

# XL Detect and XL Detect+ VideoProbes

Expect better inspections.



With the XL Detect and XL Detect+ VideoProbes, it's all in the details. Improve accuracy and speed up workflow with crisp image quality, plus an upgraded 5" LCD screen on the XL Detect+. Lower your maintenance costs with rugged durability. And get expert support from Baker Hughes anywhere, anytime. All in a lightweight, portable, and easy-to-use device. The high-end capabilities you need—without the high price.

**Be confident in your results.**

Complete fast, precise inspections with superior image quality, plus a 5" LCD screen and 3X brighter display on the XL Detect+.

**Cut down on costs.**

Lower your maintenance spending with durability you can trust, even in the harshest inspection environments.

**Stay flexible.**

At just 4.3 lbs., the device is lightweight and portable, featuring a rugged carrying case with integrated insertion tube storage reel.

**Learn quickly.**

The intuitive interface includes Menu Directed Inspection (MDI) 1.1, an application to guide users through inspections and organize results for simpler reporting

**Experience true peace of mind.**

Get readily available assistance from Baker Hughes experts, wherever you are.

**Now with a 5" LCD screen for clear-cut inspections.**

The new XL Detect+ display is 85% larger, with crystal clear image quality unmatched in the industry. That means a simpler interface, less eyestrain on long inspections, and more accurate images right on your device. Because when you can see clearly, you improve POD, speed up your workflow, and deliver results with confidence.



# Technical specifications

## Operating environment

|                               |   |
|-------------------------------|---|
| <b>Tip operating temp:</b>    | -25°C to 100°C (-13°F to 212°F) Reduced articulation below 0°C (32°F)                               |
| <b>System operating temp:</b> | -20°C to 46°C (-4°F to 115°F) LCD requires warm-up period below 0°C (32°F)                          |
| <b>Storage temperature:</b>   | -25°C to 60°C (-13°F to 140°F)  |
| <b>Relative humidity:</b>     | 95% max, non-condensing   |
| <b>Waterproof:</b>            | Insertion tube and tip to 14.7 psi (1 bar, 10.2 m of H <sub>2</sub> O, 33.5 ft of H <sub>2</sub> O) |
| <b>Environmental:</b>         | XL Detect: Tested to IP55<br>XL Detect+: Tested to IP65   |

## System

|                                    |   |
|------------------------------------|---|
| <b>Case dimensions:</b>            | 48.8 x 38.6 x 18.5 cm (19.2 x 15.2 x 7.3 in)  |
| <b>System weight:</b>              | <b>In case:</b><br>XL Detect: 6.50 kg (14.30 lb)<br>XL Detect+: 6.74 kg (14.87 lb)<br><b>Without case:</b><br>XL Detect: 1.73 kg (3.80 lb)<br>XL Detect+: 1.98 kg (4.37 lb)   |
| <b>Power (Lithium Ion battery)</b> | 8.4 V, 38 Wh (2 hour) 8.4 V, 75 Wh (4 hour)   |
| <b>Power supply:</b>               | AC input: 100-240 VAC, 50-60 Hz, 1.5 A Max<br>DC output: 9.5 V, 6.0 A   |
| <b>Construction:</b>               | Polycarbonate housings with integrated Versalon™(JP) bumpers  |
| <b>Dimensions:</b>                 | 9.53 x 13.34 x 34.29 cm (3.75 x 5.25 x 13.50 in)  |
| <b>LCD monitor:</b>                | XL Detect: Integrated transfective 9.40 cm (3.70 in) active matrix VGA color LCD with XpertBright, 640 x 480 resolution<br>XL Detect+: Integrated 12.7 cm (5.0) active matrix<br>VGA color LCD, transmissive display. |
| <b>Joystick control:</b>           | 360 All-Way Tip articulation, menu access and navigation  |
| <b>Button set:</b>                 | Access user functions, measurement and digital functions  |
| <b>Audio:</b>                      | Integrated 2.5 mm headset/microphone jack   |
| <b>Internal memory:</b>            | XL Detect: 1 GB Flash memory<br>XL Detect+: 4 GB Flash memory   |
| <b>Data I/O ports:</b>             | One USB® 2.0 port   |
| <b>Video port:</b>                 | VGA Video Out   |
| <b>Brightness control:</b>         | Auto and variable   |
| <b>Illumination type:</b>          | White LED   |
| <b>Long exposure:</b>              | Via auto and manual mode  |
| <b>White balance:</b>              | Factory default or user defined   |

## Standards compliance and classifications

|                             |   |
|-----------------------------|---|
| <b>MIL-STD-810G</b>         | Tested to United States Department of Defense Environment Tests Sections 506.5, 507.5, 509.5, 510.5, 511.5, 514.6, 516.6, 521.3 |
| <b>MIL-STD-461F</b>         | XL Detect: Tested to United States Department of Defense Electromagnetic Interference RS103 - ABOVE DECK                        |
| <b>Standards Compliance</b> | Group 1, Class A: EN61326-1 UL, IEC, EN CSA-C22.2:61010-1 UN/DOT T1-T8  |
| <b>IP Rating</b>            | XL Detect: Tested to IP55<br>XL Detect+: Tested to IP65   |

## Camera

### 4.0 mm (0.157 in) diameter probes

|                      |                                      |
|----------------------|--------------------------------------|
| <b>Image sensor:</b> | 1/10 inch Color SUPER HAD CCD camera |
| <b>Pixel count:</b>  | 290,000 pixels                       |
| <b>Housing:</b>      | Titanium                             |

### 6.1 mm (0.242 in) and 8.4 mm (0.331 in) Diameter Probes

|                      |                                      |
|----------------------|--------------------------------------|
| <b>Image sensor:</b> | 1/6 inch Color SUPER HAD™ CCD camera |
| <b>Pixel count:</b>  | 440,000 pixels                       |
| <b>Housing:</b>      | Titanium                             |

## Software

|                                 |  |
|---------------------------------|--|
| <b>Operating system:</b>        | Real-time multi-tasking operating system   |
| <b>User interface:</b>          | Simple drop-down menu-driven operation<br>Menu navigation using articulation joystick  |
| <b>File manager:</b>            | Embedded file manager software supporting: File & Folder creation, naming, deleting Store to internal Flash (C:\) or USB ThumbDrive Copy between USB and C:\ |
| <b>MDI software (optional):</b> | Provides user defined guided inspection<br>Creates DICONDE compatible inspection files<br>Creates MS Word® compatible inspection reports                     |
| <b>Audio data:</b>              | PC compatible (.AAC) file format   |
| <b>Image control:</b>           | Invert, Zoom (5X digital) Image Capture and Recall   |
| <b>Digital zoom:</b>            | Continuous (5.0X)  |
| <b>Image formats:</b>           | Bitmap (.BMP), JPEG (.JPG)   |
| <b>Video format:</b>            | MPEG 4   |
| <b>Text annotation:</b>         | Built-in full screen text overlay generator<br>Supports international language character sets<br>100 text line capacity                                      |
| <b>Graphic annotation:</b>      | User placement of arrows   |
| <b>Articulation control:</b>    | "Steer & Stay" articulation lock/fine articulation Tip "Home" return to neutral forward-tip orientation  |
| <b>Software updates:</b>        | Field updateable via USB ThumbDrive  |
| <b>Languages:</b>               | English, Spanish, French, German, Italian, Russian, Japanese, Korean, Portuguese, Chinese, Polish  |

## Insertion tube length and diameter options

| Camera diameter   | Insertion tube working length |                |                 |                 |  |  |                  |
|-------------------|-------------------------------|----------------|-----------------|-----------------|--|--|------------------|
| 4.0 mm (0.157 in) | 2.0 m (6.6 ft)                | 3.0 m (9.8 ft) |                 |                 |  |  |                  |
| 6.1 mm (0.242 in) | 2.0 m (6.6 ft)                | 3.0 m (9.8 ft) | 4.5 m (14.8 ft) | 6.0 m (19.7 ft) |  |  |                  |
| 8.4 mm (0.331 in) |                               | 3.0 m (9.8 ft) |                 |                 |  |  | 10.0 m (32.8 ft) |

## Tip articulation

| Insertion tube length | Straight tube                             |
|-----------------------|---|
| 2.0, 3.0 or 4.5 m     | Up/down – 140° min, Left/right – 140° min |
| 6.0 m                 | Up/down – 120° min, Left/right – 120° min |
| 10.0 m                | Up/down – 100° min, Left/right – 100° min |

Note: Typical articulation exceeds minimum specifications

## Tip optics

| Tip view (DOV)  | Tip color | Field of view (FOV) <sup>(1)</sup> | Depth of field (DOF) |                    | 4.0 mm optical tip part # | 6.1 mm optical tip part #  | 8.4 mm optical tip part #  |
|-----------------|-----------|------------------------------------|----------------------|--------------------|---------------------------|----------------------------|----------------------------|
| Standard tips   |           |                                    |                      |                    |                           |                            |                            |
| FORWARD         | NONE ☒    | 80°                                | 35 mm–infinity       | (1.38 in–infinity) | T4080FF                   |                            |                            |
| FORWARD         | BLACK ●   | 115°                               | 4 mm–infinity        | (0.16 in–infinity) | T40115FN                  |                            |                            |
| FORWARD         | NONE ☒    | 50°                                | 50 mm–infinity       | (1.97 in–infinity) |                           | XLG3T6150FF <sup>(2)</sup> |                            |
| FORWARD         | WHITE ○   | 50°                                | 12–200 mm            | (0.47–7.87 in)     |                           | XLG3T6150FG                |                            |
| FORWARD         | ORANGE ●  | 80°                                | 3–20 mm              | (0.12–0.79 in)     |                           | XLG3T6180FN                |                            |
| FORWARD         | YELLOW ●  | 90°                                | 20 mm–infinity       | (0.79 in–infinity) |                           | XLG3T6190FF                |                            |
| FORWARD         | BLACK ●   | 120°                               | 5–120 mm             | (0.20–4.72 in)     |                           | XLG3T61120FG               |                            |
| FORWARD OBLIQUE | PURPLE ●  | 50°                                | 12–80 mm             | (0.47–3.15 in)     |                           | XLG3T6150FB                |                            |
| FORWARD         | BLACK ●   | 120°                               | 5–200 mm             | 0.20–7.87 in)      |                           |                            | XLG3T84120FN               |
| FORWARD         | NONE ☒    | 40°                                | 250 mm–infinity      | (9.84 in–infinity) |                           |                            | XLG3T8440FF <sup>(2)</sup> |
| FORWARD         | WHITE ○   | 40°                                | 80–500 mm            | (3.15–19.68 in)    |                           |                            | XLG3T8440FG                |
| FORWARD         | YELLOW ●  | 80°                                | 25–500 mm            | (0.98–19.68 in)    |                           |                            | XLG3T8480FG                |
| FORWARD         | GRAY ●    | 120°                               | 20–infinity          | (0.79”–infinity)   |                           | T61120FF                   |                            |
| SIDE            | BLUE ●    | 120°                               | 6 mm–infinity        | (0.24 in–infinity) | T40120SF                  |                            |                            |
| SIDE            | RED ●     | 115°                               | 1–30 mm              | (0.04–0.18 in)     | T40115SN                  |                            |                            |
| SIDE            | BROWN ●   | 50°                                | 45 mm–infinity       | (1.77 in–infinity) |                           | XLG3T6150SF                |                            |
| SIDE            | GREEN ●   | 50°                                | 9–160 mm             | (0.35–6.30 in)     |                           | XLG3T6150SG                |                            |
| SIDE            | BLUE ●    | 120°                               | 4–100 mm             | (0.16–3.94 in)     |                           | XLG3T61120SG               |                            |
| SIDE            | RED ●     | 80°                                | 1–20 mm              | (0.04–0.79 in)     |                           | XLG3T6180SN                |                            |
| SIDE            | BROWN ●   | 40°                                | 250 mm–infinity      | (9.84 in–infinity) |                           |                            | XLG3T8440SF <sup>(2)</sup> |
| SIDE            | GREEN ●   | 80°                                | 25–500 mm            | (0.98–19.68 in)    |                           |                            | XLG3T8480SG                |
| SIDE            | BLUE ●    | 120°                               | 4–200 mm             | (0.16–7.87 in)     |                           |                            | XLG3T84120S                |

<sup>(1)</sup>FOV is specified diagonally.

<sup>(2)</sup>Indicates tips with maximum brightness.