Sensor solutions for Escalator and Elevator Applications

Telemecanique
Sensors

Simply easy!

> Escalator / Elevator-ready sensors

The line of sensor products making up the Telemecanique Sensors Escalator and Elevator Industry offer specifically address the necessary standards, constraints, and detection goals of Escalator and Elevator systems worldwide.

Compact and easy-to-install solutions

Physical space is at a premium in the lift industry, both on escalators and elevators. The Telemecanique Sensors product offering reflects our innovative focus not only in regard to the compact and lightweight design of our sensors, but in regard to their availability in a wide range of connector options.

Take them out of the box.

Quickly install them.

Simply easy!™

Easy to connect with the experts

The Telemecanique Sensors team is available for pre and post sales support. We become an extension of your team and share our expertise with you.

Use the "Service & Support" menu of our website to quickly connect to your local Telemecanique Sensors representative.

www.tesensors.com

> Escalators

1 Entrance detection

2 Monitors speed and direction of main drive chain

3 Detects any skirt panel deformity

2 Detects missing steps

3 Monitors open and close of the main brake

3 Detects deformed or damaged steps

4 Monitors tension of the drive chain

3 Detects foreign objects in combs

3 Detects foreign objects on handrail

2 Monitors handrail speed

5 Detects presence to activate escalator

3 Detects broken handrails

2 Detects position of access cover

4 Monitors drive chain traction

Customize it!

Sensor products from Telemecanique can be customized depending on the order quantity. For more information, please contact us at:

customercare @tesensors.com

1	XU Photoelectric Sensor	A full range of Photoelectric sensors in the main form factors from cylindrical to rectangular.
2	XS Inductive Sensor	Inductive proximity sensors range for non-contact sensing of metal objects including a SIL2 certified version.
3	XCKN/XCNT Limit Switch	Standard version of our market leading range of positive opening IEC Limit Switches. Many available heads. 1 or 2 cable entries.
4	XCNR IEC Limit Switch	Manual reset version of our market leading range of positive IEC Limit Switches with many available heads.
5	XX Ultrasonic Sensor	A full range of Ultrasonic sensors for standard or wide area detection.

> Elevators

1 — Detects car position and/or motor speed

2 — Sends remote alerts when overrun or secure area access is detected

3 — Secures access to maintenance

4 — Detects anyone in doorway before closing

5 or **5** or **4** — Detects car positioning

SIL2

6 — Detects overrun

7 — Secures access to restricted levels

For Hydraulic drive machinery...

XMLD - Monitors overpressure with 2 thresholds

XMLP - Monitors pressure with analog signal
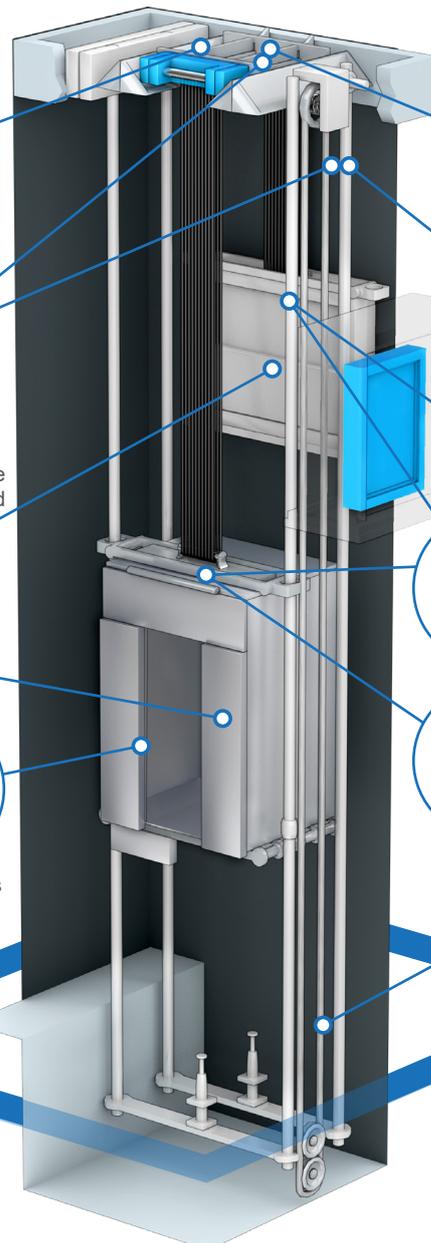
1	XS Inductive Sensor	Inductive proximity sensors range for non-contact sensing of metal objects including a SIL2 certified version.
2	XIOT Cloud Connected Sensor	Connects your unreachable assets to the cloud, enabling real-time data and alarms on mobile devices.
3	XCS Safety Switch	Safety switches for controlling the safe opening and interlocking of guards and covers.
4	XU Photoelectric Sensor	A full range of Photoelectric sensors in the main form factors from cylindrical to rectangular.
5	XCK IEC Limit Switch	Standard version of our market leading range of IEC Limit Switches with plastic roller plungers.
6	XCNR IEC Limit Switch	Manual reset version of our market leading range of positive IEC Limit Switches with many available heads.
7	XG Compact RFID Sensor	Easily integrated panel mounting smart antenna for access control compatible with most RFID electronic tags.
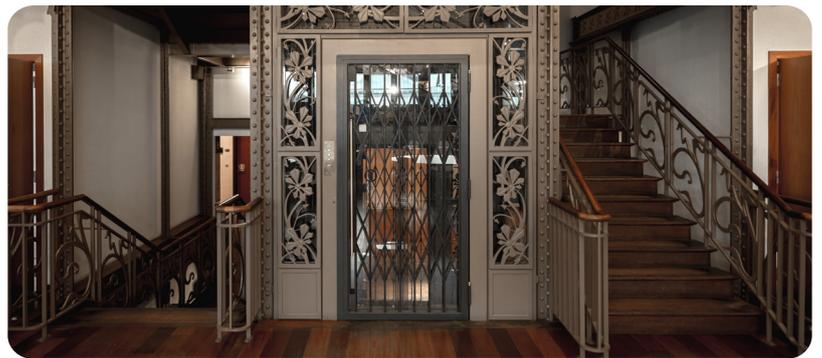
Inductive sensors

XS	Sensing distance		5 mm	8 mm		15-20 mm flush / 40 mm non flush	20 mm flush / 40 mm non flush
DC 3 wires NO	PNP	cable	XS118BLPAL2	XS218BLPAL2	XS118BHPAL2		
		connector	XS118BLPAM12	XS218BLPAM12	XS118BHPAM12	XS7C2A1PAM12	
	NPN	cable	XS118BLNAL2	XS218BLNAL2	XS118BHNAL2		
		connector	XS118BLNAM12	XS218BLNAM12	XS118BHNAM12	XS7C2A1NAM12	
DC 4 wires NO+NC	PNP	connector				XS8C2A1PCM12 / XS8C2A4PCM12	XS8C4A1PCP20 / XS8C4A4PCP20

Photoelectric sensors

XU			XUB		XUM		XUVR
			Reflex	Thru Beam	Reflex	Thru Beam	Fork
DC 3 wires NO	PNP	cable	XUB9APANL2	XUB2APANL2R	XUM9APXBL2	XUM2APXBL2	XUVR0303PANL2
		connector	XUB9APANM12	XUB2APANM12R	XUM9APXBM8	XUM2APXBM8	XUVR0303PANM8
	NPN	cable	XUB9ANANL2	XUB2ANANL2R	XUM9ANXBL2	XUM2ANXBL2	
		connector	XUB9ANANM12	XUB2ANANM12R	XUM9ANXBM8	XUM2ANXBM8	
Transmitter		cable		XUB2AKSNL2T			
		connector		XUB2AKSNM12T			

Ultrasonic sensors

			XX	
			Straight	90° angled head
1 meter sensing distance	PNP	NO / NC	XXS18P1PM12	XXA18P1PM12

Limit switches

XC										
XCKN	M20	XCKN2510P20	XCKN2502P20	XCKN2521P20	XCKN2506P20	XCKN2518P20	XCKN2545P20	XCKN2549P20	XCKN2539P20
	Pg11	XCKN2510G11	XCKN2502G11	XCKN2521G11	XCKN2506G11	XCKN2518G11	XCKN2545G11	XCKN2549G11	XCKN2539G11
XCNR	M20	XCNR2510P20	XCNR2502P20	XCNR2521P20		XCNR2518P20			
	Pg11	XCNR2510G11	XCNR2502G11	XCNR2521G11		XCNR2518G11			
XCKS	M20		XCKS502H29			XCKS531H29			XCKS539H29
	Pg13		XCKS502			XCKS531			XCKS531
	1/2NPT		XCKS502H7			XCKS531H7			
XCNT	M16	XCNT2510P16	XCNT2502P16	XCNT2521P16	XCNT2506P16	XCNT2518P16	XCNT2545P16	XCNT2549P16	XCNT2539P16
	Pg11	XCNT2510G11	XCNT2502G11	XCNT2521G11	XCNT2506G11	XCNT2518G11	XCNT2545G11	XCNT2549G11	XCNT2539G11

All switches above are NO+NC Slow

Safety Switches

XCSDMP		Safety Contacts (2)	Operating zone (1) Sao: 8mm / Sar: 20mm			
			NC + NO	2NC	NC + 2NO	2NC + NO
Without LED	Cable 2m (3)		XCSDMP5902	XCSDMP7902	XCSDMP5002	XCSDMP7002
	M12 4P or 8P (4)		XCSDMP590L01M12	XCSDMP790L01M12	XCSDMP500L01M12	XCSDMP700L01M12
With LED	Cable 2m (3)		XCSDMP5912		XCSDMP5012	XCSDMP7012
	M12 4P or 8P (4)		XCSDMP591L01M12	XCSDMP791L01M12	XCSDMP501L01M12	XCSDMP701L01M12
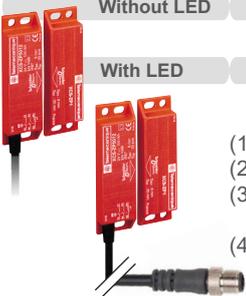
(1) Sao: Assured operating distance; Sar: Assured tripping distance
(2) Schematic diagram shown represents the contact states while the magnet is in front of the switch
(3) For switches with other cable lengths, replace the last number in the reference by 5 for 5 meters or 10 for 10 meters.
    Ex. XCSDMC5905
(4) M12 4P for XCSDMP59/79 (2 contacts), M12 8P for XCSDMP50/70 (3 contacts)

XCSRC

XCSRC10M12: SINGLE Safety RFID contactless switch (reader + factory paired transponder) • Unique pairing • M12

XCSRC11AM12: STANDALONE Safety RFID contactless switch (reader + factory paired transponder) • EDM +
            Auto start • Unique pairing • M12

XCSRC12M12: SERIES Safety RFID contactless switch (reader + factory paired transponder) • Unique pairing • M12

# Pressure Transmitters (for Hydraulic drive Elevator systems)

XMLP	Pressure range (bar) (1)	0...10	0...16	0...25	0...60	0...100	0...250
	Fluids controlled	Hydraulic oils					
	Voltage limits (V)	7...33 V DC for 4...20mA, 12...33 V DC for 0...10 V					
	Dimensions (mm) Ø x L	26 x 38 (M12), 26 x 60.5 (EN175301-803-A)					
	Fluid connections (2)	G 1/4 A (male)					
	Electrical connections (3)	connector M12 4-pins, EN 175301-803-A					
	Output type (4)	4...20mA, technique 2-wires, 0...10V, technique 3-wires					
	Analogue output 4...20mA — M12 4-pins	XMLP010BD21F	XMLP016BD21F	XMLP025BD21F	XMLP060BD21F	XMLP100BD21F	XMLP250BD21F
	EN175301-803-A	XMLP010BC21F	XMLP016BC21F	XMLP025BC21F	XMLP060BC21F	XMLP100BC21F	XMLP250BC21F

(1) Also available with psi range   (2) Also available with 1/4"-18NPT male or 7/16-20UNF female   (3) Also available with 3-pins packard connector   (4) Also available with 0.5...4.5 V and 0...10 V ratiometric output. Available in bulk packs for selling in lots of 25 pcs. Add Q suffix to the reference. Ex: XMLP001GD21F becomes XMLP001GD21FQ

Pressure Switches (for Hydraulic drive Elevator systems)

XMLD · Fixed differential, dual stage, detection at each threshold		10	20	35	70	160	300
Setting range (bar)	2nd stage switching point (PB2)	1.2...10	2.14...20	4.4...35	9.4...70	16.5...160	36...300
	1st stage switching point (PB1)	0.52...9.32	0.9...18.76	1.9...32.5	6.6...67.2	10.5...154	25...289
	Spread between 2 stages (PB2-PB1)	0.68...5.8	1.24...9.55	2.5...20.4	2.8...46	6...83	11...189
Without setting scale 2 C/O single-pole pole, snap action contacts (1 per stage)		XMLD010B1S12	XMLD020B1S12	XMLD035B1S12	XMLD070D1S12	XMLD160D1S12	XMLD300D1S12

Compact RFID Sensors

XG RFID Stations 13.56 MHz, Fixing Ø 22			Compact station for panel fixing (1)	Compact station for panel fixing with indicator light (1)
Type of associated tag			ISO 15693 to ISO 14443 standard tags. Automatic detection of the type tag.	
Display	For informing the operator			2 multicolor LEDs (7 selectable colors) driven by Modbus requests
	For the communication		1 dual color LED (Dialog station/tag)	1 dual color LED (Modbus network activity)
	Item numbers		XGCS490B201	XGCS49LB201

Cloud Connected Sensors

| XIOT Cloud Connected Sensors - 3 options to choose from			
Description	**Transmitter only** XIOT11SE5MRCL	**Prepaid 5-year access to cloud** XIOT11SE5MRCL	**Subscription services (1)** XIOT11SE5MRCL
> 1 standalone transmitter > Activation magnet > Instruction sheet	✓	✓	✓
> 5-year subscription to Sigfox LPWAN (2)	-----	✓	-----
> Web interface to configure and display data	-----	✓	✓
> Smartphone apps for alert notifications (iOS and Android)	-----	✓	✓
> Connection to Telemecanique Sensors secure servers via external SCADA system for data processing	-----	-----	✓

(1) Pricing, terms and conditions available at: https://godigital.schneider-electric.com/smp/home/home.page
(2) LPWAN: Low power wide area network

The XIOT communication offer from Telemecanique Sensors (2) is based on LPWAN (low power wide area network) technology, operated by Sigfox.

The Sigfox network covers 32 countries and is already very extensive in Europe. It is also being rapidly deployed in the US and Asia-Pacific. It uses antennas with a range of around 50 km. The map on the Sigfox website shows exactly which areas are covered by the network (see http://sigfox.com/en/coverage).

How it works

When the contacts on a sensor installed on your site change state (A), the transmitter (B) sends a message to the IoT network (LPWAN) (C), which is then routed to our secure servers (D). This message is then delivered to one or more recipients as an alert on PC, tablet, or smartphone (E).
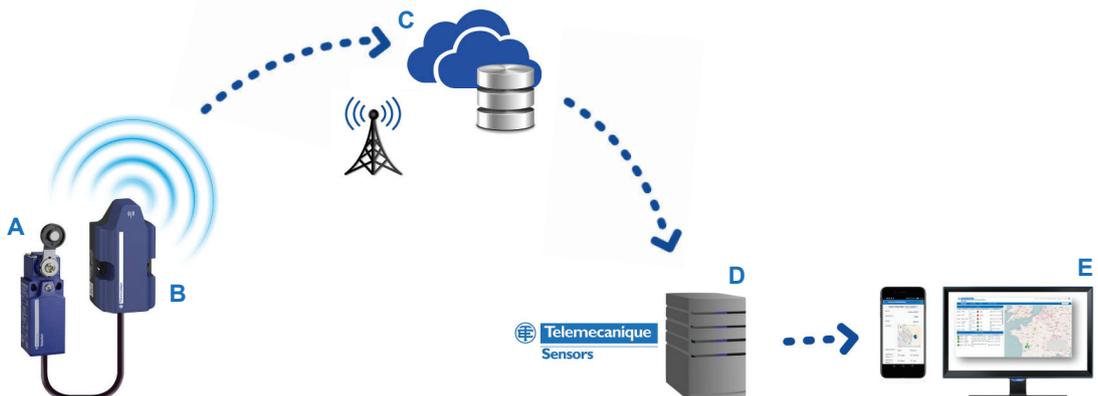
> Telemecanique Sensors

Simply easy!

Simplicity

+

Proximity

+

Expertise

Telemecanique Sensors is a world-class global brand offering a comprehensive line of 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 compatible with most PLC manufacturers.

Telemecanique Sensors is focused on 3 core values - Simplicity, Expertise, and Proximity. Our focus on *Simplicity* is reflected in the ease with which our products can be specified, installed, and used. Our focus on *Expertise* is reflected in our 70+ years of securing all the necessary and applicable certifications and our long history of addressing some of the most demanding machine applications in the industry. Our focus on *Proximity* can be seen in the worldwide availability of our products and technical support.

In short, we make sensing technology simple. We have the experience to address the most challenging applications. And we are there to help.

We make detection solutions ''Simply easy!''

Discover our complete offer: www.tesensors.com or contact your local sales agency

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