# Sensor Solutions for Hoisting Applications



Telemecanique
Sensors
Simply easy!

# > Telemecanique Sensors

## Simply easy!

Simplicity

+

Expertise

+

Proximity



Telemecanique Sensors is a world-class global brand offering a comprehensive line of products with over 25,000 types of sensors, including limit switches, pressure sensors, photoelectric sensors and proximity sensors. In addition, we provide state-of-the-art RFID systems that are compatible with many PLC manufacturers.

Telemecanique Sensors has all the right agency approvals, such as IEC, NEMA, CE, CCC, UL, CSA, and EAC.

Telemecanique Sensors is focused on three core values — Simplicity, Proximity, and Expertise. We have become experts in factory automation sensors as well as specialists in demanding applications, making our customers' lives ''Simply easy!''

# > Innovation focus



OsiSense™ XUK9T offers dedicated functions for overhead cranes: **anti-collision and tandem**

### Robust detection

- Up to 70m (230 ft.) range using time-of-flight method
- Simple alignment with a reflector is allowed by a bright red laser spot

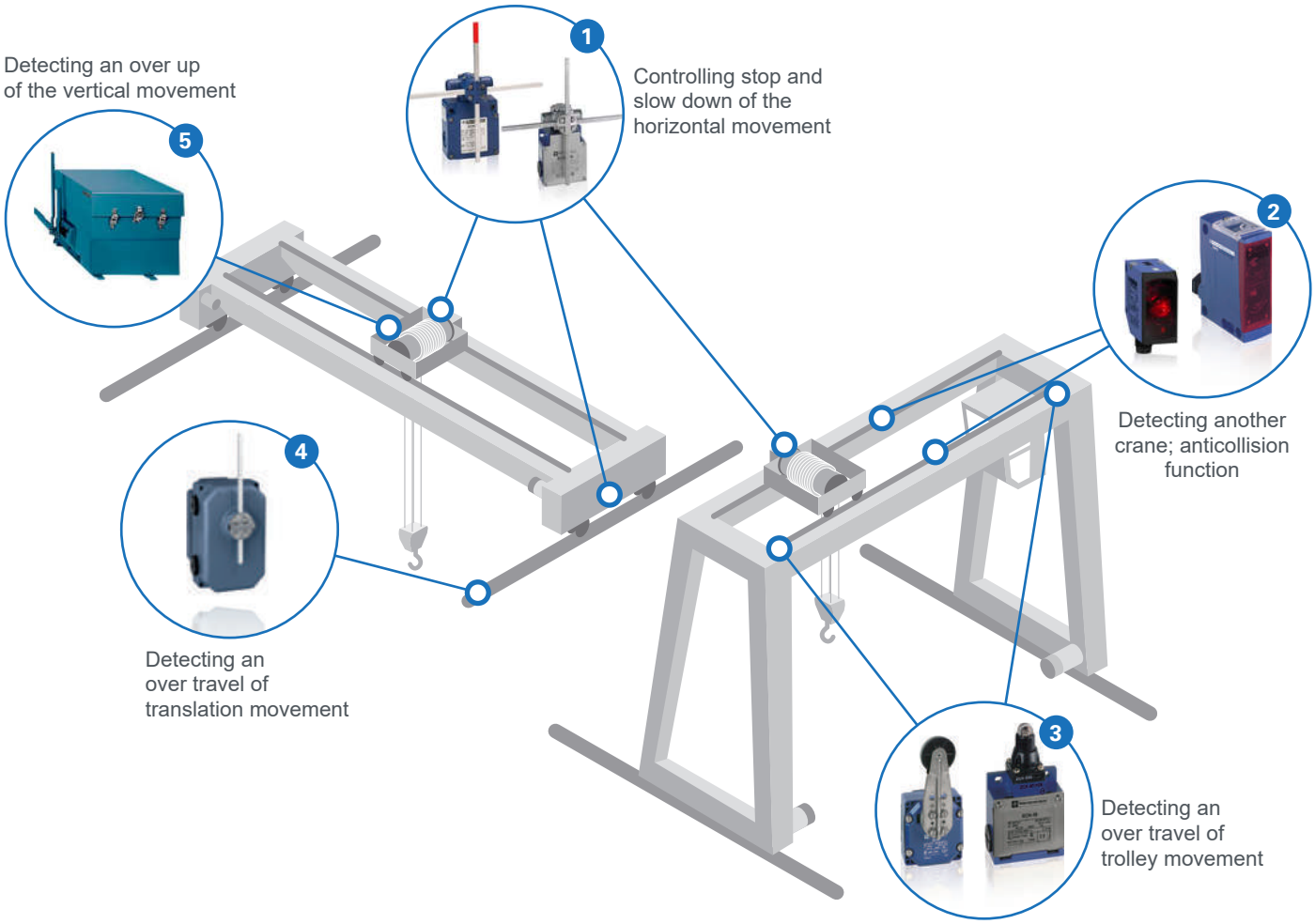
### Improved operator safety

- When several cranes use the same rail, the risk of collisions or dropped load is avoided by the anti-collision function
- Monitoring the synchronization of two cranes to translate heavy or large loads is made possible with the tandem function

### Easy installation and teach-in

- Compact size: 50mm x 50mm x 23mm (2" x 2" x 1")
- Teach-in button available on the device or via an external wire

# > Overhead and gantry crane

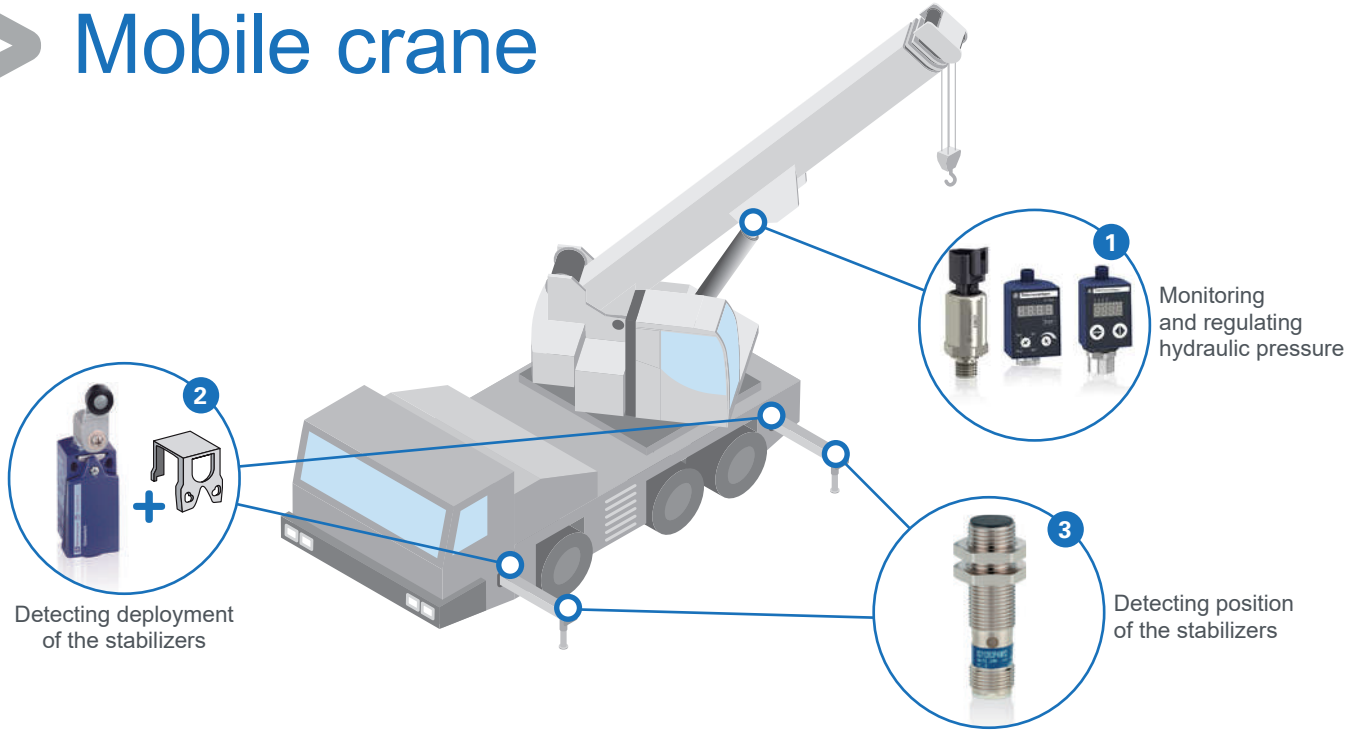



| | | |
|---|---|---|
| 1 | XCKVR / XCKMR Limit Switches | 2 ways / 2 speeds by one single sensor, compactness and robustness with positivity. |
| 2 | XUX / XUK9T Photoelectric Sensors | Long distance detection. |
| 3 | XCKM / XCR Limit Switches | Robustness with positivity. |
| 4 5 | XF Limit Switch | The ultimate hoisting protection. |





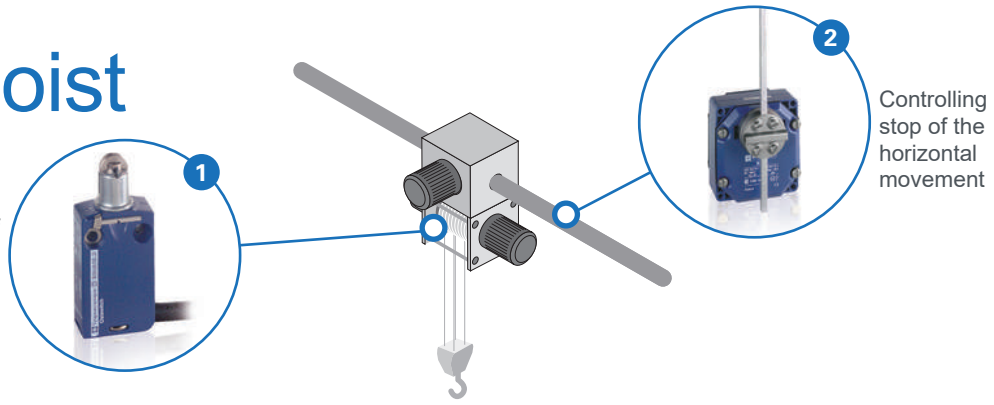
# Mobile crane




| | | |
|---|---|---|
| 1 | XMEP / XMLR/ ZMLP Pressure Sensors / Monitor | Compact and robust for reliable regulation. |
| 2 | XCKD Limit Switch + XCKZ05 Accessory | Robust for increased resistance to impact. |
| 3 | XS Inductive Sensor | Ease of installation and adjustable distance detection. |

# Block hoist

Controlling stop, up, and down of the vertical movement. Miniature switches incorporated in the hoist winch.

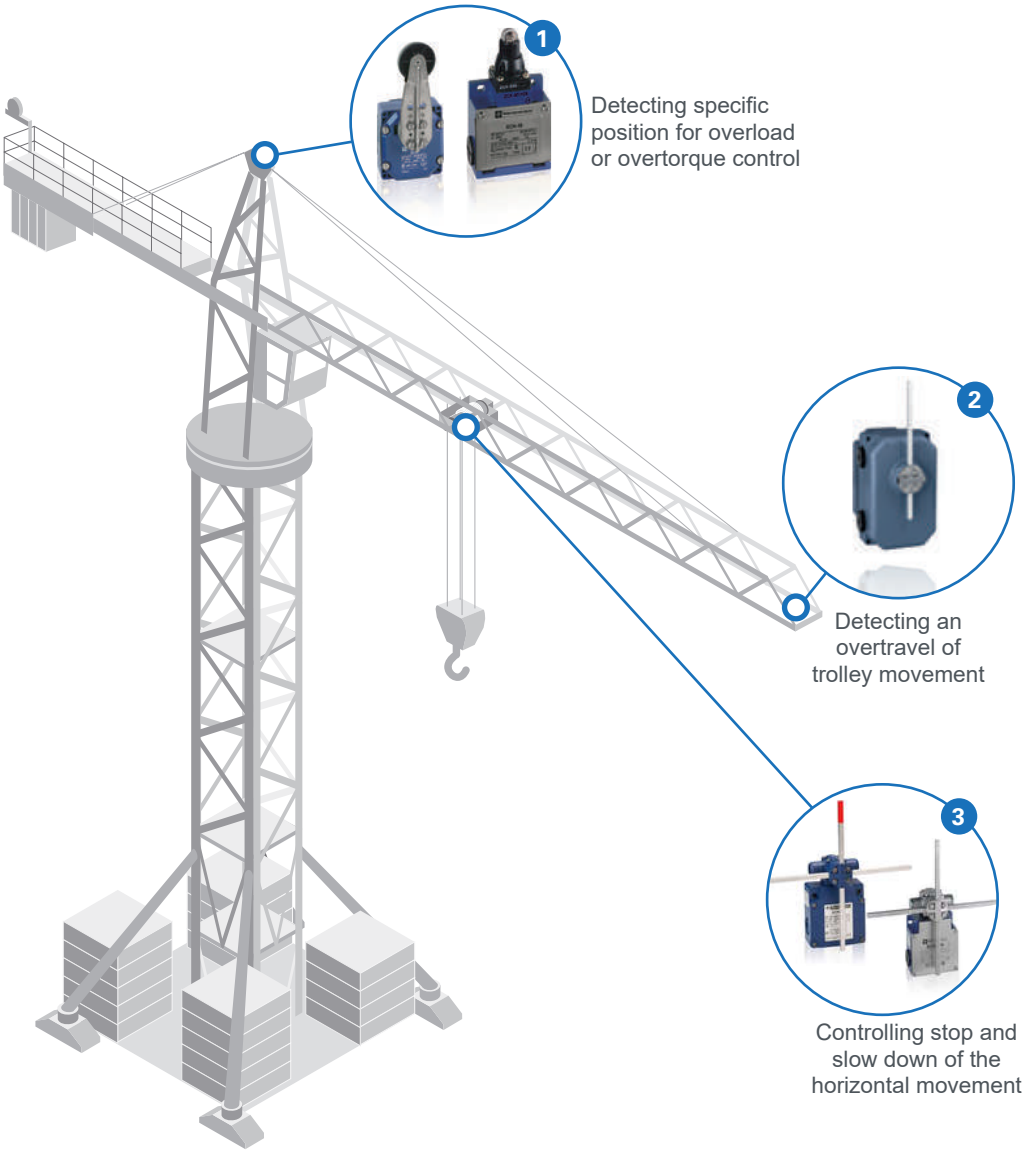



| | | |
|---|---|---|
| 1 | XCMD Limit Switch | Compact with modular head for easy mechanical integration. |
| 2 | XCR Limit Switch | 2 ways / 1 speed, compact and robust with positivity. |





# > Tower crane

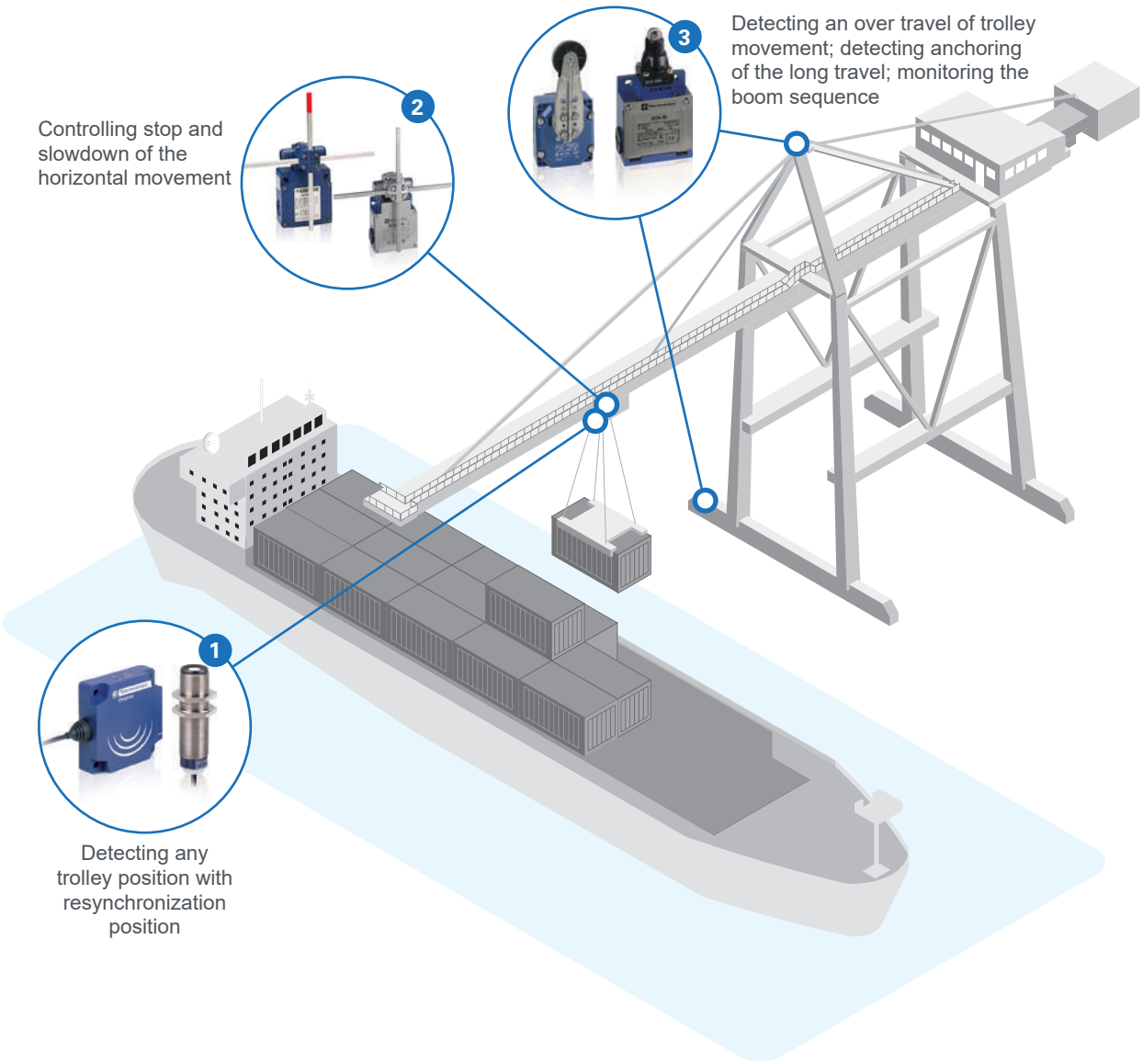



| | | |
|---|---|---|
| 1 | XCKM / XCR Limit Switches | Robust with positivity. |
| 2 | XF Limit Switch | The ultimate trolley protection. |
| 3 | XCKVR / XCKMR Limit Switches | 2 ways / 2 speeds by one single sensor, compact and robust with positivity |

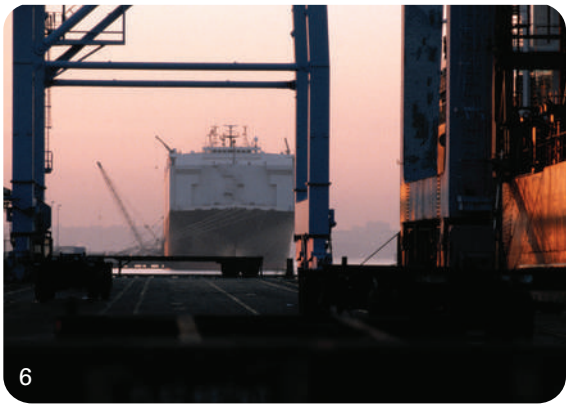




# > Harbour crane




| | | |
|---|---|---|
| 1 | XS Inductive Sensor | Easy installation and adjustment. |
| 2 | XCKVR / XCKMR Limit Switches | 2 ways / 2 speeds by one single sensor, compact and robust with positivity. |
| 3 | XCKM / XCR Limit Switches | Robust with positivity. |





# Choose the best-suited product for your application

## Limit switches



| | Contact | Connection | | | | |
|---|---|---|---|---|---|---|
| XCKD Metal | NO+NC Snap | M16 | XCKD2110P16 | XCKD2102P16 | XCKD2118P16 | |
| | | Pg11 | XCKD2110G11 | XCKD2102G11 | XCKD2118G11 | |
| XCMD Metal | NO+NC Snap | cable | XCMD2110L1 | XCMD2102L1 | XCMD2115L1 | |
| | NO+NC Slow | | XCMD2510L1 | XCMD2502L1 | XCMD2515L1 | |
| XCKM | NO+NC Snap | M20 | XCKM110H29 | XCKM102H29 | XCKM115H29 | XCKM121H29 |
| | | Pg13 | XCKM110 | XCKM102 | XCKM115 | XCKM121 |



| | Contact | Connection | |
|---|---|---|---|
| XF9D | 4 poles, 25A | Pg21 | XF9D251 |
| | 4 poles, 65A | Pg29 | XF9D651 |



| | Contact | Connection | |
|---|---|---|---|
| XF9F | 3 poles, 115A | Pg36 | XF9F1151* |
| | 3 poles, 185A | | XF9F1851* |
| | 3 poles, 265A | | XF9F2651* |

* reset knob : replace the last 1 by 2 in the reference



| | Contact | Connection | |
|---|---|---|---|
| XCKVR Plastic | "By Pass" | M20x1.5 | XCKVR24SR1H29 |
| | "Single Speed" | | XCKVR44D1H29 |
| | "Double Speed" | | XCKVR54SR1H29 |



| | Contact | Connection | |
|---|---|---|---|
| XCKMR Metal | "By Pass" | M20x1.5 | XCKMR24SR1H29 |
| | "Single Speed" | | XCKMR44D1H29 |
| | "Double Speed" | | XCKMR54D1H29 |
| | "Double Speed" | Pg13.5 | XCKMR54D1 |





| | Contact | Connection | | |
|---|---|---|---|---|
| XCRA | NO+NC Snap | Pg13.5 | XCRA11 | XCRA15 |

## Photoelectric sensors









| XU | | | | | | |
|---|---|---|---|---|---|---|
| Sensing distance | | | 11 m | 70 m | Recommanded Reflector | Recommanded Cable |
| AC/DC | Relay | Terminals | XUX9ARCTN16 | | XUZC100 | XZCP29P12L10 |
| 24 V | PNP | M12 - 5 pins | XUX9APANM12 | | XUZC250 | |
| | | M12 - 8 pins | | XUK9TAH2MM12 | XUZC250 | XZCP29P12L10 |

# Inductive sensors







| XS | Sensing distance | | Ø 12 mm | Ø 18 mm | 15x32x8 mm | 26x26x13 mm | 40x40x15 mm |
|---|---|---|---|---|---|---|---|
| | | | 4 mm | 8 mm | 5 mm | 10 mm | 15 mm |
| DC 3 wires NO | PNP | cable | XS112B3PAL2 | XS118B3PAL2 | XS7F1A1PAL2 | XS7E1A1PAL2 | XS7C1A1PAL2 |
| | | connector | XS112B3PAM12 | XS118B3PAM12 | XS7F1A1PAL01M8 | XS7E1A1PAM8 | XS7C1A1PAM8 |
| | NPN | cable | XS112B3NAL2 | XS118B3NAL2 | XS7F1A1NAL2 | XS7E1A1NAL2 | XS7C1A1NAL2 |
| | | connector | XS112B3NAM12 | XS118B3NAM12 | XS7F1A1NAL01M8 | XS7E1A1NAM8 | XS7C1A1NAM8 |
| DC 4 wires NO+NC | PNP | connector | XS112B3PCM12 | XS118B3PCM12 | | | |

# Pressure sensors

| XMEP | Connector | Analogue output | 0...60 bar | 0...100 bar | 0...250 bar | 0...400 bar | 0...600 bar |
|---|---|---|---|---|---|---|---|
|  | M12 | 0,5-4, 5V | XMEP060BD11F | XMEP100BD11F | XMEP250BD11F | XMEP400BD11F | XMEP600BD11F |
| | | 4-20mA | XMEP060BD21F | XMEP100BD21F | XMEP250BD21F | XMEP400BD21F | XMEP600BD21F |
| | | 0-10V | XMEP060BD71F | XMEP100BD71F | XMEP250BD71F | XMEP400BD71F | XMEP600BD71F |
|  | Deutsch DT04-3P | 0,5-4, 5V | XMEP060BT11F | XMEP100BT11F | XMEP250BT11F | XMEP400BT11F | XMEP600BT11F |
| | | 4-20mA | XMEP060BT21F | XMEP100BT21F | XMEP250BT21F | XMEP400BT21F | XMEP600BT21F |
| | | 0-10V | XMEP060BT71F | XMEP100BT71F | XMEP250BT71F | XMEP400BT71F | XMEP600BT71F |
|  | AMP Superseal 1,5 3-pin | 0,5-4, 5V | XMEP060BV11F | XMEP100BV11F | XMEP250BV11F | XMEP400BV11F | XMEP600BV11F |
| | | 4-20mA | XMEP060BV21F | XMEP100BV21F | XMEP250BV21F | XMEP400BV21F | XMEP600BV21F |
| | | 0-10V | XMEP060BV71F | XMEP100BV71F | XMEP250BV71F | XMEP400BV71F | XMEP600BV71F |

| XMLR | Outputs | 0...100 bar | 0...160 bar | 0...250 bar | 0...400 bar | 0...600 bar |
|---|---|---|---|---|---|---|
|  | 2 switching outputs | XMLR100M2P05 | XMLR160M2P05 | XMLR250M2P05 | XMLR400M2P05 | XMLR600M2P05 |
| | Analogue 4...20mA + 1 switching output | XMLR100M1P05 | XMLR160M1P05 | XMLR250M1P05 | XMLR400M1P05 | XMLR600M1P05 |



**Display for XMEP**

PNP
2 switching outputs
ZMLPA2P0SH

PNP
Analogue 4...20mA
+ 1 swithing output
ZMLPA2P0SH

## Robust and reliable

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