

Limit switches

XC Special range

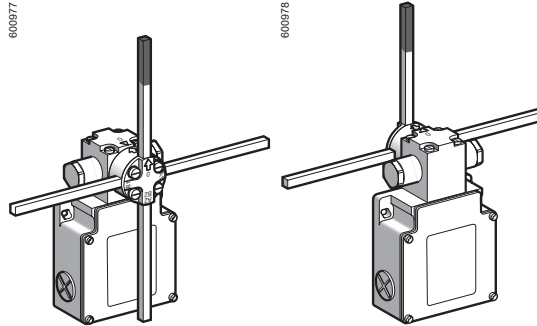
For hoisting and material handling applications, XCKMR and XCKVR

For conveyor belt shift monitoring applications, XCRT

■ XCKMR (metal)

□ With head for rotary movement operators, stay put

4 mechanical actuation positions of 4 contacts
From 2 to 5 electrical positions depending on model

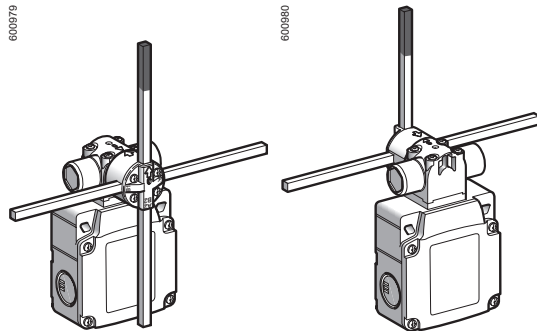


Page 50

■ XCKVR (plastic)

□ With head for rotary movement operators, stay put

4 mechanical actuation positions of 4 contacts
From 2 to 5 electrical positions depending on model

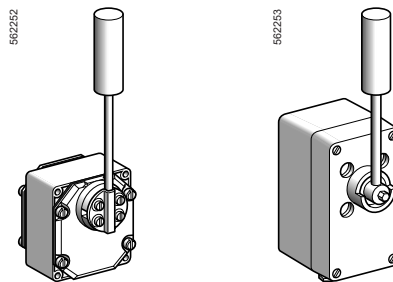


Page 50

■ XCRT

□ With head for rotary movement operators, spring return to off position

2 contact actuation positions per direction
1 contact actuated at 10°, other contact at 18°



Page 46

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For hoisting and material handling applications, XCR, XCKMR and XCKVR

For conveyor belt shift monitoring applications, XCRT

Environment characteristics				
Limit switches		XCR and XCRT	XCKMR (metal)	XCKVR (plastic)
Conformity to standards	Products	EN/IEC 60947-5-1, CSA C22-2 n° 14, CCC	EN/IEC 60947-5-1, CSA C22-2 n° 14, UL 508, CCC	
	Machine assemblies	EN/IEC 60204-1		
Product certifications		XCRA, B, E, F: CE, CSA, UL, CCC, EAC	CE, UL, CSA, CCC, EAC	
Protective treatment	Standard version	"TC"		
Ambient air temperature	For operation	- 25...+ 70 °C	- 25...+ 70 °C	- 25...+ 70 °C
	For storage	- 40...+ 70 °C	- 40...+ 85 °C	- 40...+ 70 °C
Vibration resistance	Conforming to EN/IEC 60068-2-6	9 gn (10...500 Hz)	25 gn (10...500 Hz)	25 gn (10...500 Hz)
Shock resistance	Conforming to EN/IEC 60068-2-27	XCRA, B, E, F: 68 gn, XCRT: 30 gn (18 ms)	50 gn	50 gn
Electric shock protection		Class I conforming to IEC 60536		Class II conforming to IEC 60536
Degree of protection	Conforming to EN/IEC 60529	XCRA, B, E, F: IP 65, XCRT: IP 65	IP 66	IP 65
Degree of protection against mechanical impacts	Conforming to IEC 62262	IK 07	IK 07	IK 04
Materials	Enclosure	Metal (except XCRT315: polyester)	Zamak ZP3	(PBT + PC) - GF 30 FR (Valox)
	Cover	Metal (except XCRT315: polyester)	DC03 steel	(PBT + PC) - GF 30 FR (Valox)
	Head	Metal	Zamak ZP3	(PBT + PC) - GF 30 FR (Valox)
Cable entry		1 tapped entry for Pg 13.5 cable gland	3 tapped entries for Pg 13.5 cable gland or tapped M20 x 1.5	1 tapped entry M20 x 1.5. 2 breakout holes for ISO M20 cable gland
Contact block characteristics				
Rated operational characteristics	Conforming to EN/IEC 60947-5-1 Appendix A	XCRA, B, E, F: ~ AC-15; A300 (Ue = 240 V, Ie = 3 A), Ithe = 10 A --- DC-13 ; Q300 (Ue = 250 V, Ie = 0.27 A) XCRT: ~ AC-15; B300 (Ue = 240 V, Ie = 1.5 A/ Ue = 120 V, Ie = 3 A) --- DC-13 ; R300 (Ue = 250 V, Ie = 0.1 A)	~ AC-15 ; A300 (Ue = 240 V, Ie = 3 A), Ithe = 10 A --- DC-13 ; Q150 (Ue = 125 V, Ie = 0.55 A)	
Rated insulation voltage		Ui = 500 V degree of pollution 3 conforming to EN/IEC 60947-1 Ui = 300 V conforming to UL 508, CSA C22-2 n° 14		
Rated impulse withstand voltage		U imp = 6 kV conforming to EN/IEC 60947-1, IEC 60664		
Positive operation (depending on model)		NC contacts with positive opening operation conforming to EN/IEC 60947-5-1 Section 3 (except XCRT)	NC contacts with positive opening operation conforming to EN/IEC 60947-5-1 Section 3 (contacts 21-22)	
Resistance across terminals		≤ 25 m Ω conforming to NF C 93-050 method A or IEC 60255-7 category 3		
Short-circuit protection		10 A cartridge fuse type gG (gl)		
Connection	Screw clamp terminals	Clamping capacity XE2N P2151 ou XCRT: min: 1 x 0.5 mm ² , max: 2 x 2.5 mm ² XE2S P2151: min: 1 x 0.34 mm ² , max: 2 x 1.5 mm ²	Clamping capacity min: 1 x 0.5 mm ² max: 2 x 2.5 mm ²	
Minimum actuation speed		XE2SP2151 or XCRT: 0.01 m/mn	XE2NP2151 or XCKMR and XCKVR : 6 m/mn	

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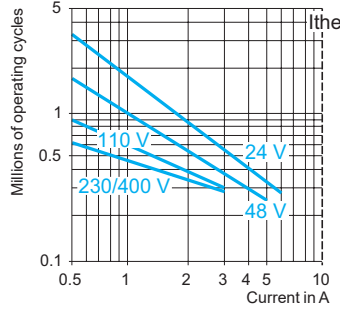
Contact block characteristics (continued)

Electrical durability

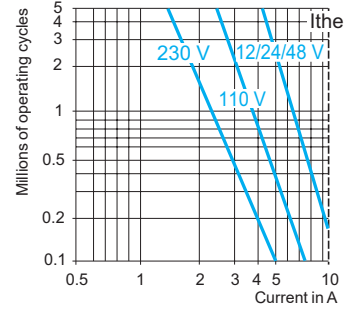
- Conforming to EN/IEC 60947-5-1 Appendix C
- Utilisation categories AC-15 and DC-13
- Maximum operating rate: 3600 operating cycles/hour
- Load factor: 0.5

AC supply
~ 50/60 Hz
~ inductive circuit

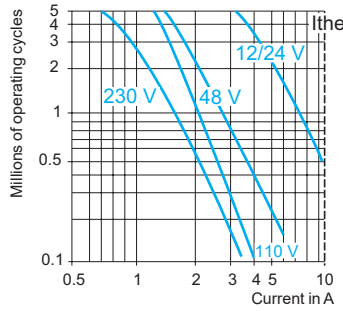
XE2SP2151



XE2NP2151



XCRT contacts



DC supply ---

	Voltage V	24	48	120
Power broken in W for 5 million operating cycles	XE2SP2151	10	7	4
	XE2NP2151	13	9	7
	XCRT contacts	10	7	4

For XE2SP2151 on ~ or --- NC and NO contacts simultaneously loaded to the values shown with reverse polarity.

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XCKMR and XCKVR

Complete switches with 3 cable entries

Type of operating head	Rotary			

Material	Metal		Plastic	
Type of operator	With cruciform metal rods	With cruciform metal rods, reversed head	With cruciform metal rods	With cruciform metal rods, reversed head

References

“By pass” switches

	2 x 2-pole NC+NO break before make, slow break (XE2NP2151)	XCKMR24SR1H29	–	XCKVR24SR1H29	–
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“Single speed” switches

	2 x 2-pole NC+NO break before make, slow break (XE2NP2151)	XCKMR44D1H29	XCKMR44D2H29	XCKVR44D1H29	XCKVR44D2H29
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“Double speed” switches (⊖ NC contact with positive opening operation on contacts 21-22)

	2 x 2-pole NC+NC break before make, slow break (non interchangeable contacts)	XCKMR54D1H29 (1)	XCKMR54D2H29 (1)	XCKVR54D1H29	XCKVR54D2H29
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Weight (kg)	0.684	0.684	0.320	0.320
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Complementary characteristics

Switch actuation	Horizontal	Horizontal
Permissible actuation area on the rods	Between 65 and 95 mm from the axis of the fixing screws on the body	
Minimum actuation speed	6 m/mn	6 m/mn
Maximum actuation speed (2)	1.5 m/s	1.5 m/s
Minimum force or torque	For tripping	0.5 N.m
	For positive opening	0.75 N.m
Mechanical durability	2 million operating cycles	1 million operating cycles
Setting up	Rods included with the switch: for customer assembly	

References of separate components

	Description	Reference	Weight kg
	Rod \varnothing 6 mm, L = 200 mm	XCRZ03	0.020
	Rod \varnothing 6 mm, L = 200 mm with red mark	XCRZ03R	0.020
	Plastic cable gland ISO M20	DE9PEM20010	0.010

DE9PEM20010

(1) For complete switches with entry for Pg 13.5 cable gland, delete H29 from the end of the reference. Example: XCKMR54D1H29 becomes XCKMR54D1.

(2) For an actuation point on the rod between 65 and 95 mm from the axis of the fixing screws on the body.

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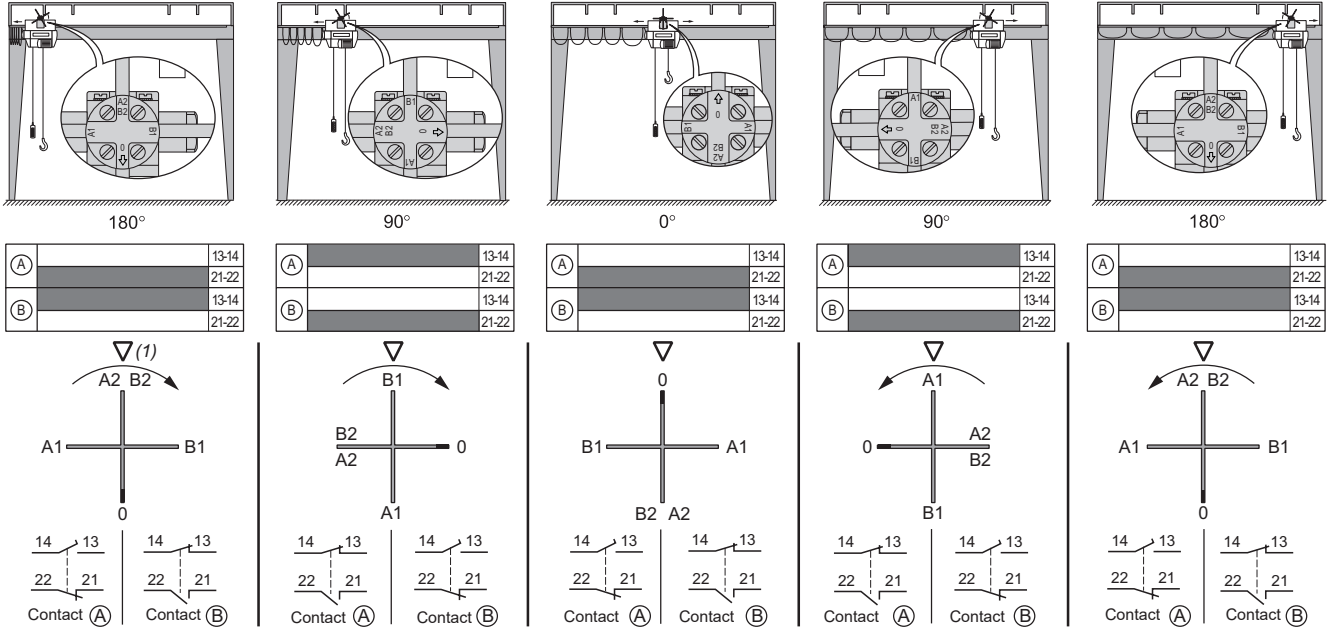
For hoisting and material handling applications,

XCKMR and XCKVR

Complete switches with 3 cable entries

Operation

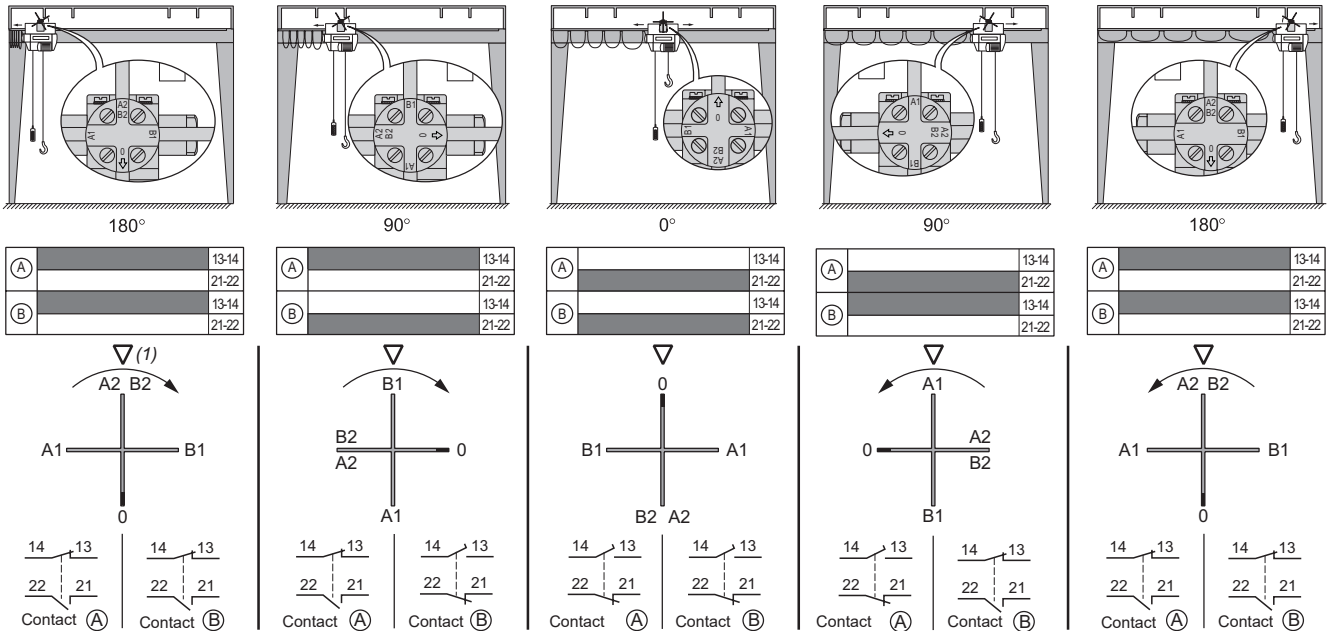
Limit switches XCK●R24SR1H29: "By pass"



(1) Triangle symbol marked on top of head.

or : direction of rotation.

Limit switches XCK●R44D●H29: "Single speed"



(1) Triangle symbol marked on top of head.

or : direction of rotation.

Limit switches

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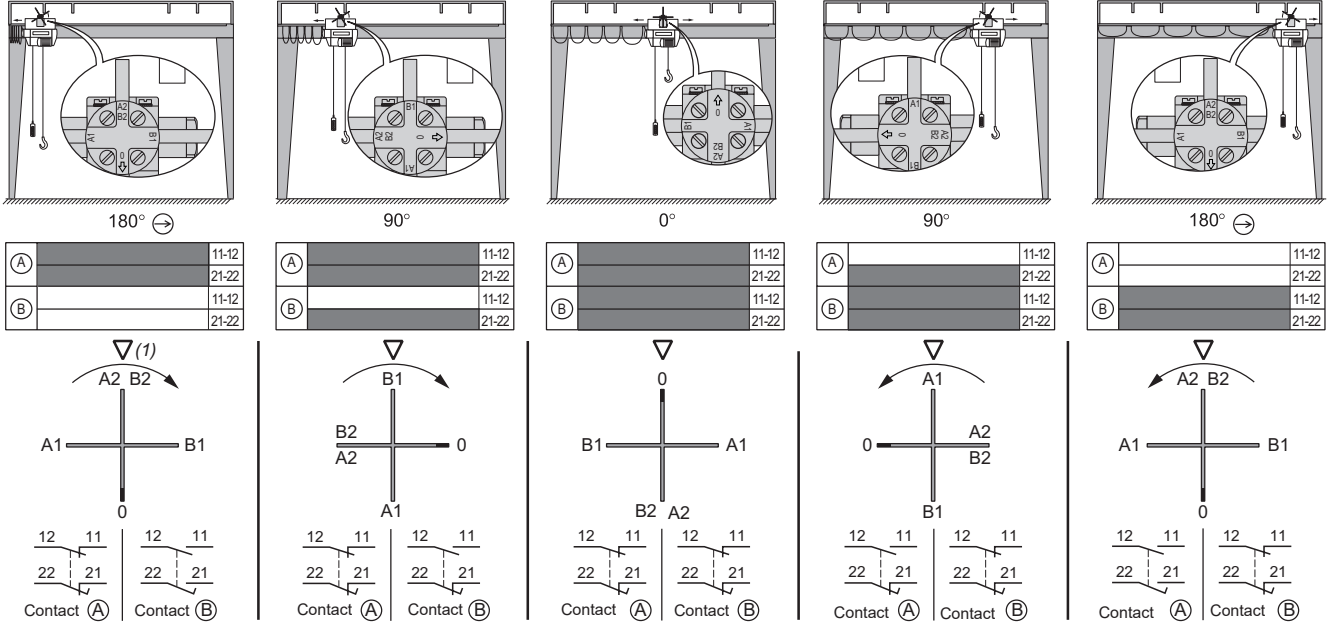
For hoisting and material handling applications,

XCKMR and XCKVR

Complete switches with 3 cable entries

Operation (continued)

Limit switches XCK●R54D●●●●: "Double speed"



(1) Triangle symbol marked on top of head.

or : direction of rotation.