

# Safety switches XCS

## Preventa

### *Control* opening



# Preventa safety switches XCS

## Simply Smart!

Leveraging  
**ingenuity**  
and intelligence  
for **ease of use**

**Optimise your installations by incorporating a complete Preventa solution!**



Module

Controller

PLC



## Coded magnetic technology

### XCS DM range

- Pre-cabled/Connector on flying lead (L = 15 cm)
- Degree of protection: IP66 + IP67
- Type of contact: REED
- Operating zone:
  - Sao = 5/Sar = 15 (XCSDMC)
  - Sao = 8/Sar = 20 (XCSDMP/R)

### XCSDM3/4 range

- Self-contained, SIL2/SIL3
- Pre-cabled or M12 connector
- Degree of protection: IP66 + IP67 + IP69K
- 2 solid-state PNP/NO outputs, 1.5 A/24 VDC
- Operating zone:
  - Sao = 10 mm, Sar = 20 mm

**Self-contained** solution (XPS DM3/4).  
**Optimum** solution with module XPS DM.  
**Universal** solution with controller XPS MC  
or safety PLC XPS MF.

## 2 technologies and 3 ranges to suit your particular needs...

Safety switches XCS are designed to protect machine operators when opening protective guards, doors or covers by stopping dangerous movements of the machine.

Used in conjunction with Preventa safety modules, controllers or PLCs, they provide a category 4/SIL 3 level of access protection according to the requirements of the applicable standards EN/ISO 13849-1 and IEC 61508.

Coded magnetic systems with integrated safety monitoring do not require an external safety relays, safety controllers or a safety PLC. On their own, they provide a SIL2/Category 3 and SIL3/Category 4 level of protection; so they can directly drive and monitor output contactors thus reducing cabling and panel space.

The safety switches are used in all types of applications, for example:

- Machines fitted with small guards or covers (with imprecise guidance and frequent hosing down), packaging machines, labellers, bottling lines, food and beverage processing, machines for micro-components: **coded magnetic** safety switches and systems.
- Machines for light industry, materials handling, label manufacture, textile machines, robotics: **plastic case** safety switches.
- Machines for heavy industry, machine tools, presses, iron and steelworks, automobile. Severe environments: **metal case** safety switches.



## Mechanical action technology: plastic case range

### XCS MP / PA / TA / TE range

- Guard switches with mechanical actuator
- Pre-cabled/1 ISO M16 cable entry (XCS PA/TE)/2 cable entries (XCS TA)
- Degree of protection: IP67
- 2 and/or 3 snap action or slow break contacts

**Optimum** solution with module XPS DM.  
**Universal** solution with controller XPS MC  
or safety PLC XPS MF.

### *Compact and economical solutions*

With the new self-contained coded magnetic system, which provides a SIL2/Category 3 or SIL3/Category 4 level of protection, it is no longer necessary to connect a safety module, controller or PLC since the system monitoring is integrated in the product.



### *An offer featuring more solutions for equipping machines*

The extensiveness of our 3 ranges (metal, plastic and coded magnetic) combined with the introduction of new versions of the products (new snap action and slow break contacts, new guiding accessories...) provides improved solutions to meet your requirements.



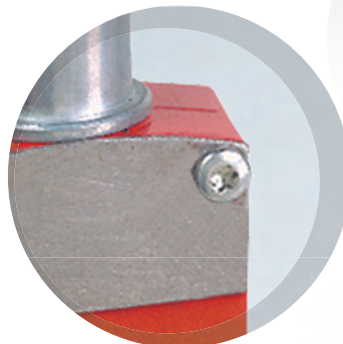
### *Easier integration in machines due to compactness of products*

Safety switches XCS PA/PL/PR are now available in 2 and 3 snap action (with positive opening operation $\ominus$ ) and slow break contact versions that are more compact: only 30 mm wide!



### *Increased safety of installations*

The new product versions fitted with a 3rd contact specifically for diagnostics improve machine availability and also provide better foresight in the event of a fault. In addition, specific torx screws to prevent access to the contact and readjustment of the products have been added.



TAB.TOUR.HOFLI.1



SAFE HPF04RELLE2

INTERSECTION  
D'OUVRAGE  
SANS  
ARRÊTATION

## Mechanical action technology: **metal case range**

### **XCS D / M** range

- Safety limit switches
- 1 cable entry (XCS D)/pre-cabled (XCS M)
- Degree of protection: IP66 + IP67 (XCS D)/IP66 + IP67 + IP68 (XCS M)
- 3 contacts (XCS D)/3 or 4 contacts (XCS M)

*Optimum* solution with module **XPS A**.  
*Universal* solution with controller **XPS MC**  
or safety PLC **XPS MF**.

### **XCS A / B / C / E** range

- Guard switches with mechanical actuator
- 1 cable entry/2 cable entries (XCS E)
- Degree of protection: IP67
- 3 slow break contacts

*Optimum* solution with module **XPS A**.  
*Universal* solution with controller **XPS MC**  
or safety PLC **XPS MF**.



### **XCS P / PL / PR / TL / TR** range

- Safety limit switches/Guard switches with rotary lever or spindle operator
- 1 cable entry (XCS P)/2 cable entries (XCS T)
- Degree of protection: IP66 + IP67 (XCS P)/IP67
- Tripping angle: 5° (XCS PL/PR/TL/TR)
- 2 or 3 slow break contacts

*Optimum* solution with module **XPS A**.  
*Universal* solution with controller **XPS MC** or safety PLC **XPS MF**.

## Coded magnetic technology

Plastic case switches		Type <b>XCSDM</b> , coded magnetic Connector on flying lead (L = 15 cm)			Coded magnetic system		Type <b>XCSDM3</b> , <b>XCSDM4</b> SIL2/Category 3   SIL3/Category 4	
Switch actuation		Face to face, face to side, side to side		Face to face	Switch actuation	Face to face, side to side, face to side		
Dimensions, W x D x H (mm)		16 x 7 x 51	25 x 13 x 88	M30 x 38.5	Type of output	2 PNP/N/O solid-state outputs, 1.5 A/24 VDC		
Switch with coded magnet	N/C + N/O, N/C staggered	XCSDMC590L01M8	XCSDMP590L01M12	XCSDMR590L01M12	Dimensions, W x D x H (mm)	34 x 27 x 100	34 x 27 x 100	
	N/O + N/O, 1 N/O staggered	XCSDMC790L01M8	XCSDMP790L01M12	XCSDMR790L01M12	Connection	Pre-cabled, L=2m	XCSDM379102	XCSDM480102
	N/C + N/C + N/O, 1 N/C staggered	-	XCSDMP500L01M12	-	Pre-cabled, L=5m	XCSDM379105	XCSDM480105	
	N/C + N/O + N/O, 1 N/O staggered	-	XCSDMP700L01M12	-	Pre-cabled, L=10m	XCSDM379110	XCSDM480110	
					M12 connector	XCSDM3791M12	XCSDM4801M12	

## Mechanical action technology: plastic range

Switches with key actuators	Type <b>XCSMP</b> pre-cabled (L = 2 m)	Type <b>XCSPA</b> and <b>TA</b>		Type <b>XCSTE</b>
		1 ISO M16 entry	2 ISO M16 entries	1 ISO M16 cable entry
Actuation speed (min.→max.)	0.05 m/s→1,5 m/s	0.1 m/s→0,5 m/s		0.1 m/s→0.5 m/s
Dimensions (body + head), W x D x H (mm)	30 x 15 x 87	30 x 30 x 93.5	52 x 30 x 114.5	110 x 33 x 93.5
Solenoid supply voltage	-	-	-	24 VAC/DC
Complete switch N/C + N/O slow break	XCSMP59L2 ⊕	XCSPA592 ⊕		XCSTE5312 ⊕
N/C + N/C slow break	XCSMP79L2 ⊕	XCSPA792 ⊕	-	XCSTE7312 ⊕
N/C + N/O + N/O snap action	-	-	-	-
N/C + N/O + N/O slow break	XCSMP70L2 ⊕	XCSPA892 ⊕	XCSTA592 ⊕	-
N/C + N/C + N/O snap action	-	XCSPA492 ⊕	-	-
N/C + N/C + N/O slow break	XCSMP80L2 ⊕	XCSPA992 ⊕	XCSTA792 ⊕	-

Switches with rotary lever or spindle	Type <b>XCSPL</b> with lever				<b>XCSTL</b>	<b>XCSPR</b>	<b>XCSTR</b>
	1 ISO M16 cable entry				2 ISO M16 cable entries		
Minimum torque (tripping / positive opening)	0.1 / 0.25 N.m	0.1 / 0.25 N.m	0.1 / 0.25 N.m	0.1 / 0.25 N.m	0.1 / 0.25 N.m	0.1 / 0.25 N.m	0.1 / 0.25 N.m
Dimensions (body + head), W x D x H (mm)	30 x 30 x 160	30 x 30 x 160	30 x 30 x 160	30 x 30 x 160	30 x 30 x 160	30 x 30 x 96	30 x 30 x 160
Complete switch N/C + N/O slow break	XCSPL592 ⊕	XCSPL582 ⊕	XCSPL572 ⊕	XCSPL562 ⊕	-	XCSPR552 ⊕	-
N/C + N/C slow break	XCSPL791*⊕	XCSPL781*⊕	XCSPL771*⊕	XCSPL762 ⊕	-	XCSPR752 ⊕	-
N/C + N/O + N/O slow break	-	-	-	XCSPL862 ⊕	XCSTL562 ⊕	-	-
N/C + N/C + N/O slow break	-	XCSPL981*⊕	-	XCSPL962 ⊕	XCSTL762 ⊕	XCSPR952 ⊕	XCSTR752 ⊕

\* with DE9RA1016 adaptor

Limit switches	Type <b>XCSP</b> , plastic with 1 ISO M20 x 1.5 cable entry		
	Maximum actuation speed	0.5 m/s	0.5 m/s
Dimensions (body + head), W x D x H (mm)	34 x 34.5 x 89	34 x 34.5 x 99.5	34 x 43 x 121.5
Complete switch N/C + N/C + N/O snap action	XCSP3910P20	XCSP3902P20	XCSP3918P20
N/C + N/C + N/O slow break	XCSP3710P20	XCSP3702P20	XCSP3718P20

## Mechanical action technology: metal range

Limit switches	Type <b>XCSD</b> , metal with 1 ISO M20 x 1.5 cable entry		
	Maximum actuation speed	0.5 m/s	0.5 m/s
Dimensions (body + head), W x D x H (mm)	34 x 34.5 x 89	34 x 34.5 x 99.5	34 x 43 x 121.5
Complete switch N/C + N/C + N/O snap action	XCSD3910P20	XCSD3902P20	XCSD3918P20
N/C + N/C + N/O slow break	XCSD3710P20	XCSD3702P20	XCSD3718P20

Switches with key actuators	Type <b>XCSA/B/C</b>			Type <b>XCSE</b>
	1 ISO M20 cable entry			1 ISO M20 cable entry
Maximum actuation speed	0.1 m/s→0.5 m/s			0.1 m/s→0.5 m/s
Dimensions (body + head), W x D x H (mm)	44 x 44 x 113.5	52 x 44 x 113.5	52 x 44 x 113.5	98 x 44 x 146
Solenoid supply voltage	-			24 VAC/DC
Complete switch N/C + N/O + N/O slow break	XCSA502 ⊕	XCSB502 ⊕	XCSC502 ⊕	XCSE5312 ⊕
N/C + N/C + N/O slow break	XCSA702 ⊕	XCSB702 ⊕	XCSC702 ⊕	XCSE7312 ⊕

Miniature limit switches	Type <b>XCSM</b> , metal pre-cabled (L = 1 m)		
	Maximum actuation speed	0.5 m/s	0.5 m/s
Dimensions (body + head), W x D x H (mm)	30 x 16 x 60	30 x 16 x 70.5	30 x 32 x 92.5
Complete switch N/C + N/C + N/O snap action	XCSM3910L1 ⊕	XCSM3902L1 ⊕	XCSM3915L1 ⊕
N/C + N/C + N/O slow break	XCSM3710L1 ⊕	XCSM3702L1 ⊕	XCSM3715L1 ⊕

Other versions: versions with Pg. cable entries, pre-cabled with other cable lengths, with LED, with other contacts, other actuators, etc. Visit [www.telemecanique.com](http://www.telemecanique.com)

[www.schneider-electric.com](http://www.schneider-electric.com)



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