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Pendant control stations with intuitive operation

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Pendant control stations

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■ Double insulated, type **XAC F**, for control circuits (1)

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(1) XAC M and XAC F: products for maintenance purposes only.

Controllers

Selection guide *6/66*

■ Controllers for “light hoisting” applications, type **XKB**

□ Controllers **XKB A** with predefined, non modifiable schemes, factory assembled . . . . . *page 6/73*
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■ Controllers for “medium hoisting” applications, type **XKD**

□ Controllers with variable composition schemes, factory assembled . . . . . *page 6/81*
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■ Controllers for “heavy hoisting” applications, type **XKM**

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■ Potentiometers for controllers

□ For standard applications, type **XKZ A** . . . . . *page 6/104*
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6

Pendant control stations

Complete stations “ready for use” and variable composition stations

Complete stations “ready for use”

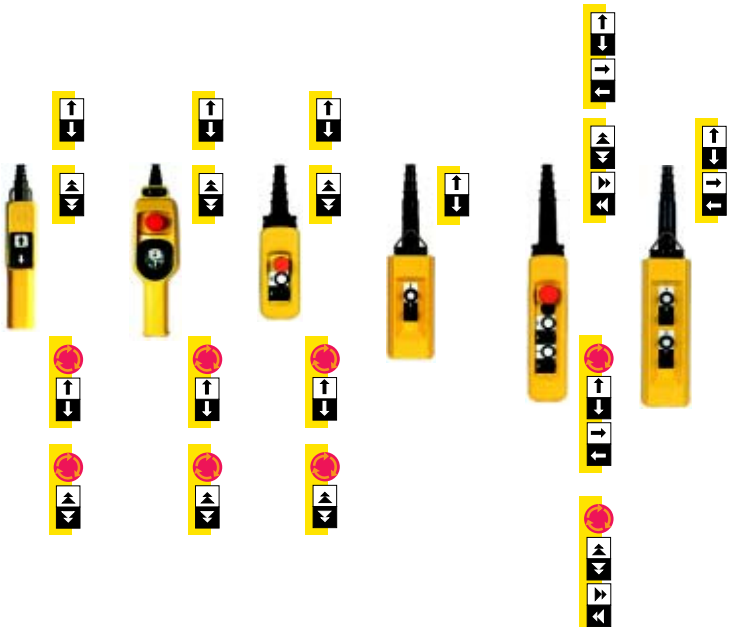
Applications	Control circuits					
	Simple hoisting: 1 movement				Handling-hoisting: 2 movements	

Motor control

Single-speed

2-speed

Emergency stop



Number of operators	2	1 (2-directional)	2	2	4	4
Enclosure material	Polypropylene	Polypropylene	Polypropylene	Polyester	Polypropylene	Polyester
Pendant station type reference	XAC A	XAC D	XAC A	XAC B	XAC A	XAC B
Page(s)	6/5	6/9	6/19	6/35	6/20	6/35

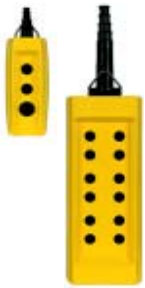
6

Variable composition stations

Applications	Control circuits		
Number of cut-outs	1 or 2	2, 3, 4, 5, 6, 8 or 12	2, 3, 4, 6, 8 or 12 in 1 row or 2 rows of 6

Equipment	■ Emergency stop (front mounted) ■ Contact blocks for 1 or 2 speeds	■ Pushbuttons ■ Selector/key switches ■ Pilot lights ■ Emergency stop (front or base mounted) ■ Wobblesticks ■ Contact blocks for 1 or 2 speeds	■ Pushbuttons ■ Selector/key switches ■ Pilot lights ■ Emergency stop (front or base mounted) ■ Wobblesticks ■ Contact blocks for 1 or 2 speeds
Enclosure material	Polypropylene	Polypropylene	Polyester
Pendant station type reference	XAC D	XAC A	XAC B
Page(s)	6/12 and 6/13	6/23 to 6/29	6/39 to 6/54

Handling-hoisting: 3 movements				Power circuits			
				Simple hoisting: 1 movement		Handling-hoisting: 2 movements	Handling-hoisting: 3 movements
6	6	8	8	1 (2-directional)	2	4	6
Polypropylene	Polyester	Polypropylene	Polyester	Polypropylene	Polyester	Polyester	Polyester
XAC A	**XAC B**	**XAC A**	**XAC B**	**XAC D**	**XAC B**	**XAC B**	**XAC B**
6/20	6/35	6/20	6/35	6/11	6/37	6/37	6/38

		Power circuits	
4 or 8	Up to 30	1 or 2	2, 3, 4, 6, 8 or 12 in 2 rows of 6
Products for maintenance purposes only	Products for maintenance purposes only		
			
■ Pushbuttons ■ Selector/key switches ■ Pilot lights ■ Emergency stop (front or base mounted) ■ Wobblesticks ■ Contact blocks for 1 or 2 speeds	■ Pushbuttons ■ Selector/key switches ■ Pilot lights ■ Emergency stop (front or base mounted) ■ Wobblesticks ■ Contact blocks for 1 or 2 speeds	■ Emergency stop (front mounted) ■ Contact blocks for 1 or 2 speeds	■ Pushbuttons ■ Selector/key switches ■ Pilot lights ■ Emergency stop (front or base mounted) ■ Wobblesticks ■ Contact blocks for 1 or 2 speeds
Aluminium	Polyester	Polypropylene	Polyester
XAC M	**XAC F**	**XAC D**	**XAC B**
6/41	6/61	6/12 and 6/13	6/39 to 6/54

Pendant control stations

Double insulated with intuitive operation, type XAC A “Pistol grip”

For control circuits

Environment

Conformity to standards			IEC 947-5-1, EN 60947-5-1 For versions with Emergency stop: EN 60204-1, EN 60204-32, EN 292-2, EN 418
Product certifications			UL type 4X A600-Q600, CSA type 4 A600-Q600
Protective treatment	Standard version		“TH”
Ambient air temperature	For operation	**°C**	- 25…+ 70
	For storage	**°C**	- 40…+ 70
Vibration resistance			15 gn (10…500 Hz) conforming to IEC 68-2-6
Shock resistance			100 gn conforming to IEC 68-2-27
Electric shock protection			Class II conforming to IEC 536 and NF C 20-030
Degree of protection			IP 65 conforming to IEC 529; IK 08 conforming to EN 50102
Mechanical durability (in millions of operating cycles)			1
Enclosure			Double insulated polypropylene, coloured yellow throughout
Cable entry			Rubber sleeve with stepped entry diameter for cable Ø 7…Ø 15 mm

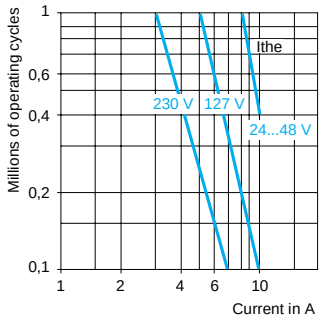
Contact block characteristics

Rated operational characteristics		∼ AC-15: A600 or Ue = 600 V, Ie = 1.2 A or Ue = 240 V, Ie = 3 A ⎓ DC-13: Q600 or Ue = 600 V, Ie = 0.1 A or Ue = 250 V, Ie = 0.27 A conforming to IEC 947-5-1 Appendix A
Thermal current (Ithe)	**A**	10
Rated insulation voltage (Ui)	**V**	600, degree of pollution 3, conforming to IEC 947-1
Rated impulse withstand voltage (U imp)	**kV**	6, conforming to IEC 947-1
Positive operation		Mushroom head pushbutton: N/C contact with positive opening operation conforming to IEC 947-5-1 Section 3
Contact operation		Slow break
Resistance across terminals	**MΩ**	⩽ 25
Operating force	**N**	13 to 15
Terminal referencing		By numbers conforming to CENELEC EN 50013
Short-circuit protection		10 A cartridge fuse type gG (gl)
Connection	**mm²**	Screw and captive cable clamp terminals. Clamping capacity: 1 x 2.5 or 2 x 1.5 with or without cable end

Rated operational power

Conforming to IEC 947-5-1 Appendix C. Utilisation categories AC-15 and DC-13.
Operating rate: 3600 operating cycles/hour. Load factor: 0.5.

a.c. supply ∼ 50/60 Hz
ᗰᗰᗰ Inductive circuit



d.c. supply ⎓
Power broken in W for 1 million operating cycles

Voltage	**V**	**24**	**48**	**120**
ᗰᗰᗰ	W	65	48	40

References:
pages 6/5 and 6/6

Dimensions:
page 6/7

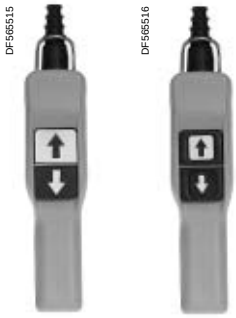
Application schemes:
page 6/7

Pendant control stations

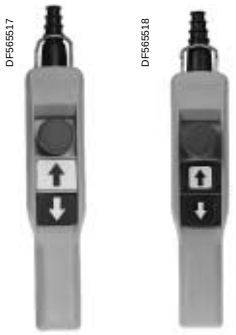
Double insulated with intuitive operation, type XAC A “Pistol grip”

For control circuits

Complete stations “ready for use”



XAC A201 *XAC A211*



XAC A2013 *XAC A2113*

XAC A2014 *XAC A2114*

For control of single-speed hoist motors

Functions	Number of operators	Type of operators	Contact block(s) and scheme: Per direction	Contact block(s) and scheme: For Emergency stop	Reference	Weight kg
	2 mechanically interlocked	Standard	1 N/O ZB2 BE101	–	**XAC A201**	0.270
			1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	–	**XAC A205**	0.300
		Booted	1 N/O ZB2 BE101	–	**XAC A211**	0.290
			1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	–	**XAC A215**	0.320
	2 mechanically interlocked + 1 latching Emergency stop Ø 30 mm operator ZA2 BS44	Standard	1 N/O ZB2 BE101	1 N/C ZB2 BE102	**XAC A2013**	0.310
			1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	1 N/C ZB2 BE102	**XAC A2053**	0.340
		Booted	1 N/O ZB2 BE101	1 N/C ZB2 BE102	**XAC A2113**	0.310
			1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	1 N/C ZB2 BE102	**XAC A2153**	0.340
	2 mechanically interlocked + 1 trigger action latching Emergency stop Ø 30 mm operator ZA2 BS834	Standard	1 N/O ZB2 BE101	1 N/C ZB2 BE102	**XAC A2014**	0.310
			1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	1 N/C ZB2 BE102	**XAC A2054**	0.340
		Booted	1 N/O ZB2 BE101	1 N/C ZB2 BE102	**XAC A2114**	0.310
			1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	1 N/C ZB2 BE102	**XAC A2154**	0.340

Characteristics: page 6/4
Dimensions: page 6/7
Application schemes: page 6/7

Pendant control stations

Double insulated with intuitive operation, type XAC A “Pistol grip”

For control circuits

Complete stations “ready for use”

DF565520

XAC A207

DF565519

XAC A217

DF565521

XAC A207●

DF565522

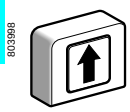
XAC A217●

For control of 2-speed hoist motors

Functions	Number of operators	Type of operators	Contact block(s) and scheme: Per direction	Contact block(s) and scheme: For Emergency stop	Reference	Weight kg
	2 mechanically interlocked	Standard	2 step 1 N/O + 1 N/O staggered ZB2 BE101 + ZB2 BE201	–	**XAC A207**	0.320
		Booted	2 step 1 N/O + 1 N/O staggered ZB2 BE101 + ZB2 BE201	–	**XAC A217**	0.320
	2 mechanically interlocked + 1 latching Emergency stop Ø 30 mm operator ZA2 BS44	Standard	2 step 1 N/O + 1 N/O staggered ZB2 BE101 + ZB2 BE201	1 N/C ZB2 BE102	**XAC A2073**	0.360
		Booted	2 step 1 N/O + 1 N/O staggered ZB2 BE101 + ZB2 BE201	1 N/C ZB2 BE102	**XAC A2173**	0.360
	2 mechanically interlocked + 1 trigger action latching Emergency stop Ø 30 mm operator ZA2 BS834	Standard	2 step 1 N/O + 1 N/O staggered ZB2 BE101 + ZB2 BE201	1 N/C ZB2 BE102	**XAC A2074**	0.360
		Booted	2 step 1 N/O + 1 N/O staggered ZB2 BE101 + ZB2 BE201	1 N/C ZB2 BE102	**XAC A2174**	0.360

Separate components and spare parts

Description	For use with	Marking/ Function	Scheme	Reference	Weight kg
Booted pushbutton operators with fixing screws	XAC A211● XAC A215● (single-speed)	↑	–	**XAC A921**	0.010
		↓	–	**XAC A922**	0.010
	XAC A217● (2-speed)	▲	–	**XAC A923**	0.010
		▼	–	**XAC A924**	0.010
Contact blocks spring return, slow break	XAC A all models	N/O		**ZB2 BE101**	0.015
		N/C		**ZB2 BE102**	0.015
		N/O staggered		**ZB2 BE201**	0.015
Protective cable sleeve + suspension ring + cable clamp	Cable Ø 7 to Ø 13 mm	–	–	**XAC A913**	0.070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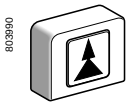
XAC A921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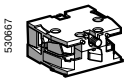
XAC A923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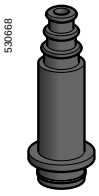
ZB2 BE●●●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XAC A913

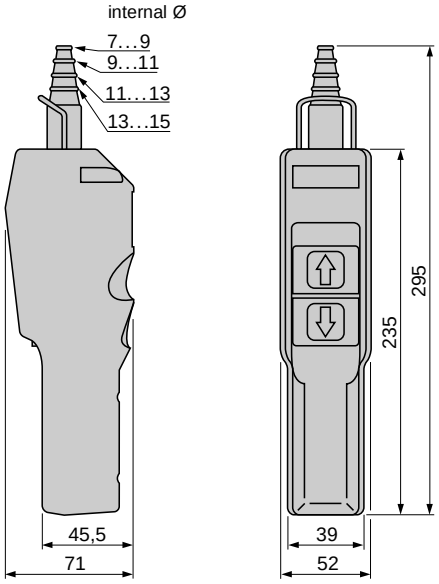
Characteristics: page 6/4
Dimensions: page 6/7
Application schemes: page 6/7

Pendant control stations

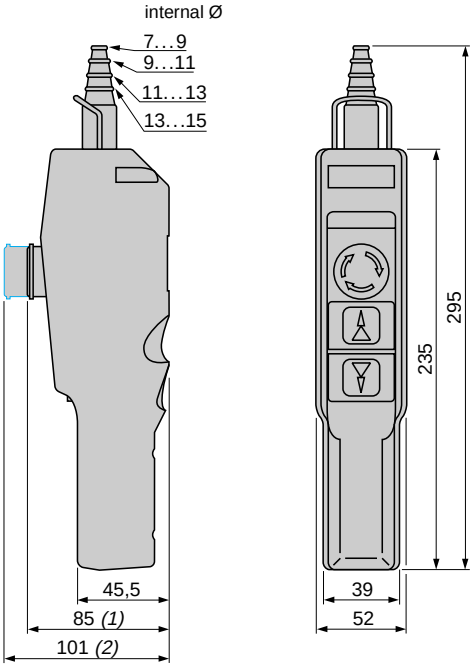
Double insulated with intuitive operation, type XAC A “Pistol grip”
For control circuits
Complete stations “ready for use”

Dimensions

XAC A2●●



XAC A2●●●

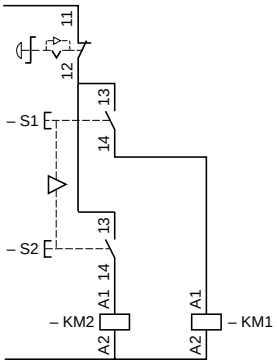


(1) With standard latching Ø 30 mm Emergency stop ZA2 BS44.
(2) With trigger action latching Ø 30 mm Emergency stop ZA2 BS834.

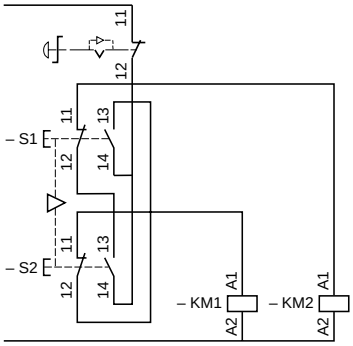
Application schemes (typical examples)

For control of single-speed reversing motor

XAC A2●1●

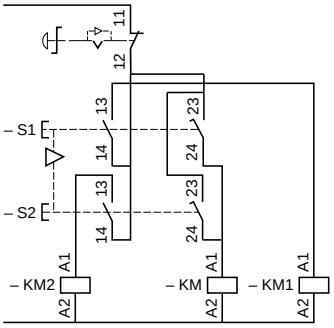


XAC A2●5●



For control of 2-speed reversing motor

XAC A2●7●



Characteristics:
page 6/4

References:
pages 6/5 and 6/6

Pendant control stations

Double insulated with intuitive operation, type XAC D

For control circuits

Environment

Conformity to standards			IEC 947-5-1, EN 60947-5-1 For versions with Emergency stop: EN 60204-1, EN 60204-32, EN 292-2, EN 418, 89/655 EEC
Protective treatment	Standard version		"TH"
Ambient air temperature	For operation	**°C**	- 25…+ 70
	For storage	**°C**	- 40…+ 70
Vibration resistance			15 gn (10…500 Hz) conforming to IEC 68-2-6
Shock resistance			70 gn conforming to IEC 68-2-27
Electric shock protection			Class II conforming to IEC 536 and NF C 20-030
Degree of protection			IP 65 conforming to IEC 529; IK 08 conforming to EN 50102
Mechanical durability (in millions of operating cycles)			3
Enclosure			Double insulated polypropylene, coloured yellow throughout
Cable entry			Rubber sleeve with stepped entry diameter for cable Ø 7…Ø 18 mm

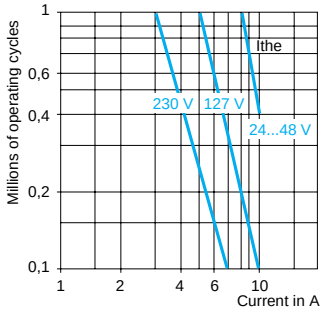
Contact block characteristics

Rated operational characteristics			∿ AC-15: A600 or Ue = 600 V, Ie = 1.2 A or Ue = 240 V, Ie = 3 A ⎓ DC-13: Q600 or Ue = 600 V, Ie = 0.1 A or Ue = 250 V, Ie = 0.27 A conforming to IEC 947-5-1 Appendix A
Thermal current (Ithe)	**XAC D2●A010●**	**A**	10
	XAC D2●A12●1	**A**	16
Rated insulation voltage (Ui)		**V**	600, degree of pollution 3, conforming to IEC 947-1
Rated impulse withstand voltage (U imp)		**kV**	6, conforming to IEC 947-1
Positive operation			Mushroom head pushbutton on **XAC D22A●●●●**: N/C contact with positive opening operation conforming to IEC 947-5-1 Section 3
Contact operation			Single-speed contact blocks: slow break 2-speed contact blocks: snap action
Resistance across terminals		**MΩ**	⩽ 25
Operating force	**XAC D2●A010●, XAC D2●A12●1**	**N**	16
Terminal referencing			By numbers conforming to CENELEC EN 50013
Short-circuit protection			10 A cartridge fuse type gG (gl)
Connection		**mm²**	Screw and captive cable clamp terminals Clamping capacity: 1 x 2.5 or 2 x 1.5 with or without cable end

Rated operational power

Conforming to IEC 947-5-1 Appendix C. Utilisation categories AC-15 and DC-13.
Operating rate: 3600 operating cycles/hour. Load factor: 0.5.

a.c. supply ∿ 50/60 Hz
ꟷ Inductive circuit



d.c. supply ⎓
Power broken in W for 1 million operating cycles

Voltage	**V**	**24**	**48**	**120**
ꟷ	W	65	48	40

References: page 6/9
Dimensions: page 6/14
Application schemes: page 6/15
Presentation: page 6/16

Pendant control stations

Double insulated with intuitive operation, type XAC D

For control circuits

Complete stations “ready for use”

DF565503

XAC D21A0101

DF565501

XAC D22A0105

DF565504

XAC D21A1231

DF565502

XAC D22A1241

For control of single-speed hoist motors

Functions	Number of operators	Contact block(s) and scheme: Per direction	Contact block(s) and scheme: For Emergency stop	Reference	Weight kg
Reversing, mechanically interlocked	**1** 2-directional operator	1 N/O ZB2 BE101	–	**XAC D21A0101**	0.340
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	–	**XAC D21A0105**	0.365
	1 2-directional operator + 1 latching Emergency stop Ø 30 mm operator ZA2 BS44	1 N/O ZB2 BE101	1 N/C ZB2 BE102	**XAC D22A0101**	0.395
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	1 N/C ZB2 BE102	**XAC D22A0105**	0.425
	1 2-directional operator + 1 trigger action latching Emergency stop Ø 30 mm operator ZA2 BS834	1 N/O ZB2 BE101	1 N/C ZB2 BE102	**XAC D24A0101**	0.395
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	1 N/C ZB2 BE102	**XAC D24A0105**	0.425

For control of 2-speed hoist motors

Functions	Number of operators	Contact block(s) and scheme: For the 2 directions	Contact block(s) and scheme: For Emergency stop	Reference	Weight kg
Reversing, mechanically interlocked	**1** 2-directional operator	1 N/O + N/O staggered XED S1231 *(1)*	–	**XAC D21A1231**	0.365
		1 N/C + N/O + N/O staggered XED S1241 *(1)*	–	**XAC D21A1241**	0.405
	1 2-directional operator + 1 latching Emergency stop Ø 30 mm operator ZA2 BS44	1 N/O + N/O staggered XED S1231 *(1)*	1 N/C ZB2 BE102	**XAC D22A1231**	0.420
		1 N/C + N/O + N/O staggered XED S1241 *(1)*	1 N/C ZB2 BE102	**XAC D22A1241**	0.420
	1 2-directional operator + 1 trigger action latching Emergency stop Ø 30 mm operator ZA2 BS834	1 N/O + N/O staggered XED S1231 *(1)*	1 N/C ZB2 BE102	**XAC D24A1231**	0.420
		1 N/C + N/O + N/O staggered XED S1241 *(1)*	1 N/C ZB2 BE102	**XAC D24A1241**	0.420

(1) Reference of double contact block for reversing operation.

Characteristics: page 6/8
Dimensions: page 6/14
Application schemes: page 6/15
Presentation: page 6/16

Pendant control stations

Double insulated with intuitive operation, type XAC D

For power circuits (direct switching)

Environment			
Conformity to standards			IEC 947-3, EN 60947-3, NF C 63-130, VDE 0660-107
Protective treatment	Standard version		"TH"
Ambient air temperature	For operation	**°C**	- 25…+ 70
	For storage	**°C**	- 40…+ 70
Vibration resistance			15 gn (10…500 Hz) conforming to IEC 68-2-6
Shock resistance			100 gn conforming to IEC 68-2-27 except **XAC D** 2-speed: 70 gn
Electric shock protection			Class II conforming to IEC 536 and NF C 20-030
Degree of protection			IP 65 conforming to IEC 529; IK 08 conforming to EN 50102
Mechanical durability (in millions of operating cycles)			3
Enclosure			Double insulated polypropylene, coloured yellow throughout
Cable entry			Rubber sleeve with stepped entry diameter for cable Ø 7…Ø 18 mm

Contact block characteristics			
Thermal current (Ithe)	**XEN T●●●●**	**A**	10
	XED S●●●●	**A**	16
Rated insulation voltage (Ui)		**V**	500, degree of pollution 3, conforming to IEC 947-1 400, degree of pollution 3, for Emergency stop contact on stations **XAC D22P●●●●**
Rated impulse withstand voltage (U imp)		**kV**	6, conforming to IEC 947-1 4 for Emergency stop contact on stations **XAC D22P●●●●**
Contact operation			Snap action
Operating force		**N**	Single-speed: 28; 2-speed: 31
Terminal referencing			By numbers conforming to CENELEC EN 50005
Short-circuit protection			6 A maximum cartridge fuse type aM
Connection		**mm²**	Screw clamp terminals Clamping capacity: 1 x 2.5 or 2 x 1.5 with or without cable end
Rated operational power			Utilisation categories AC-3 and AC-4 conforming to IEC 947-3 Appendix A 3 phases, 2 poles **XED S2●●●**: 1.1 kW-400 V **XED S3●●●**: 2.2 kW-400 V Brake contact: 100 V d.c. supply, 0.7 A, L/R = 100 ms
			Utilisation category AC-23B, mushroom head Emergency stop 3 phases, 3 poles, isolating block: **XEN T●●●●**: 3 kW-400 V
Electrical durability (in millions of operating cycles)			Utilisation categories AC-3 and AC-4 conforming to IEC 947-3 Appendix A Duty cycle comprising 75% AC-3, 25% AC-4 Operating rate: 600 per hour, load factor: 0.4 3 phases, 2 poles **XED S2●●●**: 1.1 kW-400 V = 1 million **XED S3●●●**: 2.2 kW-400 V = 1 million

References: page 6/11
Dimensions: page 6/14
Application schemes: page 6/15
Presentation: page 6/16

Pendant control stations

Double insulated with intuitive operation, type XAC D

For power circuits (direct switching)
Complete stations “ready for use”

DF565500

XAC D21P2111

DF565501

XAC D22P2121

DF565504

XAC D21P2231

DF565502

XAC D22P2241

For control of single-speed hoist motors

Functions	Number of operators	Contact blocks: Per direction	Contact blocks: For Emergency stop	Maximum operational power/400 V	Reference	Weight kg
Reversing, mechanically interlocked	**1** 2-directional operator	2-pole XED S2111*(1)*	–	1.1 kW	**XAC D21P2111**	0.355
		2-pole XED S3111*(1)*	–	2.2 kW	**XAC D21P3111**	0.355
		2-pole + 1 N/O (brake) XED S2121*(1)*	–	1.1 kW	**XAC D21P2121**	0.355
		2-pole + 1 N/O (brake) XED S3121*(1)*	–	2.2 kW	**XAC D21P3121**	0.355
	1 2-directional operator + 1 latching Emergency stop Ø 30 mm operator ZA2 BS44 *(2)*	2-pole XED S2111*(1)*	1 N/C + N/C + N/C XEN T1991	1.1 kW	**XAC D22P2111** *(2)*	0.410
		2-pole XED S3111*(1)*	1 N/C + N/C + N/C XEN T1991	2.2 kW	**XAC D22P3111** *(2)*	0.410
		2-pole + 1 N/O (brake) XED S2121*(1)*	1 N/C + N/C + N/C XEN T1991	1.1 kW	**XAC D22P2121** *(2)*	0.410
		2-pole + 1 N/O (brake) XED S3121*(1)*	1 N/C + N/C + N/C XEN T1991	2.2 kW	**XAC D22P3121** *(2)*	0.410

For control of 2-speed hoist motors

Functions	Number of operators	Contact blocks: Per direction	Contact blocks: For Emergency stop	Maximum operational power/400 V	Reference	Weight kg
Reversing, mechanically interlocked	**1** 2-directional operator	2-pole XED S2231*(1)*	–	1.1 kW	**XAC D21P2231**	0.355
		2-pole XED S3231*(1)*	–	2.2 kW	**XAC D21P3231**	0.355
		2-pole + 1 N/O (brake) XED S2241*(1)*	–	1.1 kW	**XAC D21P2241**	0.355
		2-pole + 1 N/O (brake) XED S3241*(1)*	–	2.2 kW	**XAC D21P3241**	0.355
	1 2-directional operator + 1 latching Emergency stop Ø 30 mm operator ZA2 BS44 *(2)*	2-pole XED S2231*(1)*	1 N/C + N/C + N/C XEN T1991	1.1 kW	**XAC D22P2231** *(2)*	0.420
		2-pole XED S3231*(1)*	1 N/C + N/C + N/C XEN T1991	2.2 kW	**XAC D22P3231** *(2)*	0.420
		2-pole + 1 N/O (brake) XED S2241*(1)*	1 N/C + N/C + N/C XEN T1991	1.1 kW	**XAC D22P2241** *(2)*	0.420
		2-pole + 1 N/O (brake) XED S3241*(1)*	1 N/C + N/C + N/C XEN T1991	2.2 kW	**XAC D22P3241** *(2)*	0.420

(1) Reference of double contact block for reversing operation.
*(2) To order a station with a trigger action latching Emergency stop Ø 30 mm operator (ZA2 BS834), replace **D22** in the reference selected by **D24**. Example: **XAC D22P2111** becomes **XAC D24P2111**.*

Characteristics: page 6/10
Dimensions: page 6/14
Application schemes: page 6/15
Presentation: page 6/16

Pendant control stations

Double insulated with intuitive operation, type XAC D

For control or power circuits

Empty enclosures, separate components and spare parts

DF565505

XAC D021

DF565506

XAC D022

DF565505

ZB2 BE10●

DF565505

XED S1231

DF565509

XED S2121

DF565510

XEN T1991

Empty enclosures

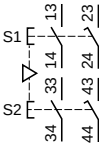
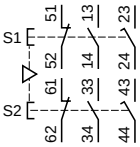
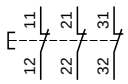
Description	Enclosure cut-outs	Reference	Weight kg
Empty enclosure comprising: - the enclosure, - protective cable sleeve for Ø 7 to 18 mm cable, - internal cable clamp, - cable tie (for tightening sleeve onto cable), - the directional operator, - legends.	For directional operator	**XAC D021**	0.345
	For directional operator + operating head (Ø 22.5 mm cut-out)	**XAC D022**	0.345

Variable composition stations, factory assembled

Use the order form on page 6/17 to define the required configuration.

Equipment: contact blocks and operating heads — See separate components, pages 6/12 and 6/13

Contact blocks

Description	Application	Function (1)	Scheme (1)	Max. power/ 400 V	Reference	Weight kg
For control circuits						
Single block spring return, slow break	Single-speed	N/O		–	**ZB2 BE101**	0.015
		N/C		–	**ZB2 BE102**	0.015
Double block spring return, snap action	2-speed	N/O + N/O staggered		–	**XED S1231**	0.015
		N/C + N/O + N/O staggered		–	**XED S1241**	0.015
For power circuits						
Double block spring return, snap action	Single-speed	2-pole	(2)	1.1 kW	**XED S2111**	0.080
				2.2 kW	**XED S3111**	0.090
		2-pole + 1 N/O (brake)	(2)	1.1 kW	**XED S2121**	0.090
				2.2 kW	**XED S3121**	0.090
	2-speed	2-pole	(2)	1.1 kW	**XED S2231**	0.110
				2.2 kW	**XED S3231**	0.110
		2-pole + 1 N/O (brake)	(2)	1.1 kW	**XED S2241**	0.120
				2.2 kW	**XED S3241**	0.120
For Emergency stop operating head (Ø 22.5 mm cut-out)						
Single block spring return, slow break		N/C		–	**ZB2 BE102**	0.015
		N/C + N/C + N/C		–	**XEN T1991**	0.040

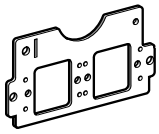
(1) Function or scheme per direction for double contact blocks.
(2) See application schemes, page 6/15.

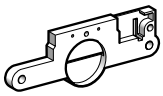
Characteristics: pages 6/8 and 6/10
Dimensions: page 6/14
Application schemes: page 6/15
Presentation: page 6/16

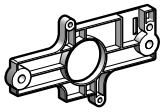
Telemecanique

Pendant control stations

Double insulated with intuitive operation, type XAC D
For control or power circuits
Separate components and spare parts


XAC D913


XAC D911


XAC D912

ZA2 BS44

ZA2 BS834

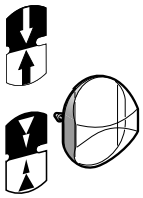
ZA2 BS74

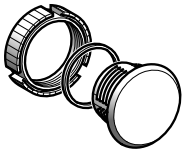
ZA2 BD2

ZA2 BG2

XAC D901

XAC D902


XAC D905


ZB2 SZ3

Contact block support plates

For use with	Reference	Weight kg
2 movement contact blocks ZB2 BE10● (control circuit stations)	**XAC D913**	0.010
1 contact block ZB2 BE102 for operating head	**XAC D911**	0.005
1 contact block XEN T1991 for operating head	**XAC D912**	0.010

Operating heads for Ø 22.5 mm cut-out

Description	Colour	Reference	Weight kg
Mushroom head Ø 30 mm, latching Turn to release (Emergency stop function)	Red	**ZA2 BS44**	0.040
Mushroom head Ø 30 mm, trigger action, latching Turn to release (Emergency stop function)	Red	**ZA2 BS834**	0.040
Mushroom head Ø 30 mm, latching Key release, n° 455 *(1)* Key withdrawal in rest (unactuated) position (Emergency stop function)	Red	**ZA2 BS74**	0.060
Selector switch, standard handle 2 position, stay put	Black	**ZA2 BD2**	0.018
Key switch (key n° 455) *(1)* 2 position, stay put Key withdrawal in left-hand position	–	**ZA2 BG2**	0.020

Complementary accessories

Description	Reference	Weight kg
Protective cable sleeve for cable Ø 7 to 18 mm	**XAC D901**	0.030
Diaphragm for directional operator, black polychloroprene	**XAC D902**	0.015
Directional operator with set of legends (single-speed and 2-speed)	**XAC D905**	0.005
Blanking plug for Ø 22.5 mm cut-out, black, with seal and fixing nut	**ZB2 SZ3**	0.010

Printed labels, pendant station characteristics

Description	Pendant station circuit function	Sold in lots of	Unit reference	Weight kg
Self-adhesive labels product identification	Control	50	**XAC D950**	0.001
	Power, 1.1 kW	50	**XAC D951**	0.001
	Power, 2.2 kW	50	**XAC D952**	0.001

(1) Other key numbers available on request, please consult your Regional Sales office.

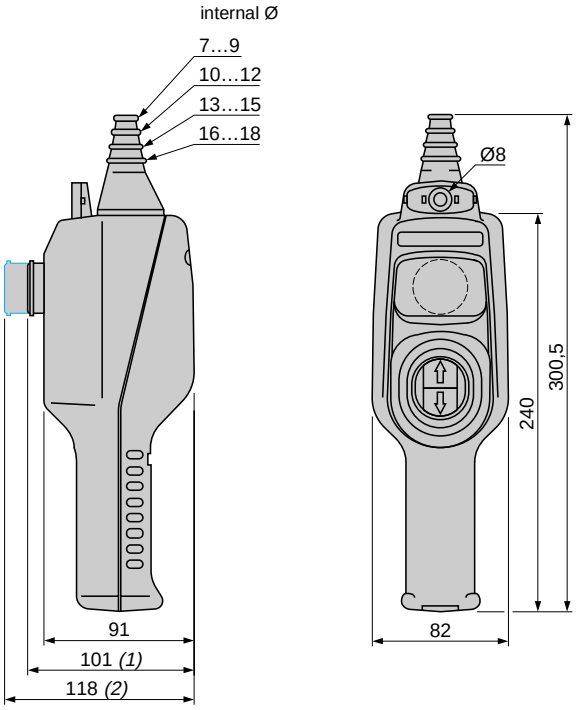
Characteristics: pages 6/8 and 6/10
Dimensions: page 6/14
Application schemes: page 6/15
Presentation: page 6/16

Pendant control stations

Double insulated with intuitive operation, type XAC D

For control or power circuits

XAC D●●●



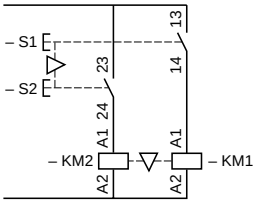
(1) With standard latching Ø 30 mm Emergency stop ZA2 BS44.
(2) With trigger action latching Ø 30 mm Emergency stop ZA2 BS834.

Pendant control stations

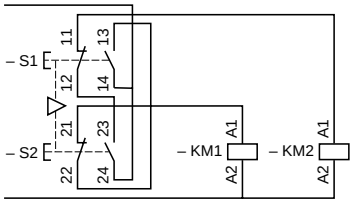
Double insulated with intuitive operation, type XAC D
For control or power circuits

Control circuits

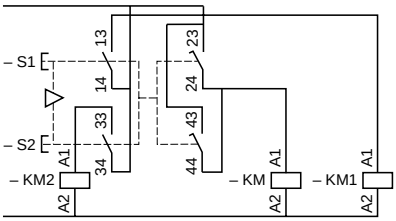
XAC D21A0101



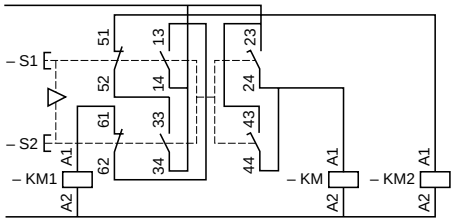
XAC D21A0105



XAC D21A1231



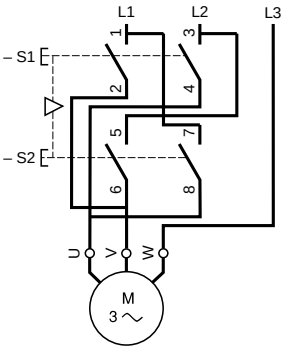
XAC D21A1241



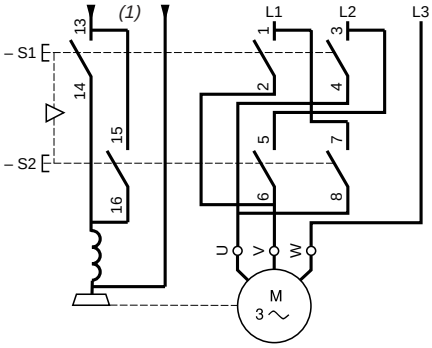
Power circuits

For control of single-speed reversing motor
2-phase switching

XAC D21P2111, XAC D21P3111



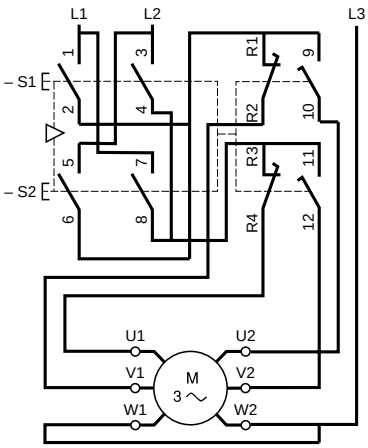
XAC D21P2121, XAC D21P3121



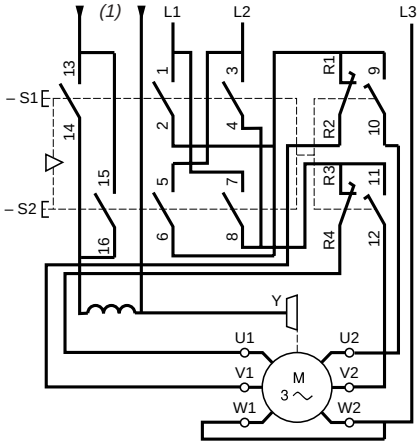
(1) Brake supply.

For control of 2-speed reversing motor (motors with separate windings only)
2-phase switching

XAC D21P2231, XAC D21P3231

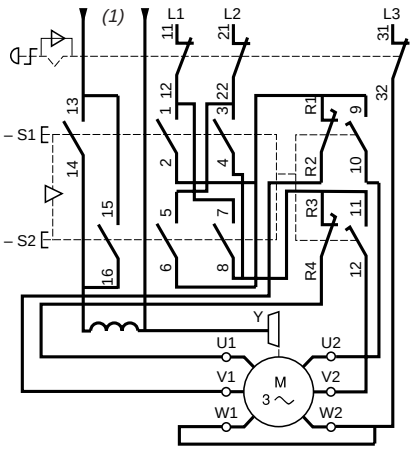


XAC D21P2241, XAC D21P3241



(1) Brake supply.

XAC D22P2241



(1) Brake supply.

Characteristics:
pages 6/8 and 6/10

References:
pages 6/9 to 6/13

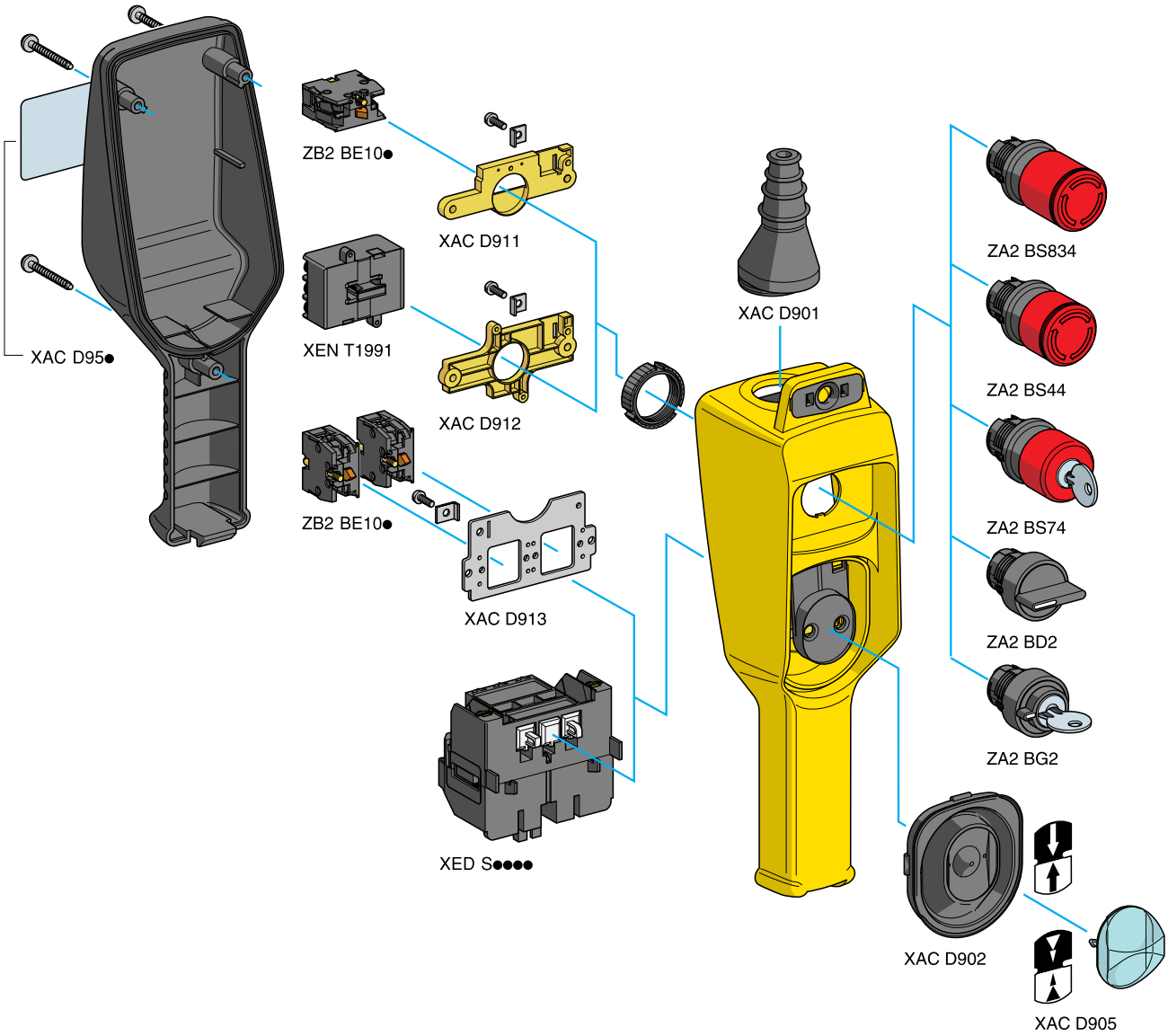
Dimensions:
page 6/14

Presentation:
page 6/16

Pendant control stations

Double insulated with intuitive operation, type XAC D

For control or power circuits



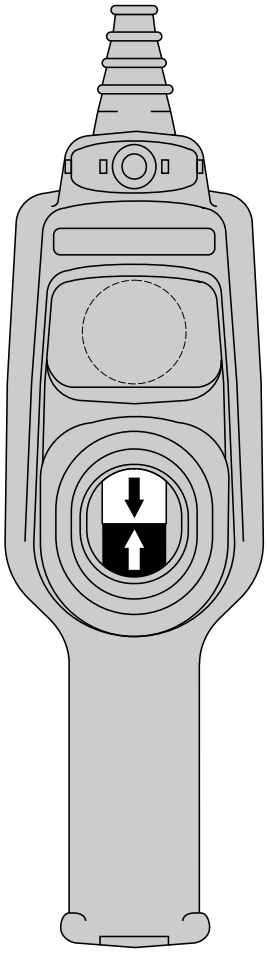
Order form (specimen suitable for photocopying)

Pendant control stations

Double insulated with intuitive operation, type XAC D

For control or power circuits

Variable composition stations, factory assembled



Customer			**Schneider Electric Industries**	
Company	Order N°	Delivery date	Sales office - Subsidiary Co.	Order N°

Enter the order with XAC D09 reference

Unit reference of empty enclosure, see page 6/12	**Number of identical stations**	**Enclosure price** *(1)*
XAC **D** **0** **2**		

The reference of the empty enclosure above comprises:
- the enclosure,
- internal cable clamp,
- cable tie (for tightening sleeve onto cable),
- the directional operator with set of legends, **XAC D905**,
- protective cable sleeve for Ø 7 to 18 mm cable, **XAC D901**,
- diaphragm for directional operator, **XAC D902**.

Operating head see page 6/13		**Contact blocks** see page 6/12		**Support plate** see page 6/13		
Reference	Unit price	Reference	Unit price	Reference	Unit price	**Total price**

Contact blocks see page 6/12			**Support plate** (for ZB2 BE●●● only) see page 6/13			
Reference	Qty.	Unit price	Reference	Qty.	Unit price	**Total price**

Factory assembled:
Add an additional cost for assembly **XAC 9VA**

Total price of assembled pendant station

(1) Obtain the empty enclosure price.

6

Pendant control stations

Double insulated, type XAC A

For control circuits

Environment

Conformity to standards			IEC 947-5-1, EN 60947-5-1
Product certifications			NEMKO. Special version: UL Listed A600-Q600, CSA A600-Q600
Protective treatment	Standard version		"TH"
Ambient air temperature	For operation	**°C**	- 25…+ 70
	For storage	**°C**	- 40…+ 70
Vibration resistance			15 gn (10…500 Hz) conforming to IEC 68-2-6
Shock resistance			100 gn conforming to IEC 68-2-27
Electric shock protection			Class II conforming to IEC 536 and NF C 20-030
Degree of protection			IP 65 conforming to IEC 529; IK 08 conforming to EN 50102
Mechanical durability (in millions of operating cycles)			1
Enclosure			Double insulated polypropylene, coloured yellow throughout
Cable entry			Rubber sleeve with stepped entry diameter for cable Ø 8…Ø 26 mm

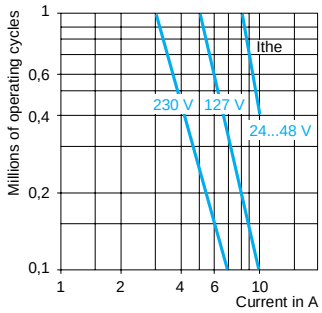
Contact block characteristics

Rated operational characteristics	**ZB2 BE●●●, XEN G●●●●, XAC S●●●●**		∿ AC-15: A600 or Ue = 600 V, Ie = 1.2 A or Ue = 240 V, Ie = 3 A ⎓ DC-13: Q600 or Ue = 600 V, Ie = 0.1 A or Ue = 250 V, Ie = 0.27 A
	XEN T●●●●		∿ AC-15: A300 or Ue = 240 V, Ie = 3 A ⎓ DC-13: Q300 or Ue = 250 V, Ie = 0.27 A conforming to IEC 947-5-1 Appendix A
Thermal current (Ithe)		**A**	10
Rated insulation voltage (Ui)	**ZB2 BE●●●, XEN G●●●●, XAC S●●●●**	**V**	600, degree of pollution 3
	XEN T●●●●		400, degree of pollution 3, conforming to IEC 947-1
Rated impulse withstand voltage (U imp)		**kV**	6, conforming to IEC 947-1
Positive operation			Mushroom head pushbutton: N/C contact with positive opening operation conforming to IEC 947-5-1 Section 3
Contact operation			N/C or N/O slow break
Resistance across terminals		**MΩ**	⩽ 25
Operating force		**N**	Operators - with1 N/O contact: 10 - with 1 N/C contact: 8 - with additional N/O contact: + 5 - with additional N/C contact: + 3
Terminal referencing			Conforming to CENELEC EN 50013
Short-circuit protection			10 A cartridge fuse type gG (gl)
Connection		**mm²**	Screw and captive cable clamp terminals. Clamping capacity: min. 1 x 0.5 mm², max., with or without cable end: 2 x 1.5 mm² or 1 x 2.5 mm². 6.3 mm clips (on request), please consult your Regional Sales office.

Rated operational power

Conforming to IEC 947-5-1 Appendix C. Utilisation categories AC-15 and DC-13.
Operating rate: 3600 operating cycles/hour. Load factor: 0.5.

a.c. supply ∿ 50/60 Hz
ꟷ Inductive circuit



d.c. supply ⎓
Power broken in W for 1 million operating cycles

Voltage	V	24	48	120
ꟷ	W	65	48	40

References: pages 6/19 to 6/22
Dimensions: page 6/30
Application schemes: page 6/31
Presentation: page 6/32

Pendant control stations

Double insulated, type XAC A

For control circuits

Complete stations “ready for use”

DF565523

XAC A271
XAC A281

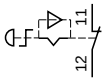
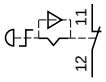
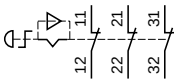
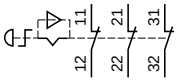
DF565524

XAC A2713
XAC A2813

DF565524

XAC A27131
XAC A28131

For control of single-speed motors

Functions	Number of operators	Contact block(s) and scheme: Per direction	Contact block(s) and scheme: For Emergency stop	Reference	Weight kg
	2 mechanically interlocked	1 N/O ZB2 BE101 	–	**XAC A271**	0.475
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101 	–	**XAC A281**	0.500
	2 mechanically interlocked + 1 latching Emergency stop Ø 30 mm operator ZA2 BS44 *(1)*	1 N/O ZB2 BE101 	1 N/C ZB2 BE102 	**XAC A2713** *(1)*	0.575
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101 	1 N/C ZB2 BE102 	**XAC A2813** *(1)*	0.600
		1 N/O ZB2 BE101 	1 N/C + N/C + N/C XEN T1192 	**XAC A27131** *(1)*	0.615
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101 	1 N/C + N/C + N/C XEN T1192 	**XAC A28131** *(1)*	0.635

*(1) To order a station with a trigger action latching Emergency stop Ø 30 mm operator (ZA2 BS834), replace the number **3** in the reference selected by the number **4**.*
*Examples: **XAC A2713** becomes **XAC A2714** and **XAC A27131** becomes **XAC A27141**.*

6

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Dimensions: page 6/30
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Presentation: page 6/32

Pendant control stations

Double insulated, type XAC A
For control circuits
Complete stations “ready for use”

DF565525

XAC A471
XAC A481

530226

XAC A4713
XAC A4813
XAC A47131
XAC A48131

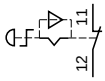
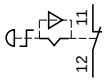
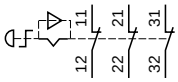
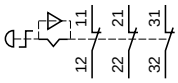
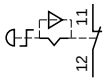
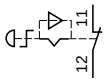
530223

XAC A671
XAC A681

530224

XAC A6713
XAC A6813

For control of single-speed motors *(continued)*

Functions	Number of operators	Contact block(s) and scheme: Per direction	Contact block(s) and scheme: For Emergency stop	Reference	Weight kg
	4 mechanically interlocked between pairs	1 N/O ZB2 BE101	–	**XAC A471**	0.625
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	–	**XAC A481**	0.675
	4 mechanically interlocked between pairs + 1 latching Emergency stop Ø 40 mm operator ZA2 BS54 *(1)*	1 N/O ZB2 BE101	1 N/C ZB2 BE102 	**XAC A4713** *(1)*	0.800
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	1 N/C ZB2 BE102 	**XAC A4813** *(1)*	0.815
		1 N/O ZB2 BE101	1 N/C + N/C + N/C XEN T1192 	**XAC A47131** *(1)*	0.835
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	1 N/C + N/C + N/C XEN T1192 	**XAC A48131** *(1)*	0.850
	6 mechanically interlocked between pairs	1 N/O ZB2 BE101	–	**XAC A671**	0.860
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	–	**XAC A681**	0.950
	6 mechanically interlocked between pairs + 1 latching Emergency stop Ø 40 mm operator ZA2 BS54 *(1)*	1 N/O ZB2 BE101	1 N/C ZB2 BE102 	**XAC A6713** *(1)*	0.845
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	1 N/C ZB2 BE102 	**XAC A6813** *(1)*	0.935

*(1) To order a station with a trigger action latching Emergency stop Ø 40 mm operator (ZA2 BS844), replace the number **3** in the reference selected by the number **4**.*
*Examples: **XAC A4713** becomes **XAC A4714** and **XAC A47131** becomes **XAC A47141**.*

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Pendant control stations

Double insulated, type XAC A
For control circuits
Complete stations “ready for use”

DF565526

XAC A67131
XAC A68131

DF565527

XAC A871
XAC A881

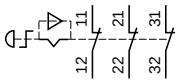
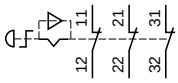
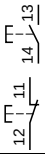
530229

XAC A291

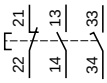
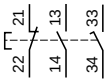
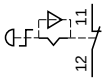
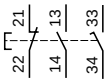
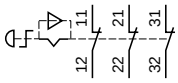
530230

XAC A2913
XAC A29131

For control of single-speed motors *(continued)*

Functions	Number of operators	Contact block(s) and scheme: Per direction	Contact block(s) and scheme: For Emergency stop	Reference	Weight kg
	6 mechanically interlocked between pairs + 1 latching Emergency stop Ø 40 mm operator ZA2 BS54 *(1)*	1 N/O ZB2 BE101	1 N/C + N/C + N/C XEN T1192 	**XAC A67131** *(1)*	0.880
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	1 N/C + N/C + N/C XEN T1192 	**XAC A68131** *(1)*	0.970
I O	**8** mechanically interlocked between pairs	1 N/O on 7 operators ZB2 BE101 and 1 N/C on the 8th operator ZB2 BE102 	–	**XAC A871**	0.940
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	–	**XAC A881**	1.045

For control of 2-speed motors

Functions	Number of operators	Contact block(s) and scheme: Per direction	Contact block(s) and scheme: For Emergency stop	Reference	Weight kg
	2 mechanically interlocked between pairs	1 N/C + N/O + N/O staggered XEN G1191 	–	**XAC A291**	0.525
	2 mechanically interlocked between pairs + 1 latching Emergency stop Ø 30 mm operator ZA2 BS44 *(1)*	1 N/C + N/O + N/O staggered XEN G1191 	1 N/C ZB2 BE102 	**XAC A2913** *(1)*	0.570
		1 N/C + N/O + N/O staggered XEN G1191 	1 N/C + N/C + N/C XEN T1192 	**XAC A29131** *(1)*	0.605

*(1) To order a station with a trigger action latching Emergency stop Ø 30 mm operator (ZA2 BS834) or Ø 40 mm operator (ZA2 BS844), replace the number **3** in the reference selected by the number **4**.*
*Examples: **XAC A67131** becomes **XAC A67141** and **XAC A2913** becomes **XAC A2914**.*

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Pendant control stations

Double insulated, type XAC A
For control circuits
Complete stations “ready for use”

DF565528

XAC A491

530229

XAC A4913
XAC A49131

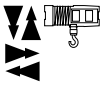
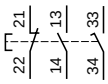
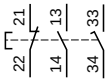
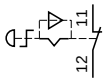
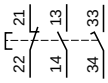
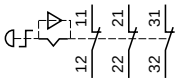
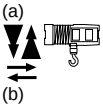
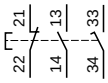
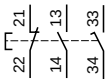
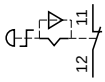
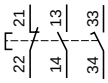
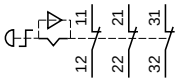
DF565528

XAC A492

530229

XAC A4923
XAC A49231

For control of 2-speed motors *(continued)*

Functions	Number of operators	Contact block(s) and scheme: Per direction	Contact block(s) and scheme: For Emergency stop	Reference	Weight kg
	**4** mechanically interlocked between pairs	1 N/C + N/O + N/O staggered XEN G1191 	–	**XAC A491**	0.625
	4 mechanically interlocked between pairs + 1 latching Emergency stop Ø 40 mm operator ZA2 BS54 *(1)*	1 N/C + N/O + N/O staggered XEN G1191 	1 N/C ZB2 BE102 	**XAC A4913** *(1)*	0.675
		1 N/C + N/O + N/O staggered XEN G1191 	1 N/C + N/C + N/C XEN T1192 	**XAC A49131** *(1)*	0.700
(a)  (b)	**4** mechanically interlocked between pairs	1 N/C + N/O + N/O staggered (a) XEN G1191  1 N/O (b) ZB2 BE101	–	**XAC A492**	0.675
	4 mechanically interlocked between pairs + 1 latching Emergency stop Ø 40 mm operator ZA2 BS54 *(1)*	1 N/C + N/O + N/O staggered (a) XEN G1191  1 N/O (b) ZB2 BE101	1 N/C ZB2 BE102 	**XAC A4923** *(1)*	0.700
		1 N/C + N/O + N/O staggered (a) XEN G1191  1 N/O (b) ZB2 BE101	1 N/C + N/C + N/C XEN T1192 	**XAC A49231** *(1)*	0.735

*(1) To order a station with a trigger action latching Emergency stop Ø 40 mm operator (ZA2 BS844), replace the number **3** in the reference selected by the number **4**.*
*Examples: **XAC A4913** becomes **XAC A4914** and **XAC A49131** becomes **XAC A49141**.*

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Pendant control stations

Double insulated, type XAC A
For control circuits
Empty enclosures

530233

XAC A02

530234

XAC A03

530234

XAC A12

Empty enclosures

Description	Number of cut-outs	Reference	Weight kg
Enclosure comprising: - the enclosure, - internal mounting plate, - protective cable sleeve, - internal cable clamp, - suspension ring, - cable tie (for tightening sleeve onto cable).	2	**XAC A02**	0.440
	3	**XAC A03** *(1)*	0.440
	4	**XAC A04**	0.540
	5	**XAC A05** *(1)*	0.625
	6	**XAC A06**	0.665
	8	**XAC A08**	0.770
	12	**XAC A12**	1.000

Variable composition stations, factory assembled

Use the order form on page 6/33 to define the required configuration.

Equipment: contact blocks, operating heads (control and signalling), complementary accessories	See separate components, pages 6/24 to 6/29

(1) Enclosures with 3 cut-outs XAC A03 and 5 cut-outs XAC A05 cannot be fitted with a mounting adaptor for base mounted units.

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Pendant control stations

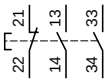
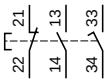
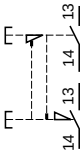
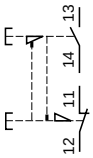
Double insulated, type XAC A
For control circuits
Separate components and spare parts

Contact blocks for front mounting

ZB2 BE101
ZB2 BE102

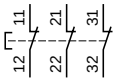
XEN G1191
XEN G1491

XEN G3781
XEN G3791

Description	Application	Function	Scheme	Reference	Weight kg
Single block, spring return slow break	Single-speed	N/O		**ZB2 BE101**	0.015
		N/C		**ZB2 BE102**	0.015
		N/C + N/O + N/O simultaneous *(1)*		**XEN G1491**	0.040
	2-speed	N/C + N/O + N/O staggered *(1)*		**XEN G1191**	0.040
Double block, latching slow break *(2)*	Single-speed	N/O N/O		**XEN G3781**	0.060
		N/O N/C		**XEN G3791**	0.060

Isolating switch, slow break, for front mounting

XEN T1192

For mounting in enclosures	Application	Function	Scheme	Reference	Weight kg
XAC A03 (frontal cut-out) XAC A05, A06, A08 (frontal or base cut-out)	Emergency stop	N/C + N/C + N/C with positive opening operation		**XEN T1192**	0.050

(1) Only for use with XAC A9●●● operators.
(2) Not suitable for use with the following operating heads: ZA2 BB, ZA2 BD, ZA2 BG and ZA2 BS.

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Presentation: page 6/32

Pendant control stations

Double insulated, type XAC A
For control circuits
Separate components and spare parts

530240

XAC S10●

Contact blocks for base mounting

Description	Function	Scheme	Reference	Weight kg
Spring return slow break *(1)*	N/O		**XAC S101**	0.030
	N/C		**XAC S102**	0.030
	N/O + N/O		**XAC S103**	0.045
	N/C + N/C		**XAC S104**	0.045
	N/C + N/O		**XAC S105**	0.045

530241

ZB2 BV006

530242

ZB2 BV007

Pilot light bodies for front mounting

Description	Supply voltage	Scheme	Reference	Weight kg
Direct supply Bulb not included *(2)*	⩽ 400 V		**ZB2 BV006**	0.015
Direct supply, through resistor Incandescent BA 9s base fitting 130 V bulb included	230 V		**ZB2 BV007**	0.020

(1) Not suitable for use with 3-position operating heads ZA2 BD and ZA2 BG or for mounting in enclosures XAC A039 and XAC A03.
(2) Bulb type for use with direct supply units: BA 9s base fitting incandescent bulb U ⩽ 130 V or neon bulb 110 V ⩽ U ⩽ 400 V. Maximum power: 2.6 W, maximum Ø: 11 mm, maximum length: 28 mm. See page 6/25.

6

Pendant control stations

Double insulated, type XAC A
For control circuits
Separate components and spare parts

530243

XAC A94●●

530248

ZA2 BS54

530249

ZA2 BS834

Operating heads for front mounting

Description	Colour	Sold in lots of	Unit reference	Weight kg
Booted operators	White	10	**XAC A9411**	0.010
	Black	10	**XAC A9412**	0.010
	Green	10	**XAC A9413**	0.010
	Red	10	**XAC A9414**	0.010
	Yellow	10	**XAC A9415**	0.010
	Blue	10	**XAC A9416**	0.010
	Brown	10	**XAC A9419**	0.010

530244

ZA2 BS14

530245

ZA2 BD●

530246

ZA2 BG●

DF565529

ZA2 BB●

Operating heads for front or base mounting

Description	Colour	Type	Reference	Weight kg
Mushroom head, latching Turn to release (Emergency stop function)	Red	Ø 30 mm	**ZA2 BS44**	0.040
		Ø 40 mm	**ZA2 BS54**	0.050
Mushroom head, trigger action, latching Turn to release (Emergency stop function)	Red	Ø 30 mm	**ZA2 BS834**	0.040
		Ø 40 mm	**ZA2 BS844**	0.050
Mushroom head, latching Key release (n° 455) Key withdrawal in rest (unactuated) position (Emergency stop function)	Red	Ø 30 mm	**ZA2 BS74**	0.060
		Ø 40 mm	**ZA2 BS14**	0.065
Selector switches, standard handle (Not to be used with XEN G●●●● contact blocks)	Black	2 position, stay put	**ZA2 BD2**	0.018
		3 position, stay put *(1)*	**ZA2 BD3**	0.018
Key switches (key n° 455) Key withdrawal in left and right-hand positions	–	2 position, stay put	**ZA2 BG4**	0.042
		3 position, stay put *(1)*	**ZA2 BG5**	0.042
Wobblesticks *(2)* Operates in all directions for fast stop	Black	–	**ZA2 BB2**	0.060
	Red	–	**ZA2 BB4**	0.060

(1) Only suitable for front mounting.
(2) Base mounting recommended.

Other versions
Key release mushroom head pushbuttons with other key numbers.
Selector switches with other mechanical functions.
Key switches with other mechanical functions and with other key numbers.
Please consult your Regional Sales Office.

Characteristics: page 6/18
Dimensions: page 6/30
Application schemes: page 6/31
Presentation: page 6/32

Pendant control stations

Double insulated, type XAC A
For control circuits
Separate components and spare parts

530250

ZA2 BV0●

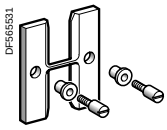
530201 530202

DL1 C●●●● DL1 CF●●●

530203

XAC A960

DF565531

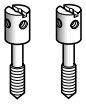


XAC A009

DF565530

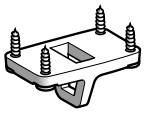
ZB2 SZ3

530205



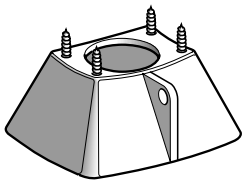
XAC B961

530206



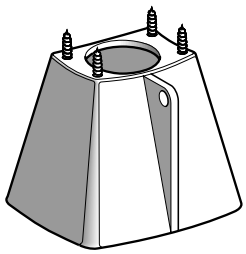
XAC A971

530207



XAC A982

530208



XAC A983

530200

XBF X13

Pilot light heads

Description	Colour	Reference	Weight kg
For use with incandescent bulbs			
Lens cap with fixing bezel	White	**ZA2 BV01**	0.015
	Green	**ZA2 BV03**	0.015
	Red	**ZA2 BV04**	0.015
	Yellow	**ZA2 BV05**	0.015
	Blue	**ZA2 BV06**	0.015
	Clear	**ZA2 BV07**	0.015
For use with neon bulbs			
Lens cap with fixing bezel	Green	**ZA2 BV033**	0.015
	Red	**ZA2 BV043**	0.015
	Yellow	**ZA2 BV053**	0.015
	Clear	**ZA2 BV073**	0.015

Bulbs

Description	Voltage	Sold in lots of	Unit reference	Weight kg
Incandescent BA 9s base fitting Maximum power: 2.6 W Maximum Ø: 11 mm Maximum length: 28 mm	6 V	10	**DL1 CB006**	0.002
	12 V	10	**DL1 CE012**	0.002
	24 V	10	**DL1 CE024**	0.002
	48 V	10	**DL1 CE048**	0.002
	130 V	10	**DL1 CE130**	0.002
Neon BA 9s base fitting Maximum power: 2.6 W Maximum Ø: 11 mm Maximum length: 28 mm	110 V	10	**DL1 CF110**	0.002
	230 V	10	**DL1 CF220**	0.002
	400 V	10	**DL1 CF380**	0.002

Complementary accessories, tools

Description		Reference	Weight kg
Protective cable sleeve	For cable Ø 8 to 22 mm	**XAC A950**	0.070
	For cable Ø 8 to 26 mm	**XAC A960**	0.090
Mechanical interlock for 2 operators	With fixing screws	**XAC A009**	0.003
Blanking plug	With seal and fixing nut	**ZB2 SZ3**	0.005
Adaptor for self-supporting cable type BBAP	Mounted with protective sleeve for cable Ø 8 to 26 mm	**XAC B961**	0.025
Lower support ring	–	**XAC A971**	0.010
Protective guards for base mounted units	For selector switch (standard handle) or mushroom head pushbutton	**XAC A982**	0.025
	For key switch or key release latching mushroom head pushbutton	**XAC A983**	0.045
Bulb extractor	For BA 9s base fitting bulbs	**XBF X13**	0.025

Characteristics: page 6/18
Dimensions: page 6/30
Application schemes: page 6/31
Presentation: page 6/32

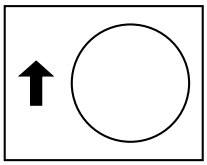
Pendant control stations

Double insulated, type XAC A

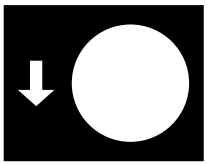
For control circuits

Legends 30 x 40 mm with symbols conforming to NF E 52-124

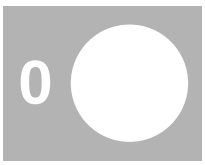
530209



White background, black symbol



Black background, white symbol



Red background, white symbol

Function Symbol	Reference	Weight kg
Raise, slow	**ZB2 BY4901**	0.001
Raise, fast	**ZB2 BY4902**	0.001
Raise, slow-fast	**ZB2 BY4903**	0.001
Right, slow	**ZB2 BY4907**	0.001
Right, fast	**ZB2 BY4908**	0.001
Right, slow-fast	**ZB2 BY4909**	0.001
Forward, slow	**ZB2 BY4913**	0.001
Forward, fast	**ZB2 BY4914**	0.001
Forward, slow-fast	**ZB2 BY4915**	0.001
Slew right, slow	**ZB2 BY4919**	0.001
Slew right, fast	**ZB2 BY4920**	0.001
Slew right, slow-fast	**ZB2 BY4921**	0.001
Slow	**ZB2 BY4933**	0.001
Klaxon	**ZB2 BY4932**	0.001
Start	**ZB2 BY4930**	0.001

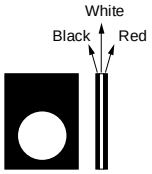
Function Symbol	Reference	Weight kg
Lower, slow	**ZB2 BY2904**	0.001
Lower, fast	**ZB2 BY2905**	0.001
Lower, slow-fast	**ZB2 BY2906**	0.001
Left, slow	**ZB2 BY2910**	0.001
Left, fast	**ZB2 BY2911**	0.001
Left, slow-fast	**ZB2 BY2912**	0.001
Reverse, slow	**ZB2 BY2916**	0.001
Reverse, fast	**ZB2 BY2917**	0.001
Reverse, slow-fast	**ZB2 BY2918**	0.001
Slew left, slow	**ZB2 BY2922**	0.001
Slew left, fast	**ZB2 BY2923**	0.001
Slew left, slow-fast	**ZB2 BY2924**	0.001
Fast	**ZB2 BY4934**	0.001
Start-Klaxon	**ZB2 BY4935**	0.001
Stop	**ZB2 BY2931**	0.001

Characteristics: page 6/18
Dimensions: page 6/30
Application schemes: page 6/31
Presentation: page 6/32

Pendant control stations

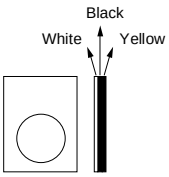
Double insulated, type XAC A
For control circuits
Legends 30 x 40 mm

530211



ZB2 BY2101

530212



ZB2 BY4101

Text	Reference	Weight kg	Text	Reference	Weight kg

- Start functions: white characters on black background
- Stop functions: white characters on red background

Blank

Black or red background	**ZB2 BY2101**	0.001	White or yellow background	**ZB2 BY4101**	0.001

With French text

For pushbuttons

Marche	**ZB2 BY2103**	0.001
Arrêt	**ZB2 BY2104**	0.001
Avant	**ZB2 BY2105**	0.001
Arrière	**ZB2 BY2106**	0.001
Montée	**ZB2 BY2107**	0.001
Descente	**ZB2 BY2108**	0.001
Droite	**ZB2 BY2109**	0.001
Gauche	**ZB2 BY2110**	0.001
En service	**ZB2 BY2111**	0.001
Hors service	**ZB2 BY2112**	0.001
Sous tension	**ZB2 BY2126**	0.001
Lent	**ZB2 BY2127**	0.001
Vite	**ZB2 BY2128**	0.001
Klaxon	**ZB2 BY2125**	0.001

For selector switches

Arrêt-Marche	**ZB2 BY2166**	0.001
Hors-En	**ZB2 BY2167**	0.001

With English text

For pushbuttons

Start	**ZB2 BY2303**	0.001
Stop	**ZB2 BY2304**	0.001
Forward	**ZB2 BY2305**	0.001
Reverse	**ZB2 BY2306**	0.001
Up	**ZB2 BY2307**	0.001
Down	**ZB2 BY2308**	0.001
Right	**ZB2 BY2309**	0.001
Left	**ZB2 BY2310**	0.001
On	**ZB2 BY2311**	0.001
Off	**ZB2 BY2312**	0.001
Power on	**ZB2 BY2326**	0.001
Slow	**ZB2 BY2327**	0.001
Fast	**ZB2 BY2328**	0.001
–	–	–

For selector switches

–	–	–
Off-On	**ZB2 BY2367**	0.001

With special texts

- Specify text when ordering,
- 2 lines maximum, 11 characters per line.

White characters on black background	**ZB2 BY2002**	0.001	Black characters on white background	**ZB2 BY4001**	0.001
White characters on red background	**ZB2 BY2004**	0.001	Black characters on yellow background	**ZB2 BY4005**	0.001

Other versions Legends with texts in other languages.
Please consult your Regional Sales Office.

Characteristics: page 6/18
Dimensions: page 6/30
Application schemes: page 6/31
Presentation: page 6/32

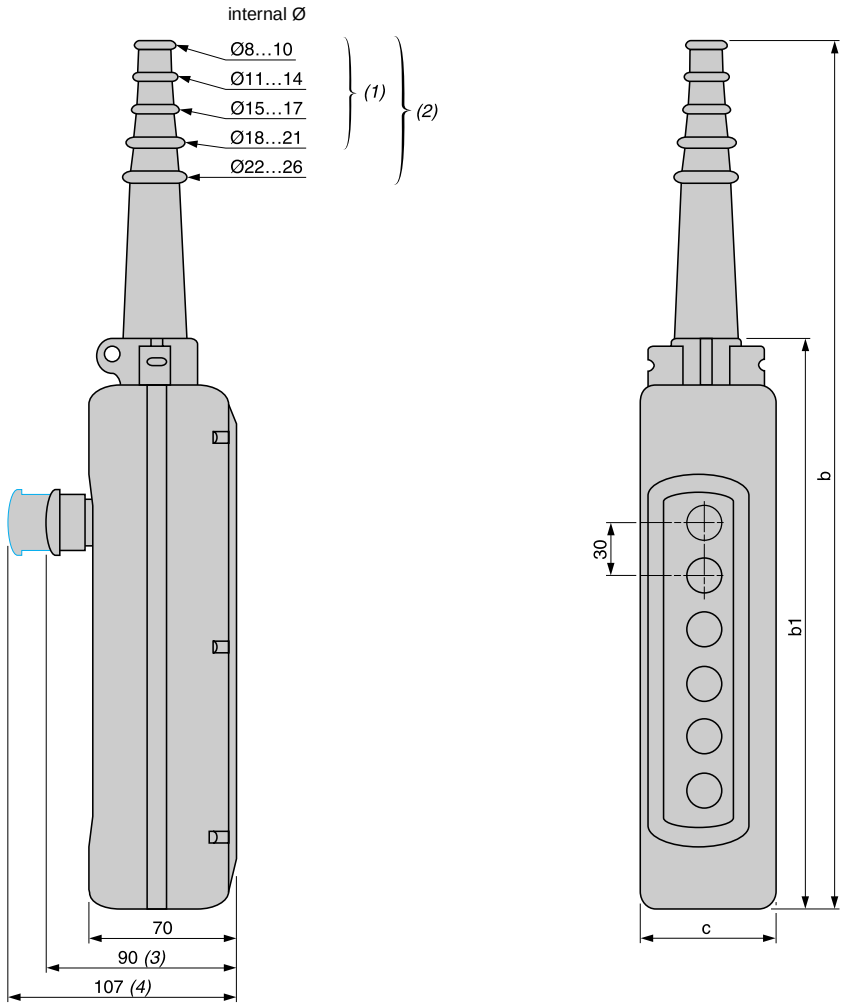
Pendant control stations

Double insulated, type XAC A

For control circuits

Dimensions

XAC A pendant stations for control circuits

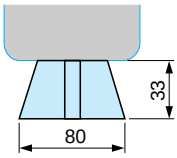


Number of operators	2	3	4	5	6	8	12
b	314	314	440	440	500	560	680
b1	190	190	250	250	310	370	490
c	80	80	80	80	80	80	92

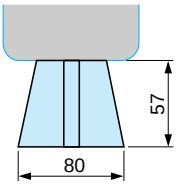
(1) For 2 and 3-way XAC A stations.
(2) For 4 and 8-way XAC A stations.
(3) With mushroom head operator.
(4) With trigger action mushroom head operator.

Protective guards

XAC A982



XAC A983



Pendant control stations

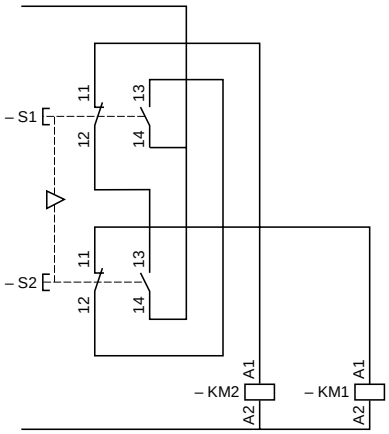
Double insulated, type XAC A

For control circuits

Application schemes (typical examples)

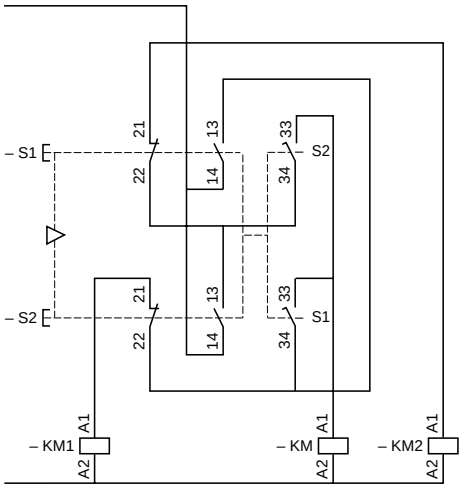
For control of single-speed reversing motor

Contact blocks **ZB2 BE101 + ZB2 BE102**



For control of 2-speed reversing motor

2 contact blocks **XEN G1191**



KM: high speed contactor

Characteristics:
page 6/18

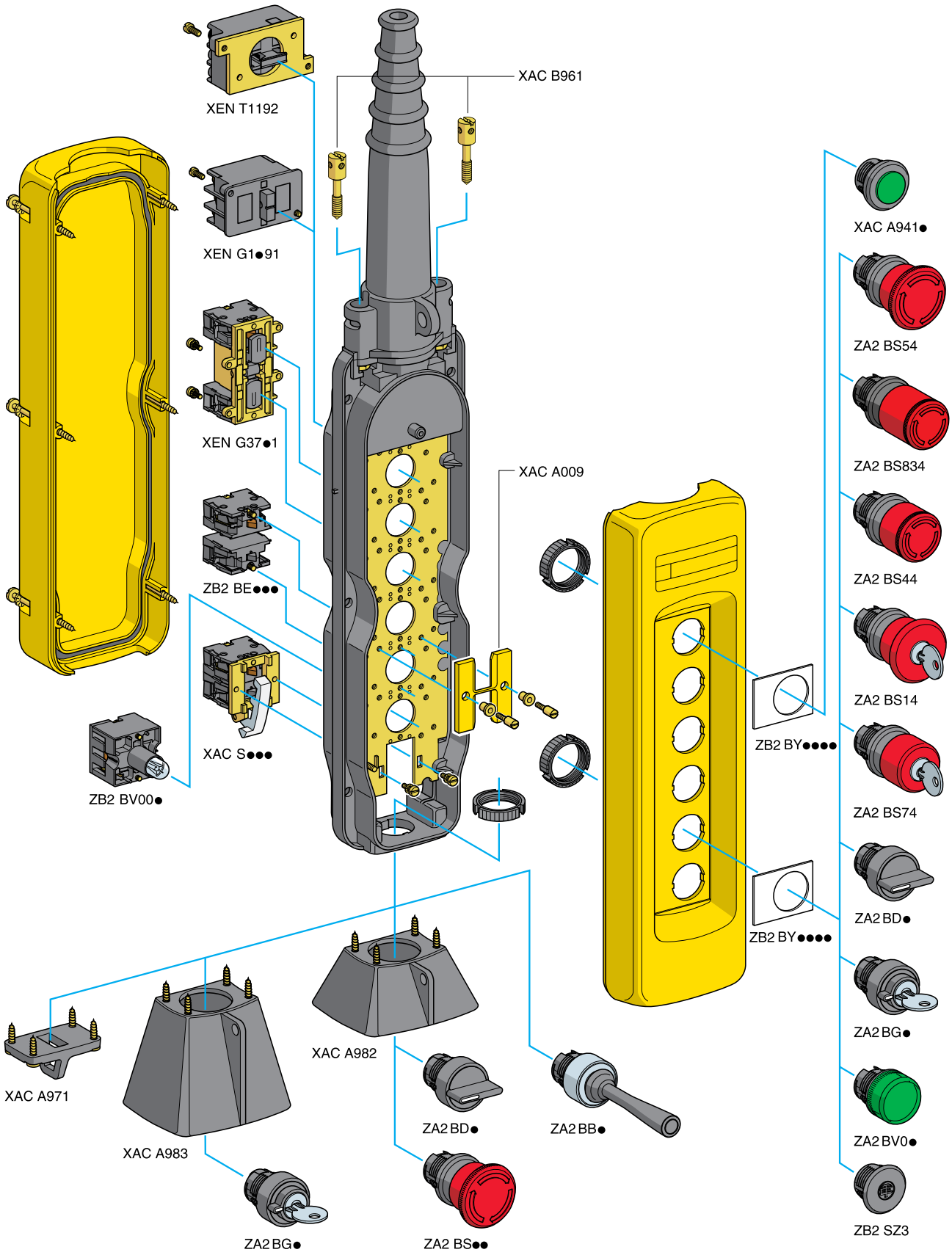
References:
pages 6/19 and 6/29

Dimensions:
page 6/30

Pendant control stations

Double insulated, type XAC A

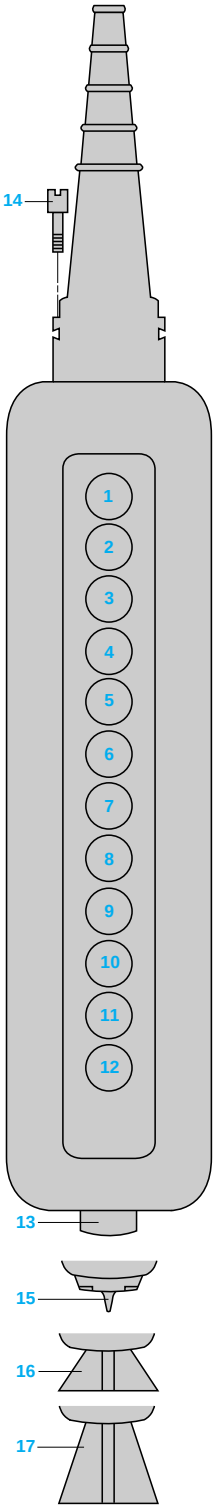
For control circuits



Order form (specimen suitable for photocopying)

Pendant control stations

Double insulated, type XAC A
For control circuits
Variable composition stations, pre-assembled



Customer			**Schneider Electric Industries**	
Company	Order N°	Delivery date	Sales office - Subsidiary Co.	Order N°

Enter the order with XAC A09 reference

Unit reference of empty enclosure, see page 30075/7	**Number of identical stations**	**Enclosure price** *(1)*
XAC **A** [ ] [ ]		

	Legends see pages 6/28 and 6/29		**Contact blocks or pilot light bodies** see pages 6/24 and 6/25		**Operating heads or pilot light heads or blanking plug** see pages 6/26 and 6/27		
	Reference	Unit price	Reference	Unit price	Reference	Unit price	**Total price**
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

Unit mounted in base of enclosure (if required) (Except when using **XAC A03 and XAC A05)**

13							

Complementary accessories, see page 6/27 (cross the appropriate box or boxes)

	Description	✕	Reference	Unit price	
14	Adaptor for self-supporting cable type BBAP for use with cable entry sleeve Ø 8 to 26 mm		**XAC B961**		
15	Lower support ring		**XAC A971**		
16	Protective guard for selector switch (std. handle) or mushroom head pushbutton, mounted in base		**XAC A982**		
17	Protective guard for key switch or key release mushroom head pushbutton, mounted in base		**XAC A983**		

Mechanical interlocking *(2)*

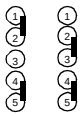
Reference	Quantity	Unit price	
XAC A009			

Pre-assembled:	Number of heads or blanking plugs to be fitted		Additional cost **XAC 9VA** for fitting of 1 head or 1 blanking plug	
		X		

Total price of assembled pendant station [ ]

(1) Obtain the empty enclosure price.
(2) Connect with a line the 2 ways which require mechanical interlocking.

Examples: combinations possible



Combinations not possible

Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control circuits

Environment

Conformity to standards			IEC 947-5-1, EN 60947-5-1
Product certifications	**XAC B**		Standard version: NEMKO, CSA 300 V type 4
	XAC M		Standard version: CSA 300 V type 4
Protective treatment	**XAC B**		Standard version: “TH”
	XAC M		Standard version: “TC”, (“TH” on request)
Ambient air temperature	For storage	**°C**	- 40…+ 70
	For operation	**°C**	- 25…+ 70
Vibration resistance			15 gn (10…500 Hz) conforming to IEC 68-2-6
Shock resistance			100 gn conforming to IEC 68-2-27
Electric shock protection	**XAC B**		Class II
	XAC M		Class I conforming to IEC 536 and NF C 20-030
Degree of protection			IP 65 conforming to IEC 529; IK 08 conforming to EN 50102
Mechanical durability (in millions of operating cycles)			1
Enclosure	**XAC B**		Double insulated glass-reinforced polyester (colour: yellow)
	XAC M		Aluminium enclosure. Painted yellow
Cable entry			Rubber sleeve with stepped entry diameter for cable Ø 7…13 mm, Ø 10…22 mm or Ø 22…35 mm

Contact block characteristics

Rated operational characteristics			∿ AC-15: A300 or Ue = 240 V, Ie = 3 A ⎓ DC-13: Q300 or Ue = 250 V, Ie = 0.27 A conforming to IEC 947-5-1 Appendix A
Thermal current (Ithe)		**A**	10
Rated insulation voltage (Ui)	**XEN C●●●●, XEN D3●●●, XEN D4●●●, XES B2011, XAC S4, XES D1181, XES D1281**	**V**	500, degree of pollution 3, conforming to IEC 947-1
	XEN B●●●●, XEN D1●●●, XEN D2●●●		400, degree of pollution 3, conforming to IEC 947-1
Rated impulse withstand voltage (U imp)		**kV**	6, conforming to IEC 947-1
Positive operation			Mushroom head pushbutton: N/C contact with positive opening operation conforming to IEC 947-5-1 Section 3
Contact operation			Slow break or snap action
Resistance across terminals		**MΩ**	⩽ 25
Operating force	With booted operator	**N**	**XAC S4●●●**: 10 (N/O), 8 (N/C); **XEN C●●●●**: 6 (N/O), 4 (N/C); **XEN B●●●●, XEN D1●●●, XEN D2●●●**: Single-speed: 9; 2-speed: 20 (1st speed), 30 (2nd speed); **XEN D3●●●, XEN D4●●●**: 25; **XES B2011**: 7; **XES D1181, XES D128**: 15 (1st speed), 25 (2nd speed)
	With spring return mushroom head operator	**N**	10
	With latching mushroom head operator	**N**	40
Terminal referencing			By numbers conforming to CENELEC EN 50013
Short-circuit protection			10 A cartridge fuse type gG (gl)
Connection		**mm²**	Screw and captive cable clamp terminals. Clamping capacity: 1 x 2.5 or 2 x 1.5 with or without cable end

Rated operational power
conforming to IEC 947-5-1 Appendix C
Utilisation categories AC-15 and DC-13
For 1 million operating cycles
Operating rate: 3600 operating cycles/hour
Load factor: 0.5
∧∧∧ Inductive circuit

Contact blocks XEN C●●●●, XEN D3●●●, XEN D4●●●, XAC S4●●●

a.c. supply ∿ 50/60 Hz

Voltage	V	24	48	127	230
∧∧∧	VA	140	385	525	455

d.c. supply ⎓

Voltage	V	24	48	120
∧∧∧	W	60	45	42

Contact blocks XEN B●●●●, XEN D1●●●, XEN D2●●●

a.c. supply ∿ 50/60 Hz

Voltage	V	24	48	127	230
∧∧∧	VA	140	210	640	680

d.c. supply ⎓

Voltage	V	24	48	120
∧∧∧	W	48	31	35

Contact blocks XES B2011, XES D1181, XES D1281

a.c. supply ∿ 50/60 Hz

Voltage	V	24	48	127	230
∧∧∧	VA	50	100	450	750

d.c. supply ⎓

Voltage	V	24	48	120
∧∧∧	W	140	140	95

References: page 6/35
Dimensions: page 6/55
Application schemes: page 6/56

Pendant control stations

Double insulated, type XAC B

For control circuits

Complete stations “ready for use” (with snap action contact blocks)

DF565564

XAC B281

DF565565

XAC B481

DF565566

XAC B681

DF565567

XAC B881

For control of single-speed motors

Functions	Number of operators	Contact blocks and scheme Per direction	Reference	Weight kg
	2 without mechanical interlocking	1 C/O snap action XES B2011	**XAC B281**	0.850
	4 without mechanical interlocking	1 C/O snap action XES B2011	**XAC B481**	1.100
	6 without mechanical interlocking	1 C/O snap action XES B2011	**XAC B681**	1.300
	8 without mechanical interlocking	1 C/O snap action XES B2011	**XAC B881**	1.550

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Characteristics:
page 6/34

Dimensions:
page 6/55

Application schemes:
page 6/56

Pendant control stations

Double insulated, type XAC B

For power circuits (direct switching)

Environment

Conformity to standards			IEC 947-3, EN 60947-3, NF C 63-130, VDE 0660-107
Product certifications	Standard version		CSA type 4
Protective treatment	Standard version		"TH"
Ambient air temperature	For storage	**°C**	- 40…+ 70
	For operation	**°C**	- 25…+ 70
Vibration resistance			15 gn (10…500 Hz) conforming to IEC 68-2-6
Shock resistance			100 gn conforming to IEC 68-2-27
Electric shock protection			Class II conforming to IEC 536 and NF C 20-030
Degree of protection			IP 65 conforming to IEC 529; IK 08 conforming to EN 50102
Mechanical durability (in millions of operating cycles)			1
Enclosure			Double insulated glass-reinforced polyester (colour: yellow)
Cable entry			Rubber sleeve with stepped entry diameter for cable Ø 10…Ø 22 mm

Contact block characteristics

Thermal current (Ithe)	**XES D1191, XES D1291**	**A**	12
	XES D2201, XES D2241, XES D2251	**A**	20
Rated insulation voltage (Ui)	**XES D●●●●**	**V**	500, degree of pollution 3, conforming to IEC 947-1
	XAC S●99	**V**	400, degree of pollution 3, conforming to IEC 947-1
	XES D1●●●	**V**	600, conforming to CSA
	XES D2●●●	**V**	300, conforming to CSA
Rated impulse withstand voltage (U imp)		**kV**	6, conforming to IEC 947-1
Contact operation			Snap action
Operating force	**XES D1●●●**	**N**	17
	XES D2●●●	**N**	32
Terminal referencing			By numbers conforming to CENELEC EN 50005
Short-circuit protection	**XES D1●●●**		10 A maximum cartridge fuse type aM
	XES D2●●●		12 A maximum cartridge fuse type aM
Connection		**mm²**	Captive screw clamp terminals Clamping capacity: 1 x 2.5 or 2 x 1.5 with or without cable end
Rated operational power	3 phases, 2 poles **XES D1●●●**		Utilisation categories AC-3 and AC-4 conforming to IEC 947-3 Appendix A 2.2 kW-240 V 2.2 kW-400 V
	3 phases, 3 poles **XES D2●●●**		3 kW-240 V 3 kW-400 V
	3 phases, 3 poles, isolating block **XAC S●99**		Utilisation category AC-23B 3 kW-400 V
	3 phases, 2 poles **XES D1●●●**		CSA certification 2 hp-240 V 5 hp-400 V 3 hp-600 V
	3 phases, 3 poles **XES D2●●●**		3 hp-240 V
Mechanical durability (in millions of operating cycles) Utilisation categories AC-3 and AC-4 conforming to IEC 947-3 Appendix A Duty cycle comprising 75% AC-3, 25% AC-4 Operating rate: 600 operating cycles per hour Load factor: 0.4	3 phases, 2 poles **XES D1●●●**		1.5 kW-240 V = 0.5 2.2 kW-240 V = 0.3 1.5 kW-400 V = 0.8 2.2 kW-400 V = 0.3
	3 phases, 3 poles **XES D2●●●**		3 kW-240 V = 0.7 3 kW-400 V = 1

References: pages 6/37 and 6/38
Dimensions: page 6/55
Application schemes: pages 6/56 and 6/57

Pendant control stations

Double insulated, type XAC B

For power circuits (direct switching)
Complete stations “ready for use”

DF565568

XAC B219
XAC B220

DF565569

XAC B3191
XAC B3201

DF565570

XAC B491
XAC B493

DF565571

XAC B4913
XAC B4933

DF565572

XAC B4911
XAC B4931

For control of single-speed motors

Functions	Number of operators	Contact blocks: Per direction	Contact blocks: For Emergency stop	Maximum operational power/400 V	Reference	Weight kg
	2 mechanically interlocked	2-pole XES D1191*(1)*	–	2.2 kW	**XAC B219**	0.355
		3-pole XES D2201*(1)*	–	3 kW	**XAC B220**	0.355
	2 mechanically interlocked + 1 latching Emergency stop Ø 40 mm operator ZA2 BS54	2-pole XES D1191*(1)*	1 N/C + N/C + N/C XAC S499	2.2 kW	**XAC B3191**	0.940
		3-pole XES D2201*(1)*	1 N/C + N/C + N/C XAC S499	3 kW	**XAC B3201**	1.000
	4 mechanically interlocked between pairs	2-pole XES D1191*(1)*	–	2.2 kW	**XAC B491**	1.200
		3-pole XES D2201*(1)*	–	3 kW	**XAC B493**	1.330
	4 mechanically interlocked between pairs + 1 latching Emergency stop Ø 40 mm operator ZA2 BS54	2-pole XES D1191*(1)*	1 N/C + N/C + N/C XAC S499	2.2 kW	**XAC B4913**	1.260
		3-pole XES D2201*(1)*	1 N/C + N/C + N/C XAC S499	3 kW	**XAC B4933**	1.390
	4 mechanically interlocked between pairs + 1 latching Emergency stop Ø 40 mm operator ZA2 BS54 mounted in base	2-pole XES D1191*(1)*	1 N/C + N/C + N/C XAC S3991	2.2 kW	**XAC B4911**	1.350
		3-pole XES D2201*(1)*	1 N/C + N/C + N/C XAC S3991	3 kW	**XAC B4931**	1.480

(1) Reference of double contact block for reversing operation.

Characteristics: page 6/36
Dimensions: page 6/55
Application schemes: pages 6/56 and 6/57

Pendant control stations

Double insulated, type XAC B

For power circuits (direct switching)
Complete stations “ready for use”

DF565573

XAC B691
XAC B693

DF565574

XAC B6913
XAC B6933

DF565575

XAC B6911
XAC B6931

DF565576

XAC B229

DF565577

XAC B3291

For control of single-speed motors *(continued)*

Functions	Number of operators	Contact blocks: Per direction	Contact blocks: For Emergency stop	Maximum operational power/400 V	Reference	Weight kg
	6 mechanically interlocked between pairs	2-pole XES D1191*(1)*	–	2.2 kW	**XAC B691**	1.350
		3-pole XES D2201*(1)*	–	3 kW	**XAC B693**	1.550
	6 mechanically interlocked between pairs + 1 latching Emergency stop Ø 40 mm operator ZA2 BS54	2-pole XES D1191*(1)*	1 N/C + N/C + N/C XAC S499	2.2 kW	**XAC B6913**	1.410
		3-pole XES D2201*(1)*	1 N/C + N/C + N/C XAC S499	3 kW	**XAC B6933**	1.610
	6 mechanically interlocked between pairs + 1 latching Emergency stop Ø 40 mm operator ZA2 BS54 mounted in base	2-pole XES D1191*(1)*	1 N/C + N/C + N/C XAC S3991	2.2 kW	**XAC B6911**	1.500
		3-pole XES D2201*(1)*	1 N/C + N/C + N/C XAC S3991	3 kW	**XAC B6931**	1.700

For control of 2-speed motors

Functions	Number of operators	Contact blocks: Per direction	Contact blocks: For Emergency stop	Maximum operational power/400 V	Reference	Weight kg
	2 mechanically interlocked	2-pole XES D1291*(1)*	–	2.2 kW	**XAC B229**	0.405
	2 mechanically interlocked + 1 latching Emergency stop Ø 40 mm operator ZA2 BS54	2-pole XES D1291*(1)*	1 N/C + N/C + N/C XAC S499	2.2 kW	**XAC B3291**	0.990

(1) Reference of double contact block for reversing operation.

Characteristics: page 6/36
Dimensions: page 6/55
Application schemes: pages 6/56 and 6/57

Pendant control stations

Double insulated, type XAC B
For control or power circuits
Empty enclosures

DF565578
XAC B020

DF565579
XAC B030

DF565580
XAC B02●

DF565581
XAC B04●

DF565582
XAC B06●

DF565583
XAC B08●

DF565584
XAC B12●

Empty enclosures for control circuits or power circuits *(1)*

Description	Protective cable sleeve	Number of cut-outs	Cut-out in base of enclosure	Reference	Weight kg
Empty enclosures *(1)* **Double insulated for "Small hoist" applications** Operator cut-out centres: 40 mm	For cable Ø 7…13 mm	2	Without	**XAC B020**	0.760
		3	Without	**XAC B030**	0.760
Empty enclosures *(1)* **Double insulated for "General purpose" applications** Operator cut-out centres: 40 mm	For cable Ø 10…22 mm	2	Without	**XAC B02**	0.760
			With	**XAC B021**	0.760
		4	Without	**XAC B04**	1.000
			With	**XAC B041**	1.000
		6	Without	**XAC B06**	1.160
			With	**XAC B061**	1.160
		8	Without	**XAC B08**	1.330
			With	**XAC B081**	1.330
		12 in 2 rows of 6	Without	**XAC B12**	1.460
			With	**XAC B121**	1.460

(1) Enclosure comprising:
- *the enclosure,*
- *protective cable sleeve,*
- *cable tie (for tightening sleeve onto cable),*
- *internal cable clamp,*
- *suspension ring,*
- *bezel tightening key.*

Characteristics: pages 6/34 and 6/36
Dimensions: page 6/55
Application schemes: pages 6/56 and 6/57
Presentation: page 6/58

Pendant control stations

Double insulated, type XAC B
For control or power circuits
Empty enclosures

DF565580

XAC B02●●

DF565581

XAC B04●●

DF565582

XAC B06●●

DF565583

XAC B08●●

DF565584

XAC B12●●

Empty enclosures for control circuits or power circuits *(1) (continued)*

Description	Protective cable sleeve	Number of cut-outs	Cut-out in base of enclosure	Reference	Weight kg
Empty enclosures *(1)* **Double insulated for "General purpose" applications** Operator cut-out centres: 40 mm	For cable Ø 22…35 mm	2	Without	**XAC B025**	0.960
			With	**XAC B0215**	0.960
		4	Without	**XAC B045**	1.200
			With	**XAC B0415**	1.200
		6	Without	**XAC B065**	1.360
			With	**XAC B0615**	1.360
		8	Without	**XAC B085**	1.530
			With	**XAC B0815**	1.530
		12 in 2 rows of 6	Without	**XAC B125**	1.660
			With	**XAC B1215**	1.660

(1) Enclosure comprising:
- *the enclosure,*
- *protective cable sleeve,*
- *cable tie (for tightening sleeve onto cable),*
- *internal cable clamp,*
- *suspension ring,*
- *bezel tightening key.*

Characteristics: pages 6/34 and 6/36
Dimensions: page 6/55
Application schemes: pages 6/56 and 6/57
Presentation: page 6/58

Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control circuits
Empty enclosures **(XAC M: products for maintenance purposes only)**

DF565585

XAC B120

Empty enclosures for control circuits *(1)*

Description	Protective cable sleeve	Number of cut-outs	Cut-out in base of enclosure	Reference	Weight kg
Empty enclosures *(1)* **Double insulated for "General purpose" applications** Operator cut-out centres: 30 mm	For cable Ø 10…22 mm	12 in 1 row	Without	**XAC B120**	1.330
			With	**XAC B1201**	1.330
	For cable Ø 22…35 mm	12 in 1 row	Without	**XAC B1205**	1.530
			With	**XAC B12015**	1.530
Empty enclosures *(1)* **Metal for "General purpose" applications** Operator cut-out centres: 40 mm	For cable Ø 10…22 mm	4	Without	**XAC M04**	1.540
			With	**XAC M041**	1.540
		8	Without	**XAC M08**	2.210
			With	**XAC M081**	2.210
	For cable Ø 22…35 mm	4	Without	**XAC M045**	1.740
			With	**XAC M0415**	1.740
		8	Without	**XAC M085**	2.410
			With	**XAC M0815**	2.410

DF565586

XAC M04●

DF565587

XAC M08●

Variable composition stations, factory assembled

Use the order form on page 6/59 to define the required configuration

Equipment: contact blocks, operating heads (control and signalling), complementary accessories	See separate components, pages 6/42 to 6/54

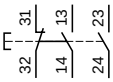
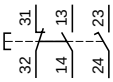
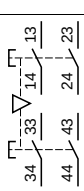
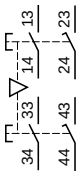
(1) Enclosure comprising:
- *the enclosure,*
- *protective cable sleeve for cable Ø 10…22 mm or Ø 22…35 mm,*
- *cable tie (for tightening sleeve onto cable),*
- *internal cable clamp,*
- *suspension ring,*
- *bezel tightening key.*

Characteristics: page 6/34
Dimensions: page 6/55
Application schemes: pages 6/56 and 6/57
Presentation: page 6/58

Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control circuits
Separate components and spare parts

Contact blocks for front mounting, slow break

Description	Application	Function	Scheme	Operator centres	Reference	Weight
				mm		kg
Spring return						
Single block 1 spring return operator	Single-speed	N/O		30 or 40	**XEN C1111**	0.020
		N/C		30 or 40	**XEN C1121**	0.020
		N/O + N/O		30 or 40	**XEN C1131**	0.020
		N/C + N/C		30 or 40	**XEN C1141**	0.020
		N/C + N/O		30 or 40	**XEN C1151**	0.020
		C/O + N/O		30 or 40	**XEN B1491**	0.050
	2-speed	2 step N/O + N/O staggered		30 or 40	**XEN B1181**	0.050
		2 step C/O + N/O staggered		30 or 40	**XEN B1191**	0.050
Double block 2 spring return operators mechanically interlocked	Single-speed	N/O + N/O simultaneous		30	**XEN D1611**	0.110
				40 *(1)*	**XEN D2611**	0.110
	2-speed	2 step N/O + N/O staggered		30	**XEN D1621**	0.110
				40 *(1)*	**XEN D2621**	0.110

DF565588

XEN C1111

DF565589

XEN B1181

DF565590

XEN D2611

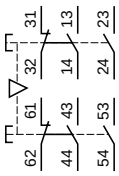
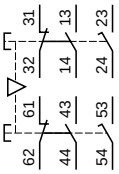
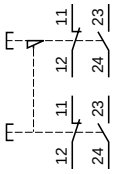
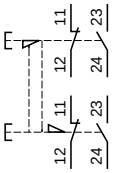
(1) These contact blocks cannot be mounted in enclosures XAC B120● (12 operators in 1 row).

Characteristics: page 6/34
Dimensions: page 6/55
Application schemes: page 6/56
Presentation: page 6/58

Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control circuits
Separate components and spare parts

Contact blocks for front mounting, slow break (continued)

Description	Application	Function	Scheme	Operator centres	Reference	Weight
				mm		kg
Spring return *(continued)*						
Double block 2 spring return operators mechanically interlocked	Single-speed	C/O + N/O		30	**XEN D1631**	0.110
				40 *(1)*	**XEN D2631**	0.110
	2-speed	2 step C/O + N/O staggered		30	**XEN D1641**	0.110
				40 *(1)*	**XEN D2641**	0.110
Latching						
Double block 1 latching operator released by 1 spring return operator	Single-speed	N/C + N/O		30	**XEN D3801**	0.170
				40 *(1)*	**XEN D4801**	0.170
Double block 2 latching operators	Single-speed	N/C + N/O		30	**XEN D3811**	0.170
				40 *(1)*	**XEN D4811**	0.170

DF565593

XEN D2641

DF565592

XEN D3801

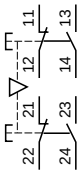
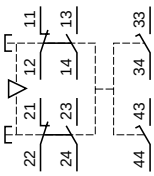
DF565591

XES B2011

DF565594

XES D1181

Contact blocks for front mounting, snap action

Description	Application	Function	Scheme	Operator centres	Reference	Weight
				mm		kg
Spring return						
Single block 1 spring return operator *(2)*	Single-speed	C/O		40 *(1)*	**XES B2011**	0.030
Double block 2 spring return operators mechanically interlocked	Single-speed	C/O		40 *(1)*	**XES D1181**	0.140
	2-speed	C/O + N/O staggered		40 *(1)*	**XES D1281**	0.190

(1) These contact blocks cannot be mounted in enclosures XAC B120● (12 operators in 1 row).
(2) Only for mounting with operators XAC B91●●.

Characteristics: page 6/34
Dimensions: page 6/55
Application schemes: page 6/56
Presentation: page 6/58

Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control circuits
Separate components and spare parts

530240

XAC S41●

Contact blocks for front mounting *(1)*

Description	Function	Scheme	Reference	Weight kg
Spring return **Slow break** Operator centres 30 or 40 mm	N/O	13 14	**XAC S411**	0.070
	N/C	11 12	**XAC S412**	0.070
	N/O + N/O	13 14 23 24	**XAC S413**	0.070
	N/C + N/C	11 12 21 22	**XAC S414**	0.070
	N/C + N/O	11 12 23 24	**XAC S415**	0.070

530240

XAC S4111

Contact blocks for base mounting *(1)*

Description	Function	Scheme	Reference	Weight kg
Spring return **Slow break**	N/O	13 14	**XAC S4111**	0.100
	N/C	11 12	**XAC S4121**	0.100
	N/O + N/O	13 14 23 24	**XAC S4131**	0.100
	N/C + N/C	11 12 21 22	**XAC S4141**	0.100
	N/C + N/O	11 12 23 24	**XAC S4151**	0.100

DF565595

XAC V06

Pilot light bodies for front mounting

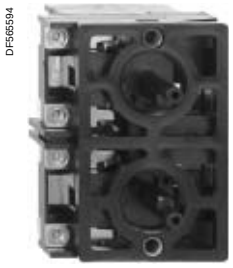
Description	Supply voltage	Scheme	Reference	Weight kg
Direct supply Bulb not included *(2)*	⩽ 400 V	X1 X2	**XAC V06**	0.050
Direct supply, through resistor Incandescent BA 9s base fitting 130 V bulb included	230 V	X1 X2	**XAC V07**	0.055

(1) Mounting with operating heads ZA2 B●●● (see page 6/47).
(2) Bulb type for use with direct supply units: BA 9s base fitting incandescent bulb U ⩽ 130 V or neon bulb 110 V ⩽ U ⩽ 400 V. Maximum power: 2.6 W, maximum Ø: 11 mm, maximum length: 26 mm. See page 6/50.

Pendant control stations

Double insulated, type XAC B
For power circuits (direct switching)
Separate components and spare parts

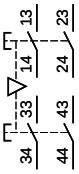
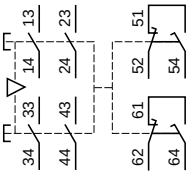
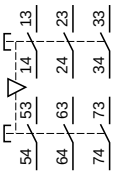
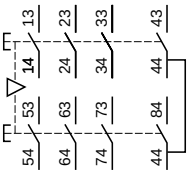
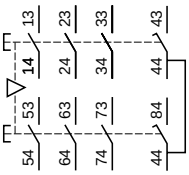
Contact blocks, snap action


DF506594

XES D1191

530368

XES D2201

Description	Application	Function	Max. power/ 400 V	Scheme	Reference	Weight kg
Double block 2-pole 2 spring return operators mechanically interlocked (operator centres: 40 mm)	Single-speed	N/O + N/O	2.2 kW		**XES D1191**	0.140
	2-speed	N/O + N/O + 1 C/O staggered auxiliary contact *(1)*	2.2 kW		**XES D1291**	0.190
Double block 3-pole 2 spring return operators mechanically interlocked (operator centres: 40 mm)	Single-speed	N/O + N/O + N/O	3 kW		**XES D2201**	0.200
		N/O + N/O + N/O + 1 N/O simultaneous auxiliary contact *(1)*	3 kW		**XES D2241**	0.210
		N/O + N/O + N/O + 1 N/O staggered auxiliary contact *(1)*	3 kW		**XEN D2251**	0.210

Isolating block, slow break

In the interests of safety, it is imperative that these isolating blocks only be used with a stay put or latching type operating head to ensure complete isolation when the pendant station is not in use.

530369

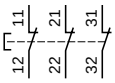
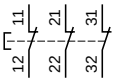
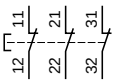
XAC S399

530391

XAC S499

530366

XAC S3991

Mounting position	Application	Function	Max. power/ 400 V	Scheme	Reference	Weight kg
On front 40 mm centres *(2)*	Emergency stop	N/C + N/C + N/C with positive opening operation	3 kW		**XAC S399**	0.100
On front 30 mm centres *(2)*	Emergency stop	N/C + N/C + N/C with positive opening operation	3 kW		**XAC S499**	0.100
In base *(3)*	Emergency stop	N/C + N/C + N/C with positive opening operation	3 kW		**XAC S3991**	0.110

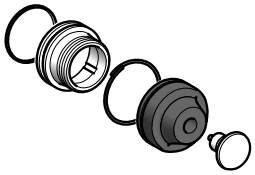
(1) Auxiliary contacts are slow break.
(2) Mounting with operating heads ZA2 B●●●, except ZA2 BD● and ZA2 BG● (see page 6/47).
(3) Mounting with operating head ZA2 BS14 (see page 6/47).

Characteristics: page 6/36
Dimensions: page 6/55
Application schemes: pages 6/56 and 6/57
Presentation: page 6/58

Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control or power circuits
Separate components and spare parts

DF565596

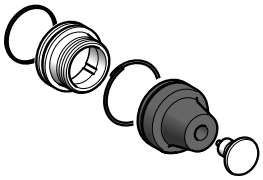


XAC B911●

Booted operators

For use with contact block	Travel	Operating temperature	Colour of insert	Sold in lots of	Unit reference	Weight kg
XEN B●●●● XEN C●●●● XEN D●●●● XES B2011 XES D2201 XES D2241 XES D2251	4 mm	- 25…+ 70 °C *(1)*	White	10	**XAC B9111**	0.005
			Black	10	**XAC B9112**	0.005
			Green	10	**XAC B9113**	0.005
			Red	10	**XAC B9114**	0.005
			Yellow	10	**XAC B9115**	0.005
			Blue	10	**XAC B9116**	0.005
			Brown	10	**XAC B9119**	0.005
		- 40…+ 70 °C *(2)*	White	10	**XAC B9121**	0.005
			Black	10	**XAC B9122**	0.005
			Green	10	**XAC B9123**	0.005
			Red	10	**XAC B9124**	0.005
			Yellow	10	**XAC B9125**	0.005
			Blue	10	**XAC B9126**	0.005
			Brown	10	**XAC B9129**	0.005

DF565597



XAC B921●

For use with contact block	Travel	Operating temperature	Colour of insert	Sold in lots of	Unit reference	Weight kg
XES D1181 XES D1191 XES D1281 XES D1291	16 mm	- 25…+ 70 °C *(1)*	White	10	**XAC B9211**	0.005
			Black	10	**XAC B9212**	0.005
			Green	10	**XAC B9213**	0.005
			Red	10	**XAC B9214**	0.005
			Yellow	10	**XAC B9215**	0.005
			Blue	10	**XAC B9216**	0.005
			Brown	10	**XAC B9219**	0.005
		- 40…+ 70 °C *(2)*	White	10	**XAC B9221**	0.005
			Black	10	**XAC B9222**	0.005
			Green	10	**XAC B9223**	0.005
			Red	10	**XAC B9224**	0.005
			Yellow	10	**XAC B9225**	0.005
			Blue	10	**XAC B9226**	0.005
			Brown	10	**XAC B9229**	0.005

Booted operators (silicone boot)

DF565598

ZA2 BP●

For use with contact block	Operating temperature	Colour of boot	Reference	Weight kg
XAC S41●	- 25…+ 70 °C	Black	**ZA2 BP2**	0.015
		Green	**ZA2 BP3**	0.015
		Red	**ZA2 BP4**	0.015
		Yellow	**ZA2 BP5**	0.015
		Blue	**ZA2 BP6**	0.015

(1) Polychloroprene boots.
(2) Silicone boots.

Characteristics: pages 6/34 and 6/36
Dimensions: page 6/55
Application schemes: pages 6/56 and 6/57
Presentation: page 6/58

Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control or power circuits
Separate components and spare parts

530385

ZA2 BS54

530384

ZA2 BS14

530382

ZA2 BD●

530383

ZA2 BG●

530381

ZA2 BB●

530390

ZA2 BV0●

Operating heads for front or base mounting *(1)*

Description	Colour	Type	Reference	Weight kg
Mushroom head, latching Turn to release (Emergency stop function)	Red	Ø 30 mm	**ZA2 BS44**	0.028
		Ø 40 mm	**ZA2 BS54**	0.033
Mushroom head, latching Key release (n° 455) Key withdrawal in rest (unactuated) position (Emergency stop function)	Red	Ø 30 mm	**ZA2 BS74**	0.060
		Ø 40 mm	**ZA2 BS14**	0.065
Selector switches, standard handle	Black	2 position, stay put	**ZA2 BD2**	0.018
		3 position, stay put *(2)*	**ZA2 BD3**	0.018
Key switches (key n° 455) Key withdrawal in left and right-hand positions	–	2 position, stay put	**ZA2 BG4**	0.042
		3 position, stay put *(1)*	**ZA2 BG5**	0.042
Wobblesticks Operates in all directions for fast stop	Black	–	**ZA2 BB2**	0.060
	Red	–	**ZA2 BB4**	0.060

Operating head for isolating block

Description	Colour	Type	Reference	Weight kg
Mushroom head, latching Key release (n° 455) Key withdrawal in rest (unactuated) position (Emergency stop function)	Red	Ø 40 mm	**ZA2 BS14**	0.065

Pilot light heads

Description	Colour	Reference	Weight kg
For use with incandescent bulbs			
Lens cap with fixing bezel	White	**ZA2 BV01**	0.015
	Green	**ZA2 BV03**	0.015
	Red	**ZA2 BV04**	0.015
	Yellow	**ZA2 BV05**	0.015
	Blue	**ZA2 BV06**	0.015
	Clear	**ZA2 BV07**	0.015
For use with neon bulbs			
Lens cap with fixing bezel	Green	**ZA2 BV033**	0.015
	Red	**ZA2 BV043**	0.015
	Yellow	**ZA2 BV053**	0.015
	Clear	**ZA2 BV073**	0.015

(1) The technical characteristics of pendant control stations XAC B and M can only be guaranteed by using the operating heads ZA2 B●● listed above.
(2) Only suitable for front mounting.

Other versions
Key release mushroom head pushbuttons with other key numbers.
Selector switches with other mechanical functions.
Key switches with other mechanical functions and with other key numbers.
Please consult your Regional Sales Office.

Characteristics: pages 6/34 and 6/36
Dimensions: page 6/55
Application schemes: pages 6/56 and 6/57
Presentation: page 6/58

Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control circuits
Separate components: pushbuttons with analogue output *(1)*

Environment

Conformity to standards			IEC 947-5-1, EN 60947-5-1
Ambient air temperature	For storage	**°C**	- 40…+ 70
	For operation	**°C**	- 25…+ 70
Degree of protection			IP 65 conforming to IEC 529
Pushbutton operator travel		**mm**	11
Operating force		**N**	4 (start of travel) 9 (end of travel)
Mechanical durability (in millions of operating cycles)			1
Connection		**mm²**	Terminal connectors, maximum clamping capacity: 2 x 1.5 mm² or 1 x 2.5 mm²

Contact block characteristics

Thermal current (Ithe)	**A**	6
Rated insulation voltage (Ui)	**V**	250, degree of pollution 3, conforming to IEC 947-1

Rated operational characteristics
conforming to 947-5-1 Appendix C
Utilisation categories AC-15 and DC-13

a.c. supply ∿ 50/60 Hz
Power broken in VA
for 1 million operating cycles

Voltage V		48	110	230
Inductive circuit	VA	30	30	30

d.c. supply ⎓
Power broken in W
for 1 million operating cycles

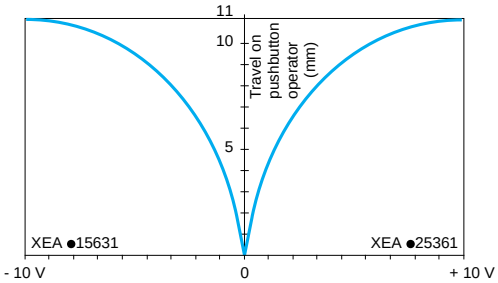
Voltage V		48	110
Inductive circuit	W	48	12

Analogue circuit characteristics

Type of current		d.c.
Rated supply voltage	**V**	15
Voltage limits	**V**	14…18
Current consumption	**mA**	< 15

Analogue signal output curves and schemes

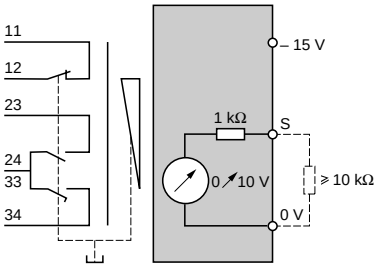
Analogue signal output curves
with 15 V supply voltage



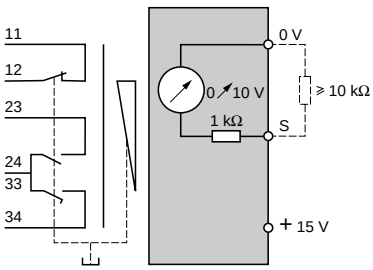
Note: *supply voltage = 15 V, output voltage = 10 V*
(if supply voltage < 15 V, output voltage < 10 V)

Equivalent output schemes

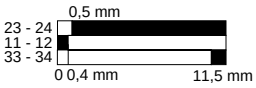
XEA ●15361



XEA ●25361



Contact state



contact closed
contact open

(1) Pushbuttons providing an analogue output signal proportional to the distance travelled by the pushbutton operator.

References:
page 6/49

Dimensions:
page 6/49

Telemecanique

Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control circuits
Separate components: pushbuttons with analogue output *(1)*

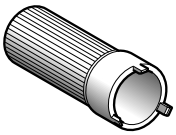
530386

XEA C●5361

530392

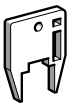
XEA B●5361

530306



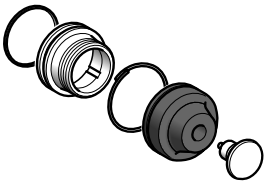
ZA2 BZ905

530305



XAC X1

DF566601



XAC B9112

References

Complete pushbuttons (body + operating head), non booted *(2)*

Supply voltage	Contact block	Reference	Weight kg
0…- 15 V	N/C + N/O at start of travel N/O at end of travel	**XEA C15361**	0.065
0…+ 15 V	N/C + N/O at start of travel N/O at end of travel	**XEA C25361**	0.065

Complete pushbuttons (body + operating head), booted (2)

Supply voltage	Contact block	Reference	Weight kg
0…- 15 V	N/C + N/O at start of travel N/O at end of travel	**XEA B15361**	0.065
0…+ 15 V	N/C + N/O at start of travel N/O at end of travel	**XEA B25361**	0.065

Mounting accessories

Description	For use with	Reference	Weight kg
Tightening key for fixing nut	XEA C●5361	**ZA2 BZ905**	0.060
	XEA B●5361	**XAC X1**	0.010

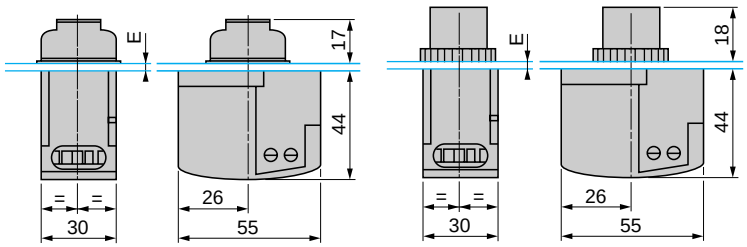
Separate components and spare parts

Description	Colour of insert	Unit reference	Weight kg
Booted operator (Sold in lots of 10)	White	**XAC B9111**	0.005
	Black	**XAC B9112**	0.005

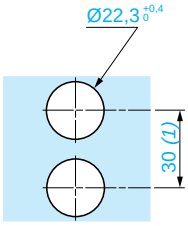
(1) Pushbuttons providing an analogue output signal proportional to the distance travelled by the pushbutton operator.
(2) Pushbutton supplied with 1 white insert and 1 black insert.

Dimensions

XEA B●5361 | **XEA C●5361**



Panel cut-out



E = support panel thickness, 1 to 3.5 mm.
(1) Minimum fixing centres between 2 operators.

Characteristics:
page 6/48

Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control or power circuits
Separate components and spare parts

530307

DL1 C●●●●

530308

DL1 CF●●●

Bulbs

Description	Voltage	Sold in lots of	Unit reference	Weight kg
Incandescent BA 9s base fitting Maximum power: 2.6 W Maximum Ø: 11 mm Maximum length: 28 mm	6 V	10	**DL1 CB006**	0.002
	12 V	10	**DL1 CE012**	0.002
	24 V	10	**DL1 CE024**	0.002
	48 V	10	**DL1 CE048**	0.002
	130 V	10	**DL1 CE130**	0.002
Neon BA 9s base fitting Maximum power: 2.6 W Maximum Ø: 11 mm Maximum length: 28 mm	120 V	10	**DL1 CF110**	0.002
	230 V	10	**DL1 CF220**	0.002
	400 V	10	**DL1 CF380**	0.002

530311

XAC B91●

530310

XAC B92●

530309

XAC B90●

Accessories for booted operators

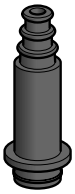
Description	Travel	Material/ Colour	Operating temperature	Sold in lots of	Unit reference	Weight kg
Boots with circlip, without coloured insert	4 mm	Polychloroprene	- 25…+ 70° C	10	**XAC B911**	0.002
		Silicone	- 40…+ 70° C	10	**XAC B912**	0.002
	16 mm	Polychloroprene	- 25…+ 70° C	10	**XAC B921**	0.002
		Silicone	- 40…+ 70° C	10	**XAC B922**	0.002
Coloured inserts for booted operators (4 and 16 mm travel)		White	–	10	**XAC B901**	0.001
		Black	–	10	**XAC B902**	0.001
		Green	–	10	**XAC B903**	0.001
		Red	–	10	**XAC B904**	0.001
		Yellow	–	10	**XAC B905**	0.001
		Blue	–	10	**XAC B906**	0.001
		Brown	–	10	**XAC B909**	0.001

Characteristics: pages 6/34 and 6/36
Dimensions: page 6/55
Application schemes: pages 6/56 and 6/57
Presentation: page 6/58

Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control or power circuits
Separate components and spare parts

530312

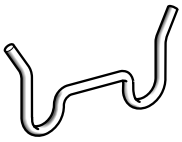


XAC B913

530313

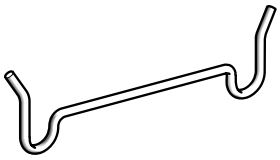
XAC B960

530314



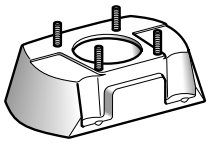
XAC B971

DF565602



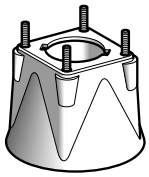
XAC B972

DF565603



XAC B983

DF565604



XAC B982

530318

XAC X1

530319

XAC X905

Complementary accessories

Description	For use with		Reference	Weight kg
Protective cable sleeve with cable tie (for tightening sleeve onto cable)	Enclosures XAC B219 and XAC B220 (2 operators)	For cable Ø 7…13 mm	**XAC B913**	0.065
	Enclosures XAC B●●● with 4 to 12 operators and XAC M●●● with 4 and 8 operators	For cable Ø 10…22 mm	**XAC B960**	0.110
		For cable Ø 22…35 mm	**XAC B965**	0.160
Blanking plug with seal and fixing nut	–		**ZB2 SZ3**	0.005
Adaptor for use with protective cable sleeve for cable Ø 10…22 mm	Self-supporting cable type BBAP		**XAC B961**	0.025
Lower support ring	Single row enclosures XAC B and XAC M		**XAC B971**	0.015
	2 row enclosures XAC B		**XAC B972**	0.020
Protective guards for base mounted units	Mushroom head pushbutton		**XAC B983**	0.050
	Key release latching mushroom head pushbutton		**XAC B982**	0.050

Tools

Description	For use with	Reference	Weight kg
Tightening key	Bezels	**XAC X1**	0.010
	Units mounted in base of enclosure	**XAC X905**	0.015
Bulb extractor	BA 9s base fitting bulbs	**XBF X13**	0.003

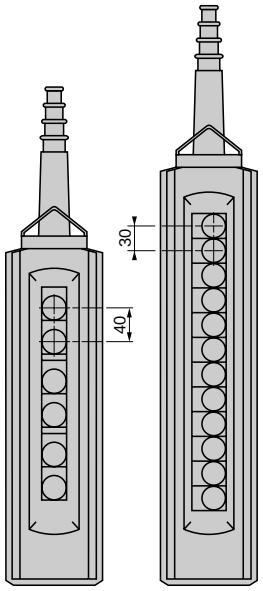
6

Characteristics: pages 6/34 and 6/36
Dimensions: page 6/55
Application schemes: pages 6/56 and 6/57
Presentation: page 6/58

Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control or power circuits
Legends 30 x 40 mm (with symbols conforming to NF E 52-124)

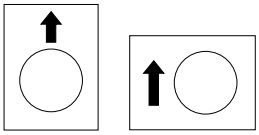
DF565666



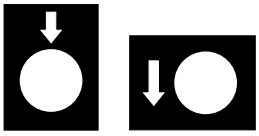
Vertical mounting
40 mm centres

Horizontal mounting
30 mm centres

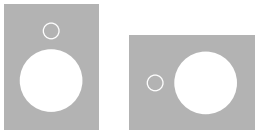
DF565665



White background, black symbol



Black background, white symbol



Red background, white symbol

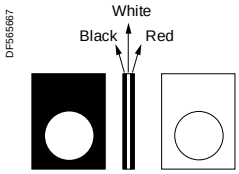
Symbol	Reference Vertical mounting 40 mm centres	Symbol	Reference Horizontal mounting 30 mm centres	Weight kg
Raise, slow	ZB2 BY4951		ZB2 BY4901	0.001
Raise, fast	ZB2 BY4952		ZB2 BY4902	0.001
Raise, slow-fast	ZB2 BY4953		ZB2 BY4903	0.001
Right, slow	ZB2 BY4901		ZB2 BY4907	0.001
Right, fast	ZB2 BY4902		ZB2 BY4908	0.001
Right, slow-fast	ZB2 BY4903		ZB2 BY4909	0.001
Forward, slow	ZB2 BY4963		ZB2 BY4913	0.001
Forward, fast	ZB2 BY4964		ZB2 BY4914	0.001
Forward, slow-fast	ZB2 BY4965		ZB2 BY4915	0.001
Slew right, slow	ZB2 BY4919		ZB2 BY4919	0.001
Slew right, fast	ZB2 BY4920		ZB2 BY4920	0.001
Slew right, slow-fast	ZB2 BY4921		ZB2 BY4921	0.001
Slow	ZB2 BY4933		ZB2 BY4933	0.001
Klaxon	ZB2 BY4982		ZB2 BY4932	0.001
Start	ZB2 BY4980		ZB2 BY4930	0.001

Symbol	Reference Vertical mounting 40 mm centres	Symbol	Reference Horizontal mounting 30 mm centres	Weight kg
Lower, slow	ZB2 BY2954		ZB2 BY2904	0.001
Lower, fast	ZB2 BY2955		ZB2 BY2905	0.001
Lower, slow-fast	ZB2 BY2956		ZB2 BY2906	0.001
Left, slow	ZB2 BY2904		ZB2 BY2910	0.001
Left, fast	ZB2 BY2905		ZB2 BY2911	0.001
Left, slow-fast	ZB2 BY2906		ZB2 BY2912	0.001
Reverse, slow	ZB2 BY2966		ZB2 BY2916	0.001
Reverse, fast	ZB2 BY2967		ZB2 BY2917	0.001
Reverse, slow-fast	ZB2 BY2968		ZB2 BY2918	0.001
Slew left, slow	ZB2 BY2922		ZB2 BY2922	0.001
Slew left, fast	ZB2 BY2923		ZB2 BY2923	0.001
Slew left, slow-fast	ZB2 BY2924		ZB2 BY2924	0.001
Fast	ZB2 BY4934		ZB2 BY4934	0.001
Start-Klaxon	ZB2 BY4985		ZB2 BY4935	0.001
Stop	ZB2 BY2931		ZB2 BY2931	0.001

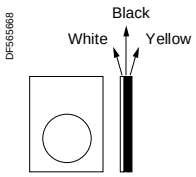
Characteristics: pages 6/34 and 6/36
Dimensions: page 6/55
Application schemes: pages 6/56 and 6/57
Presentation: page 6/58

Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control or power circuits
Legends 30 x 40 mm



ZB2 BY2101



ZB2 BY4101

Text	Reference	Weight kg	Text	Reference	Weight kg

- Start functions: white characters on black background
- Stop functions: white characters on red background

Blank

Black or red background	**ZB2 BY2101**	0.001	White or yellow background	**ZB2 BY4101**	0.001

With French text / With English text

For pushbuttons

Marche	**ZB2 BY2103**	0.001	Start	**ZB2 BY2303**	0.001
Arrêt	**ZB2 BY2104**	0.001	Stop	**ZB2 BY2304**	0.001
Avant	**ZB2 BY2105**	0.001	Forward	**ZB2 BY2305**	0.001
Arrière	**ZB2 BY2106**	0.001	Reverse	**ZB2 BY2306**	0.001
Montée	**ZB2 BY2107**	0.001	Up	**ZB2 BY2307**	0.001
Descente	**ZB2 BY2108**	0.001	Down	**ZB2 BY2308**	0.001
Droite	**ZB2 BY2109**	0.001	Right	**ZB2 BY2309**	0.001
Gauche	**ZB2 BY2110**	0.001	Left	**ZB2 BY2310**	0.001
En service	**ZB2 BY2111**	0.001	On	**ZB2 BY2311**	0.001
Hors service	**ZB2 BY2112**	0.001	Off	**ZB2 BY2312**	0.001
Sous tension	**ZB2 BY2126**	0.001	Power on	**ZB2 BY2326**	0.001
Lent	**ZB2 BY2127**	0.001	Slow	**ZB2 BY2327**	0.001
Vite	**ZB2 BY2128**	0.001	Fast	**ZB2 BY2328**	0.001
Klaxon	**ZB2 BY2125**	0.001	–	–	–

For selector switches

Arrêt-Marche	**ZB2 BY2166**	0.001	–	–	–
Hors-En	**ZB2 BY2167**	0.001	Off-On	**ZB2 BY2367**	0.001

With special texts

- Specify text when ordering,
- 2 lines maximum, 11 characters per line.

White characters on black background	**ZB2 BY2002**	0.001	Black characters on white background	**ZB2 BY4001**	0.001
White characters on red background	**ZB2 BY2004**	0.001	Black characters on yellow background	**ZB2 BY4005**	0.001

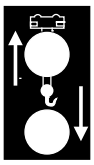
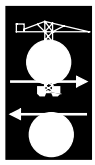
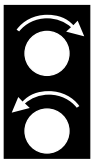
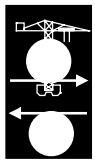
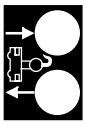
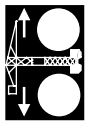
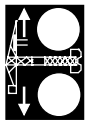
Other versions Legends with texts in other languages.
Please consult your Regional Sales Office.

Characteristics: pages 6/34 and 6/36
Dimensions: page 6/55
Application schemes: pages 6/56 and 6/57
Presentation: page 6/58

Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control or power circuits
Twin legends for tower cranes

Legends with white symbols on black background

Function	Symbol	Reference	Weight kg	Function	Symbol	Reference	Weight kg
40 mm operator centres (for enclosures with 2 to 8 operators and 12 operators in 2 rows)							
Hoist Raise Lower		**XAC Y4970**	0.002	**Long travel** Forward Reverse		**XAC Y4972**	0.002
Slew Right Left		**XAC Y4971**	0.002	**Trolley** Forward Reverse		**XAC Y4973**	0.002
30 mm operator centres (for enclosures with 12 operators in 1 row)							
Hoist Raise Lower		**XAC Y3970**	0.002	**Long travel** Forward Reverse		**XAC Y3972**	0.002
Slew Right Left		**XAC Y3971**	0.002	**Trolley** Forward Reverse		**XAC Y3973**	0.002

6

Characteristics:
pages 6/34 and 6/36

Dimensions:
page 6/55

Application schemes:
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Presentation:
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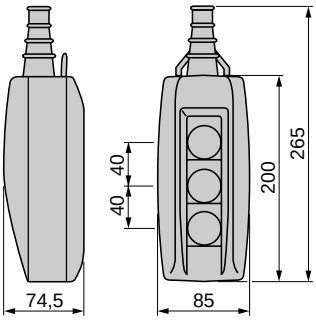
Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control or power circuits

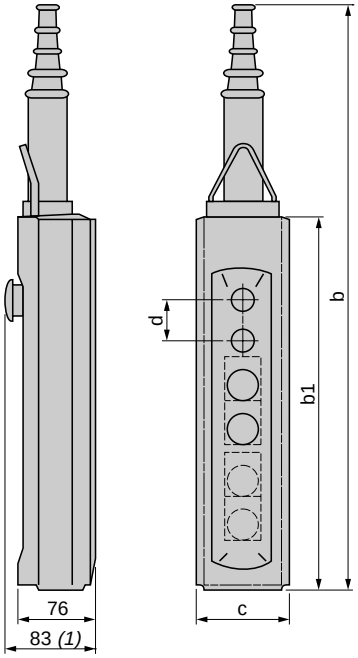
(XAC M: products for maintenance purposes only)

Pendant control stations

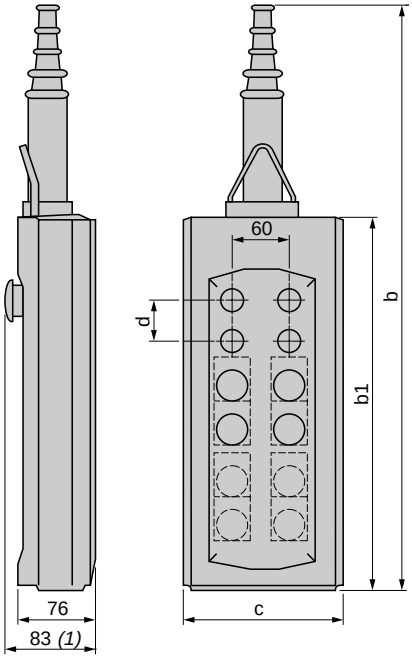
XAC B●●● (2 and 3-way)



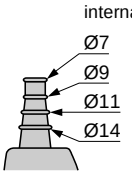
XAC B●●● (2 to 12-way, 1 row)
XAC M●●● (4 to 8-way, 1 row)

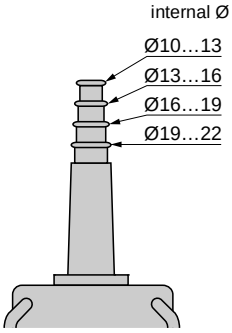


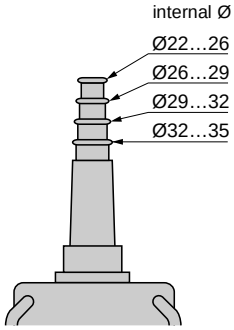
XAC B●●● (12-way, 2 rows)



Protective cable sleeves





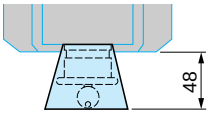


(1) With mushroom head operator.

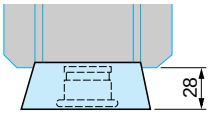
Number of operators	2	4	6	8	12 (1 row)	12 (2 rows)
b	409	499	589	679	679	593
b1	220	310	400	490	490	404
c	98	98	98	98	98	158
d	40	40	40	40	30	40

Protective guards

XAC B982

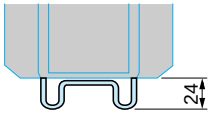


XAC B983



Lower support rings

XAC B971, B972



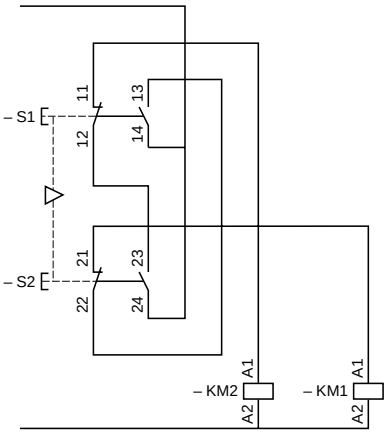
Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control or power circuits

Control circuits

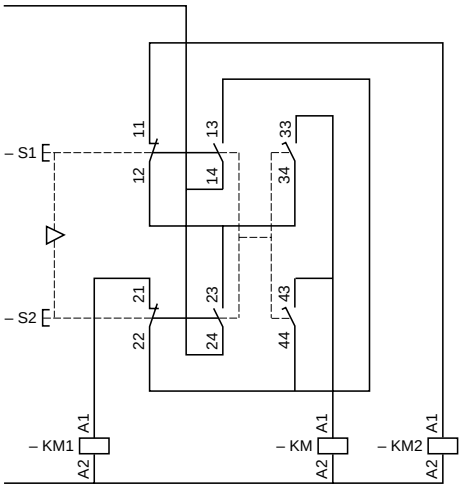
For control of single-speed reversing motor

Contact block **XES D1181**



For control of 2-speed reversing motor

Contact block **XES D1281**



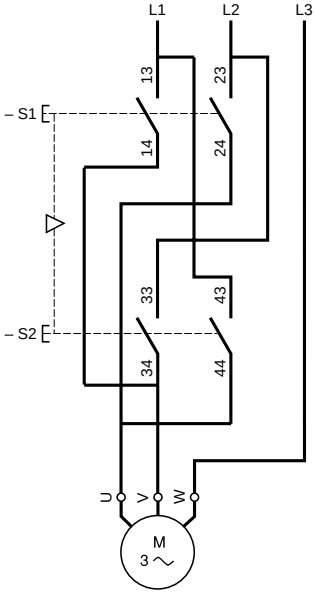
KM: high speed contactor

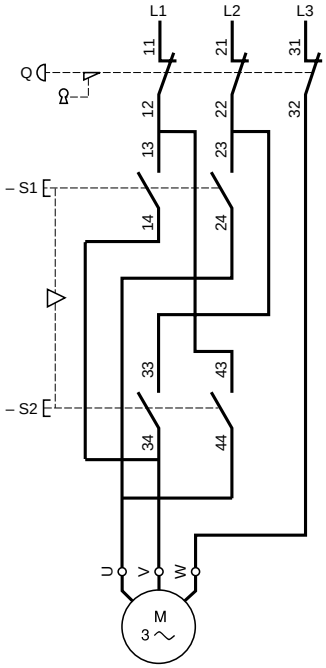
Power circuits

For control of single-speed reversing motor. 2-phase switching

Contact block **XES D1191**

Application example:
Combined with 3-pole isolating block XAC S399 or XAC S3991, shown in the unoperated position (pendant station “supplied”), fitted with key release mushroom head operator (ZA2 BS14).





Pendant control stations

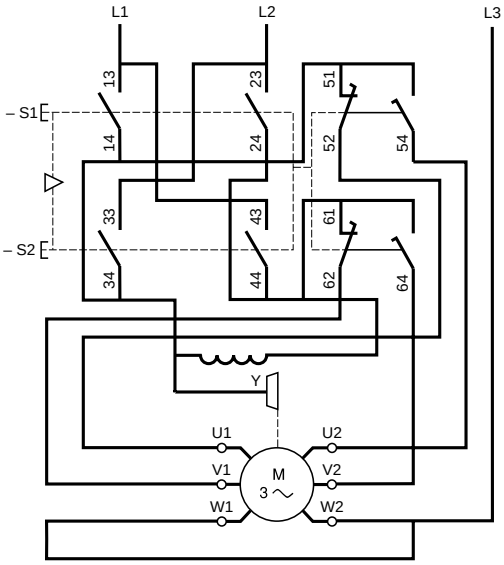
Double insulated, type XAC B
Metal, type XAC M
For control or power circuits

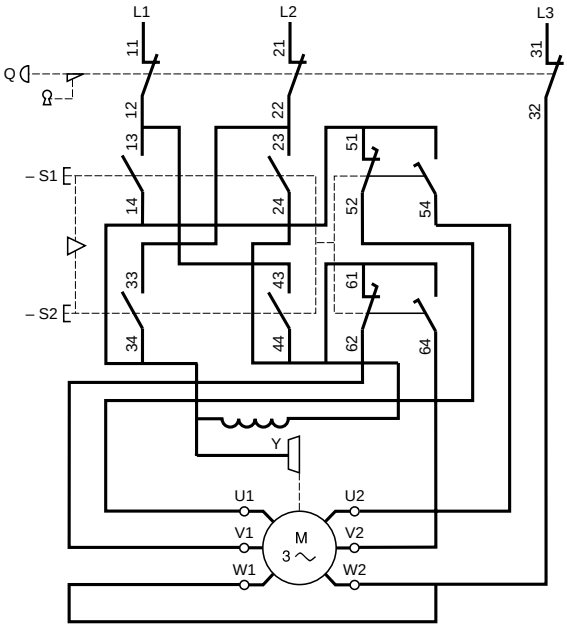
Power circuits *(continued)*

For control of 2-speed reversing motor (motors with separate windings only). 2-phase switching

Contact block **XES D1291**

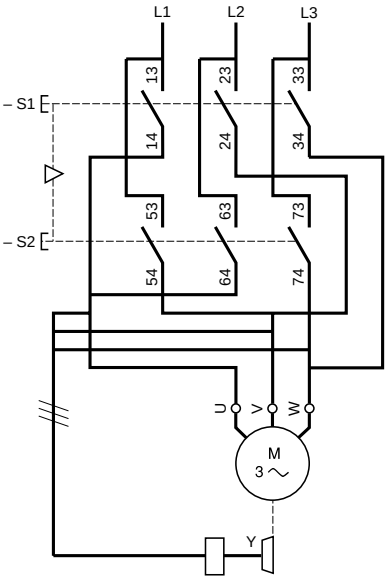
Application example:
Combined with 3-pole isolating block XAC S399 or XAC S3991, shown in the unoperated position (pendant station "supplied"), fitted with key release mushroom head operator (ZA2 BS14).



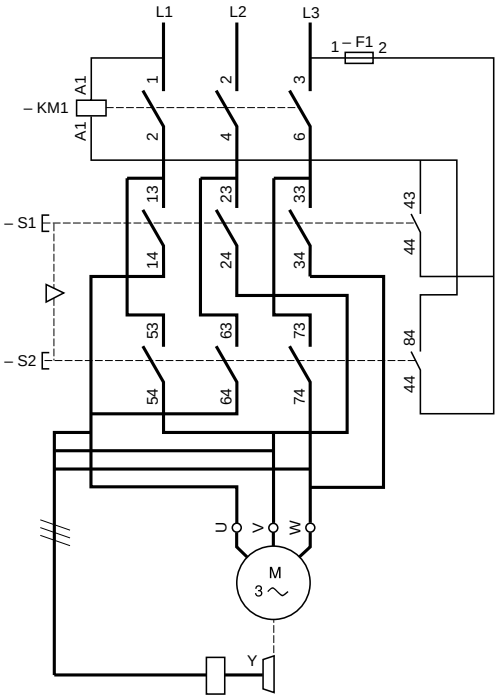


For control of single-speed reversing motor. 3-phase switching, reversing by 2-phase inversion

Contact block **XES D2201**



Contact block **XES D2241** with line contactor



Characteristics:
pages 6/34 and 6/36

References:
pages 6/35 to 6/54

Dimensions:
page 6/55

Presentation:
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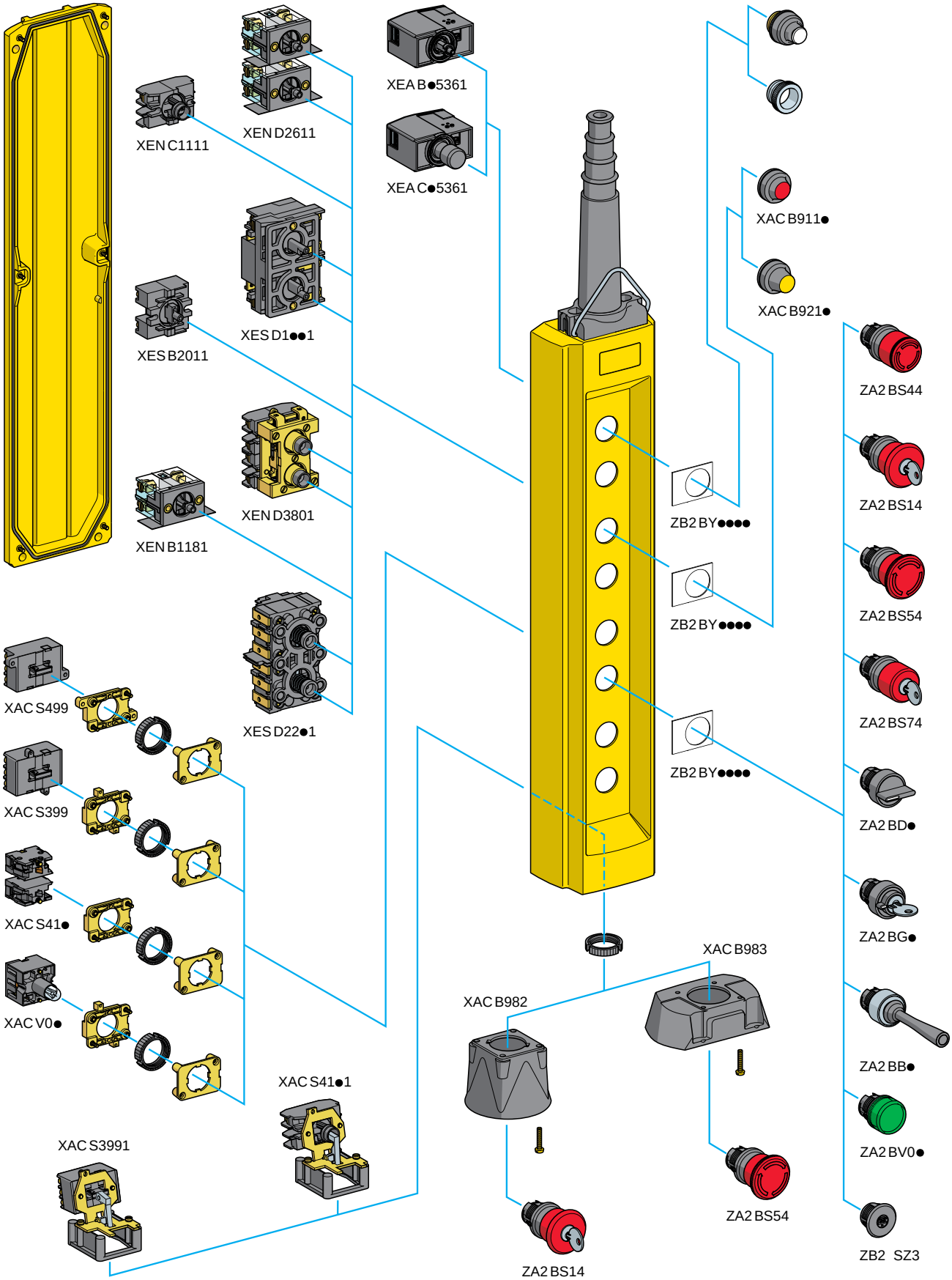
Pendant control stations

Double insulated, type XAC B
Metal, type XAC M
For control or power circuits

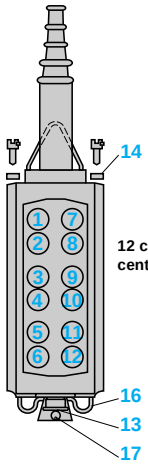


Order form (specimen suitable for photocopying)

Pendant control stations

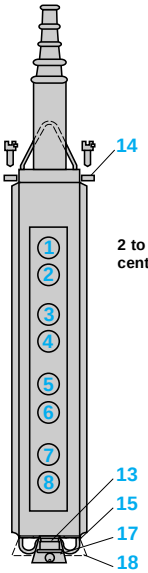
Double insulated, type XAC B
Metal, type XAC M (XAC M: products for maintenance purposes only)
For control or power circuits
Variable composition stations, factory assembled

530343



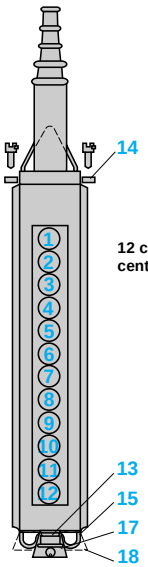
12 cut-outs, centres: 40 mm

530344



2 to 8 cut-outs, centres: 40 mm

530345



12 cut-outs, centres: 30 mm

Customer			**Schneider Electric Industries**	
Company	Order N°	Delivery date	Sales office - Subsidiary Co.	Order N°

Enter the order with XAC B09 reference (for enclosures XAC B) or XAC M09 reference (for enclosures XAC M)

Unit reference of empty enclosure, see pages 6/39 to 6/41	**Number of identical stations**	**Enclosure price** *(1)*
XAC ☐☐☐☐☐☐		

	Legends see pages 6/52 to 6/54		**Contact blocks or pilot light bodies** see pages 6/42 to 6/45		**Operating heads or pilot light heads or blanking plug** see pages 6/46 and 6/51		
	Reference	Unit price	Reference	Unit price	Reference	Unit price	**Total price**
1							
2							
3							
4							
5							
6							
7							
8							
9							
10							
11							
12							

Unit mounted in base of enclosure (if required)

13							

Factory assembled:

Number of heads or blanking plugs to be fitted		Additional cost **XAC 9VA** for fitting of 1 head or 1 blanking plug	
	X		

Complementary accessories, see page 6/51 (cross the appropriate box or boxes)

	Description	☒	Reference	Unit price	
14	Adaptor for self-supporting cable type BBAP for use with cable entry sleeve Ø 10 to 22 mm		**XAC B961**		
15	Lower support ring for single row enclosures		**XAC B971**		
15	Lower support ring for 2 row enclosures		**XAC B972**		
16	Protective guard for key release latching mushroom head pushbutton, mounted in base		**XAC B982**		
17	Protective guard for mushroom head pushbutton, mounted in base		**XAC B983**		

Total price of assembled pendant station ☐

(1) Obtain the empty enclosure price.

Pendant control stations

Double insulated, type XAC F

For control circuits

(XAC F: Products for maintenance purposes only)

Environment

Conformity to standards			IEC 947-5-1, EN 60947-5-1
Protective treatment	Standard version		"TH"
Ambient air temperature	For storage	**°C**	- 40…+ 70
	For operation	**°C**	- 25…+ 70
Vibration resistance			15 gn (10…500 Hz) conforming to IEC 68-2-6
Shock resistance			100 gn conforming to IEC 68-2-27
Electric shock protection			Class II conforming to IEC 536 and NF C 20-030
Degree of protection			IP 65 conforming to IEC 529; IK 08 conforming to EN 50102
Mechanical durability (in millions of operating cycles)			1
Enclosure			Double insulated glass-reinforced polyester (yellow)
Cable entry			Rubber sleeve with stepped entry diameter for cable Ø 10…22 mm or Ø 22…35 mm

Contact block characteristics

Rated operational characteristics			∿ AC-15: A300 or Ue = 240 V, Ie = 3 A ⎓ DC-13: Q300 or Ue = 250 V, Ie = 0.27 A conforming to IEC 947-5-1 Appendix A
Thermal current (Ithe)		**A**	10
Rated insulation voltage (Ui)	**XEN C●●●●, XEN D3●●●, XEN D4●●●, XES B2011, XAC S4, XES D1181, XES D1281**	**V**	500, degree of pollution 3
	XEN B●●●●, XEN D1●●●, XEN D2●●●		400, degree of pollution 3, conforming to IEC 947-1
Rated impulse withstand voltage (U imp)		**kV**	6, conforming to IEC 947-1
Positive operation			Mushroom head pushbutton: N/C contact with positive opening operation conforming to IEC 947-5-1 Section 3
Contact operation			Slow break or snap action
Resistance across terminals		**MΩ**	⩽ 25
Operating force	With booted operator	**N**	**XAC S4●●●**: 10 (N/O), 8 (N/C); **XEN C●●●●**: 6 (N/O), 4 (N/C); **XEN B●●●●, XEN D1●●●, XEN D2●●●**: Single-speed: 9; 2-speed: 20 (1st speed), 30 (2nd speed); **XEN D3●●●, XEN D4●●●**: 25; **XES B2011**: 7; **XES D1181, XES D128**: 15 (1st speed), 25 (2nd speed)
	With spring return mushroom head operator	**N**	10
	With latching mushroom head operator	**N**	40
Terminal referencing			By numbers conforming to CENELEC EN 50013
Short-circuit protection			10 A cartridge fuse type gG (gl)
Connection		**mm²**	Screw and captive cable clamp terminals. Clamping capacity: 1 x 2.5 or 2 x 1.5 with or without cable end

Rated operational power
Conforming to IEC 947-5-1 Appendix C
Utilisation categories AC-15 and DC-13
For 1 million operating cycles
Operating rate: 3600 operating cycles/hour
Load factor: 0.5
∩ Inductive circuit

Contact blocks XEN C●●●●, XEN D3●●●, XEN D4●●●, XAC S4●●●

a.c. supply ∿ 50/60 Hz

Voltage	**V**	**24**	**48**	**127**	**230**
∩	VA	140	385	525	455

d.c. supply ⎓

Voltage	**V**	**24**	**48**	**120**
∩	W	60	45	42

Contact blocks XEN B●●●●, XEN D1●●●, XEN D2●●●

a.c. supply ∿ 50/60 Hz

Voltage	**V**	**24**	**48**	**127**	**230**
∩	VA	140	210	640	680

d.c. supply ⎓

Voltage	**V**	**24**	**48**	**120**
∩	W	48	31	35

Contact blocks XES B2011, XES D1181, XES D1281

a.c. supply ∿ 50/60 Hz

Voltage	**V**	**24**	**48**	**127**	**230**
∩	VA	50	100	450	750

d.c. supply ⎓

Voltage	**V**	**24**	**48**	**120**
∩	W	140	140	95

References: page 6/61
Dimensions: page 6/62
Application schemes: page 6/63
Presentation: page 6/64

Pendant control stations

Double insulated, type XAC F
For control circuits
Empty enclosures

(XAC F: Products for maintenance purposes only)

DF565680

XAC F00●0

Empty enclosures *(1)*

Description		Protective cable sleeve	Reference	Weight kg
Enclosures without cut-outs	Without guard rails	Ø 10…22 mm	**XAC F0010**	2.100
		Ø 22…35 mm	**XAC F0050**	2.300
	With guard rails	Ø 10…22 mm	**XAC F0011**	2.300
		Ø 22…35 mm	**XAC F0051**	2.500
Enclosures with cut-outs in positions requested on the order form, see page 6/65	Without guard rails	Ø 10…22 mm	**XAC F3210**	2.100
		Ø 22…35 mm	**XAC F3250**	2.300
	With guard rails	Ø 10…22 mm	**XAC F3211**	2.300
		Ø 22…35 mm	**XAC F3251**	2.500

DF565681

XAC F00●1

Variable composition stations, factory assembled

Use the order form on page 6/65 to define the required configuration

Equipment: separate components as for control circuit pendant stations XAC B and XAC M. Units XB2 B can be mounted using a stiffening plate, please consult us.	See separate components, pages 6/42 to 6/54

(1) Enclosure comprising:
- *the enclosure,*
- *protective cable sleeve for cable Ø 10…22 mm or Ø 22…35 mm,*
- *cable tie (for tightening sleeve onto cable,*
- *internal cable clamp.*

Characteristics: page 6/60
Dimensions: page 6/62
Application schemes: page 6/63
Presentation: page 6/64

Pendant control stations

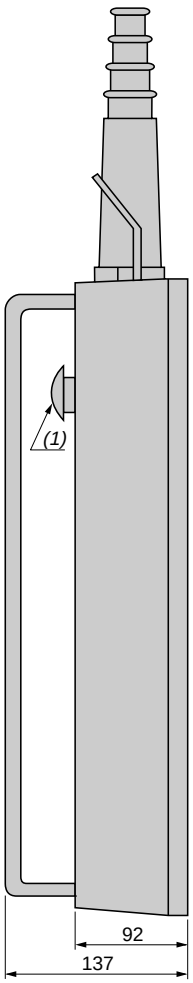
Double insulated, type XAC F

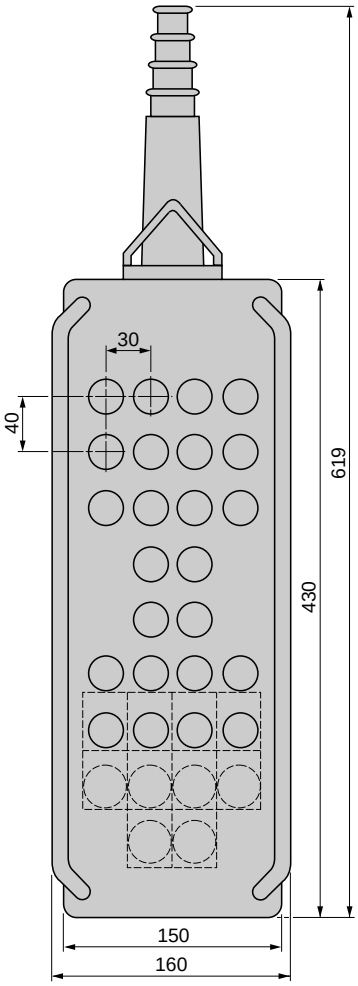
For control circuits

(XAC F: Products for maintenance purposes only)

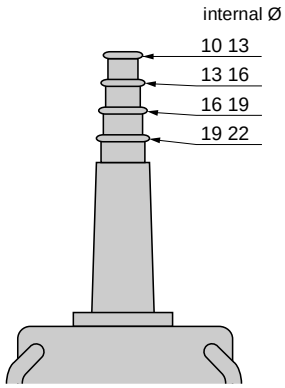
Pendant control stations

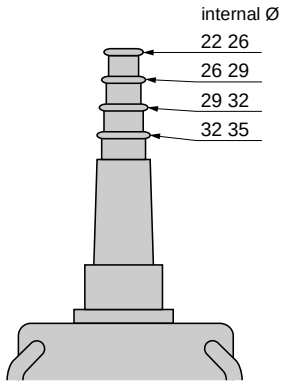
XAC F●●●1 (30 operators maximum, front mounting)





Protective cable sleeves

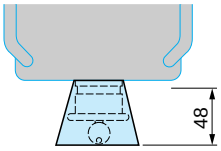




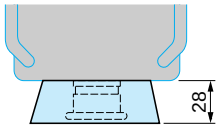
(1) With mushroom head operator.

Protective guards

XAC B982



XAC B983



Pendant control stations

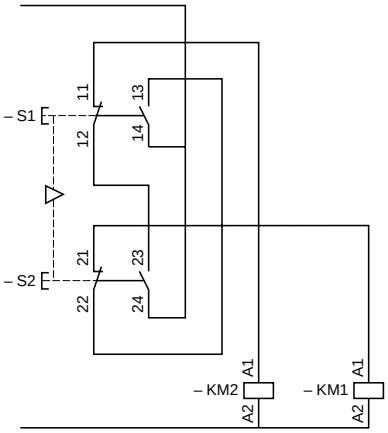
Double insulated, type XAC F

For control circuits

(XAC F: Products for maintenance purposes only)

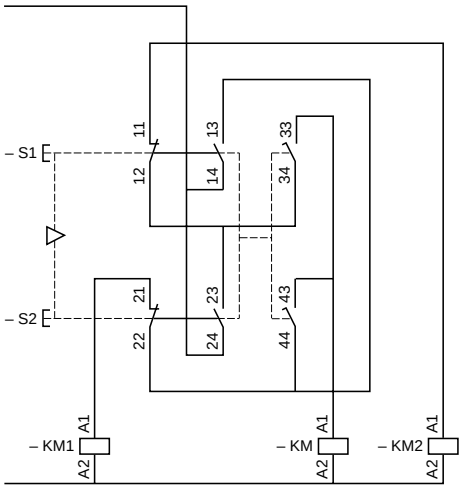
For control of single-speed reversing motor

Contact block **XES D1181**



For control of 2-speed reversing motor

Contact block **XES D1281**



KM: high speed contactor

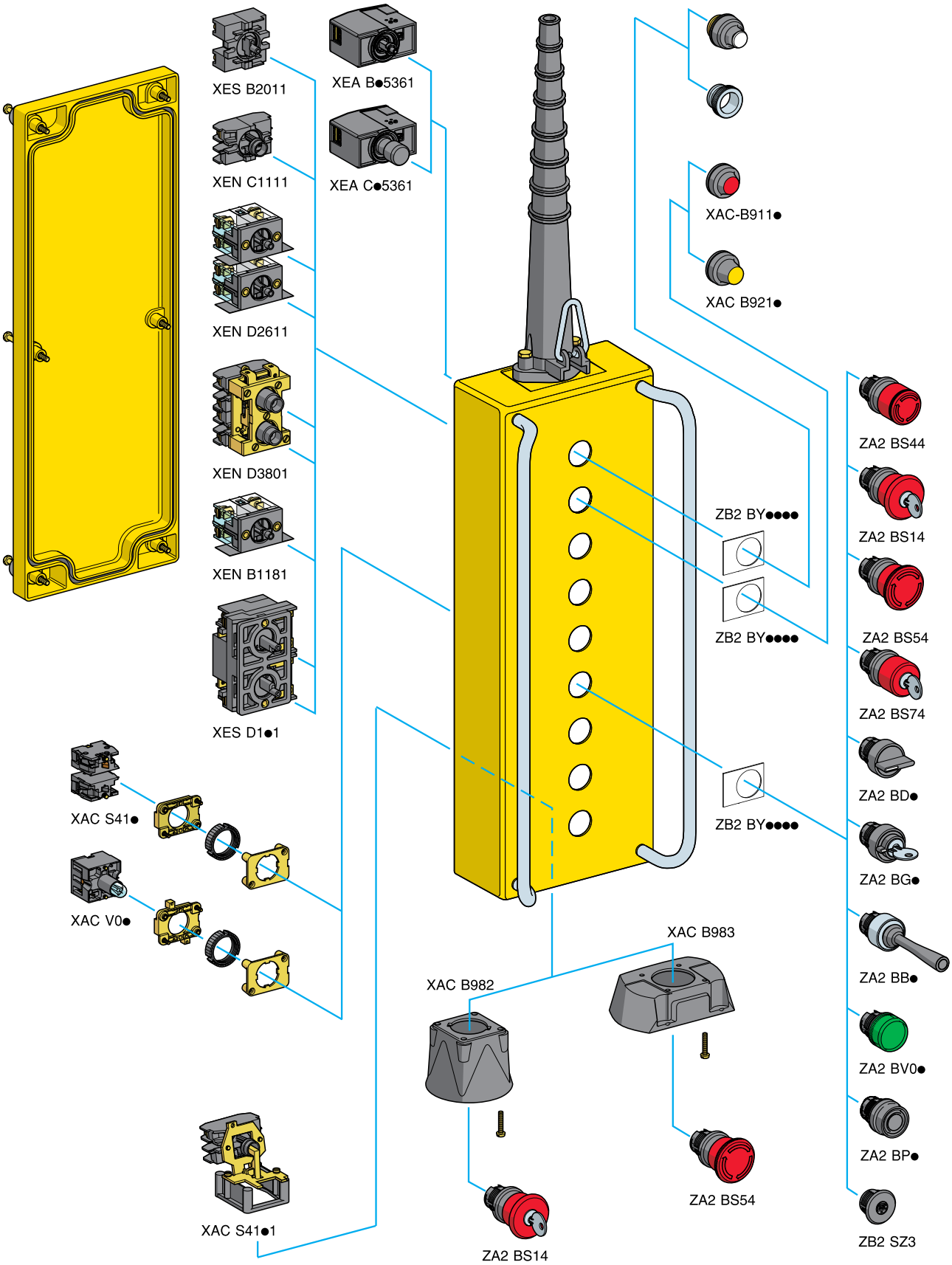
6

Pendant control stations

Double insulated, type XAC F

For control circuits

(XAC F: Products for maintenance purposes only)



Order form (specimen suitable for photocopying)

Pendant control stations

Double insulated, type XAC F

For control circuits

Variable composition stations, factory assembled

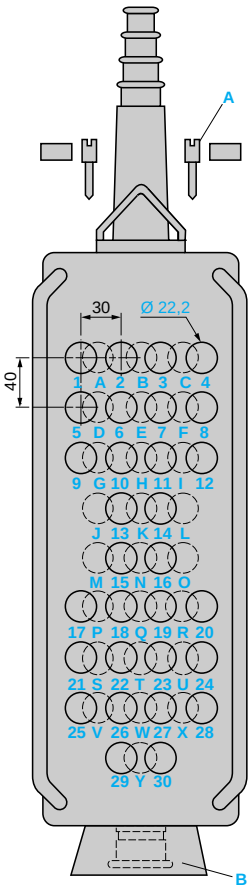
(XAC F: Products for maintenance purposes only)

Customer			**Schneider Electric Industries**	
Company	Order N°	Delivery date	Sales office - Subsidiary Co.	Order N°

Enter the order with XAC F09 reference

The cut-outs indicated below only enable the mounting of contact and pilot light bodies XAC in association with operating heads/lenses ZA2 B. For other configurations, the arrangement of the cut-outs must be specifically designed. In this case, attach the configuration of the units to be mounted to this order form.

Unit reference of empty enclosure with cut-outs, see page 6/61	**Number of identical stations**	**Enclosure price** *(1)*
XAC F 3 ☐ ☐ ☐		



Position of cut-outs (number or letter)	**Legends**, see pages 6/52 to 6/54		**Contact blocks or pilot light bodies**, see pages 6/42 to 6/45		**Operating heads or pilot light heads or blanking plug**, see pages 6/46 and 6/51		**Total price**
	Reference	Unit price	Reference	Unit price	Reference	Unit price	
Unit mounted in base, if required *(2)*							

Factory assembled:

Number of heads or blanking plugs to be fitted	X	Additional cost **XAC 9VA** for fitting of 1 head or 1 blanking plug	

Complementary accessories, see page 6/52 (cross the appropriate box or boxes)

	Description	✕	Reference	Unit price	
A	Adaptor for self-supporting cable type BBAP for use with cable entry sleeve Ø 10…22 mm		**XAC B961**		
B	Protective guard for mushroom head pushbutton, mounted in base		**XAC B983**		
	Protective guard for key release latching mushroom head pushbutton, mounted in base		**XAC B982**		

Total price of assembled pendant station ☐

(1) Obtain the empty enclosure price with cut-outs.
(2) If positions Y, 29 or 30 are used, a unit cannot be mounted in the base of the enclosure.

Controllers
For hoisting applications, types **XD** and **XK**

Applications			**"Light hoisting"**		
			Compact and light weight		
			For control of small materials handling equipment, elevating work platforms, fork-lift trucks, etc. Can be installed on control panels or enclosures types XAL, XAM and XAP	**For control of materials handling equipment, public work cranes, etc. Can be installed on portable controller stations type XJP**	
Mechanical durability (in millions of operating cycles)			1 in each direction	1 in each direction	1 in each direction
Number of directions	Basic		2 or 4 depending on model	4	4
	Variable composition		–	8	8
Number of movements			1 or 2	2	2
Maximum number of notches in each direction			**XD2**: 1 or 2 **XD4**, **XD5**: 1	3	3
Types of lever movement	Notched	with stayput operation	■	■	■
		with spring return to zero operation	■	■	■
	Unnotched	with spring return to zero operation	–	■	■
Operating schemes			Predefined cams	Predefined cams	Variable composition cams
Maximum number of contacts per movement			**XD2**: 4 (1 or 2 N/O contacts in each direction) **XD4**, **XD5**: 2 (1 N/O contact in each direction)	4 or 4 + 1 zero (centre) position contact	4 or 4 + 1 zero (centre) position contact
Contact *(1)*	Supply		∿ and ⎓	∿ and ⎓	∿ and ⎓
	Nominal thermal current		10 A	10 A	10 A
Mechanical durability of contact blocks (in millions of operating cycles)			5	1	1
Control device			Vertical lever	Vertical lever	Vertical lever
Handles *(2)*	a simple		■	■	■
	b1 with zero (centre) position mechanical interlocking		–	■	■
	b2 with zero (centre) position mechanical and electrical interlocking		–	■	■
	c1 "Dead man's" type		–	■	■
	c2 with built-in pushbutton		–	■	■
Lever gate			Fixed composition 30° in each direction	Variable composition	Variable composition
Maximum number of potentiometers per movement			–	1 or 2 depending on contact block arrangement	1 or 2 depending on contact blocks arrangement
Type references			**XD2, XD4, XD5**	**XKB A**	**XKB E**
Page(s)			1/97, 1/165 and 1/183	6/72	6/74

(1) N/C slow break contacts with positive opening operation. Contacts closed in absence of cam lobe.
(2) Handles type b1 and b2 are designed in accordance with the French hoisting standard NF E 52070 (Dec. 1985): Electrical equipment of hoisting devices, paragraph 8231: all control devices must be designed, constructed and positioned in such a manner as to avoid any accidental operation…

“Medium hoisting”	“Heavy hoisting”		
Compact and fully configurable unit	**Extremely robust and fully configurable unit**		
For control of cranes, overhead travelling cranes, etc. Can be installed on fixed seated controller desks type XJC	**For control of overhead travelling cranes (iron and steelworks, rolling mills) etc. Can be installed on seated controller desks type XJC**		
3 in each direction	4 in each direction	4 in each direction	4 in each direction
4	4	2	2
8	8	2	2
2	2	1	1
5	6	6	9
■	■	■	■
■	■	■	■
■	■	■	■
Variable composition cams	Variable composition cams	Variable composition cams	Variable composition cams
16	24	24	12
∿ and ⎓	∿ and ⎓	∿ and ⎓	∿ and ⎓
10 A	20 A	20 A	20 A
3	4	4	4
Vertical lever	Vertical lever	Vertical lever	Side lever
■	■	■	■
■	■	■	–
■	■	■	–
■	■	■	–
■	■	■	–
Predefined or customised	Predefined or customised	–	–
2	2	2	1
XKD F	**XKM A**	**XKM B**	**XKM C**
6/80	6/88	6/88	6/94

Controllers
For hoisting applications, type **XK**

Controller

The controllers are units designed to control hoisting and materials handling equipment by grouping their electrical circuits.
They comprise adaptable sub-assemblies that enable the construction of many different versions.
Used in association with automation system equipment, they ensure the starting, acceleration and braking of the drive motors.
They are designed for fitting into portable controller stations or controller desks. The mounting is dust and damp protected.

Mechanical block

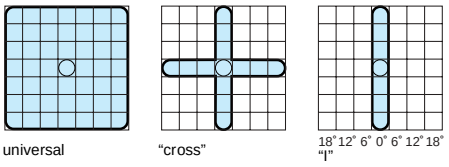
Articulated mechanical assembly that holds the control lever, lever gate, actuating mechanism, cam carriers, contacts and potentiometer adaptation device.

Control lever

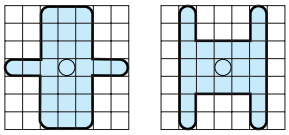
Operating device that enables separate or simultaneous control of the movements. Fitted to it are dust and damp protecting bellows, the handle and mechanical and electrical safety devices that are actuated when the controller lever is returned to its zero (centre) position.

Lever gate

Standard lever gates



Examples of special lever gates



2 types of lever gate:
■ Standard types:
□ universal: allows the lever to move to its maximum travel in 1 or 2 directions simultaneously ("universal" or "8-direction" controller),
□ "cross" or "I" gates: only allow the lever to move to its maximum travel in 1 direction at a time.

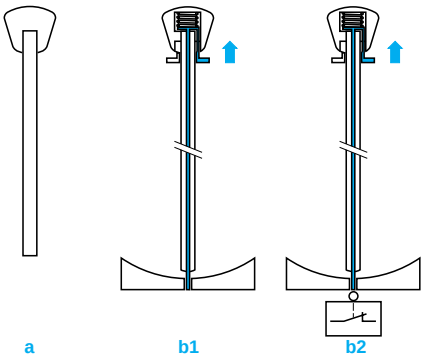
■ Special types: related to the application, they are used to control the required combination of movements.

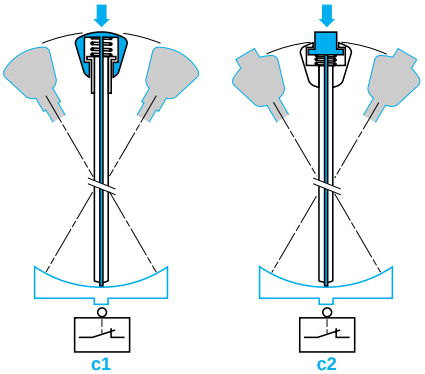
End stops

Additional devices for limiting the lever travel to a number of positions in a given direction.

6

Handles





a **Simple handle:** fixed knob screwed onto the control lever.

b1 **Handle with zero (centre) position mechanical interlock**.
Operation:
The knob of the handle comprises a fixed part (upper section) and a moving part (lower section).
When the lever is in the zero (centre) position, it is mechanically locked by a sliding rod within the lever.
To disengage the lock, the lower part of the handle is pulled upwards thus freeing the rod.

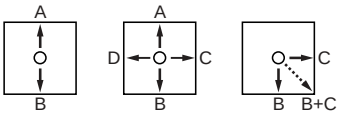
b2 **Handle with zero (centre) position mechanical interlock + electrical contact.**
Mechanical operation identical to that described above.
When the lever is in the zero (centre) position, the rod actuates a contact block.
The disengagement of the lock causes the contact(s) in the block to change state.

c1 **"Dead man's" handle.**
Operation:
The knob of the handle comprises a fixed part (lower section) and a moving part (upper section).
When the upper section of the knob is pushed downwards it pushes a sliding rod within the lever.
This rod actuates a moving bowl which, in turn, causes a contact block (located in the lower part of the mechanism) to change state and remain in this condition irrespective of the control lever position.

c2 **Handle with built-in flush or projecting pushbutton (audible alarm type).**
Mechanical operation identical to that described above.
The handle is fixed and it is only the pushbutton that operates the sliding rod.

Controllers
For hoisting applications, type **XK**

Direction



This is the direction of operation of the control lever away from its zero (centre) position towards one of 2 or 4 directions (either 2 directions directly in line or 4 directions at 90°).
Diagonal movement is the operation of 2 directions simultaneously.

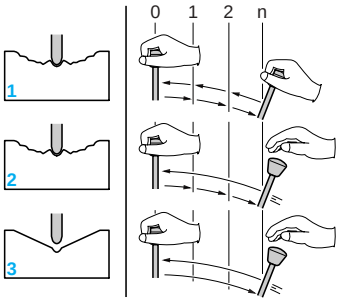
Movement

The movement is the combination of 2 directions either side of the zero position that are directly in line.

Electrical position

This is the change of state of a contact block obtained by angular displacement of the control lever.

Types of lever movement



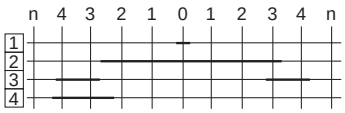
Three different types of lever operation for each direction:
1 **Notched positions, with stayput operation.**
The control lever is moved notch by notch from its zero (centre) position to its maximum travel position in the required direction.
The lever maintains its position when the operator releases the handle.
2 **Notched positions, with spring return to zero operation.**
Notched operation identical to that described above but with an automatic device that returns the lever to its zero (centre) position when the operator releases the handle.
3 **Unnotched positions, with spring return to zero operation.**
The control lever of the controller is moved from its zero (centre) position to its maximum travel position in the required direction without notching.
Irrespective of its position, the lever spring returns to the zero (centre) position when the operator releases the handle.

Electrical contacts

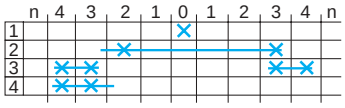
When designing the scheme take into account that all contacts are closed until actuated (opened) by an operating cam.

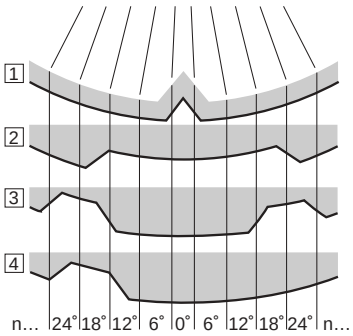
Cam schemes

Electrical scheme in accordance with IEC 113-4



Controller scheme in accordance with IEC 337-2A





The contact blocks are actuated by a series of various length cams which are arranged to provide the required scheme.
These cams can either be:
□ variable composition, i.e. comprising different sub-assemblies mounted on a cam carrier,
□ predetermined, i.e. for a function that is widely used in conventional schemes.
Example: reversing cams for direction of operation.

Cam carriers

Mechanism designed for mounting cams on for controllers with variable composition cams.

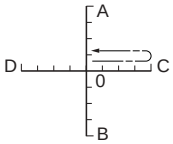
Cam actuation of contacts

When actuated by the cam lobe, the contact opens thus ensuring positive opening operation. Therefore, the presence of a cam corresponds to the absence of a cross or line on the scheme.

Example of graphic representation of a scheme

The various methods for indicating the operating sequence of the contacts are represented by schemes in accordance with IEC 113-4 or IEC 337-2A (section 2).
The ordering grids for XK controllers are designed in accordance with IEC 337-2A (section 2).
Take particular note of the way an assured electrical overlapping is represented as is shown for contacts 2 and 4 between positions 2 and 3 (see diagram to left).

Operating cycle

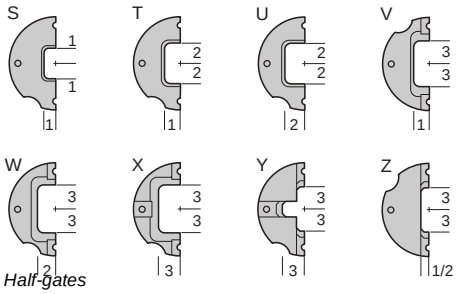


An operating cycle applied from an initial common O position is the passing from this initial position to the extreme position in each direction and subsequent return to the initial O position.

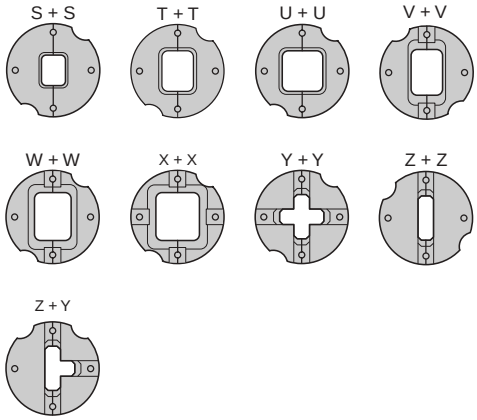
Controllers
For “light hoisting” applications, type **XKB**

109229-34_M

XKB ●



Half-gates



9 main combinations

Compact and lightweight units, designed to control “light hoisting” and materials handling equipment. Mainly for use in portable stations.
2 models:
■ **XKB A**: controllers with predefined, non modifiable, scheme.
■ **XKB E**: controllers with variable composition schemes.

Control lever
Length: 130 mm. Travel in each direction: 28° maximum.

Lever gate
Universal and modifiable.
Specific, by adding half-gates to the universal lever gate (referenced by letter) 9 main combinations. .

End stops
The total lever travel can be limited to 20° or 12° by using removable end stops (**XKB Z972** for 20°, **XKB Z971** for 12°) when the lever gate comprises half-gates Y or Z.

Handles
■ Simple handle with zero (centre) position contact (closed at zero).
■ Handle with zero (centre) position mechanical interlock + contact (closed at zero).
■ “Dead man’s” handle with contact (open when handle released).
■ Handle with built-in flush or projecting pushbutton and contact (open when pushbutton or handle released).

***Note:** it is important to decide which type of handle is required when selecting the controller, since modification cannot be affected after installation.*

Electrical positions
3 positions maximum in each direction.

Types of lever movement
■ **Notched positions, with stayput operation**: 3 notches maximum in each direction (12°, 20°, 28°).
■ **Notched positions, with spring return to zero operation**: 3 notches maximum in each direction (12°, 20°, 28°). (XKB E: only 1 contact may be used at each notch.)
■ **Unnotched positions, with spring return to zero operation**: 28° maximum travel in each direction. (XKB E: only 1 contact may be used for each spring return to zero position.)

Contacts
The contact blocks used for establishing the scheme are located in a monobloc assembly. There are 2 types:
□ Block with 4 contacts per movement.
□ Block with 4 contacts per movement + 1 zero (centre) position contact.
For both types, an additional contact is available. Its function depends on the type of handle.

Cam schemes
■ **XKB A**: standard schemes can be established using predefined cams. These cams are moulded and cannot be modified.
2 versions:
□ Using a block with 4 contacts per movement: 2 reversing cams and 2 function cams per movement.
□ Using a block with 4 contacts per movement + 1 zero (centre) position contact: 2 reversing cams and 2 function cams per movement + 1 zero (centre) position cam.
■ **XKB E**: special schemes can be established using snap-on cams (for each position) mounted on cam carriers. (overlapping contact operation is not possible).
2 versions:
□ Using a block with 4 contacts per movement: 4 variable composition cams per movement.
□ Using a block with 4 contacts per movement + 1 zero (centre) position contact: 4 variable composition cams per movement + 1 fixed composition zero (centre) position cam.

Legend
One 100 x 100 mm anodised aluminium legend plate with matt satin finish.
Standard “hoist-long travel” and “traverse-slew” symbols or text (to be stated on Order form, see page 6/73).

Potentiometer adaptation
■ 2 potentiometers maximum per movement when using block with 4 contacts per movement.
■ 1 potentiometer maximum per movement when using block with 4 contacts per movement + 1 zero (centre) position contact.

Characteristics: page 6/71
Order form: pages 6/73 and 6/74
Dimensions: page 6/100

Controllers
For “light hoisting” applications, type **XKB**

Environment

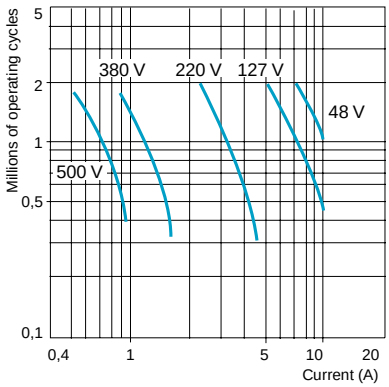
Conformity to standards			IEC 337-1, NF C 63-140, VDE 0660 part 2
Product certifications			XKB A: CSA ∿ 300 V “heavy duty”, ⎓ “standard duty”, ASE: 500 mV max., 10 A max., 100 VA max., USSR
Protective treatment			Standard version “TC”
Ambient air temperature	For storage	**°C**	- 40…+ 70
	For operation	**°C**	- 20…+ 70
Operating position			All positions
Vibration resistance			6 gn (1 to 70 Hz)
Shock resistance	Conforming to IEC 68-2-27		20 gn, duration 11 ms
Electric shock protection	Conforming to IEC 536 and NF C 20-030		Class I
Maximum operating lever force required in each direction		**daN**	< 1.7
Degree of protection	Conforming to IEC 529		IP 54 (unit with simple handle mounted in dust and damp proof enclosure)
Mechanical durability (In millions of operating cycles)			1 in each direction
Weight		**kg**	**XKB A** and **XKB E**: 0.850

Contact block characteristics

Type		Monobloc assembly comprising 9 double-break contacts (8 function contacts and 1 zero position contact mounted at lever base) or monobloc assembly comprising 11 double-break contacts (8 function contacts + 2 zero position contacts and 1 zero position contact mounted at lever base)
Conventional thermal current	**A**	10 conforming to IEC 337-1, NF C 63-140, VDE 0660, CSA C 22-2 n° 14
Rated insulation voltage	**V**	≂ 500 conforming to NF C 20-040, VDE 0110, IEC 158-1
Insulation category		Group C conforming to NF C 20-040 and VDE 0110
Contact operation		Slow break, double-break contacts with positive opening operation; N/O (green operator). N/C contact (red operator): zero position contact mounted at lever base
Resistance across terminals	**mΩ**	⩽ 25 (in accordance with NF C 93-050, at 1 A)
Terminal referencing		Conforming to CENELEC EN 50013
Short-circuit protection		10 A cartridge fuse type gG conforming to IEC 337-1B, VDE 0660 part 2

Operational power
Conforming to IEC 337-1
Utilisation categories AC-11 and DC-11
Operating rate: 3600 operating cycles/hour
Load factor: 0.5

a.c. supply ∿ 50-60 Hz
∩∩∩ Inductive circuit



d.c. supply ⎓

Power broken in W for 1 million operating cycles

Voltage V	**24**	**48**	**120**
∩∩∩	90	90	75

Connection	Captive screw clamp terminals	Clamping capacity: □ minimum 1 x 0.5 mm², □ maximum, with or without cable end: 2 x 1.5 mm² or 1 x 2.5 mm², or by clips conforming to NF C 20-120

Order form:
pages 6/72 to 6/75

Dimensions:
page 6/100

Controllers

For “light hoisting” applications, types **XKB A** and **XKB E**

Grid for composing the reference of a controller

Reference of controller type XKB

	Model	Contacts	Handle	Lever movement AB	Lever movement CD	Potentiometer adaptation
XKB						

Model

With predefined scheme	**A**
With variable composition scheme	**E**

Contact blocks

Block with 4 contacts per movement	Screw clamp terminal connections	**1**
	6.3 clip connections	**2**
Block with 4 contacts per movement + 1 zero (centre) position contact	Screw clamp terminal connections	**3**
	6.3 clip connections	**4**

Handle

Simple + zero (centre) position electrical interlocking (contact closed in rest position)	**1**
With zero (centre) position mechanical and electrical interlocking (contact closed in rest position)	**2**
“Dead man’s” type (contact open when released)	**4**
With built-in flush pushbutton (contact open in rest position)	**5**
With built-in projecting pushbutton (contact open in rest position)	**6**

Type of lever movement

On movement AB

Movement not required (blocked)	**0**
Notched positions, with stayput operation	**1**
Unnotched positions, with spring return to zero operation	**2**
Notched positions, with spring return to zero operation *(1)*	**3**

On movement CD

Movement not required (blocked)	**0**
Notched positions, with stayput operation	**1**
Unnotched positions, with spring return to zero operation	**2**
Notched positions, with spring return to zero operation *(1)*	**3**

Potentiometer adaptation

Without adaptation nor potentiometer		**0**
Adaptation only (without potentiometer)	On movement AB	**4**
	On movement CD	**5**
	On movements AB + CD	**6**
Adaptation + potentiometer *(2)*	On movement AB	**7**
	On movement CD	**8**
	On movements AB + CD	**9**

(1) Type of lever operation recommended when using a potentiometer.
(2) Potentiometer type and value to be stated on the Order form. For standard application potentiometers, see page 6/104.

Characteristics: page 6/71
Dimensions: page 6/100

Order form

(specimen suitable for photocopying)

Controllers

For “light hoisting” applications, type **XKB A**

Controllers XKB A with predefined, non modifiable schemes, factory assembled

See example on page 6/75

Customer		Schneider Electric Industries			
Company	Customer’s reference	Sales office - Subsid. - Plant	Editor	Geographical zone	Order N°

Reference (use the grid for composing the reference of a controller on page 6/72)

		Model	Contacts	Handle	Lever movement AB	Lever movement CD	Potentiometer adaptation
Number of identical units	XKB	A					

For Schneider Electric Industries use only

Order N°	Item N°		MOD	ETI	POI	GLV	CTS	MAB	MCD	PAB	PCD
		XKB									

Lever gate

In accordance with the half-gates available, sketch and crosshatch the lever’s field of movement on the scheme grids below.
In the absence of this information, the controller will be supplied with a “universal” gate.

Potentiometer adaptation

Cross ☒ the required position on the schemes below.

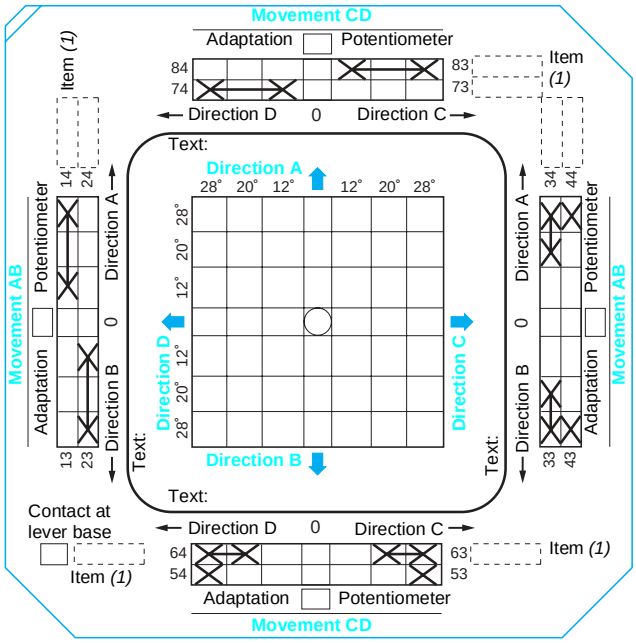
On movement AB	Type/size:	
	Value:	
On movement CD	Type/size:	
	Value:	

Legend

Without legend	☐
With blank legend **XKB Y1**	☐
With “traverse-slew” symbols, **XKB Y2**	☐
With “hoist-long travel” symbols, **XKB Y3**	☐
With specific engraved text, **XKB Y1001** (clearly state the text on the scheme below)	☐
Left-hand operated unit	☐
Right-hand operated unit	☐

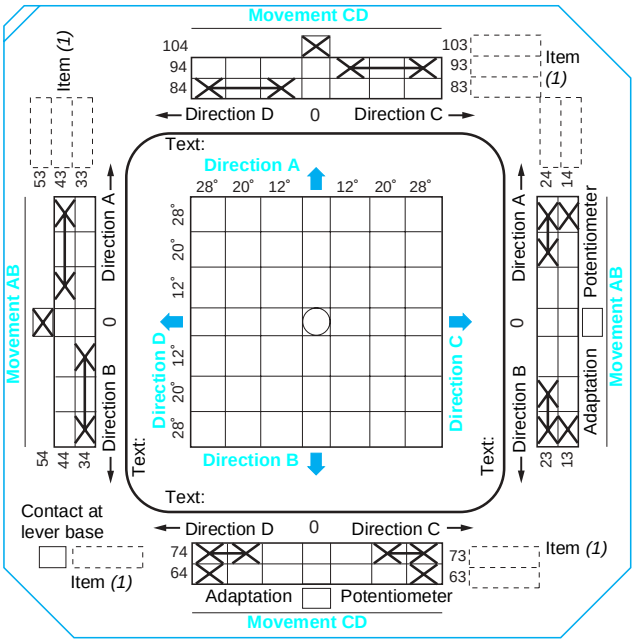
Scheme 1: 4 contacts per movement (viewed from above)

Orientation locater



Scheme 2: 4 contacts + 1 zero (centre) position contact per movement (viewed from above)

Orientation locater



(1) Reserved for contact identification in the automation system scheme. It is not possible to mark it on the controller.

Characteristics: page 6/71
Dimensions: page 6/100

Order form

(specimen suitable for photocopying)

Controllers

For “light hoisting” applications, type **XKB E**

Controllers XKB E with variable and modifiable schemes, factory assembled

Customer		Schneider Electric Industries			
Company	**Customer’s reference**	**Sales office - Subsid. - Plant**	**Editor**	**Geographical zone**	**Order N°**

Reference **(use the grid for composing the reference of a controller on page 6/72)**

			Model	Contacts	Handle	Lever movement AB	Lever movement CD	Potentiometer adaptation
Number of identical units		**XKB**	**E**					

For Schneider Electric Industries use only										
Order N°	Item N°		MOD	ETI	POI	GLV	CTS	MAB	MCD	PAB	PCD
		XKB									

Lever gate

In accordance with the half-gates available, sketch and crosshatch the lever’s field of movement on the scheme grids below.
In the absence of this information, the controller will be supplied with a “universal” gate.

Potentiometer adaptation

Cross☒ the required position on the schemes below.

On movement AB	Type/size:
	Value:
On movement CD	Type/size:
	Value:

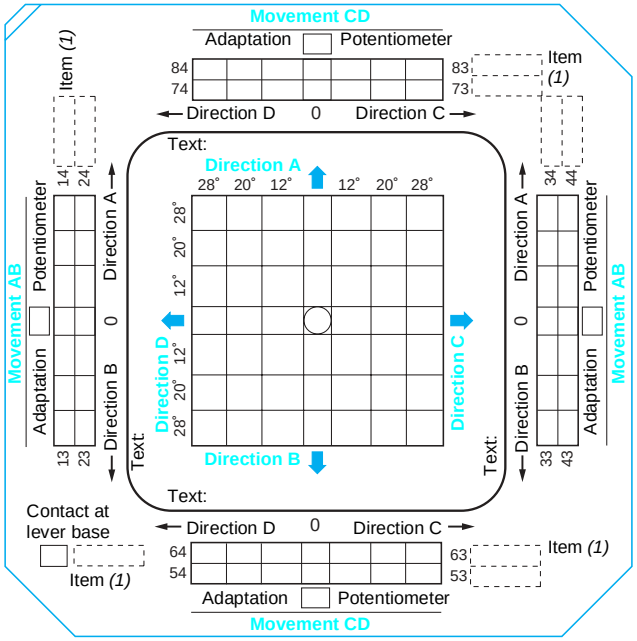
Legend

Without legend	☐
With blank legend, **XKB Y1**	☐
With “traverse-slew” symbols, **XKB Y2**	☐
With “hoist-long travel” symbols, **XKB Y3**	☐
With specific engraved text, **XKB Y1001** (clearly state the text on the scheme below)	☐
Left-hand operated unit	☐
Right-hand operated unit	☐

⚠ If the scheme is not defined, all **XKB E** controllers will be supplied with the standard scheme as used for XKB A.

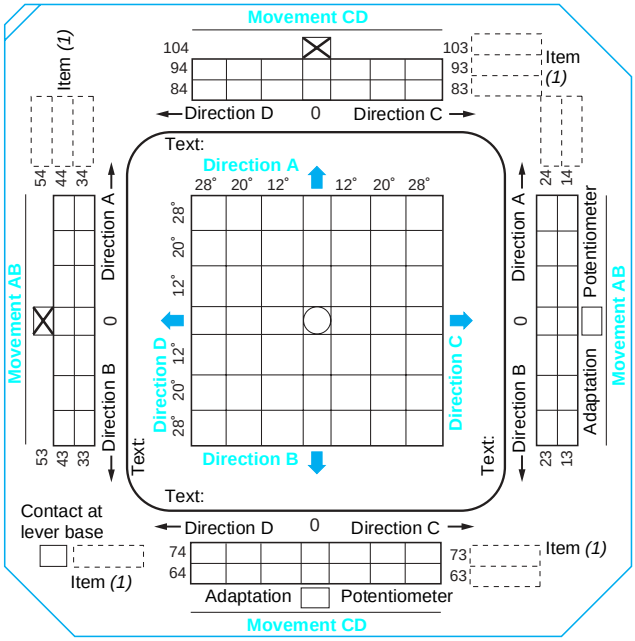
Scheme 1: 4 contacts per movement (viewed from above)

Orientation locater



Scheme 2: 4 contacts + 1 zero (centre) position contact per movement (viewed from above)

Orientation locater



(1) Reserved for contact identification in the automation system scheme. It is not possible to mark it on the controller.
Spring return operation: only 1 contact can be used with spring return at each notch.

Controllers

For “light hoisting” applications, type **XKB E**

Ordering form completion example

Requirement

A 2 movement controller:
“hoist-long travel”.
“Universal” lever gate, limited to 2 “lower” positions.

Composition of the reference (see page **6/72**)

XKB	E	3	4	2	3	7

Model
With variable composition scheme (customised electrical scheme as shown below) — E

Contact blocks
Block with 4 contacts + 1 zero (centre) position contact per movement (screw clamp terminals). — 3

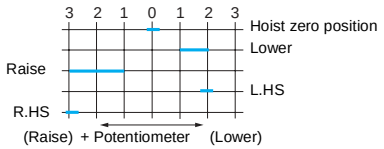
Handle
“Dead man’s” type — 4

Type of lever operation on movement AB
Unnotched positions, with spring return to zero operation — 2

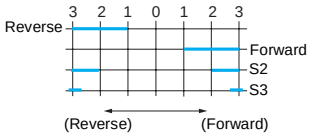
Type of lever operation on movement CD
Notched positions, with spring return to zero operation — 3

Potentiometer adaptation
With adaptation device + potentiometer on movement AB, standard 4700 Ω, size 15, model — 7

Electrical scheme for movement AB “hoist”



Electrical scheme for movement CD “long travel”



Lever gate
In accordance with the half-gates available, sketch and crosshatch the lever’s field of movement on the scheme grids below.
In the absence of this information, the controller will be supplied with a “universal” gate.

Potentiometer adaptation
Cross ☒ the required position on the schemes below.

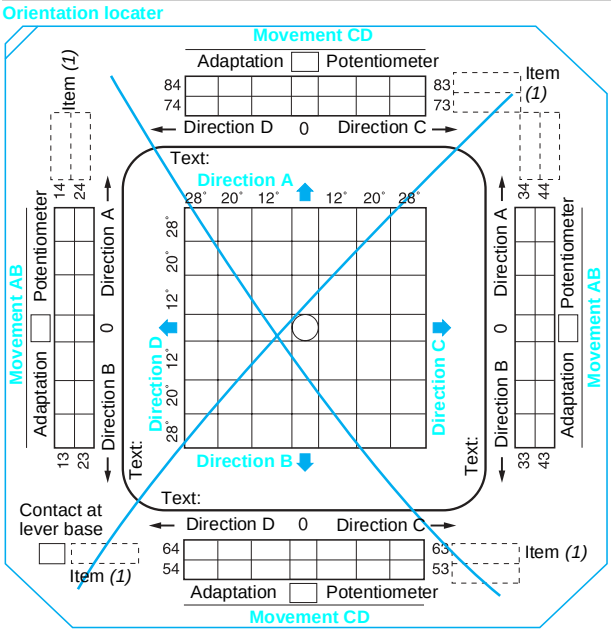
On movement AB	Type/size:	XKZ A15047
	Value:	4700 Ω
On movement CD	Type/size:	
	Value:	

Legend

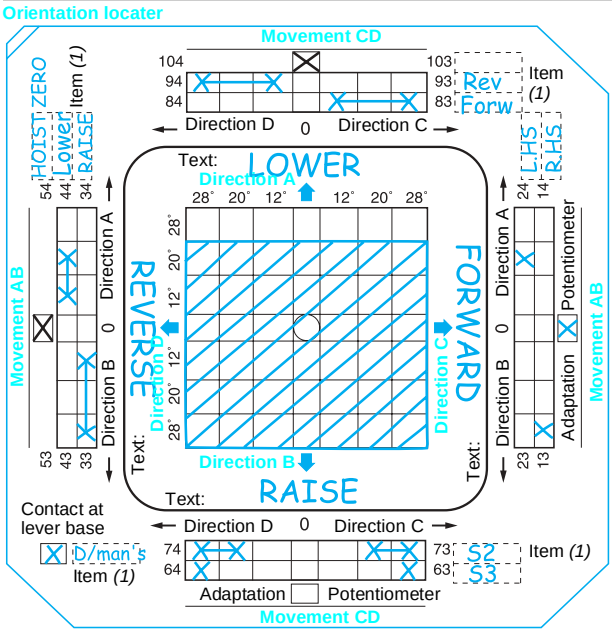
Without legend	☐	With specific engraved text, **XKB Y1001** (clearly state the text on the scheme below)	
With blank legend, **XKB Y1**	☐	Left-hand operated unit	☐
With “traverse-slew” symbols, **XKB Y2**	☐	Right-hand operated unit	☒
With “hoist-long travel” symbols, **XKB Y3**	☐		

⚠ If the scheme is not defined, all **XKB E** controllers will be supplied with the standard scheme as used for XKB A.

Scheme 1: 4 contacts per movement (viewed from above)



Scheme 2: 4 contacts + 1 zero (centre) position contact per movement

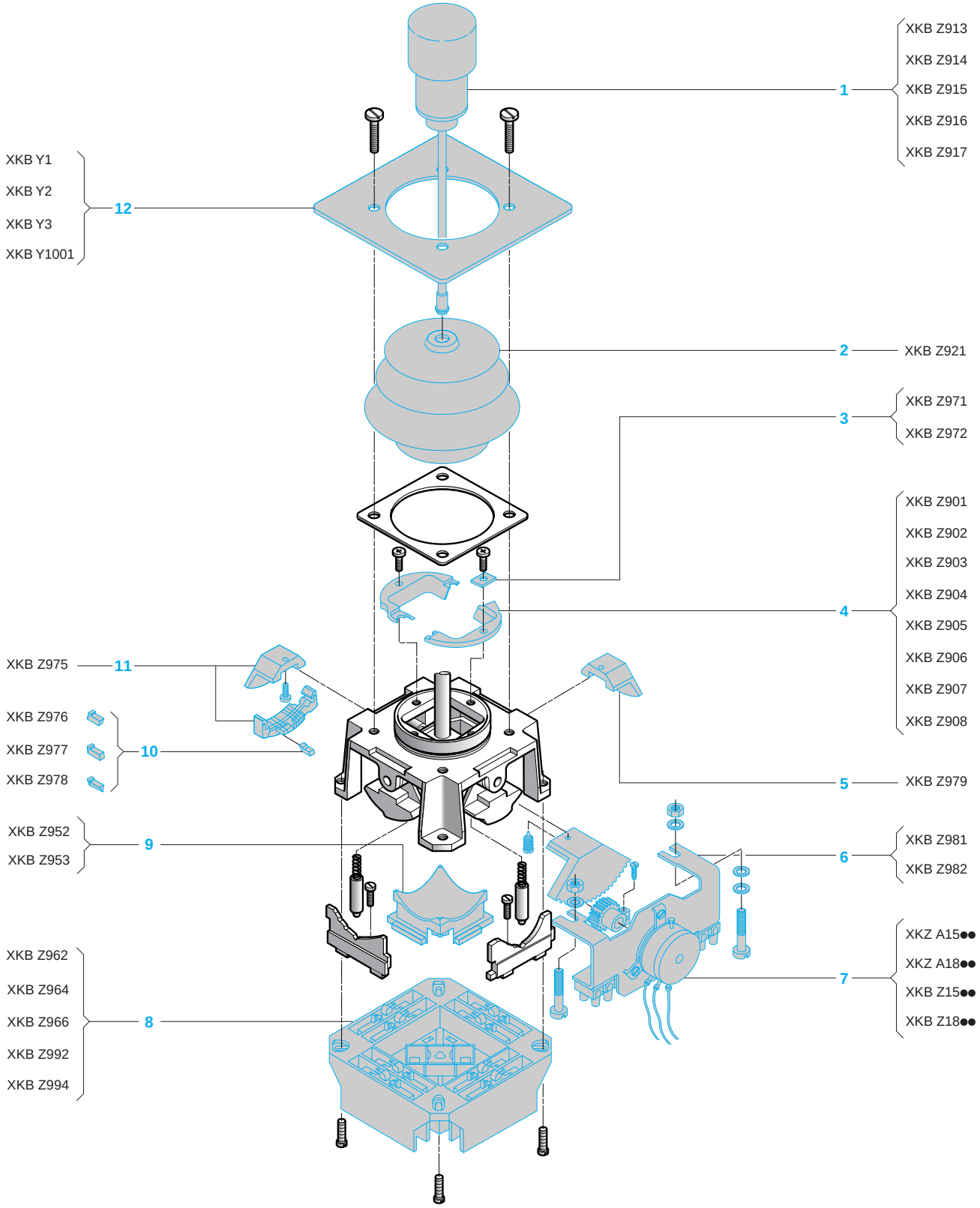


(1) Reserved for contact identification in the automation system scheme. It is not possible to mark it on the controller.
Spring return operation: only 1 contact can be used with spring return at each notch.

Controllers

For “light hoisting” applications, type **XKB**

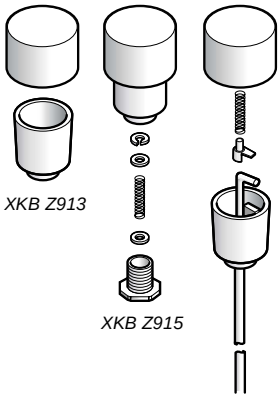
Separate components

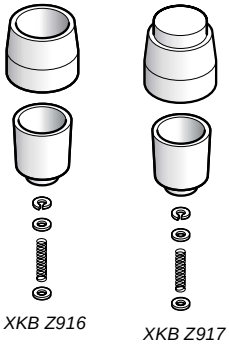


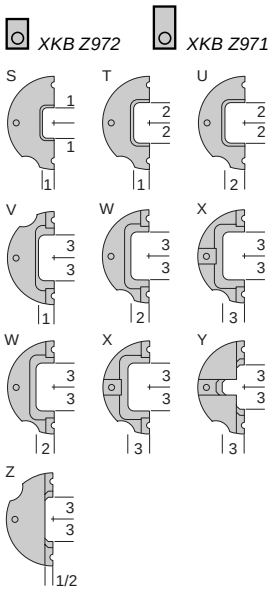
Controllers

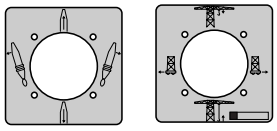
For “light hoisting” applications, type **XKB**

Separate components









Description	Item	Characteristics	Unit reference	Weight kg
Bellows	2	–	**XKB Z921**	0.060
Handles ⚠ Not interchangeable between different models	1	Simple	**XKB Z913**	0.030
		With zero (centre) position interlocking	**XKB Z914**	0.040
		“Dead man’s” type	**XKB Z915**	0.045
		With built-in flush pushbutton	**XKB Z916**	0.030
		With built-in projecting pushbutton	**XKB Z917**	0.030
Lever gate Universal and modifiable Specific, by adding half-gates to the universal lever gate (referenced by letter)	4	S	**XKB Z901**	0.005
		T	**XKB Z902**	0.005
		U	**XKB Z903**	0.005
		V	**XKB Z904**	0.005
		W	**XKB Z905**	0.005
		X	**XKB Z906**	0.005
		Y	**XKB Z907**	0.005
		Z	**XKB Z908**	0.005
Removable end stops Sold in lots of 10	3	Stop limiting to 1 notch of movement	**XKB Z971**	0.025
		Stop limiting to 2 notches of movement	**XKB Z972**	0.020
Contacts: block with 4 contacts per movement Screw clamp terminal connections	8	For use with simple handle or handle with zero (centre) position interlocking	**XKB Z962**	0.185
		For use with “Dead man’s” handle or handle with built-in pushbutton	**XKB Z966**	0.185
Contacts: block with 4 contacts per movement + 1 zero (centre) position contact Screw clamp terminal connections	8	For use with simple handle or handle with zero (centre) position interlocking	**XKB Z992**	0.215
		For use with “Dead man’s” handle or handle with built-in pushbutton	**XKB Z994**	0.215
Cam carriers for variable composition cams (XKB E only) Sold in lots of 20	11	–	**XKB Z975**	0.105
Cams **(XKB E only)** Sold in lots of 50	10	Right-hand position (colour: green)	**XKB Z976**	0.010
		Left-hand position (colour: red)	**XKB Z977**	0.010
		Pass cam (colour: black)	**XKB Z978**	0.010
Zero (centre) position cam with fixing screw	5	–	**XKB Z979**	0.010
Lever base adaptations	9	Interlocking bowl	**XKB Z952**	0.010
		Bowl for “Dead man’s” handle or handle with built-in pushbutton	**XKB Z953**	0.010
Legends	12	Blank	**XKB Y1**	0.025
		“Traverse - slew”	**XKB Y2**	0.025
		“Hoist - long travel”	**XKB Y3**	0.025
		With specific engraved text	**XKB Y1001**	0.025
Potentiometer adaptation kits *(1)*	6	Size 15	**XKB Z981**	0.090
		Size 18 *(2)*	**XKB Z982**	0.090
Potentiometers for controllers XKB	7	–	**XKZ A15●●, A18●●** **XKB Z15●●, Z18●●** See pages 6/104 and 6/105	–

(1) Including 13 tooth pinion.
- *The maximum lever travel of 28° per direction corresponds to a potentiometer shaft rotation of 161°.*
- *Levers with friction drive facility are available under certain conditions: please consult your Regional Sales Office.*

(2) The size 18 potentiometer adaptation on an XKB controller prevents it from being mounted in an XJP controller station.

Controllers

For “medium hoisting” applications, type **XKD**

109230-34-

XKD F

Compact and fully configurable units designed to control “medium hoisting” equipment.
Mainly for use on fixed control stations or seated controller desks type **XJC**.
1 model:
■ **XKD F**: controller with variable composition schemes.

Control lever

Length: 200 mm. Travel in each direction: 36° maximum.

Lever gate

Integral, non removable, part of the mechanical block. Must be specified on the Order form.

Handles

■ Simple handle.
■ Handle with zero (centre) position mechanical interlock.
■ Handle with zero (centre) position mechanical interlock + 1 C/O snap action contact.
■ “Dead man’s” handle + slow break contact(s).
■ Handle with built-in flush or projecting pushbutton + slow break contact(s).

Angular electrical positions

■ 6 positions maximum in each direction.

Types of lever movement

■ **Notched positions, with stayput operation**
2 versions:
□ 5 notches maximum in each direction, at 12°, 18°, 24°, 30° and 36° (6° per notch), only when used with variable composition cam carriers comprising 4 or 8-contact blocks (1st notch at 6°).
□ 3 notches maximum in each direction, at 12°, 24° and 36° (12° per notch), only when used with variable composition cam carriers comprising 2-contact blocks.

Note: *It is possible to use, on the same movement, a “5 notch max.” cam carrier combined with a “3 notch max.” cam carrier. The lever operation is “5 notch” type.*

■ **Notched positions, with spring return to zero operation**
3 or 5 notches maximum in each direction depending on the versions stated above.
⚠ 4 simultaneous contacts max. with spring return can be used at the 1st (12°) notch.
■ **Unnotched positions, with spring return to zero operation**
36° maximum travel in each direction.
⚠ 2 simultaneous contacts maximum with spring return can be used at 6° and then 4 contacts maximum at each subsequent 6° position.

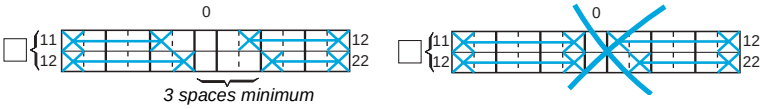
Contacts

16 contacts maximum per movement.
The contact blocks are mounted in pairs on a fixing plate.

Cam schemes

2 versions:
■ **Variable composition cams, 6° per position; 4 or 8-contact cam carriers.**
□ From 1 to 5 mechanical positions.
□ Overlapping contact operation possible (see graphic representation on page 6/69) except between the 4th and last position.
■ **Variable composition cams, 12° per position; 2-contact cam carriers.**
□ From 1 to 3 mechanical positions.
□ The contacts can be actuated 6° by 6° approx., except under the following conditions:
For technical reasons, it is essential to have at least 3 spaces on the electrical scheme for the same contact.

2 possible examples *2 impossible examples*



The 2-contact cam carriers are compact and do not increase the size of the mechanical block base.

Legend

One 120 x 120 mm anodised aluminium legend plate with matt satin finish.
Text to be stated on Order form.

Potentiometer adaptation

2 potentiometers maximum per movement:
□ mounted directly on the mechanical block when used with 2-contact variable composition cams,
□ mounted at the extremity of the contact supports when used with 4 and 8-contact variable composition cams.

Order form:
pages 6/80 and 6/81

Dimensions:
page 6/101

Controllers
For “medium hoisting” applications, type **XKD**

Environment

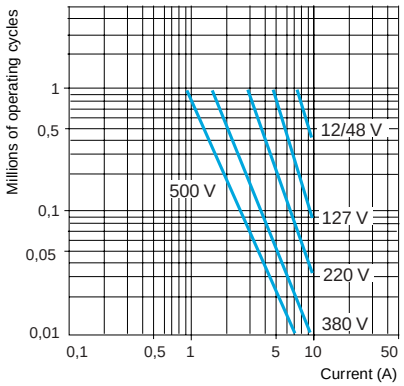
Conformity to standards			IEC 337-1, NF C 63-140, VDE 0660 part 2
Product certifications			CSA A600, Q 600, Bureau Véritas, USSR
Protective treatment			Standard version “TC”
Ambient air temperature	For storage	**°C**	- 40…+ 70
	For operation	**°C**	- 20…+ 70
Operating position			All positions
Vibration resistance			2 gn (10 to 500 Hz) conforming to IEC 68-2-6
Shock resistance			15 gn, duration 11 ms, conforming to IEC 68-2-27
Electric shock protection			Class I, conforming to IEC 536 and NF C 20-030
Maximum operating lever force required in each direction		**daN**	Notched positions, with stayput operation: < 1.5 / Notched or unnotched positions, with spring return to zero operation: < 3.5
Degree of protection			IP 54 conforming to IEC 529 (unit with simple handle mounted in dust and damp proof enclosure)
Mechanical durability	In millions of operating cycles		**XKD F:** 3 in each direction
Weight	**XKD F**	**kg**	Mechanical block: 0.950 4-contact assembly: 0.350 8-contact assembly: 0.560

Contact block characteristics

Type		N/C contact (**ZB2 BE102**)
Conventional thermal current	**A**	10 conforming to IEC 337-1, NF C 63-140, VDE 0660, CSA C 22-2 n° 14
Rated insulation voltage	**V**	≂ 500 conforming to NF C 20-040, VDE 0110, IEC 158-1
Insulation category		Group C conforming to NF C 20-040 and VDE 0110
Contact operation		Slow break, double-break contacts with positive opening operation
Resistance across terminals	**mΩ**	⩽ 25 (in accordance with NF C 93-050, at 1 A)
Short-circuit protection		10 A cartridge fuse type gG conforming to IEC 337-1B, VDE 0660 part 2

Operational power
Conforming to IEC 337-1
Utilisation categories AC-11 and DC-11
Operating rate: 3600 operating cycles/hour
Load factor: 0.5

a.c. supply ∼ 50-60 Hz
Inductive circuit



d.c. supply ⎓

Power broken in W for 1 million operating cycles

Voltage V	**24**	**48**	**120**
	65	48	40

Connection	Captive screw clamp terminals Clamping capacity: □ minimum 1 x 0.5 mm², □ maximum, with or without cable end: 2 x 1.5 mm² or 1 x 2.5 mm² conforming to NF C 20-120

Order form:
pages 6/80 and 6/81

Dimensions:
page 6/101

Controllers

For “medium hoisting” applications, type **XKD F**

Grid for composing the reference of a controller

Reference of controller type XKD

	Lever	Handle	Movement AB No. of blocks	Movement AB Lever movement	Movement AB Potentiometer adaptation	Movement CD No. of blocks	Movement CD Lever movement	Movement CD Potentiometer adaptation
XKD F	1							

Control lever		
Standard model, length 200 mm		1
Handle		
Simple (standard model)		1
With zero (centre) position mechanical interlocking		2
With zero (centre) position mechanical & electrical interlocking (1 C/O contact)		3
“Dead man’s” type	With N/C + N/O contact	4
	With N/O + N/O contact	5
With built-in flush pushbutton	With N/C + N/O contact	6
	With N/O + N/O contact	7
With built-in projecting pushbutton	With N/C + N/O contact	8
	With N/O + N/O contact	9

Movement AB

Number of 2-contact blocks		
0 blocks		0
1 block		1
2 blocks		2
3 blocks		3
4 blocks		4
5 blocks		5
6 blocks		6
8 blocks		8
Type of lever movement		
Notched positions, with stayput operation	3 notches *(1)*	1
	5 notches (starting from 12°) or 6 notches (from 6°) *(2) (3)*	2
Notched positions, with spring return to zero operation	3 notches *(1)*	3
	5 notches (starting from 12°) or 6 notches (from 6°) *(2) (3)*	4
Unnotched positions, with spring return to zero operation *(4)*		5
Potentiometer adaptation		
Without adaptation nor potentiometer		0
With adaptation only (without potentiometer)		1
With adaptation + potentiometer *(5)*		2

Movement CD

Number of 2-contact blocks		
0 blocks		0
1 block		1
2 blocks		2
3 blocks		3
4 blocks		4
5 blocks		5
6 blocks		6
8 blocks		8
Type of lever movement		
Notched positions, with stayput operation	3 notches *(1)*	1
	5 notches (starting from 12°) or 6 notches (starting from 6°) *(2) (3)*	2
Notched positions, with spring return to zero operation	3 notches *(1)*	3
	5 notches (starting from 12°) or 6 notches (starting from 6°) *(2) (3)*	4
Unnotched positions, with spring return to zero operation *(4)*		5
Potentiometer adaptation		
Without adaptation nor potentiometer		0
With adaptation only *(6)* (without potentiometer)		1
With adaptation *(6)* + potentiometer *(5)*		2

(1) 3 notches: restricted to 2-contact variable composition cams only.
(2) 5 notches: by using 1 or 2 variable composition 4 or 8-contact cams. 1st mechanical notch at 12° (6 electrical positions in each direction).
(3) It is possible to obtain 6 mechanical notches, 1st mechanical notch at 6° (6 electrical positions in each direction). Please consult your Regional Sales office.
(4) Type of lever operation recommended when using a potentiometer.
(5) Potentiometer type and value to be stated on the Order form, see pages 6/104 and 6/105.
(6) It is possible to obtain 6 mechanical notches, 1st mechanical notch at 6° (6 electrical positions in each direction). Please consult your Regional Sales office.

Characteristics: page 6/79
Dimensions: page 6/101

Order form

(specimen suitable for photocopying)

Controllers

For “medium hoisting” applications, type **XKD F**
Controllers with variable composition schemes, factory assembled

See example on page 6/83

Customer		Schneider Electric Industries			
Company	Customer’s reference	Sales office - Subsid. - Plant	Editor	Geographical zone	Order N°

Reference (use the grid for composing the reference of a controller on page 6/80)

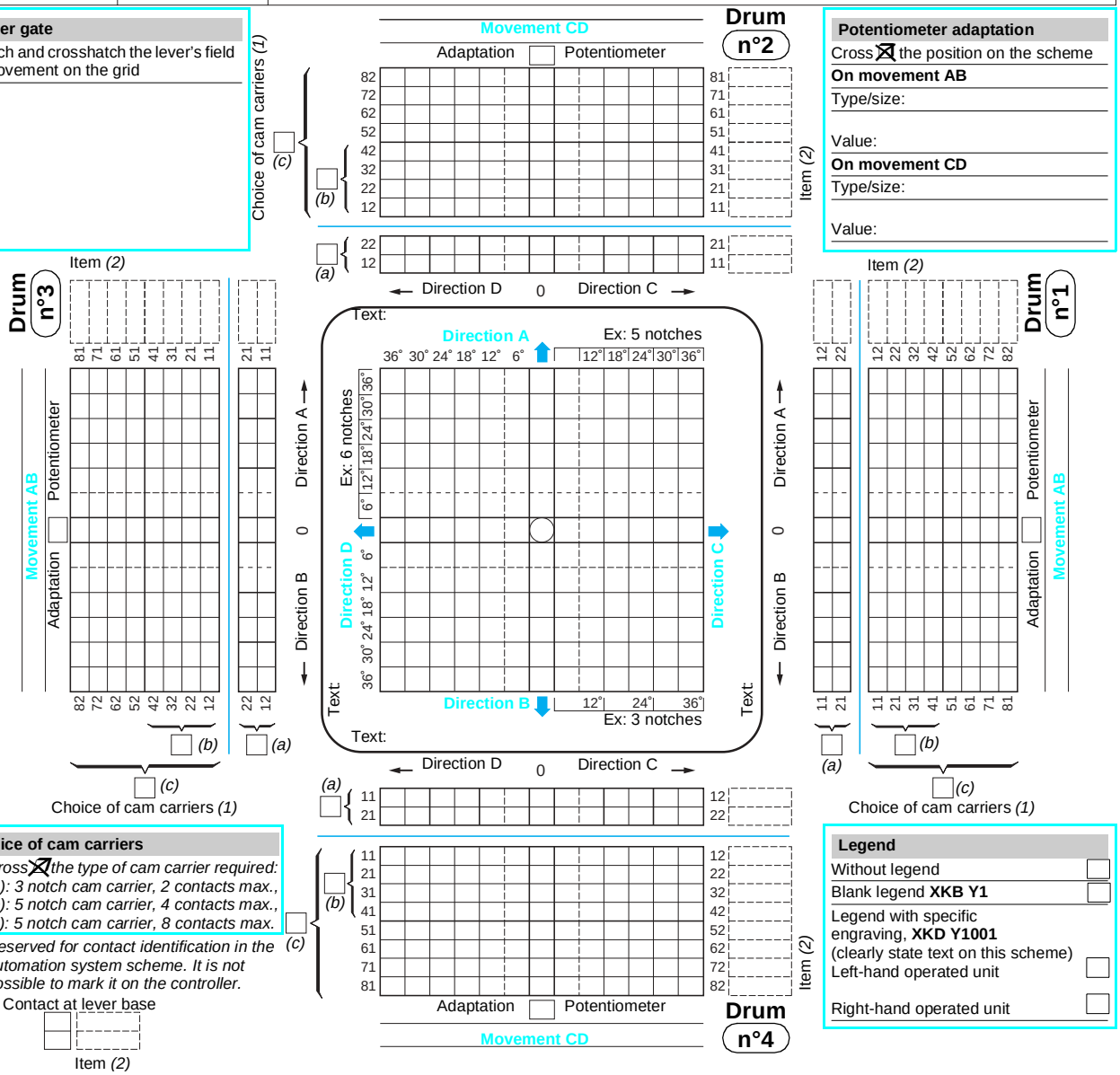
		Lever	Handle	Movement AB			Movement CD		
				No. of blocks	Lever movement	Potentiometer adaptation	No. of blocks	Lever movement	Potentiometer adaptation
Number of identical units	XKD F	1							

For Schneider Electric Industries use only

Order N°	Item N°		MOD	LEV	POI	GLV	CT1	CT3	MAB	P13	CT2	CT4	MCD	P24
		XKD												

Lever gate

Sketch and crosshatch the lever’s field of movement on the grid



Potentiometer adaptation

Cross ☒ the position on the scheme

On movement AB

Type/size:

Value:

On movement CD

Type/size:

Value:

Choice of cam carriers

(1) Cross ☒ the type of cam carrier required:
(a): 3 notch cam carrier, 2 contacts max.,
(b): 5 notch cam carrier, 4 contacts max.,
(c): 5 notch cam carrier, 8 contacts max.

(2) Reserved for contact identification in the automation system scheme. It is not possible to mark it on the controller.

Contact at lever base

Item (2)

Legend

Without legend	☐
Blank legend **XKB Y1**	☐
Legend with specific engraving, **XKD Y1001** (clearly state text on this scheme)	
Left-hand operated unit	☐
Right-hand operated unit	☐

- Electrical overlapping of contacts is not possible between the 5th and 6th notches.
- Spring return operation: 2 simultaneous contacts maximum with spring return can be used at 6° and then 4 contacts at each subsequent 6° position.

Controllers

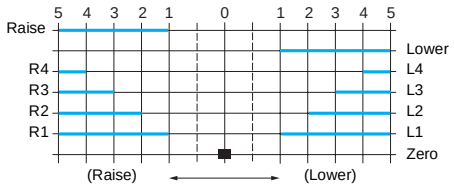
For “medium hoisting” applications, type **XKD F**

Controller selection example

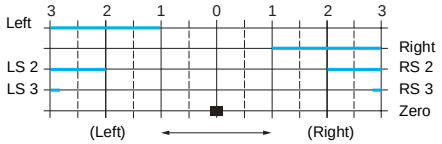
Requirement

A 2 movement controller: “hoist-traverse”.
“Cross” type lever gate. Controller conforming to NF E 52-070.
No potentiometer adaptation on movements AB or CD.

Scheme for movement AB “hoist”



Scheme for movement CD “traverse”



Notes:

Movement AB

The scheme for movement AB requires 7 contacts, therefore, select 4 blocks of 2 contacts.
The only alternative is the selection of either drum n° 3 or n° 1, depending on the available space.

Movement CD

The space between each notch indicated on the 3 position scheme cannot be adhered to.
Effectively, to obtain 5 contacts, a 2-contact block can be selected (drum n° 2), which does not increase the size of the base, together with 2 x 2-contact blocks (drum n° 4).
The lever gate will limit the lever travel to 3 notches.

Composition of the reference (see page 6/80)

XKD F	1	2	4	4	0	3	4	0

Control lever
Standard, length 200 mm — **1**

Handle
With zero (centre) position mechanical interlocking — **2**

Movement AB “hoist”

Number of 2-contact blocks
4 blocks — **4**

Type of lever movement
5 notched positions, with spring return to zero operation — **4**

Potentiometer adaptation
Without adaptation nor potentiometer — **0**

Movement CD “traverse”

Number of 2-contact blocks
3 blocks — **3**

Type of lever movement
5 notched positions, with spring return to zero operation — **4**

Potentiometer adaptation
Without adaptation nor potentiometer — **0**

Order form:
pages 6/80 and 6/81

Characteristics:
page 6/79

Dimensions:
page 6/101

Controllers

For “medium hoisting” applications, type **XKD F**

Ordering form completion example

Customer		Schneider Electric Industries			
Company	**Customer’s reference**	**Sales office - Subsid. - Plant**	**Editor**	**Geographical zone**	**Order N°**

Reference **(use the grid for composing the reference of a controller on page 6/80)**

			Movement AB			Movement CD		
	Lever	Handle	No. of blocks	Lever movement	Potentiometer adaptation	No. of blocks	Lever movement	Potentiometer adaptation
Number of identical units: 1 — **XKD F**	1	2	4	4	0	3	4	0

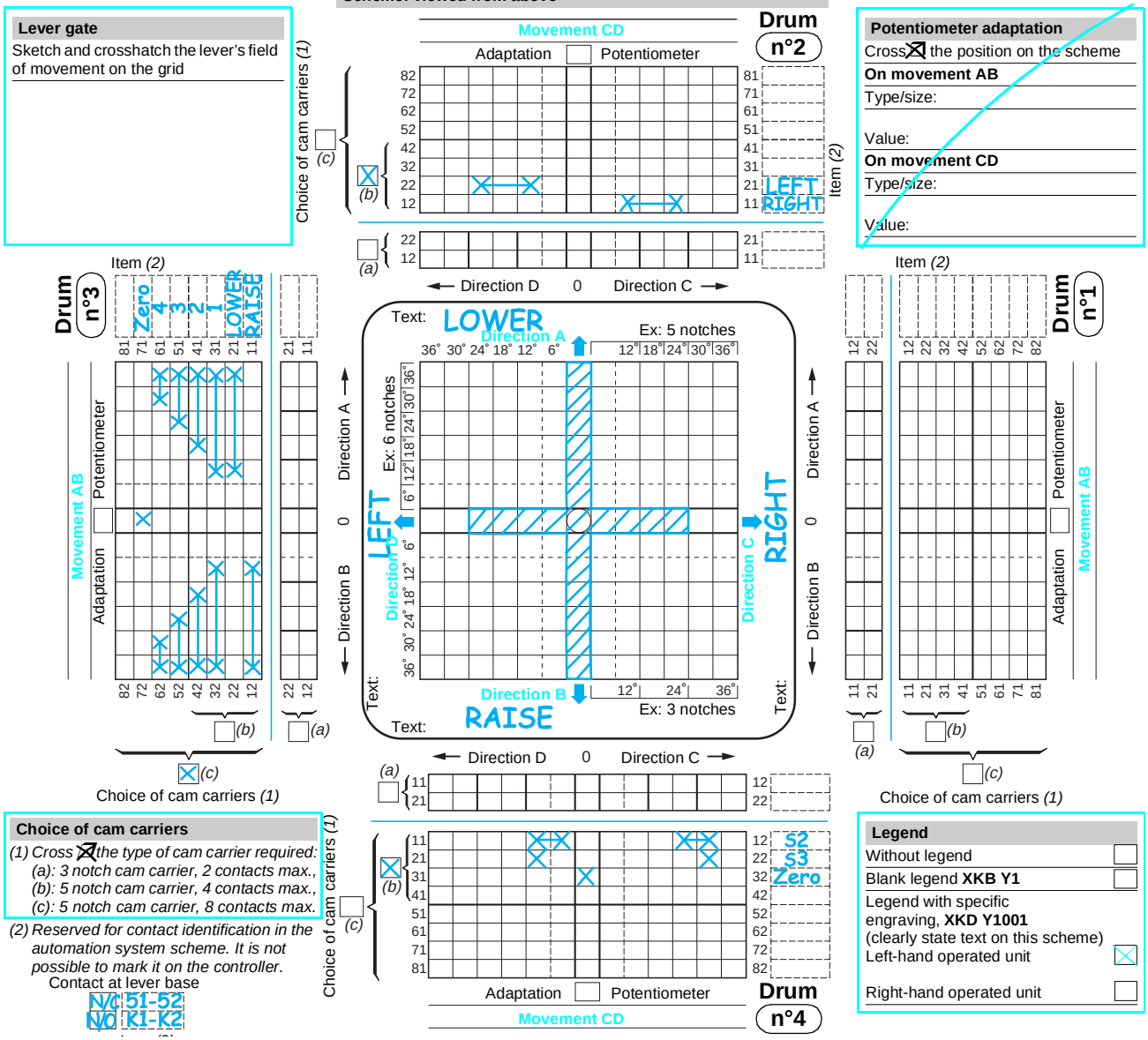
For Schneider Electric Industries use only

Order N°	Item N°		MOD	LEV	POI	GLV	CT1	CT3	MAB	P13	CT2	CT4	MCD	P24
		XKD												

Scheme: viewed from above

Lever gate

Sketch and crosshatch the lever’s field of movement on the grid



Potentiometer adaptation

Cross ☒ the position on the scheme

On movement AB

Type/size:

Value:

On movement CD

Type/size:

Value:

Choice of cam carriers

(1) Cross ☒ the type of cam carrier required:
(a): 3 notch cam carrier, 2 contacts max.,
(b): 5 notch cam carrier, 4 contacts max.,
(c): 5 notch cam carrier, 8 contacts max.

(2) Reserved for contact identification in the automation system scheme. It is not possible to mark it on the controller.

Contact at lever base

NC 51-52
NO K1-K2

Legend

Without legend ☐

Blank legend **XKB Y1** ☐

Legend with specific engraving, **XKD Y1001** (clearly state text on this scheme)

Left-hand operated unit ☒

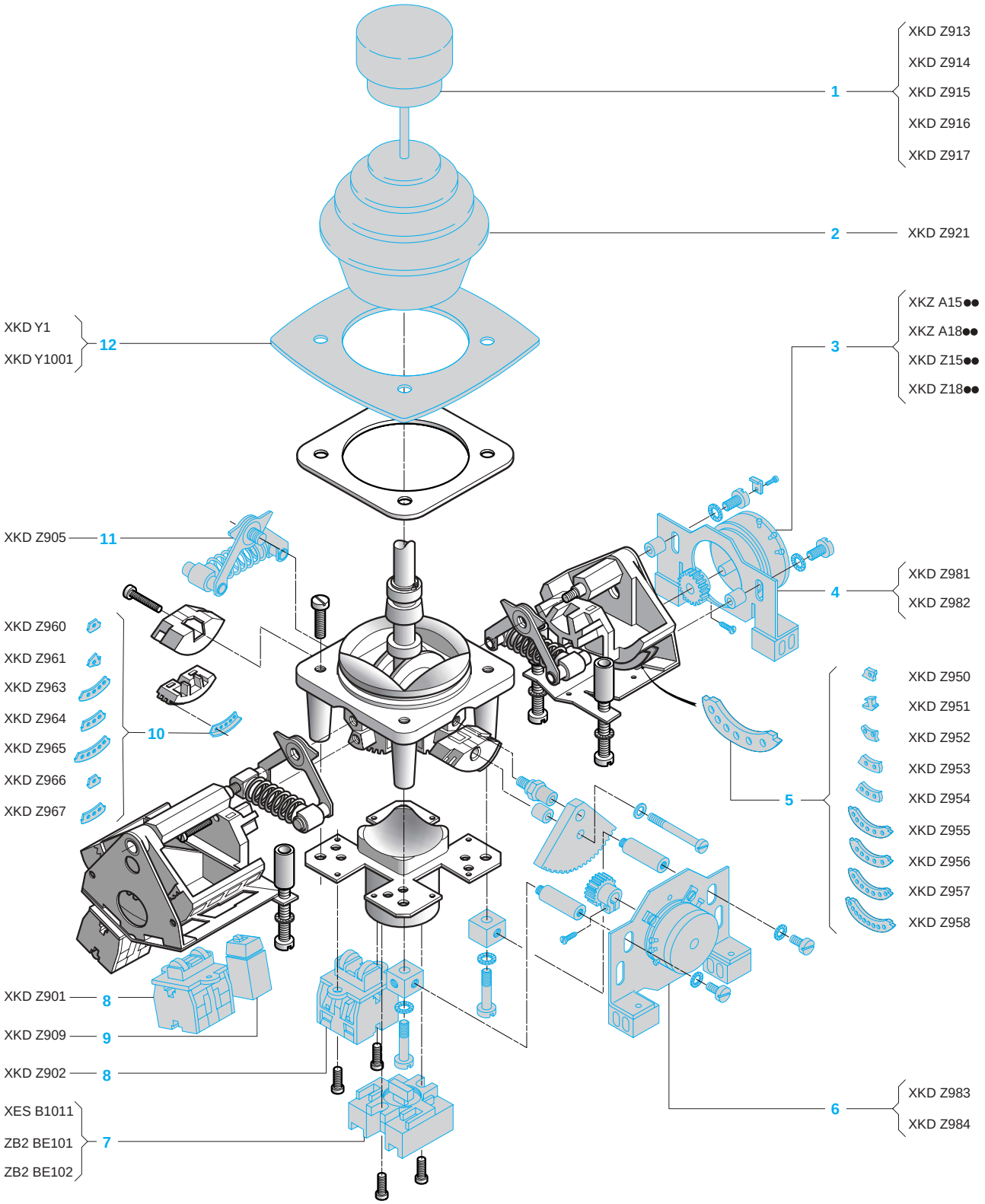
Right-hand operated unit ☐

- Electrical overlapping of contacts is not possible between the 5th and 6th notches.
- Spring return operation: 2 simultaneous contacts maximum with spring return can be used at 6° and then 4 contacts at each subsequent 6° position.

Controllers

For “medium hoisting” applications, type **XKD F**

Separate components

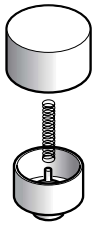


Controllers

For “medium hoisting” applications, type **XKD F**

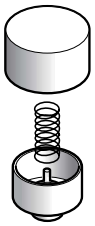
Separate components

XKD Z913

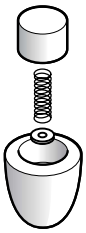


XKD Z914

XKD Z915



XKD Z916



XKD Z917

Description	Item	Characteristics		Unit reference	Weight kg
Bellows	2	Bellows + 1 flat seal		**XKD Z921**	0.075
Handles ⚠ Not interchangeable between different models	1	Simple		**XKD Z913**	0.060
		With zero (centre) position interlocking		**XKD Z914**	0.035
		“Dead man’s” type		**XKD Z915**	0.040
		With built-in flush pushbutton		**XKD Z916**	0.050
		With built-in projecting pushbutton		**XKD Z917**	0.050
Spring return operation mechanism Sold in lots of 2	11	Spring return to zero mechanism		**XKD Z905**	0.100
Notched operation mechanism	9	Position notching mechanism for variable composition cams		**XKD Z909**	0.010
Variable composition cams for support with 4 or 8 contacts Sold in lots of 50	5	Pass cam		**XKD Z950**	0.005
		Complementary, 1 position		**XKD Z951**	0.005
		Complementary, 1.5 position		**XKD Z952**	0.010
		Complementary, 2 positions		**XKD Z953**	0.010
		Complementary, 3 positions		**XKD Z954**	0.020
		Complementary, 6 positions		**XKD Z955**	0.035
		5 positions		**XKD Z956**	0.030
		7 positions		**XKD Z957**	0.040
		9 positions		**XKD Z958**	0.050
Variable composition cams for support with 2 contacts Sold in lots of 20	10	Complementary, half-position		**XKD Z960**	0.005
		Complementary, 1 position		**XKD Z961**	0.005
		Reversing, for notches 1+ 2 + 3		**XKD Z963**	0.020
		Acceleration, for notches 2 + 3		**XKD Z964**	0.005
		Acceleration, for notch 3		**XKD Z965**	0.010
		Pass cam		**XKD Z966**	0.010
		Cam for zero position contact		**XKD Z967**	0.010
Scheme contacts	8	2 x ZB2 BE102 contacts mounted on baseplate	Without marker	**XKD Z901**	0.050
			With marker	**XKD Z902**	0.050
Zero (centre) position electrical interlocking C/O contact	7	Snap action		**XES B1011**	0.030
Contacts for “Dead man’s” handle or handle with built-in pushbutton	7	Slow break	N/C, positive opening	**ZB2 BE102**	0.015
			N/O	**ZB2 BE101**	0.015
Legends	12	Blank		**XKD Y1**	0.035
		With specific engraved text		**XKD Y1001**	0.035
Potentiometer adaptation kits *(1)*	4	On end of contact supports	Size 15	**XKD Z981**	0.120
			Size 18	**XKD Z982**	0.130
	6	Directly on mechanical block	Size 15	**XKD Z983**	0.120
			Size 18	**XKD Z984**	0.130
Potentiometers for controllers XKD	3	–		**XKZ A15●●, A18●●** **XKD Z15●●, Z18●●** See pages 6/104 and 6/105	–

(1) Including 15 tooth pinion.

- *The maximum lever travel of 36° per direction corresponds to a potentiometer shaft rotation of 168°.*
- *Levers with friction drive facility are available under certain conditions. Please consult your Regional Sales Office.*

Controllers
For “heavy hoisting” applications, type **XKM**

109231_33_M

XKM A

109232_37_M

XKM B

109233_38_M

XKM C

Extremely robust and fully configurable units designed to control “heavy hoisting” equipment.
Mainly for use on fixed control stations or seated controller desks type **XJC**.
3 different controller models:
■ **XKM A**: with variable composition schemes, multidirectional control of 2 movements by central lever.
■ **XKM B**: with variable composition schemes, control of 1 movement by central lever.
■ **XKM C**: with variable composition schemes, control of 1 movement by side lever.

Control lever
XKM A and **XKM B**: length: 200 or 250 mm. Travel in each direction: 36° max.
XKM C: side lever, length 240 mm. Travel in each direction: 54° maximum.

Lever gate
XKM A: universal or specific (must be specified on Order form).
XKM B and **XKM C:** no lever gate.

End stops
Removable, attached to mechanical block to limit lever travel in 6° steps.

Handle
XKM A and **XKM B**; 5 versions:
■ Simple handle.
■ Handle with zero (centre) position mechanical interlock.
■ Handle with zero (centre) position mechanical interlock + 1 C/O snap action contact.
■ “Dead man’s” handle with 1 C/O snap action contact.
■ Handle with built-in flush or projecting pushbutton + 1 C/O snap action contact.
XKM C: simple handle.

Electrical positions
XKM A and **XKM B:** 6 positions maximum in each direction.
XKM C: 9 positions maximum in each direction.

Type of lever movement
■ **Notched positions, with stayput operation.**
XKM A and **XKM B**; 2 versions:
□ 6 notch sector in each direction: 6°, 12°, 18°, 24°, 30°, 36°.
□ 5 notch sector in each direction: 12°, 18°, 24°, 30°, 36°.

Note: *two different notching forces: Normal: operating lever force: 2 daN. Increased: operating lever force: 4 daN (for 4 simultaneously operated contacts).*

XKM C, 2 versions:
□ 9 notch sector maximum in each direction: 6°, 12°, 18°, 24°, 30°, 36°, 42°, 48°, 54°.
□ 8 notch sector maximum in each direction: 12°, 18°, 24°, 30°, 36°, 42°, 48°, 54°.
■ **Notched positions, with spring return to zero operation**.
XKM A, B and C, 2 versions:
□ 6 notches maximum in each direction: 6°, 12°, 18°, 24°, 30°, 36°.
□ 5 notches maximum in each direction: 12°, 18°, 24°, 30°, 36°.
⚠ 2 simultaneous contacts maximum with spring return can be used at 6° and then 4 contacts maximum at each subsequent notch.
■ **Unnotched positions, with spring return to zero operation**:
XKM A, B and C: 36° maximum travel in each direction.
⚠ 2 simultaneous contacts maximum with spring return can be used at 6° and then 4 contacts maximum at each subsequent 6° position.

Contacts
24 contacts maximum per movement (2 x 3 blocks of 4 contacts).
2 versions:
□ Standard, double-break contacts.
□ Double-break contacts with magnetic blow-out.

Cam schemes
24 cams maximum per movement (12 contacts on each side), mounted in groups of 4.
Warning: for technical reasons relating to mounting, the first cam (for contact 13-14) must be a reversing or zero position cam.

Legends
1 for each direction, interchangeable without dismantling the unit.
Material: anodised aluminium, anodic oxidation marking.
Standard markings: FORWARD, REVERSE, RAISE, LOWER, LEFT, RIGHT.
Other markings: to be stated on Order form.

Potentiometer adaptation
2 potentiometers maximum per movement.
Potentiometers mounted at the extremity of the contact supports or directly onto the faces of the mechanical block.

Order form:
pages 6/88 and 6/89

Dimensions:
pages 6/102 and 6/103

Controllers

For “heavy hoisting” applications, type **XKM**

Environment

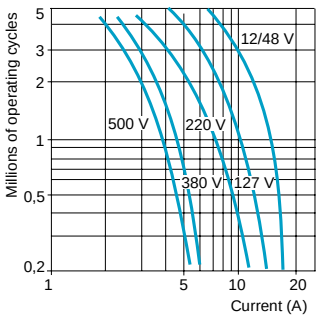
Conformity to standards			IEC 337-1, NF C 63-140, VDE 0660 part 2, CSA C 22-2 n° 14
Product certifications			CSA 600 V max. (≂) “heavy duty”, USSR
Protective treatment			Standard version “TC”
Ambient air temperature	For storage	**°C**	- 40…+ 70 °C
	For operation	**°C**	- 10…+ 70 °C
Operating position			All positions
Vibration resistance	Conforming to IEC 68-2-6		2 gn (10 to 500 Hz)
Shock resistance	Conforming to IEC 68-2-27		Direction of shocks on vertical axis: 15 gn Direction of shocks on horizontal and transversal axes: 100 gn
Electric shock protection	Conforming to IEC 536 and NF C 20-030		Class I
Maximum operating lever force required in each direction		**daN**	< 4 for 4 simultaneously actuated contacts (to 1st notch) < 4.5 for 4 simultaneously actuated contacts for spring return to zero version (maintained against end stop)
Degree of protection	Conforming to IEC 529		IP 54 (unit with simple handle mounted in dust and damp proof enclosure)
Mechanical durability (in millions of operating cycles)			4 in each direction (mechanical control device)
Weight		**kg**	**XKM A:** mechanical block: 4.6. 4-contact assembly: 0.7 **XKM B:** mechanical block: 3. 4-contact assembly: 0.7 **XKM C:** mechanical block: 3.7. 4-contact assembly: 0.7

Contact block characteristics

Type		Block of 4 double-break contacts
Conventional thermal current	**A**	20 conforming to IEC 337-1, NF C 63-140, VDE 0660
Rated insulation voltage	**V**	≂ 500 conforming to NF C 20-040, VDE 0110, IEC 158-1; 600 V conforming to CSA C 22-2 n° 14
Insulation category		Group C conforming to NF C 20-040 and VDE 0110
Contact operation		Slow break, double-break contacts with positive opening operation 2 versions: standard or with magnetic blow-out
Resistance across terminals	**mΩ**	⩽ 25 (in accordance with NF C 93-050, at 1 A)
Terminal referencing		Conforming to CENELEC EN 50013
Short-circuit protection		20 A cartridge fuse type gG conforming to IEC 337-1B, VDE 0660 part 2

Operational power
Conforming to IEC 337-1
Utilisation categories AC-11 and DC-11
Operating rate: 3600 operating cycles/hour
Load factor: 0.5

Standard double-break contact block
a.c. supply ∼ 50-60 Hz
Inductive circuit



d.c. supply ⎓
Power broken in W for 3 million operating cycles

Voltage V	**24**	**48**	**120**
	70	75	75

Double-break contact block with magnetic blow-out.
d.c. supply ⎓
Power broken in W for 3 million operating cycles

Voltage V	**24**	**48**	**120**
	90	100	100

Connection	Captive screw clamp terminals Clamping capacity: □ minimum: 1.5 mm², □ maximum: 2 x 2.5 mm² with cable end

Order form:
pages 6/88 and 6/89

Dimensions:
pages 6/102 and 6/103

Controllers

For “heavy hoisting” applications, type **XKM**

Grid for composing the reference of a controller XKM A or XKM B

Reference of a controller type XKM A or XKM B

	Model	Lever	Handle	Contacts	Movement AB: No. of blocks	Movement AB: Lever movement	Movement AB: Potentiometer adaptation	Movement CD (XKM A only): No. of blocks	Movement CD (XKM A only): Lever movement	Movement CD (XKM A only): Potentiometer adaptation
XKM										
Model										
2 movement controller (AB + CD)	A									
1 movement controller (AB)	B									
Control lever										
Short: length 200 mm (standard)		1								
Long: length 250 mm		2								
Handle										
Simple (standard model)			1							
With zero (centre) position mechanical interlocking			2							
With zero (centre) position mechanical & electrical interlocking (1 C/O contact)			3							
“Dead man’s” type (1 C/O contact)			4							
With built-in flush pushbutton (1 C/O contact)			5							
With built-in projecting pushbutton (1 C/O contact)			6							
Type of contacts										
Block of 4 double-break contacts (standard model)				1						
Block of 4 double-break contacts with magnetic blow-out				2						
Movement AB										
Number of 4-contact blocks					0 blocks: 0					
					1 block: 1					
					2 blocks: 2					
					3 blocks: 3					
					4 blocks: 4					
					5 blocks: 5					
					6 blocks: 6					
Type of lever movement										
Notched positions, with stayput operation – 5 notches *(1)* – Normal lever force						1				
Notched positions, with stayput operation – 5 notches *(1)* – Increased lever force						2				
Notched positions, with stayput operation – 6 notches *(2)* – Normal lever force						3				
Notched positions, with stayput operation – 6 notches *(2)* – Increased lever force						4				
Notched positions, with spring return to zero operation – 5 notches *(1)*						5				
Notched positions, with spring return to zero operation – 6 notches *(2)*						6				
Unnotched positions, with spring return to zero operation *(3)*						7				
Potentiometer adaptation										
Without potentiometer support plate, or potentiometer							0			
With potentiometer support plate only *(4)* (potentiometer not included)							1			
With potentiometer support plate + potentiometer *(5)*							2			
Movement CD (for type XKM A only)										
Number of 4-contact blocks								0 blocks: 0		
								1 block: 1		
								2 blocks: 2		
								3 blocks: 3		
								4 blocks: 4		
								5 blocks: 5		
								6 blocks: 6		
Type of lever movement										
Notched positions, with stayput operation – 5 notches *(1)* – Normal lever force									1	
Notched positions, with stayput operation – 5 notches *(1)* – Increased lever force									2	
Notched positions, with stayput operation – 6 notches *(2)* – Normal lever force									3	
Notched positions, with stayput operation – 6 notches *(2)* – Increased lever force									4	
Notched positions, with spring return to zero operation – 5 notches *(1)*									5	
Notched positions, with spring return to zero operation – 6 notches *(2)*									6	
Unnotched positions, with spring return to zero operation *(3)*									7	
Potentiometer adaptation										
Without adaptation nor potentiometer										0
With adaptation only (without potentiometer)										1
With adaptation + potentiometer *(5)*										2

(1) 5 mechanical notches (1st notch at 12°) (6 electrical positions in each direction). (2) 6 mechanical notches (1st notch at 6°) (6 electrical positions in each direction).
(3) Type of lever operation recommended when using a potentiometer. (4) Adaptation including 15 tooth pinion.
(5) Potentiometer type and value to be stated on the Order form, see pages 6/104 and 6/105.

Order form

(specimen suitable for photocopying)

Controllers

For “heavy hoisting” applications, type **XKM**

Controllers XKM A and XKM B with variable composition schemes, factory assembled

See example on page 6/91

Customer		Schneider Electric Industries			
Company	Customer’s reference	Sales office - Subsid. - Plant	Editor	Geographical zone	Order N°

Reference (use the grid for composing the reference of a controller on page 6/88)

		Model	Lever	Handle	Type of contact	Movement AB No. of blocks	Movement AB Lever movement	Movement AB Potentiometer adaptation	Movement CD (XKM A only) No. of blocks	Movement CD (XKM A only) Lever movement	Movement CD (XKM A only) Potentiometer adaptation
Number of identical units	XKM										

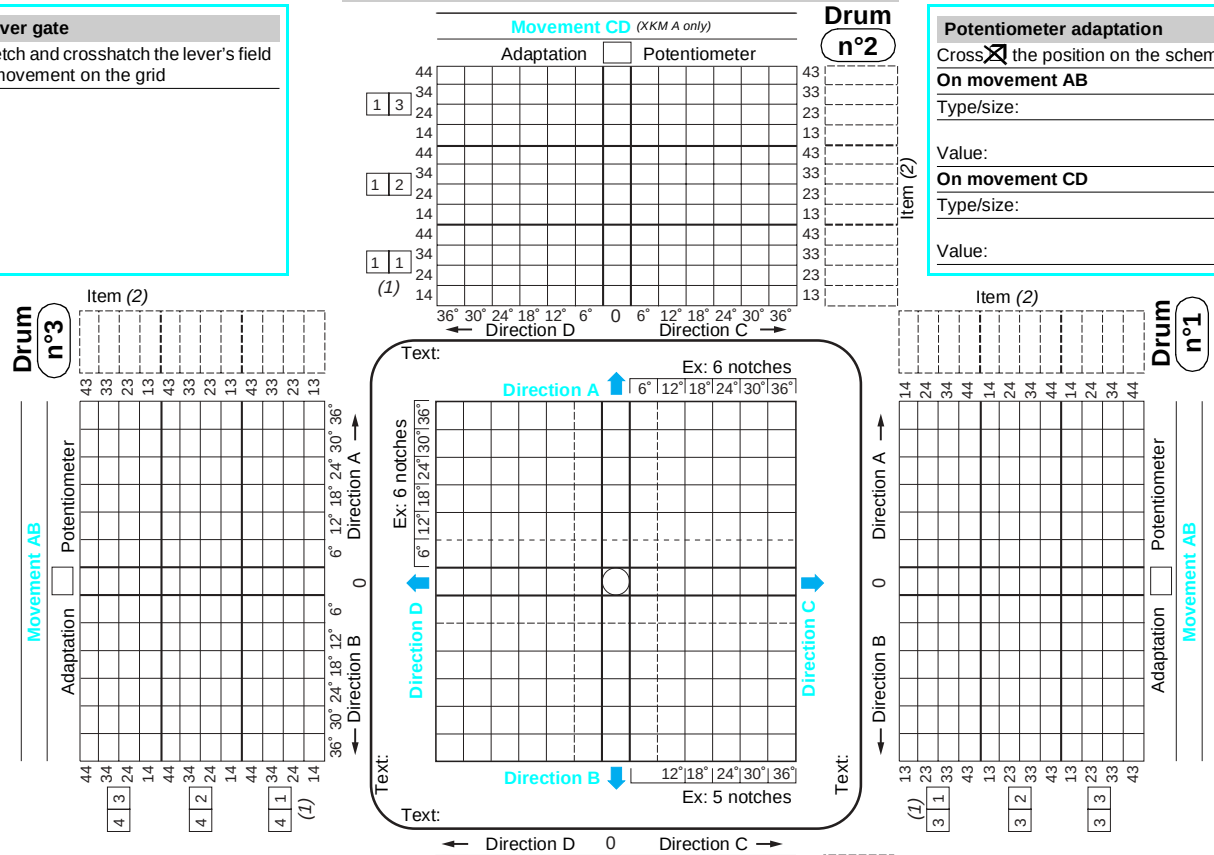
For Schneider Electric Industries use only

Order N°	Item N°		MOD	LEV	POI	GLV	CT1	CT3	MAB	P13	CT2	CT4	MCD	P24
		XKM												

Lever gate

Sketch and crosshatch the lever’s field of movement on the grid

Scheme: viewed from above



Potentiometer adaptation

Cross ☒ the position on the scheme

On movement AB

Type/size:

Value:

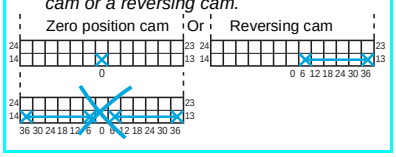
On movement CD

Type/size:

Value:

Choice of cam carriers

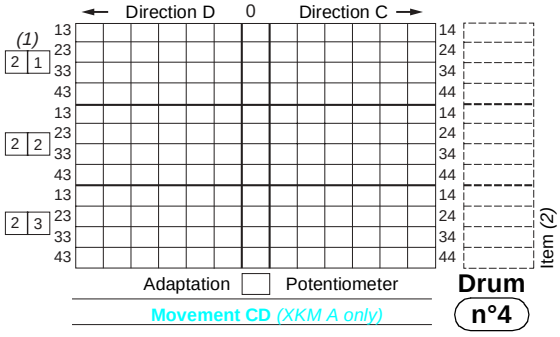
(1) The 1st cam must either be a zero position cam or a reversing cam.



(2) Reserved for contact identification in the automation system scheme.
It is not possible to mark it on the controller.

Contact at lever base

Item *(2)*



Legend (1 for each direction)

- Without legend ☐
- Blank legend **XKM Y1** ☐
- Legend with specific engraving (clearly state text on this scheme)
  - Left-hand operated unit ☐
  - Right-hand operated unit ☐
- Legend with standard text (see page 6/99)
  - Left-hand operated unit ☐
  - Right-hand operated unit ☐

⚠ 2 simultaneous contacts maximum with spring return can be used at 6° and then 4 contacts at each subsequent 6° position.

Controllers

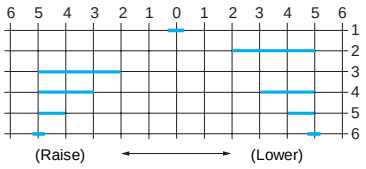
For “heavy hoisting” applications, type **XKM A**

Controller selection example

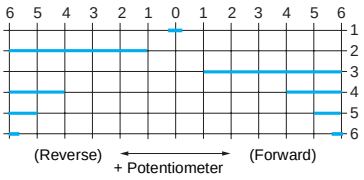
Requirement

A 2 movement controller: “hoist-long travel”.
Universal lever gate, limited to 4 notches on the “raise” and “lower” directions (1st notch at 12°).
Potentiometer adaptation on movement CD. Potentiometer selected: 4700 Ω, size 15, standard model.

Scheme for movement AB “hoist”



Scheme for movement CD “long travel”



Notes:
Movement AB
Two installation alternatives depending on the required size:
- 2 blocks of 4 contacts, both on the same side of the mechanical block (example shown),
- 1 block of 4 contacts on either side of the mechanical block.

Movement CD
Same installation alternatives as for movement AB.
Two alternatives for potentiometer installation:
- On end of cam carriers and contact supports (example shown).
- Directly on the mechanical block.

Composition of the reference (see page 6/88)

XKM	A	1	4	1	2	5	0	2	7	2
Model										
2 movements (AB + CD)	A									
Control lever										
Short: length 200 mm (standard)		1								
Handle										
“Dead man’s” type with 1 C/O contact			4							
Type of contacts										
Standard double-break				1						
Movement AB										
Number of 4-contact blocks										
2 blocks (i.e. 8 contacts when 6 contacts required)					2					
Type of lever movement										
Notched positions, with spring return to zero operation and 5 notch sectors (starting from 12°)						5				
Potentiometer										
Without adaptation device or potentiometer							0			
Movement CD										
Number of 4-contact blocks										
2 blocks (i.e. 8 contacts when 6 contacts required)								2		
Type of lever movement										
Unnotched positions, with spring return to zero operation									7	
Potentiometer										
With potentiometer adaptation device + size 15, 4700 Ω potentiometer										2

Controllers

For “heavy hoisting” applications, type **XKM A**

Ordering form completion example

Customer		Schneider Electric Industries			
Company	**Customer’s reference**	**Sales office - Subsid. - Plant**	**Editor**	**Geographical zone**	**Order N°**

Reference (use the grid for composing the reference of a controller on page 6/88)

			Model	Lever	Handle	Type of contact	Movement AB No. of blocks	Movement AB Lever movement	Movement AB Potentiometer adaptation	Movement CD No. of blocks	Movement CD Lever movement	Movement CD Potentiometer adaptation
Number of identical units	1	XKM	A	1	4	1	2	5	0	2	7	2

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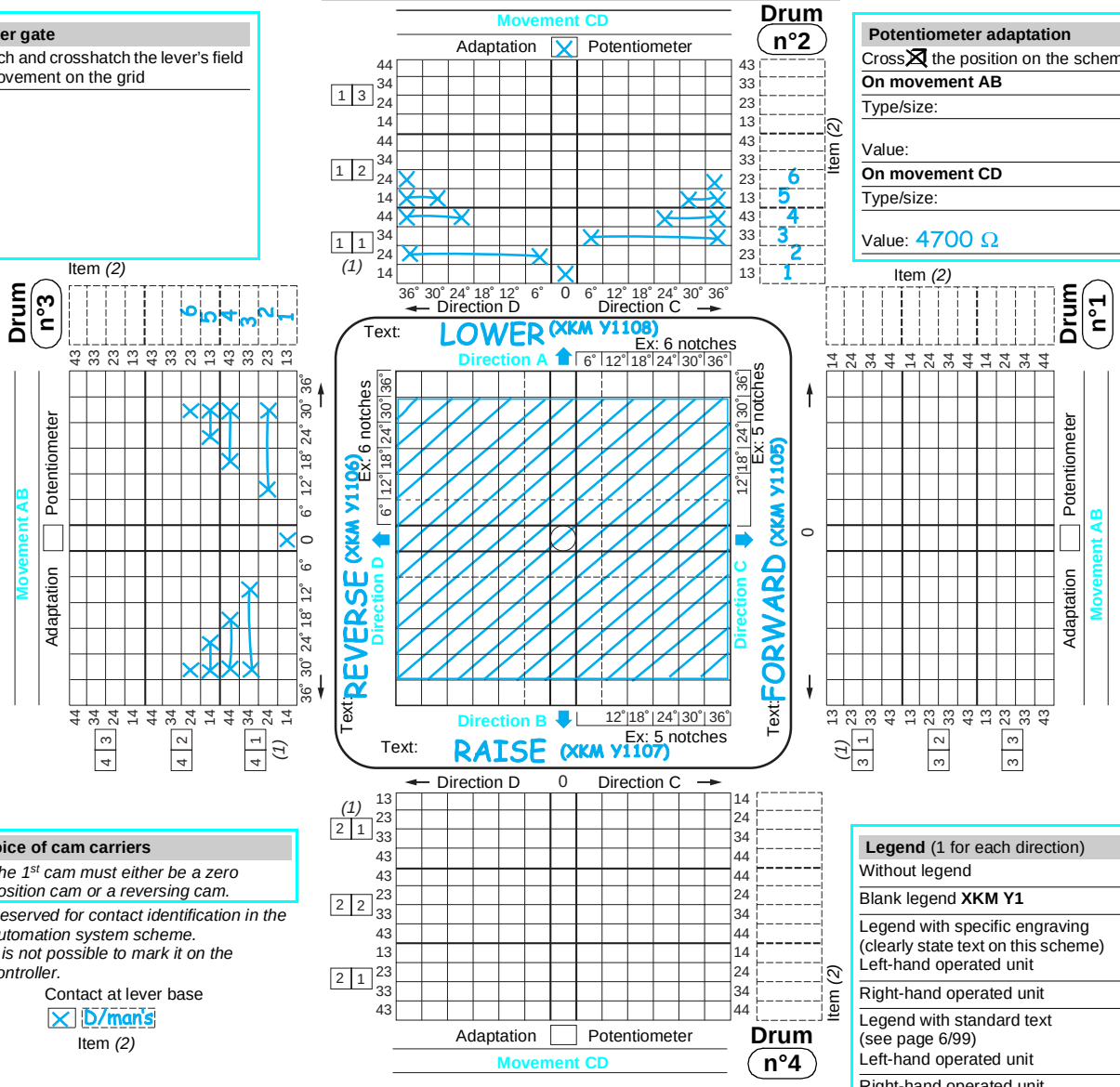
Order N°	Item N°		MOD	LEV	POI	GLV	CT1	CT3	MAB	P13	CT2	CT4	MCD	P24
		XKM												

Scheme: viewed from above

Lever gate

Sketch and crosshatch the lever’s field of movement on the grid



Potentiometer adaptation

Cross ☒ the position on the scheme

On movement AB

Type/size:

Value:

On movement CD

Type/size:

Value: 4700 Ω

Choice of cam carriers

(1) The 1st cam must either be a zero position cam or a reversing cam.

(2) Reserved for contact identification in the automation system scheme. It is not possible to mark it on the controller.

Contact at lever base

☒ D/man’s

Item *(2)*

Legend (1 for each direction)

- Without legend ☐
- Blank legend **XKM Y1** ☐
- Legend with specific engraving (clearly state text on this scheme)
  - Left-hand operated unit ☐
  - Right-hand operated unit ☐
- Legend with standard text (see page 6/99)
  - Left-hand operated unit ☒
  - Right-hand operated unit ☐

⚠ 2 simultaneous contacts maximum with spring return can be used at 6° and then 4 contacts at each subsequent 6° position.

Controllers

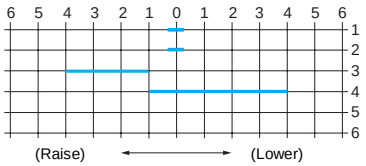
For “heavy hoisting” applications, type **XKM B**

Controller selection example

Requirement

A single movement controller: “hoist”.

Scheme for movement AB “hoist”



Note:

Movement AB

Two installation alternatives depending on the required size (space in the enclosure or non symmetrical installation):

- 1 to 3 blocks of 4 contacts on each side of the mechanical block,
- 1 to 3 blocks on one side only.

Composition of the reference (see page 6/88)

XKM	B	1	1	1	1	6	0			

Model
1 movement controller (AB) — **B**

Control lever
Short: length 200 mm (standard) — **1**

Handle
Simple (standard model) — **1**

Type of contacts
Block of 4 double-break contacts (standard model) — **1**

Movement AB

Number of 4-contact blocks
1 block (i.e. 4 contacts) — **1**

Type of lever movement
6 notched positions, with spring return to zero operation — **6**

Potentiometer
Without potentiometer support plate, or potentiometer — **0**

6

Controllers

For “heavy hoisting” applications, type **XKM B**

Ordering form completion example

Customer		Schneider Electric Industries			
Company	**Customer’s reference**	**Sales office - Subsid. - Plant**	**Editor**	**Geographical zone**	**Order N°**

Reference (use the grid for composing the reference of a controller on page 6/88)

		Model	Lever	Handle	Type of contact	Movement AB No. of blocks	Movement AB Lever movement	Movement AB Potentiometer adaptation	Movement CD No. of blocks	Movement CD Lever movement	Movement CD Potentiometer adaptation
Number of identical units	1	XKM B	1	1	1	1	6	0			

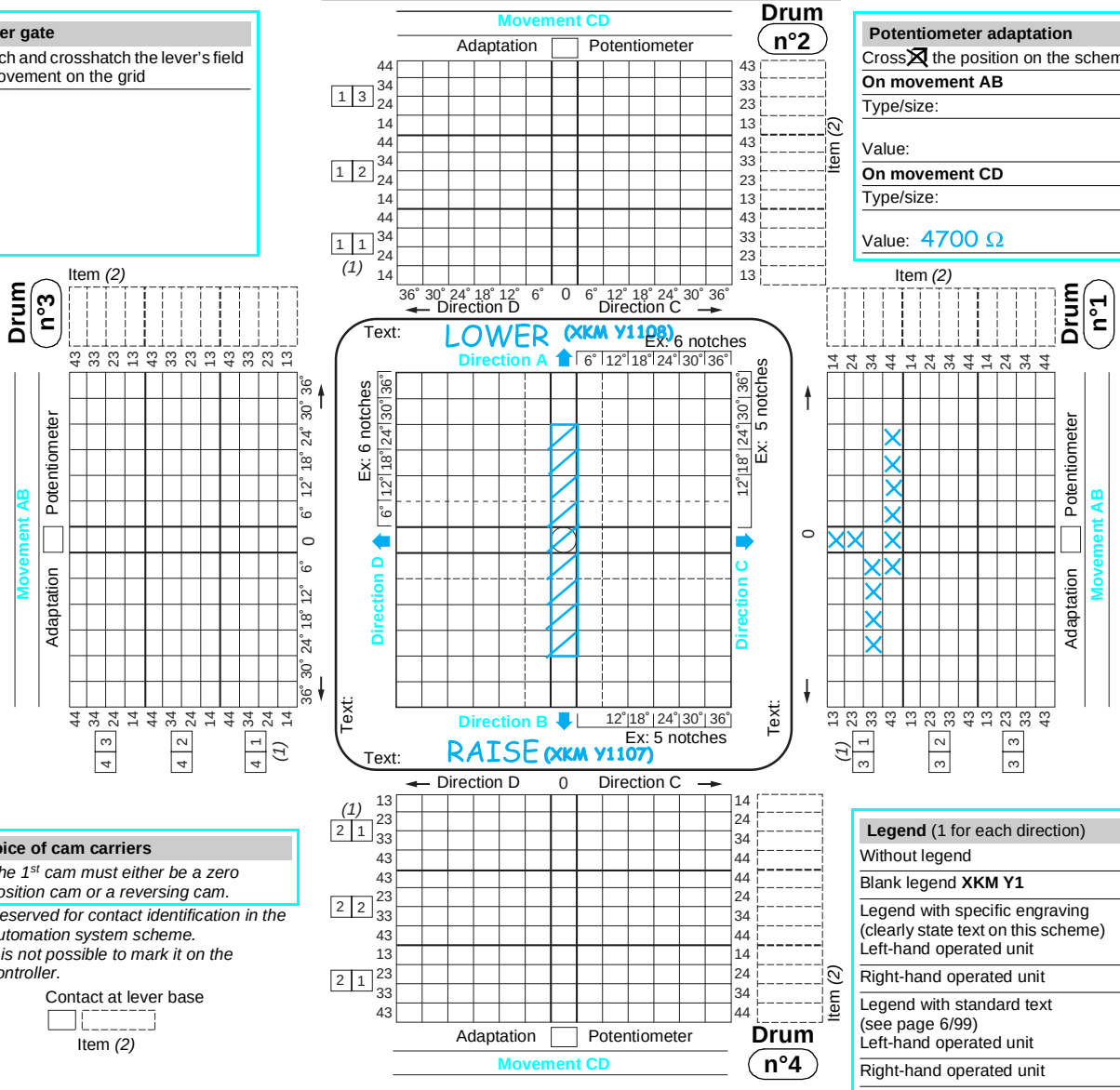
For Schneider Electric Industries use only

Order N°	Item N°		MOD	LEV	POI	GLV	CT1	CT3	MAB	P13	CT2	CT4	MCD	P24
		XKM												

Scheme: viewed from above

Lever gate

Sketch and crosshatch the lever’s field of movement on the grid



Potentiometer adaptation

Cross the position on the scheme

On movement AB

Type/size:

Value:

On movement CD

Type/size:

Value: 4700 Ω

Choice of cam carriers

(1) The 1st cam must either be a zero position cam or a reversing cam.

(2) Reserved for contact identification in the automation system scheme. It is not possible to mark it on the controller.

Contact at lever base

Item *(2)*

Legend (1 for each direction)

- Without legend ☐
- Blank legend **XKM Y1** ☐
- Legend with specific engraving (clearly state text on this scheme) Left-hand operated unit ☐
- Right-hand operated unit ☐
- Legend with standard text (see page 6/99) Left-hand operated unit ☐
- Right-hand operated unit ☒

⚠ 2 simultaneous contacts maximum with spring return can be used at 6° and then 4 contacts at each subsequent 6° position.

Controllers

For “heavy hoisting” applications, type **XKM C**

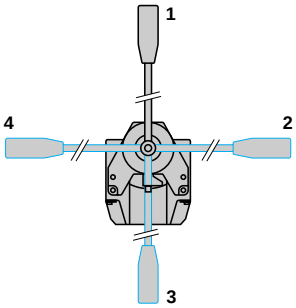
Grid for composing the reference of a controller

Reference of controller type XKM C

	Lever	Contacts	Movement AB No. of blocks	Movement AB Lever movement	Potentiometer adaptation
XKM C					

Control lever

Side lever, position according to diagram below



		Lever
Side lever, position according to diagram below	Position **1**	**1**
	Position **2**	**2**
	Position **3**	**3**
	Position **4**	**4**

Type of contacts

	Contacts
Block of 4 double-break contacts (standard model)	**1**
Block of 4 double-break contacts with magnetic blow-out	**2**

Movement AB

Number of 4-contact blocks

	Movement AB No. of blocks
1 block	**1**
2 blocks	**2**
3 blocks	**3**

Type of lever movement

			Movement AB Lever movement
Notched positions, with stayput operation	5 notches *(1)*	Normal lever force	**1**
		Increased lever force	**2**
	6 notches *(2)*	Normal lever force	**3**
		Increased lever force	**4**
	8 notches *(1)*		**5**
	9 notches *(2)*		**6**
Notched positions, with spring return to zero operation	5 notches *(1)*		**7**
	6 notches *(2)*		**8**
Unnotched positions, with spring return to zero operation *(3)*			**9**

Potentiometer adaptation

	Potentiometer adaptation
Without adaptation nor potentiometer	**0**
With adaptation *(4)* only (without potentiometer)	**1**
With adaptation *(4)* + potentiometer *(5)*	**2**

(1) 1st mechanical notch at 12°.
(2) 1st mechanical notch at 6°.
(3) Type of lever operation recommended when using a potentiometer.
(4) Adaptation including 15 tooth pinion.
(5) Potentiometer type and value to be stated on the Order form, see page 6/104.

Order form: page 6/95
Characteristics: page 6/87
Dimensions: pages 6/102 and 6/103

Order form

(specimen suitable for photocopying)

Controllers

For “heavy hoisting” applications, type **XKM C**

Controllers with variable composition schemes, factory assembled

See example on page 6/96

Customer		Schneider Electric Industries			
Company	**Customer’s reference**	**Sales office - Subsid. - Plant**	**Editor**	**Geographical zone**	**Order N°**

Reference **(use the grid for composing the reference of a controller on page 6/94)**

			Model	Lever	Contacts	Movement AB Number of blocks	Movement AB Lever movement	Movement AB Potentiometer adaptation
Number of identical units	☐	**XKM**	**C**	☐	☐	☐	☐	☐

For Schneider Electric Industries use only

Order N°	Item N°		MOD	LEV	POI	GLV	CTS	MAN	POT
		XKM	☐	☐	☐	☐	☐	☐	☐

Potentiometer adaptation

Cross ☒ the required position on the scheme below.

On movement AB

Type/size:

Value:

Legend

Without legend ☐

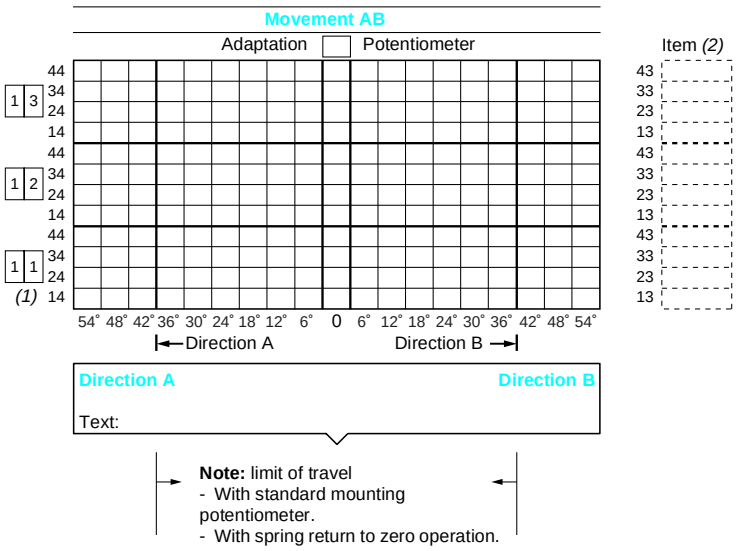
Blank legend **XKM CY1** ☐

Legend with specific engraving, **XKM CY1001**
(clearly state the text on the scheme below)

Left-hand operated unit ☐

Right-hand operated unit ☐

Scheme (viewed from above)



⚠ 2 simultaneous contacts maximum with spring return can be used at 6° and then 4 contacts at each subsequent 6° position.

(1) The 1st cam must either be a zero position cam or a reversing cam.

(2) Reserved for contact identification in the automation system scheme. It is not possible to mark it on the controller.

Controllers

For “heavy hoisting” applications, type **XKM C**

Controller selection example

Requirement

A 1 movement (AB), 2 direction controller, fitted with a vertical (upward pointing) lever.

Movement AB:
Installation of 2 blocks of 4 standard double-break contacts.

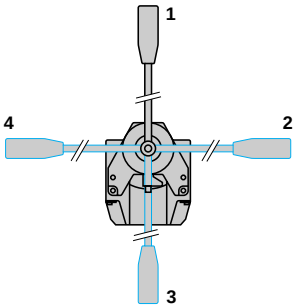
Lever movement with 6 notches at 6° intervals (1st mechanical notch at 6°), with notched cams and stayput angular positions.
No potentiometer.

Composition of the reference (see page 6/94)

	Lever	Contacts	Movement AB: No. of blocks	Movement AB: Lever movement	Potentiometer adaptation
XKM C	1	1	2	3	0

Control lever

Side lever, position according to diagram below



Position **1**	**1**
Position **2**	**2**
Position **3**	**3**
Position **4**	**4**

Type of contacts

Block of 4 double-break contacts (standard model)	**1**
Block of 4 double-break contacts with magnetic blow-out	**2**

Movement AB

Number of 4-contact blocks

1 block	**1**
2 blocks	**2**
3 blocks	**3**

Type of lever movement

Notched positions, with stayput operation	5 notches *(1)*	Normal lever force	**1**
		Increased lever force	**2**
	6 notches *(2)*	Normal lever force	**3**
		Increased lever force	**4**
	8 notches *(1)*		**5**
	9 notches *(2)*		**6**
Notched positions, with spring return to zero operation	5 notches *(1)*		**7**
	6 notches *(2)*		**8**
Unnotched positions, with spring return to zero operation *(3)*			**9**

Potentiometer adaptation

Without adaptation nor potentiometer	**0**
With adaptation *(4)* only (without potentiometer)	**1**
With adaptation *(4)* + potentiometer *(5)*	**2**

(1) 1st mechanical notch at 12°.
(2) 1st mechanical notch at 6°.
(3) Type of lever operation recommended when using a potentiometer.
(4) Adaptation including 15 tooth pinion.
(5) Potentiometer type and value to be stated on the Order form, see page 6/104.

Controllers

For “heavy hoisting” applications, type **XKM C**

Ordering form completion example

Customer		**Schneider Electric Industries**			
Company	**Customer’s reference**	**Sales office - Subsid. - Plant**	**Editor**	**Geographical zone**	**Order N°**

Reference **(use the grid for composing the reference of a controller on page 6/94)**

			Model	Lever	Contacts	Movement AB Number of blocks	Movement AB Lever movement	Movement AB Potentiometer adaptation
Number of identical units		**XKM**	C	1	1	2	3	0

For Schneider Electric Industries use only

Order N°	Item N°		MOD	LEV	POI	GLV	CTS	MAN	POT
		XKM							

Potentiometer adaptation

Cross ☒ the required position on the scheme below.

On movement AB

Type/size:

Value:

Legend

Without legend ☐

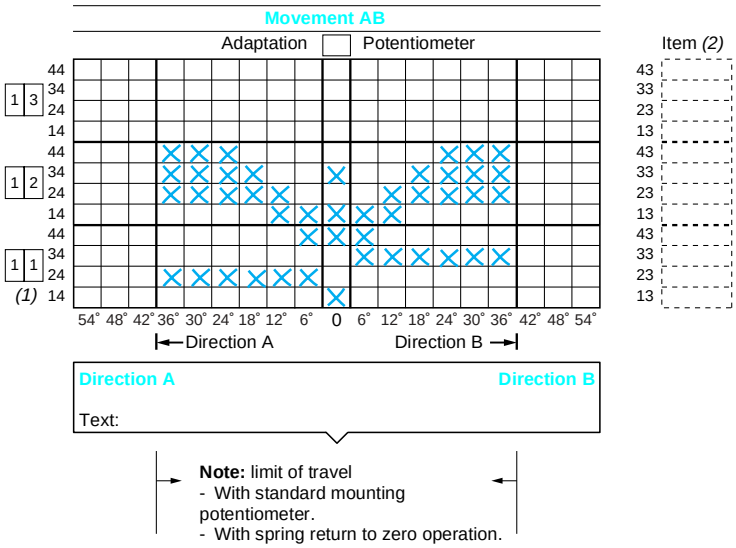
Blank legend **XKM CY1** ☒

Legend with specific engraving, **XKM Y1001**
(clearly state the text on the scheme below)

Left-hand operated unit ☐

Right-hand operated unit ☐

Scheme (viewed from above)



⚠ 2 simultaneous contacts maximum with spring return can be used at 6° and then 4 contacts at each subsequent 6° position.

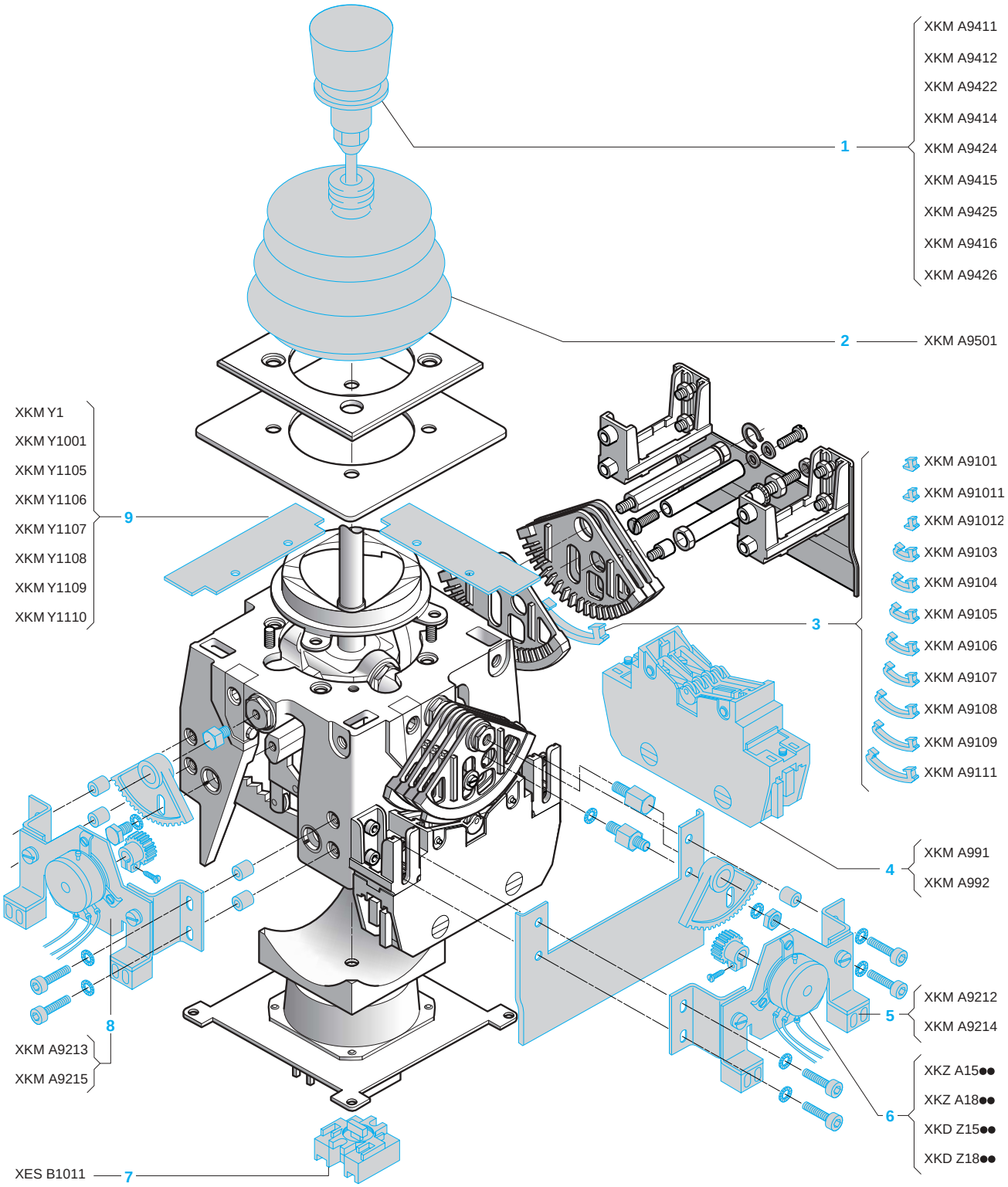
(1) The 1st cam must either be a zero position cam or a reversing cam.

(2) Reserved for contact identification in the automation system scheme. It is not possible to mark it on the controller.

Controllers

For “heavy hoisting” applications, type **XKM**

Separate components



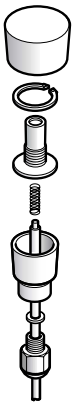
Controllers

For “heavy hoisting” applications, type **XKM**

Separate components

XKM A9411

XKM A94●4



XKM A94●2

XKM A94●5

XKM A94●6

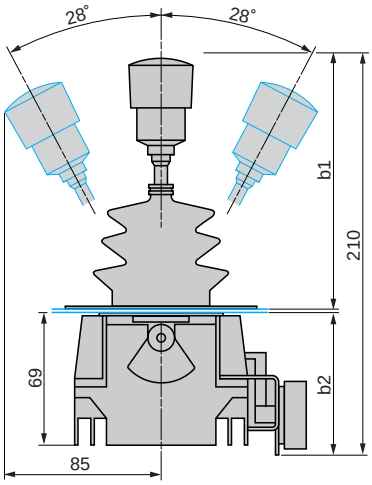
Description	Item	Characteristics		Unit reference	Weight kg
Bellows	2	–		**XKM A9501**	0.120
Simple handle	1	–	For short or long lever	**XKM A9411**	0.085
Handles + rods	1	With zero (centre) position interlocking	For short lever	**XKM A9414**	0.145
			For long lever	**XKM A9424**	0.155
		“Dead man’s” type	For short lever	**XKM A9412**	0.150
			For long lever	**XKM A9422**	0.160
		With built-in flush pushbutton	For short lever	**XKM A9415**	0.140
			For long lever	**XKM A9425**	0.150
		With built-in projecting pushbutton	For short lever	**XKM A9416**	0.140
			For long lever	**XKM A9426**	0.150
Variable composition cams Sold in lots of 50	3	Pass cam		**XKM A9101**	0.115
		Complementary		**XKM A91011**	0.120
		Overlapping		**XKM A91012**	0.105
		3 positions		**XKM A9103**	0.205
		4 positions		**XKM A9104**	0.245
		5 positions		**XKM A9105**	0.370
		6 positions		**XKM A9106**	0.400
		7 positions		**XKM A9107**	0.430
		8 positions		**XKM A9108**	0.460
		9 positions		**XKM A9109**	0.505
		11 positions		**XKM A9111**	0.560
Blocks of 4 contacts	4	Double-break		**XKM A991**	0.310
		Double-break with magnetic blow-out		**XKM A992**	0.335
Contact at lever base	7	1 C/O snap action		**XES B1011**	0.030
Legends	9	Blank		**XKM Y1**	0.010
		With specific engraving (specify text when ordering)		**XKM Y1001**	0.010
		With standard text	Forward	**XKM Y1105**	0.010
			Reverse	**XKM Y1106**	0.010
			Raise	**XKM Y1107**	0.010
			Lower	**XKM Y1108**	0.010
			Left	**XKM Y1109**	0.010
			Right	**XKM Y1110**	0.010
Potentiometer adaptation kits *(1)*	5	On end of contact supports	Size 15	**XKM A9214**	0.120
			Size 18	**XKM A9212**	0.130
	8	Directly on mechanical block	Size 15	**XKM A9215**	0.120
			Size 18	**XKM A9213**	0.130
Potentiometers for controllers XKM A, XKM B, XKM C	6	–		**XKZ A15●●, A18●●** **XKD Z15●●, Z18●●** See pages 6/104 and 6/105	–

(1) Including 15 tooth pinion.

- *The maximum lever travel of 36° per direction corresponds to a potentiometer shaft rotation of 168°.*
- *Levers with friction drive facility are available under certain conditions. Please consult your Regional Sales Office.*

Controllers
For “light hoisting” applications, type **XKB**

XKB A, XKB E

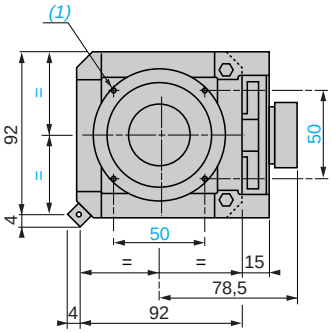


		b1	b2
XKB A, XKB E	**with size 15 (3 W) potentiometer**	129…134	75
	with size 18 (4 W) potentiometer	129…134	80

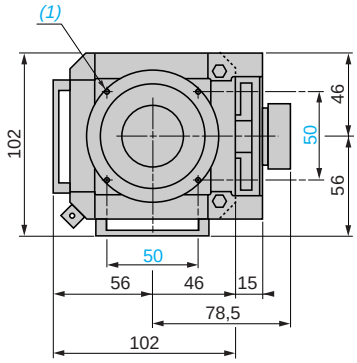
(1) Fixing by 4 M5 screws.

Note: *the size 18 potentiometer adaptation on an XKB controller prevents it from being mounted in an XJP controller station.*

4-contact block

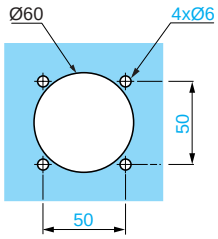


4-contact block + 1 zero position contact



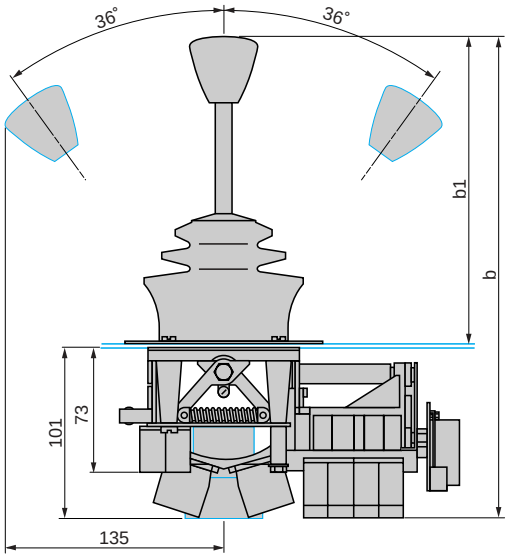
Panel cut-out

thickness 1 to 6 mm

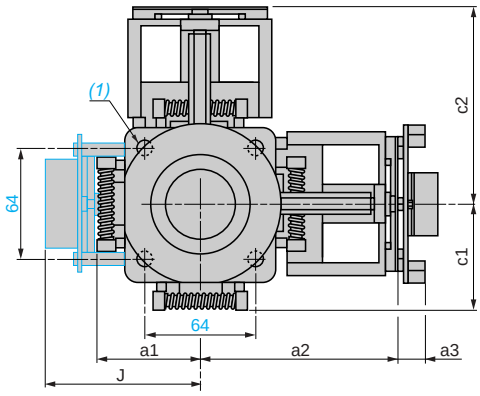


Controllers
For “medium hoisting” applications, type **XKD**

XKD F



		b	b1
XKD F	**with short lever**	288	181…186
	with long lever	338	236…241



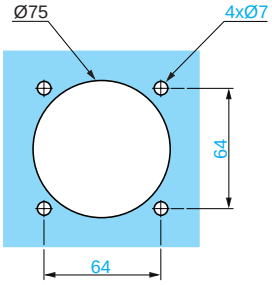
		a1	a2	c1	c2
XKD F	**with 2 contacts**	52	–	52	–
	with 2 contacts + spring return to zero	65	–	65	–
	with 4 contacts	–	90	–	90
	with 8 contacts	–	120	–	120

		J	a3
Adaptation for potentiometer	**size 15 (3 W)**	83.5	24.5
	size 18 (4 W)	85.5	26.5

(1) Fixing by 4 M6 screws.

Panel cut-out

thickness 1 to 6 mm

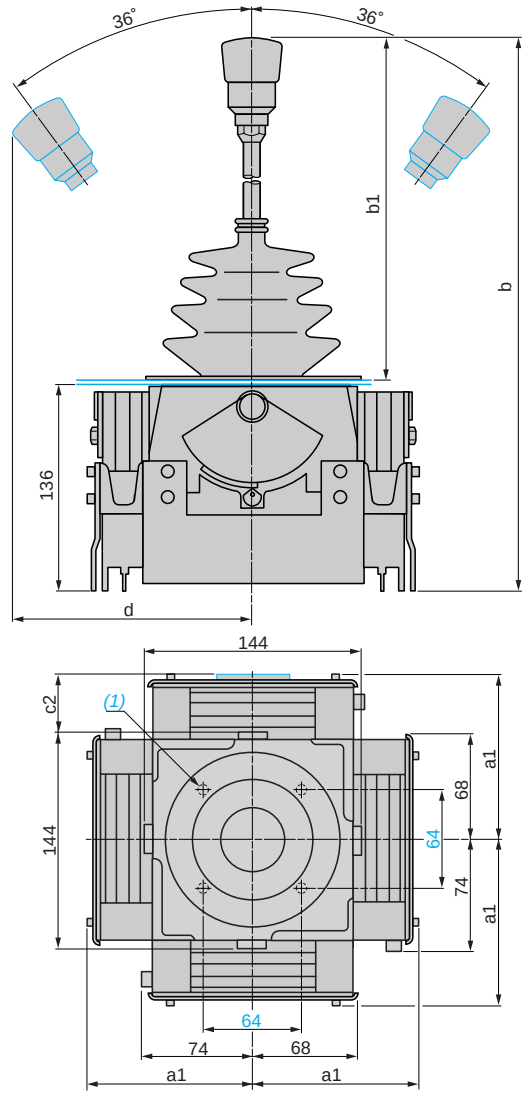


Controllers

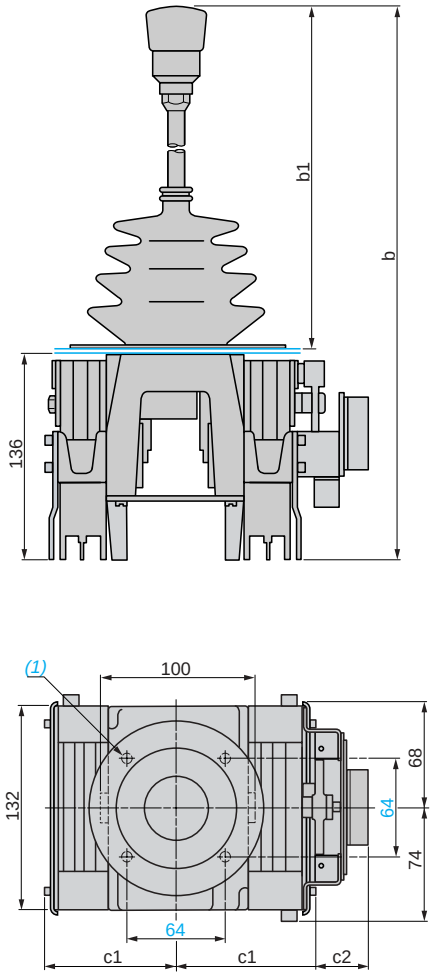
For “heavy hoisting” applications, type **XKM**

6

XKM A



XKM B



		b	b1	d
XKM A, XKM B	**with short lever**	322	180 to 185	125
	with long lever	392	230 to 235	125

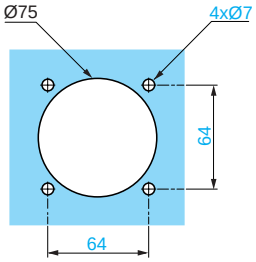
		a1	c1
XKM A, XKM B	**with 4 contacts**	110	88
	with 8 contacts	140	118
	with 12 contacts	170	148

		c2
Adaptation for potentiometer	**size 15 (3 W)**	37.5
	size 18 (4 W)	44.5

(1) Fixing by 4 M6 screws.

Panel cut-out

thickness 1 to 6 mm



Presentation:
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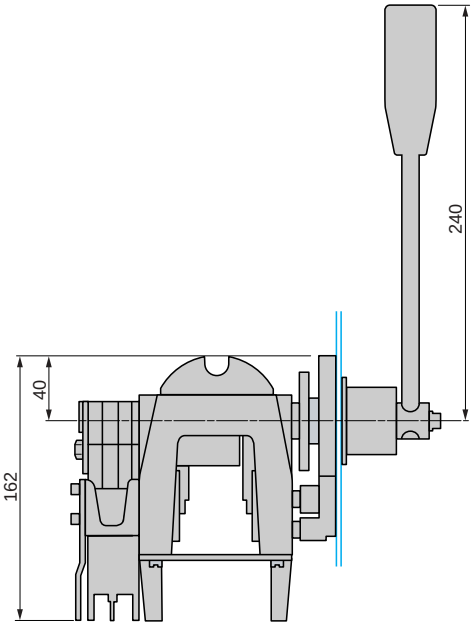
Characteristics:
page 6/87

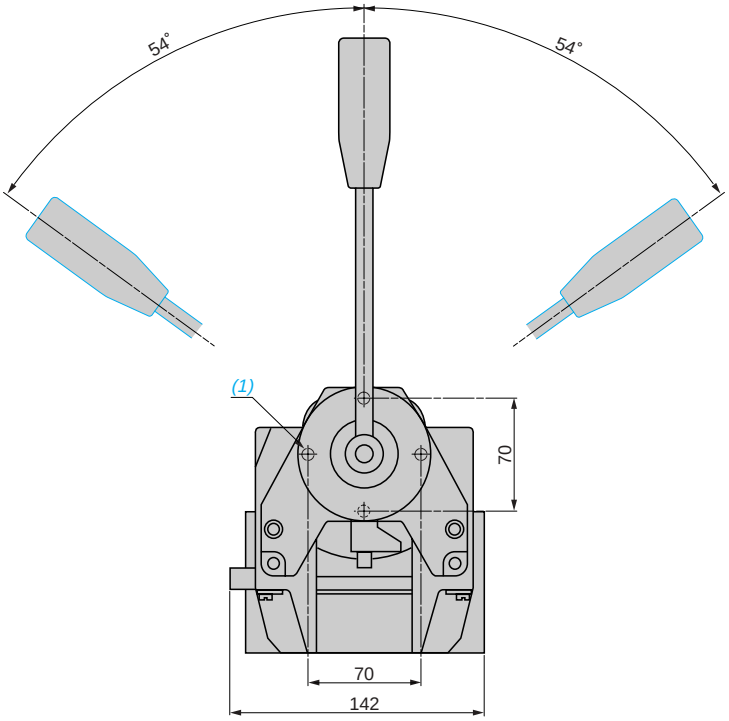
Order form:
pages 6/88 and 6/89

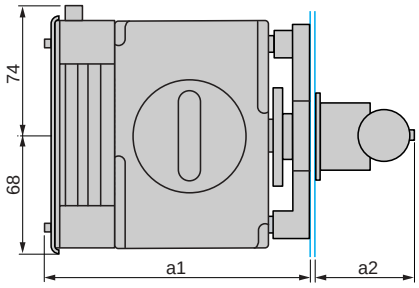
Controllers

For “heavy hoisting” applications, type **XKM**

XKM C





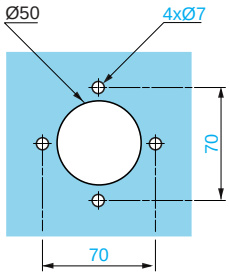


		a1	a2
XKM C	**with 4 contacts**	157	36 to 41
	with 8 contacts	187	36 to 41
	with 12 contacts	217	36 to 41

(1) Fixing by 4 M6 screws.

Panel cut-out

thickness 1 to 6 mm



Presentation:
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Characteristics:
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Order form:
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Controllers

Potentiometers for controllers

For standard applications, type **XKZ A**

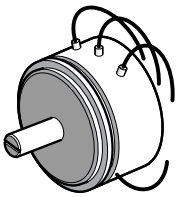
Mechanical characteristics

Potentiometer type	XKZ A15●●●	XKZ A18●●●
Size	15	18
Conformity to standards	UTE 93265	
Mounting method	By the body (“synchro” type)	
Rotational operation	Continuous	
Function	Linear (1% resolution)	
Operating angle	360°	
Mechanical durability (in millions of operating cycles)	3	1

Electrical characteristics

Centre tap	Wired out to terminal	
Dead zone around centre tap point (neutral zone)	2° ± 1°	
Nominal power (Pn)	3 W at 85 °C	4 W at 85 °C
Connections	Flying leads from soldered standard tags	

References



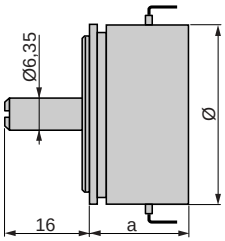
XKZ A●●●●

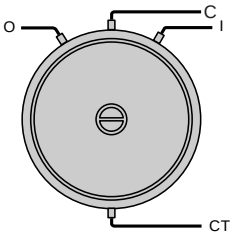
Resistance value Ω	Availability	Size	Reference	Weight kg
4700 (2 x 2350)	Stock item	15	**XKZ A15047**	0.060
	Short delivery	18	**XKZ A18047**	0.060
1000 (2 x 500)	Short delivery	15	**XKZ A15010**	0.060
	On demand	18	**XKZ A18010**	0.060
2200 (2 x 1100)	Short delivery	15	**XKZ A15022**	0.060
	On demand	18	**XKZ A18022**	0.060
10,000 (2 x 5000)	Stock item	15	**XKZ A15100**	0.060
	On demand	18	**XKZ A18100**	0.060
Other values	On demand	15	**XKZ A15000** *(1)*	0.060
	On demand	18	**XKZ A18000** *(1)*	0.060

(1) When ordering an XKZ A15000 or XKZ A18000, the total resistance value must be stated. The other characteristics are the same.

6

Dimensions

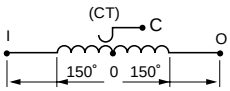




The pinion included with the adaptation simply clamps onto the potentiometer operating shaft (diameter 6.35 mm, length 16 mm).

	a	Ø
XKZ A15●●●	20	36.5
XKZ A18●●●	27	44.45

Connection



I = yellow
O = green
C = red
CT = black

Controllers

Potentiometers for controllers

For applications requiring an extended "neutral zone", types **XKB Z** and **XKD Z**

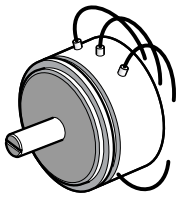
Mechanical characteristics

Potentiometer type	XKB Z15●●, XKD Z15●●	XKB Z18●●, XKD Z18●●
Size	15	18
Conformity to standards	UTE 93265	
Mounting method	By the body ("synchro" type)	
Rotational operation	Continuous	
Function	Linear (1% resolution)	
Operating angle	360°	
Mechanical durability (in millions of operating cycles)	3	1

Electrical characteristics

Centre tap	Wired out to terminal	
Dead zone around centre tap point (neutral zone)	40°, mainly for use with controllers XKB 30°, mainly for use with controllers XKD and XKM	
Nominal power (Pn)	3 W at 85 °C	4 W at 85 °C
Connections	Flying leads from soldered standard tags	

References



XKB Z1●●●, XKD Z1●●●

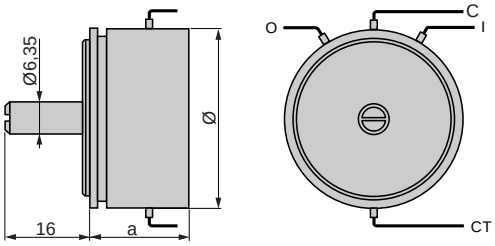
Potentiometers for controllers XKB

Resistance value Ω	Availability	Size	Reference	Weight kg
4700 (2 x 2350)	On demand	15	**XKB Z1547**	0.055
	On demand	18	**XKB Z1847**	0.065
800 (2 x 400)	On demand	15	**XKB Z1508**	0.055
	On demand	18	**XKB Z1808**	0.065

Potentiometers for controllers XKD and XKM

4700 (2 x 2350)	Stock item	15	**XKD Z1547**	0.055
	On demand	18	**XKD Z1847**	0.065
800 (2 x 400)	On demand	15	**XKD Z1508**	0.055
	On demand	18	**XKD Z1808**	0.065

Dimensions

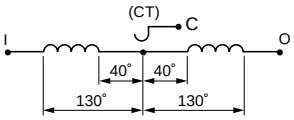


The pinion included with the adaptation simply clamps onto the potentiometer operating shaft (diameter 6.35 mm, length 16 mm).

	a	Ø
XKB Z15●●, XKD Z15●●	20	36.5
XKB Z18●●, XKD Z18●●	27	44.45

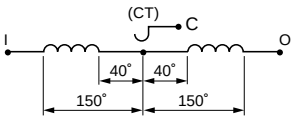
Connection

XKB Z15●●, XKB Z18●●



I = yellow
O = green
C = red
CT = black

XKD Z15●●, XKD Z18●●



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O = green
C = red
CT = black