3/4</td>
<td>14 - 17 (0.55 - 0.67in)</td>
<td>--</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Armoured cable</td>
<td>OCTEXA3/4</td>
<td>18 - 23 (0.7 - 0.9in)</td>
<td>14 - 17 (0.55 - 0.67in)</td>
</tr>
</tbody>
</table>