OsiSense™ for your hoisting applications

Telemecanique
Sensors

> Telemecanique Sensors

Making sense of sensors

Our products

> **Telemecanique Sensors:** a world-class global brand offering a comprehensive line of products with over 25,000 types of sensors, including limit switches, pressure sensors, photoelectric and proximity sensors. In addition, we provide state-of-the-art RFID systems that are compatible with many PLC manufacturers as well as industrial encoders.
> **Telemecanique Sensors:** known for high quality and superior performance, Telemecanique™ is second to none, and has all the right agency approvals such as IEC, NEMA, CE, CCC, UL, CSA.

Our sales team

> **A dedicated Sales team:** trained and experienced sales professionals are available to help you with any sensing application.
> **Telemecanique Sensors teams:** are available for pre and post sales support. We become an extension of your team and we share our expertise with you.

Localized manufacturing

> **High-volume manufacturing:** manufacturing is located in each of the major markets of Europe, North America, and Asia to ensure prompt delivery and short lead times to our local distribution centres worldwide.
> **Regional flex-centres** enable fast response and quick delivery of customized and specialty product services.

Availability and reliability

> **A worldwide supply chain with a network of local distribution** centres ensures the availability of Telemecanique Sensors and allows us to be a reliable supplier and partner.

> Choose the best suited product for your applications

Over run function

XF9D
XCR
XF9F
XCMD
XCKM

Mechanical stop, ultimate stop to avoid possible damages of the machine

> Horizontal movements (X & Y axis)
• Power limit switch that directly cuts the motor power supplies: XF9D
• Rotary limit switch with contact integrated on the main electrical sequence: XCR.

> Vertical movements (Z axis)
• Power limit switch that directly cuts the motor power supplies: XF9F
Mainly for over up movement
• Limit switch incorporated in the hoist winch or on the drum: XCMD or XCKM.
Give information drum/winch full and empty.

Stop and slow down functions

XCKMR
XCRA
XUE
XUX
XRB
XR2
XCKM
XS

Electrical and mechanical stop, end of working area
Electrical stop, speed reduction in order to reach the stop at slow speed

> Horizontal movements (X & Y axis)
• Two steps cross limit switch, slow down and stop functions realized with one single sensor: XCKMR or new limit switch XCKVR (available 1st quarter 2012)
• Rotary head industrial limit switch to detect a fix stop position: XCRA
• Anticollision function with an other mobile equipment by using sensors with 2 logic outputs XUE or 1 logic output XUX.

> Vertical movements (Z axis)
• Screw limit switches allow a complete hoisting position control: XRB or XR2
• Limit switch linked with the drum giving stop down information «rope slack» detection and stop up information «rope overlap» detection: XCKM
• Inductive proximity sensor monitors the cable on the drum, giving stop down information «drum empty» for rope's end: XS
• Limit switch on hoist fix point giving stop up function «overload»: XCKM.

Positioning function

XCC
XS
XS
XUE
XCC
XRB
XR2

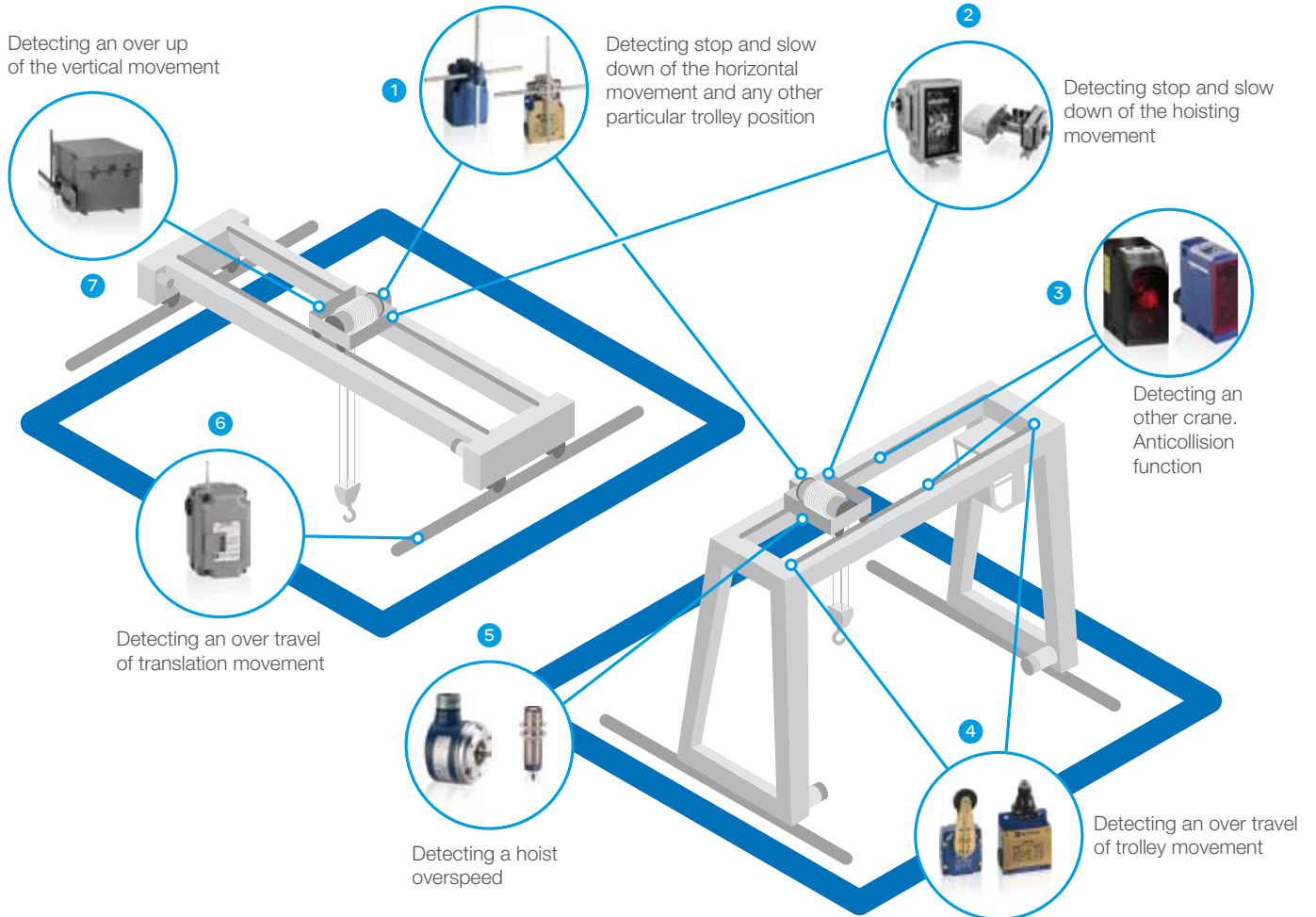**Electrical information giving any specific positions in the working area**

> Horizontal movements (X & Y axis)
• Incremental and absolute rotary encoders for linear position control: XCC
• Detection of a fix point to overcome the wheel slippage and for any particular known position: XS
• Distance measurement sensors to monitor the position of other equipment by using an analog output: XUE.

> Vertical movements (Z axis)
• Incremental and absolute rotary encoders (connected to the drum) for linear height control: XCC
• Screw limit switches allow a complete hoist positions control with up to 28 different positions and an analog signal: XRB or XR2.
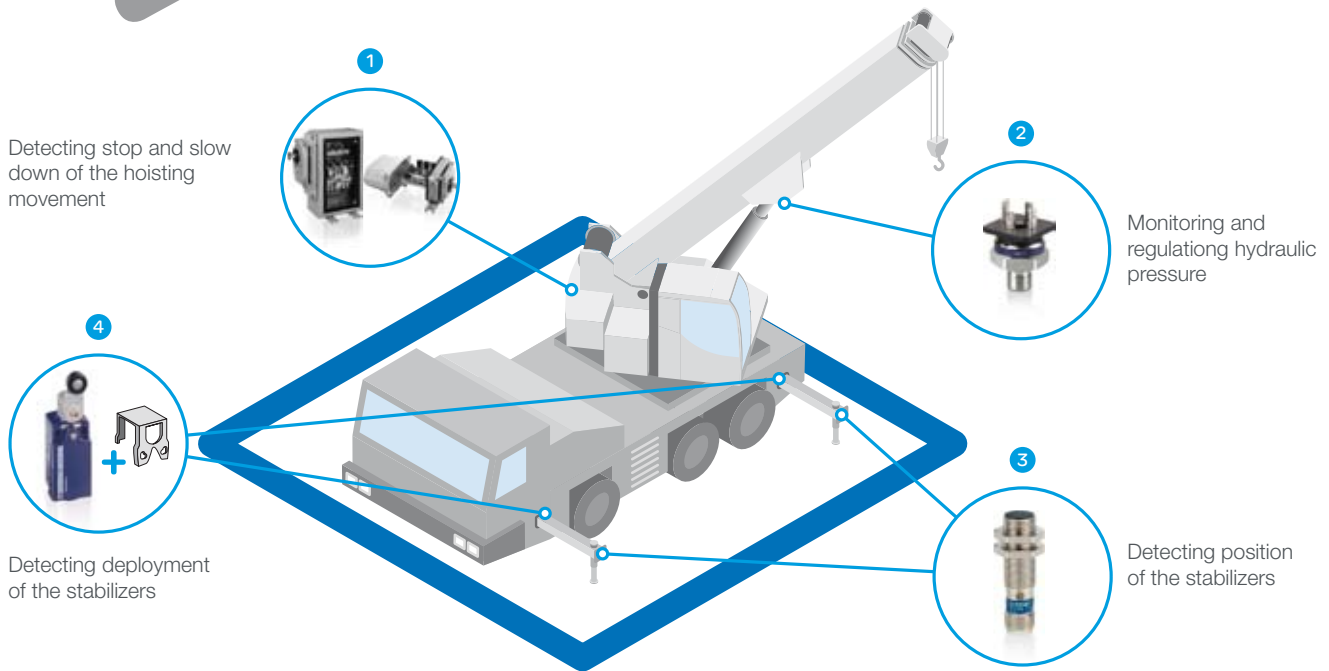
> Overhead and gantry crane

Detecting an over up
of the vertical movement

7

Detecting stop and slow
down of the horizontal
movement and any other
particular trolley position

1

2

Detecting stop and slow
down of the hoisting
movement

3

Detecting an
other crane.
Anticollision
function

6

Detecting an over travel
of translation movement

5

Detecting a hoist
overspeed

4

Detecting an over travel
of trolley movement

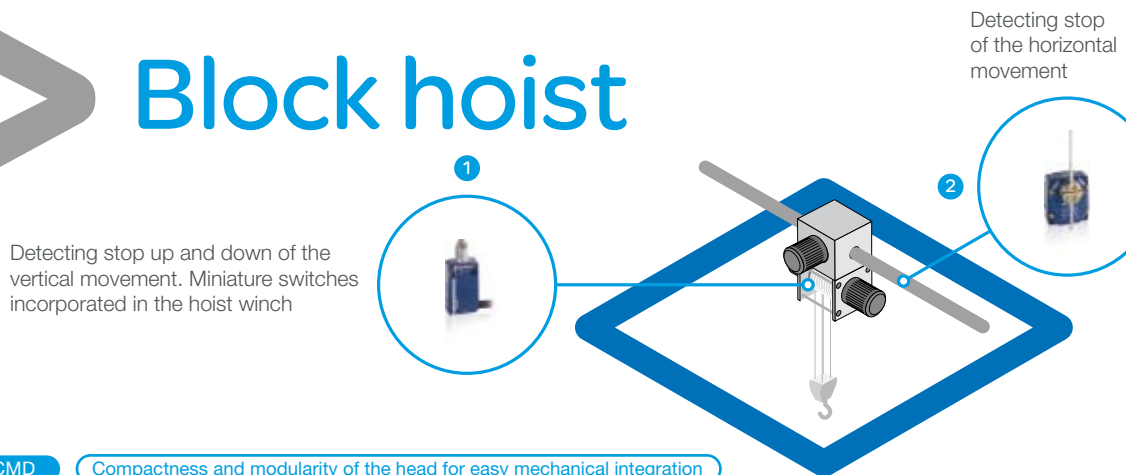|		
1	OsiSense XCKVR / XCKMR	2 ways / 2 speeds by one single sensor, compactness and robustness with positivity
2	OsiSense XR	Robustness and modularity (up to 28 contacts)
3	OsiSense XUX / XUE	Long distance detection
4	OsiSense XCKM / XCR	Robustness with positivity
5	OsiSense XCC / XS	Ease of installation and adjustment
6 **7**	OsiSense XF	The ultimate hoisting protection

> Mobile crane

1 Detecting stop and slow down of the hoisting movement

2 Monitoring and regulationg hydraulic pressure

4 Detecting deployment of the stabilizers

3 Detecting position of the stabilizers

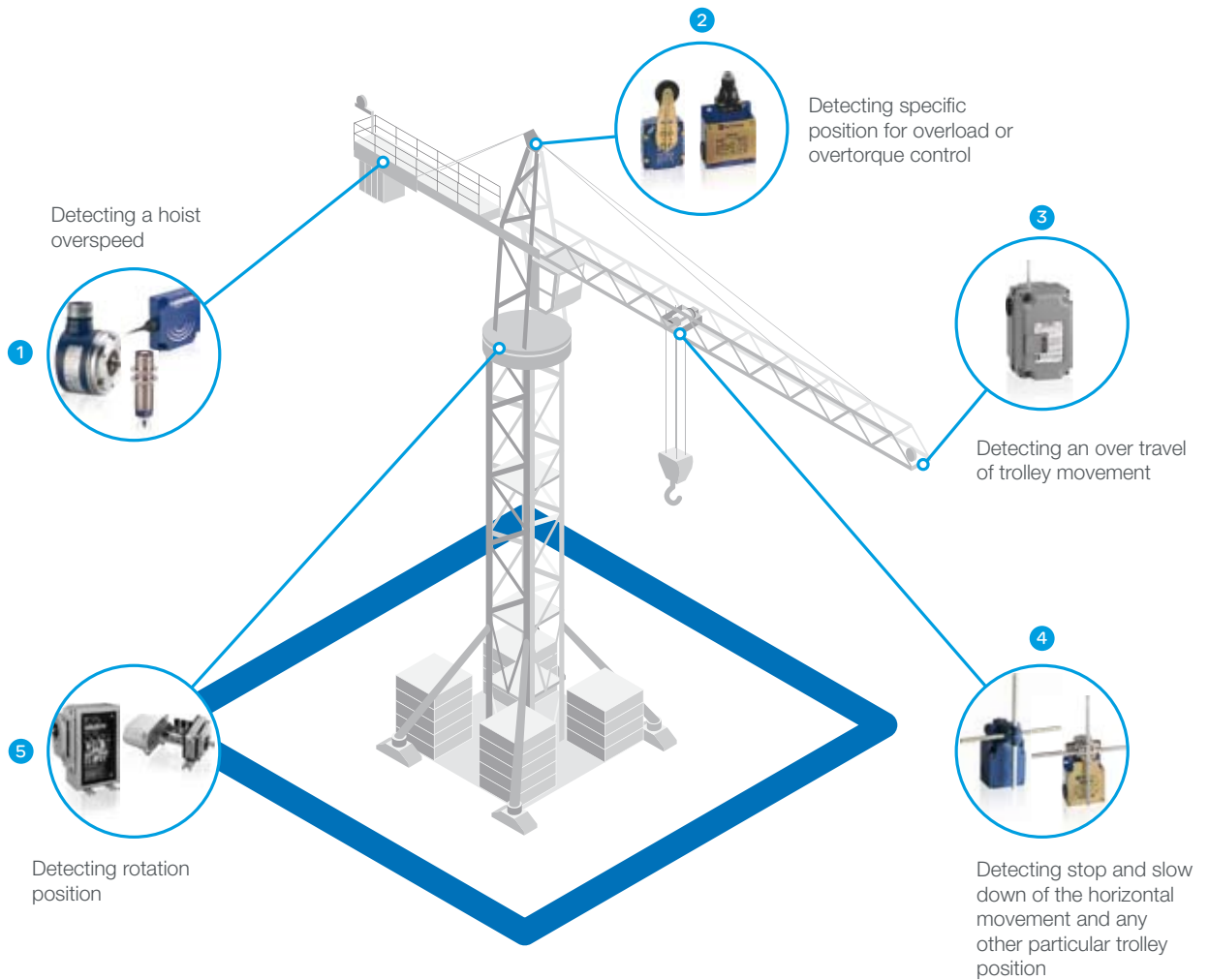|	
1 | OsiSense XR	Robustness and modularity (up to 28 contacts)
2 | OsiSense XMLP	Compactness and robustness for reliable regulation
3 | OsiSense XS	Ease of installation and adjustment distance detection
4 | OsiSense XCKD + CKZ05	Robustness for increased resistance to impact

> Block hoist

Detecting stop of the horizontal movement

1 Detecting stop up and down of the vertical movement. Miniature switches incorporated in the hoist winch

1 | OsiSense XCMD	Compactness and modularity of the head for easy mechanical integration
2 | OsiSense XCR	2 ways / 1 speed, compactness and robustness with positivity

> Tower crane

2 Detecting specific position for overload or overtorque control

Detecting a hoist overspeed

1

3 Detecting an over travel of trolley movement

5 Detecting rotation position

4 Detecting stop and slow down of the horizontal movement and any other particular trolley position

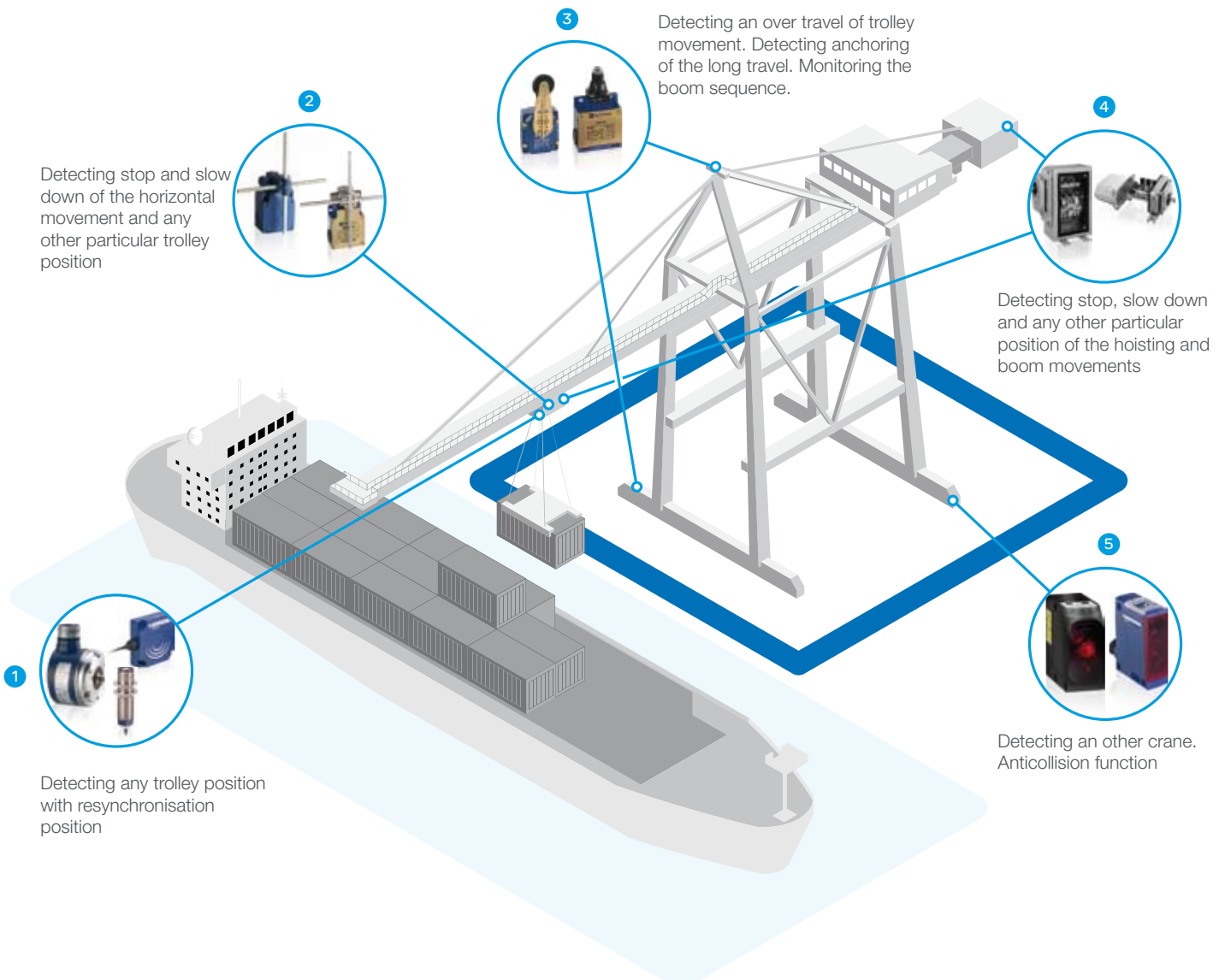|	
1 OsiSense XCC / XS	Ease of installation and adjustment
2 OsiSense XCKM / XCR	Robustness with positivity
3 OsiSense XF	The ultimate trolley protection
4 OsiSense XCKVR / XCKMR	2 ways / 2 speeds by one single sensor, compactness and robustness with positivity
5 OsiSense XR	Robustness and modularity (up to 28 contacts)

> Harbour crane

3 Detecting an over travel of trolley movement. Detecting anchoring of the long travel. Monitoring the boom sequence.

2 Detecting stop and slow down of the horizontal movement and any other particular trolley position

4 Detecting stop, slow down and any other particular position of the hoisting and boom movements

1 Detecting any trolley position with resynchronisation position

5 Detecting an other crane. Anticollision function

1	OsiSense XCC / XS	Ease of installation and adjustment
2	OsiSense XCKVR / XCKMR	2 ways / 2 speeds by one single sensor, compactness and robustness with positivity
3	OsiSense XCKM / XCR	Robustness with positivity
4	OsiSense XR	Robustness and modularity (up to 28 contacts)
5	OsiSense XUX / XUE	With reflector: long distance detection