

6 - Pendant control stations and controllers

Pendant control stations with intuitive operation

Selection guide page 6/2

- Double insulated, for control circuits
 - Complete stations “ready for use”, “Pistol grip”, type **XAC A** page 6/5
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 - Separate components and spare parts page 6/12
 - Variable composition stations, factory assembled page 6/17

Pendant control stations

Selection guide page 6/2

- Double insulated, type **XAC A**, for control circuits
 - Complete stations “ready for use” page 6/19
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- Double insulated, type **XAC B** or metal, type **XAC M** (1)
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 - Variable composition stations, factory assembled page 6/59
- Double insulated, type **XAC F**, for control circuits (1)
 - Empty enclosures page 6/61
 - Variable composition stations, factory assembled page 6/65

(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 6/72
 - Controllers **XKB E** with variable composition schemes,
factory assembled page 6/72
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- Controllers for “medium hoisting” applications, type **XKD F**
 - Controllers with variable composition schemes,
factory assembled page 6/78
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- Controllers for “heavy hoisting” applications, type **XKM**
 - Controllers **XKM A** and **XKM B** with variable composition schemes,
factory assembled page 6/86
 - Controllers **XKM C** with variable composition schemes,
factory assembled page 6/93
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- Potentiometers for controllers
 - For standard applications, type **XKZ A** page 6/100
 - For applications requiring an extended “neutral zone”,
types **XKB Z** and **XKD Z** page 6/101

Pendant control stations

Complete stations “ready for use” and variable composition stations

Complete stations “ready for use”

Applications

Motor control

↑ ↓ Single-speed

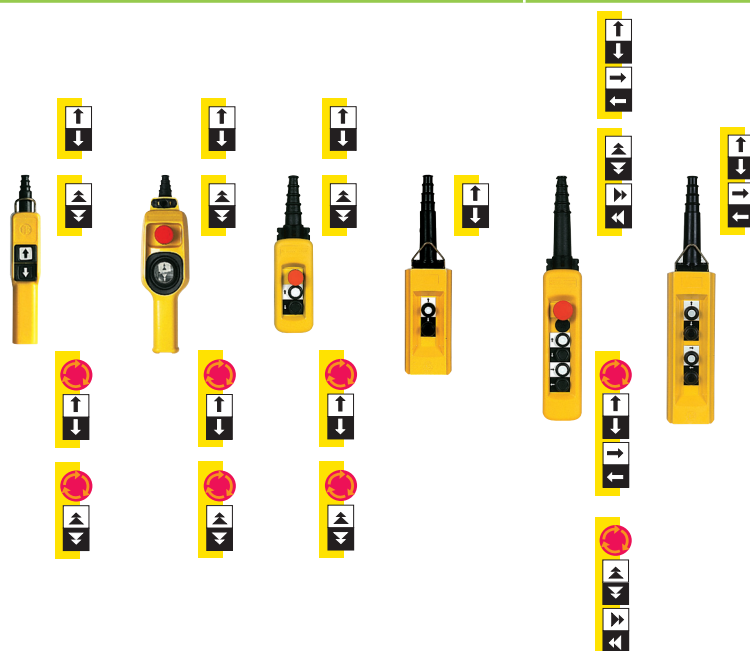
↑ ↓ 2-speed

Emergency stop

Control circuits

Simple hoisting: 1 movement

Handling-hoisting:
2 movements



Number of operators

Enclosure material

Pendant station type reference

Page(s)

2

1
(2-directional)

2

2

4

4

Polypropylene

Polypropylene

Polypropylene

Polyester

Polypropylene

Polyester

XAC A

XAC D

XAC A

XAC B

XAC A

XAC B

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Variable composition stations

Applications

Number of cut-outs

Control circuits

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

Pendant station type reference

Page(s)

Polypropylene

Polypropylene

Polyester

XAC D

XAC A

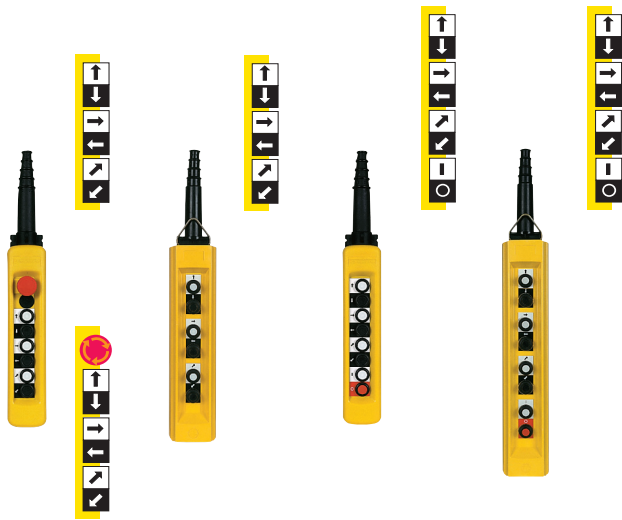
XAC B

6/12 and 6/13

6/23 to 6/29

6/39 to 6/54

Handling-hoisting: 3 movements

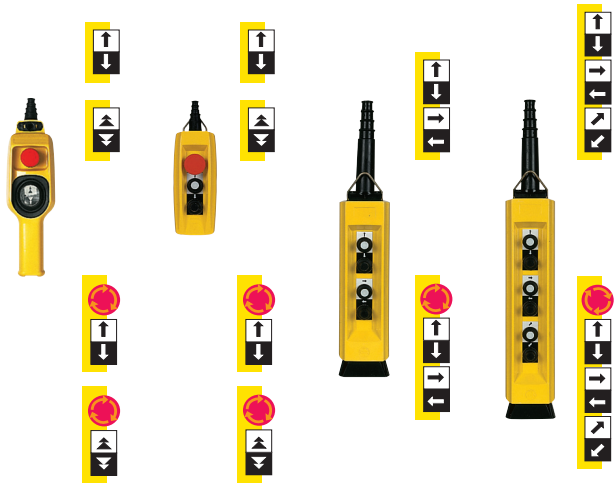


Power circuits

Simple hoisting: 1 movement

Handling-hoisting:
2 movements

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	6/21	6/35	6/11	6/37	6/37	6/38

4 or 8

Up to 30

Products for maintenance purposes only Products for maintenance purposes only



Power circuits

1 or 2

2, 3, 4, 6, 8 or 12 in 2 rows of 6



- Pushbuttons
- Selector/key switches
- Pilot lights
- Emergency stop (front or base mounted)
- Wobblesticks
- Contact blocks for 1 or 2 speeds

Aluminium

XAC M

6/41

- Pushbuttons
- Selector/key switches
- Pilot lights
- Emergency stop (front or base mounted)
- Wobblesticks
- Contact blocks for 1 or 2 speeds

Polyester

XAC F

6/61

- Emergency stop (front mounted)
- Contact blocks for 1 or 2 speeds

Polypropylene

XAC D

6/12 and 6/13

- Pushbuttons
- Selector/key switches
- Pilot lights
- Emergency stop (front or base mounted)
- Wobblesticks
- Contact blocks for 1 or 2 speeds

Polyester

XAC B

6/37 to 6/54

Pendant control stations

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

For control circuits

Environment

Conformity to standards		EN/IEC 60947-5-1 EN/IEC 60204-32, UL 508, CSA C22-2 n° 14 EN/IEC 60947-5-5 and EN/ISO 13850: 2006 for versions with trigger action Emergency stop
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 60068-2-6
Shock resistance		100 gn conforming to IEC 60068-2-27
Electric shock protection		Class II conforming to IEC 61140
Degree of protection		IP 65 conforming to IEC 60529 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

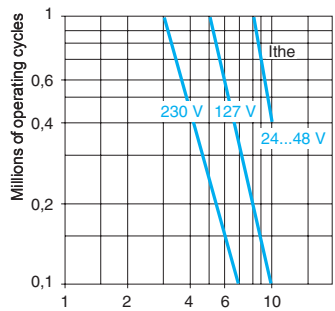
Rated operational characteristics		~ AC-15: A600 or Ue = 600 V, Ie = 1.2 A or Ue = 240 V, Ie = 3 A --- DC-13: Q600 or Ue = 600 V, Ie = 0.1 A or Ue = 250 V, Ie = 0.27 A conforming to EN/IEC 60947-5-1 Appendix A
Thermal current (Ithe)	A	10
Rated insulation voltage (Ui)	V	600, degree of pollution 3, conforming to IEC 60947-1
Rated impulse withstand voltage (U imp)	kV	6, conforming to IEC 60947-1
Positive operation		Mushroom head pushbutton: N/C contact with positive opening operation conforming to EN/IEC 60947-5-1 Appendix K
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 EN/IEC 60947-5-1 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
Inductive circuit

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



Voltage V	24	48	120
mm W	65	48	40








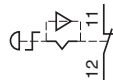

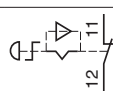

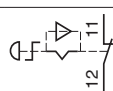

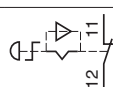
Pendant control stations

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

For control circuits

Complete stations “ready for use”

For control of single-speed hoist motors

Functions	Number of operators	Type of operators	Contact block(s) and scheme		Reference	Weight kg		
			Per direction	For Emergency stop				
	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 trigger action latching Emergency stop Ø 30 mm operator ZA2 BS834 (1)	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

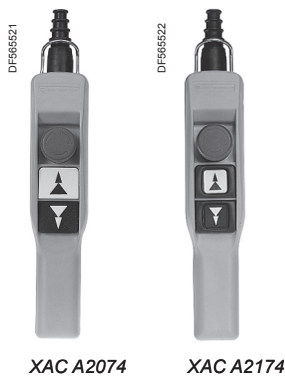
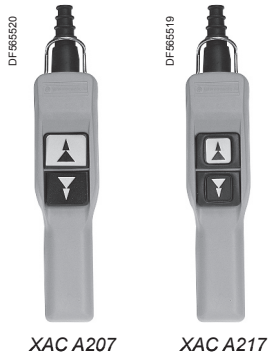
(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

Pendant control stations

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

For control circuits

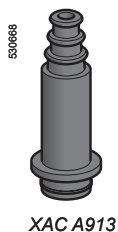
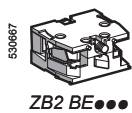
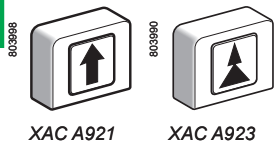
Complete stations “ready for use”



For control of 2-speed hoist motors

Functions	Number of operators	Type of operators	Contact block(s) and scheme	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 trigger action latching Emergency stop Ø 30 mm operator ZA2 BS834 (1)	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

6



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

(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

Pendant control stations

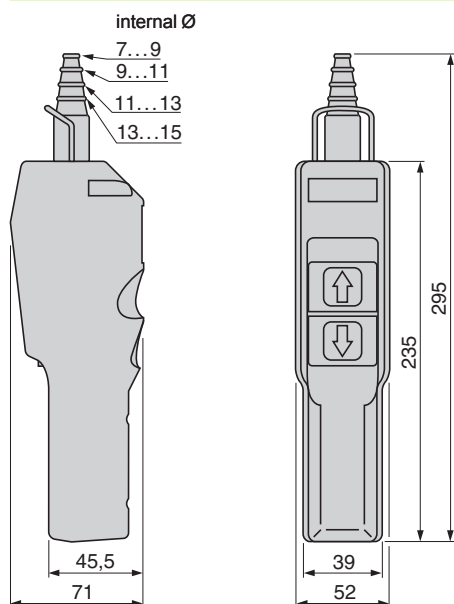
Double insulated with intuitive operation,
type XAC A "Pistol grip"

For control circuits

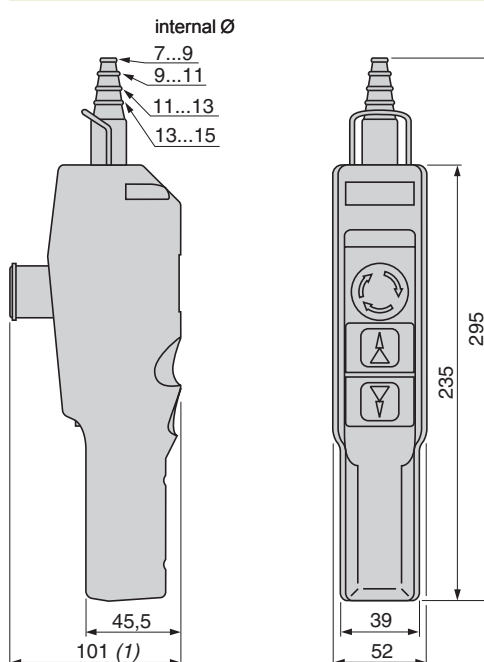
Complete stations "ready for use"

Dimensions

XAC A2●●



XAC A2●●●

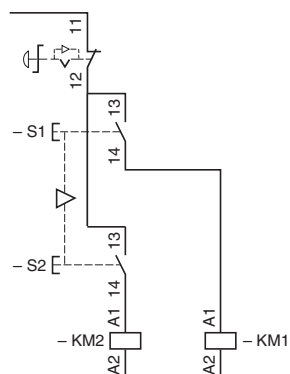


(1) With trigger action latching Ø 30 mm Emergency stop ZA2 BS834.

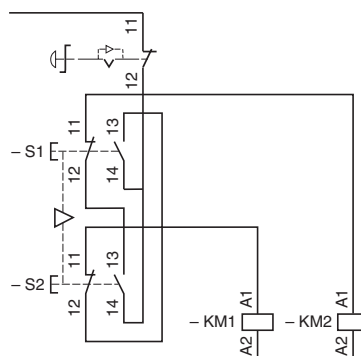
Application schemes (typical examples)

For control of single-speed reversing motor

XAC A2●1●

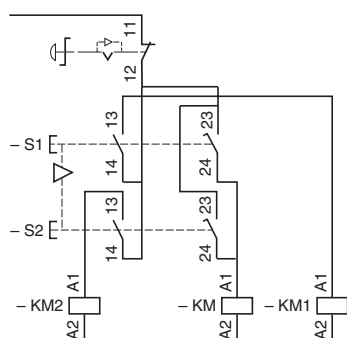


XAC A2●5●



For control of 2-speed reversing motor

XAC A2●7●



Pendant control stations

Double insulated with intuitive operation,
type XAC D

For control circuits

Environment

Conformity to standards		EN/IEC 60947-5-1 EN/IEC 60204-32, UL 508, CSA C22-2 n° 14 EN/IEC 60947-5-5 and EN/ISO 13850: 2006 for versions with trigger action Emergency stop
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 60068-2-6
Shock resistance		70 gn conforming to IEC 60068-2-27
Electric shock protection		Class II conforming to IEC 61140
Degree of protection		IP 65 conforming to IEC 60529 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

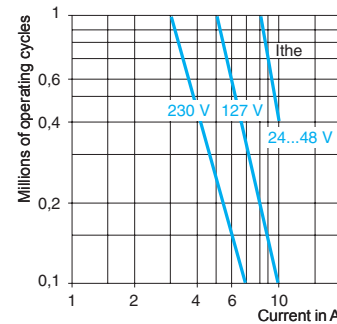
Contact block characteristics

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 EN/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 60947-1
Rated impulse withstand voltage (U imp)		kV 6, conforming to IEC 60947-1
Positive operation		Mushroom head pushbutton on XAC D22A●●●●: N/C contact with positive opening operation conforming to EN/IEC 60947-5-1 Appendix K
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 Captive screw clamp terminals Clamping capacity: 1 x 2.5 or 2 x 1.5 with or without cable end

Operational power Conforming to IEC 60947-5-1 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
Inductive circuit

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



Voltage V	24	48	120
mm. W	65	48	40




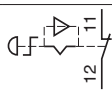

Pendant control stations

Double insulated with intuitive operation,
type XAC D


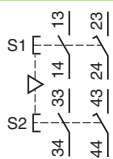
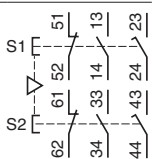
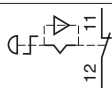
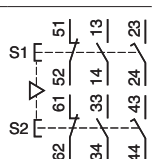
For control circuits

Complete stations “ready for use”

For control of single-speed hoist motors

Functions	Number of operators	Contact block(s) and scheme	Reference	Weight kg
 Reversing, mechanically interlocked	1	1 N/O		
	2-directional operator	ZB2 BE101	XAC D21A0101	0.340
				
		For Emergency stop		
		1 N/C + 1 N/O		
		ZB2 BE102	XAC D21A0105	0.365
		+ ZB2 BE101		
				
		For Emergency stop		
		1 N/C		
		ZB2 BE102	XAC D24A0101	0.395
				
		For Emergency stop		
		1 N/C + 1 N/O		
		ZB2 BE102	XAC D24A0105	0.425
		+ ZB2 BE101		
				

For control of 2-speed hoist motors

Functions	Number of operators	Contact block(s) and scheme	Reference	Weight kg
 Reversing, mechanically interlocked	1	1 N/O + N/O		
	2-directional operator	staggered XED S1231 (1)	XAC D21A1231	0.365
				
		For Emergency stop		
		1 N/C + N/O		
		+ N/O staggered XED S1241 (1)	XAC D21A1241	0.405
				
		For Emergency stop		
		1 N/C		
		ZB2 BE102	XAC D24A1231	0.420
				
		For Emergency stop		
		1 N/C + N/O		
		+ N/O staggered XED S1241 (1)	XAC D24A1241	0.420
				

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

(2) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

Pendant control stations

Double insulated with intuitive operation,
type XAC D

For power circuits (direct switching)

Environment			
Conformity to standards			EN/IEC 60947-5-1 EN/IEC 60204-32, UL 508, CSA C22-2 n° 14 EN/IEC 60947-5-5 and EN/ISO 13850: 2006 for versions with trigger action Emergency stop EN/IEC 60947-3
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 60068-2-6
Shock resistance			100 gn conforming to IEC 60068-2-27 except XAC D 2-speed: 70 gn
Electric shock protection			Class II conforming to IEC 61140
Degree of protection			IP 65 conforming to IEC 60529 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 60947-1 400, degree of pollution 3 for Emergency stop contact on stations XAC D22P●●●●
Rated impulse withstand voltage (U imp)		kV	6, conforming to IEC 60947-1 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
Operational power			Utilisation categories AC-3 and AC-4 conforming to IEC 60947-3 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 60947-3 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



Pendant control stations

Double insulated with intuitive operation,
type XAC D



For power circuits (direct switching)

Complete stations “ready for use”

For control of single-speed hoist motors

Functions	Number of operators	Contact blocks Per direction	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
 Emergency stop	1 2-directional operator + 1 trigger action latching Emergency stop Ø 30 mm operator ZA2 BS834 (2)	2-pole XED S3111 (1)	1 N/C + N/C + N/C XEN T1991	2.2 kW	XAC D24P3111 (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 D24P2121 (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 D24P3121 (2)	0.410

For control of 2-speed hoist motors

Functions	Number of operators	Contact blocks Per direction	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
 Emergency stop	1 2-directional operator + 1 trigger action latching Emergency stop Ø 30 mm operator ZA2 BS834 (2)	2-pole XED S2231 (1)	1 N/C + N/C + N/C XEN T1991	1.1 kW	XAC D24P2231 (2)	0.420
		2-pole XED S3231 (1)	1 N/C + N/C + N/C XEN T1991	2.2 kW	XAC D24P3231 (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 D24P3241 (2)	0.420

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

(2) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.



XAC D21P2111



XAC D24P2121



XAC D21P2231



XAC D24P3241

Pendant control stations

Double insulated with intuitive operation,
type XAC D

For control or power circuits

Empty enclosures, separate components and spare parts



XAC D021



XAC D022



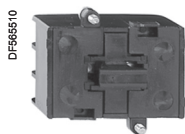
ZB2 BE10●



XED S1231



XED S2121



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 6/13 and 6/14

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.

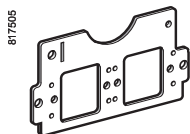
(2) See application schemes, page 6/15.

Pendant control stations

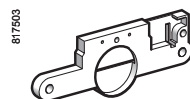
Double insulated with intuitive operation,
type XAC D

For control or power circuits

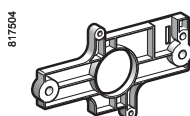
Separate components and spare parts



XAC D913



XAC D911



XAC D912



ZA2 BS834



ZA2 BS934



ZA2 BD2



ZA2 BG2

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
1 trigger action latching Emergency stop Ø 30 mm operator (1) Turn to release	Red	ZA2 BS834	0.040
1 trigger action latching Emergency stop Ø 30 mm operator Key release, n° 455 (2) Key withdrawal in rest (unactuated) position	Red	ZA2 BS934	0.060
Selector switch, standard handle 2 position, stay put	Black	ZA2 BD2	0.018
Key switch (key n° 455) (2) 2 position, stay put Key withdrawal in left-hand position	—	ZA2 BG2	0.020
Key switch (key n° 455) (2) 2 position, spring return from right to left Key withdrawal in left-hand position	—	ZA2 BG6	0.020
Key switch (key n° 455) (2) 2 position, stay put Key withdrawal in left and right-hand position	—	ZA2 BG4	0.020
Key switch (key n° 455) (2) (3) 3 position, stay put Key withdrawal in left and right-hand position	—	ZA2 BG5	0.020
Key switch (key n° 455) (2) (3) 3 position, stay put Key withdrawal in centre position	—	ZA2 BG3	0.020

(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

(2) Other key numbers available on request, please consult your Regional Sales Office.

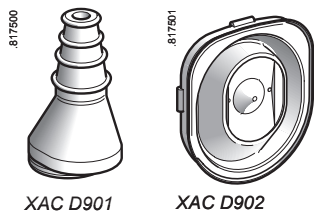
(3) Only suitable for front mounting.

Pendant control stations

Double insulated with intuitive operation,
type XAC D

For control or power circuits

Complementary accessories

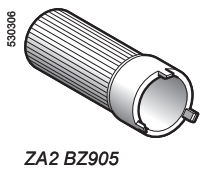


Complementary accessories

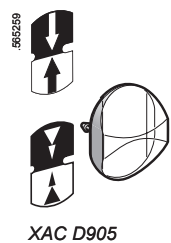
Protective cable sleeve for cable Ø 7 to 18 mm	–	XAC D901	0.030
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Diaphragm for directional operator, polychloroprene	Black	XAC D902	0.015
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Tightening tool for fixing nut	–	ZA2 BZ905	0.060
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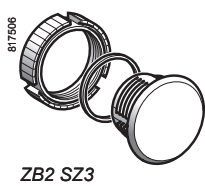
Directional operator with set of legends (single-speed and 2-speed)	–	XAC D905	0.005
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Blanking plug for Ø 22.5 mm cut-out, with seal and fixing nut	Black	ZB2 SZ3	0.010
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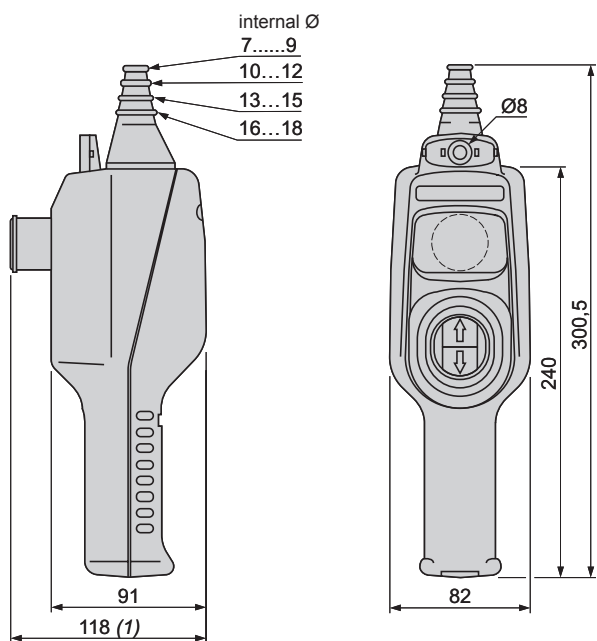
Printed labels, pendant station characteristics

Description	Pendant station circuit type	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



Dimensions

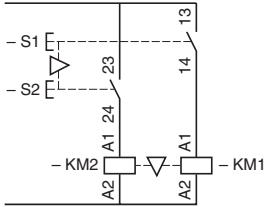
XAC D●●●



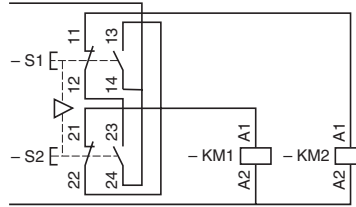
(1) With trigger action latching Ø 30 mm Emergency stop ZA2 BS834.

Control circuits

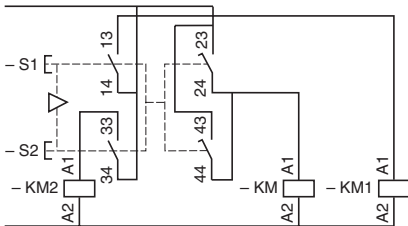
XAC D21A0101



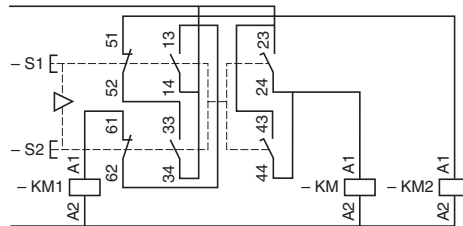
XAC D21A0105



XAC D21A1231



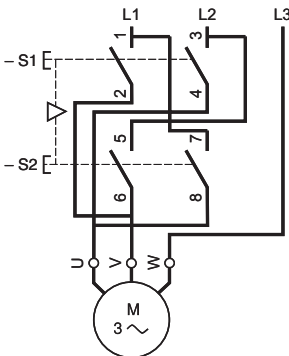
XAC D21A1241



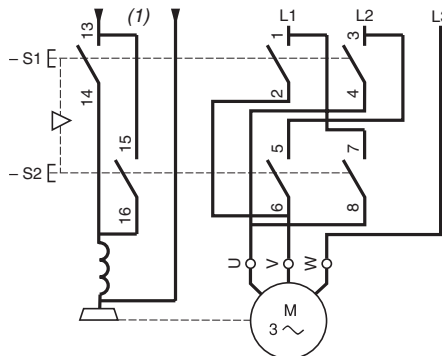
Power circuits

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

XAC D21P2111, XAC D21P3111



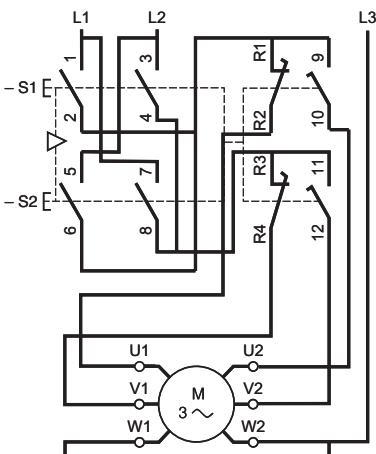
XAC D21P2121, XAC D21P3121



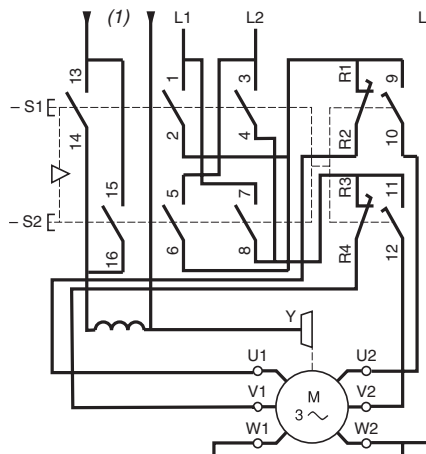
(1) Brake supply.

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

XAC D21P2231, XAC D21P3231



XAC D21P2241, XAC D21P3241



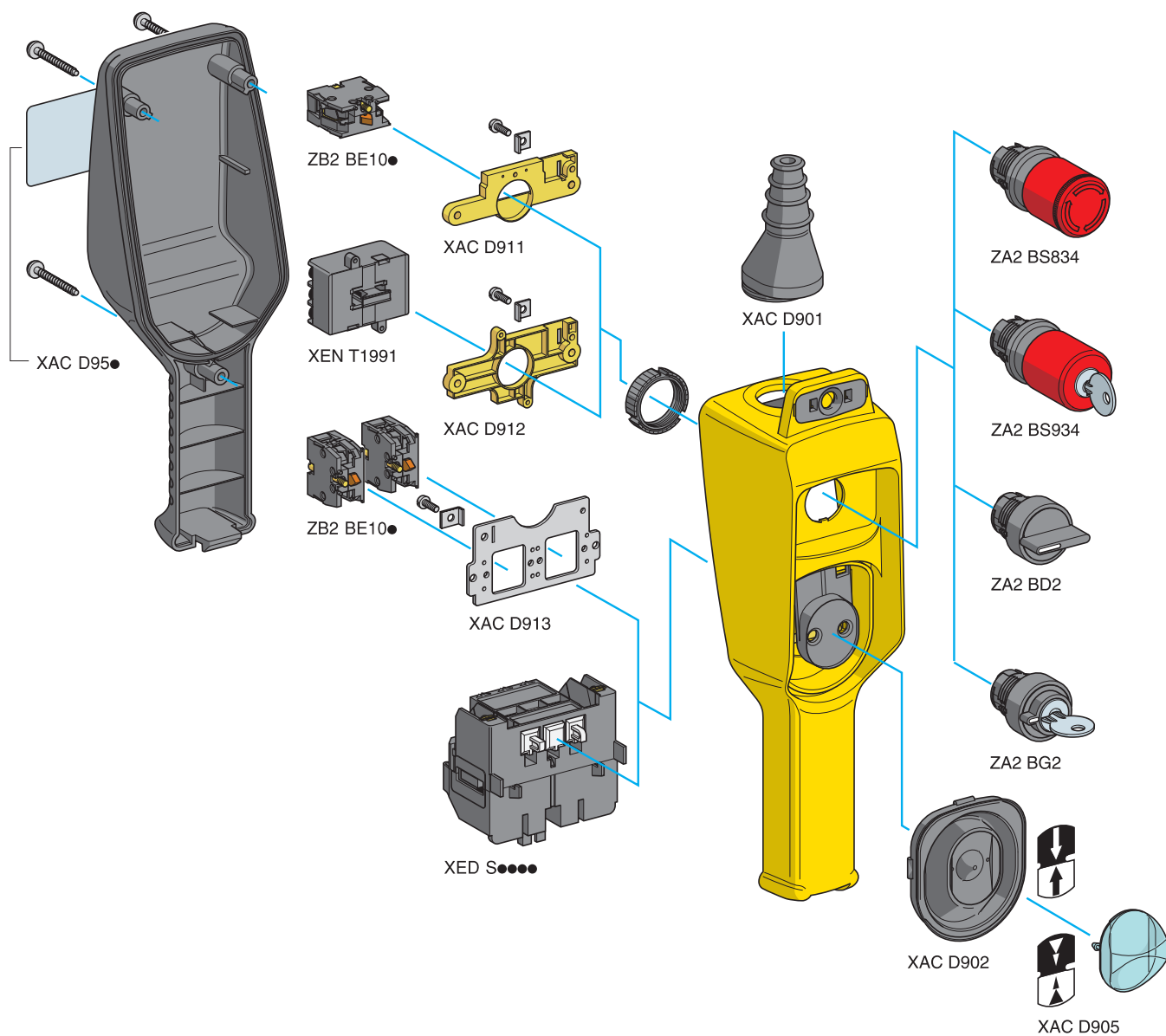
(1) Brake supply.

Pendant control stations

Double insulated with intuitive operation,
type XAC D

For control or power circuits

Variable composition stations, factory assembled

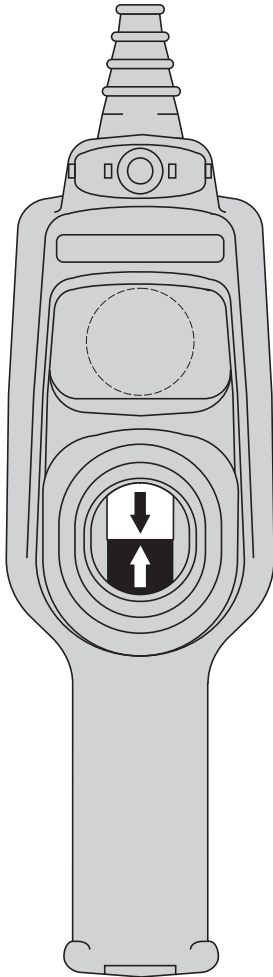


Pendant control stations

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		Total price
Reference	Unit price	Reference	Unit price	Reference	Unit price	

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

Factory assembly:

Add an additional cost for assembly **XAC 9VA**

Total price of assembled pendant station

(1) Obtain the empty enclosure price.

Environment

Conformity to standards		EN/IEC 60947-5-1 EN/IEC 60204-32, UL 508, CSA C22-2 n° 14 EN/IEC 60947-5-5 and EN/ISO 13850: 2006 for versions with trigger action Emergency stop
Product certifications		Special version, with suffix "H7": UL Listed A600-Q600, CSA A600-Q600, CCC, GOST
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 60068-2-6
Shock resistance		100 gn conforming to IEC 60068-2-27
Electric shock protection		Class II conforming to IEC 61140
Degree of protection		IP 65 conforming to IEC 60529 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

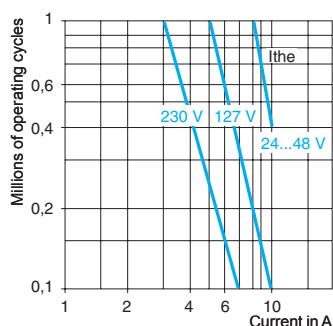
Rated operational characteristics	ZB2 BE●●●, XEN G●●●●, XAC S●●●● XEN T●●●●		\sim AC-15: A600 or Ue = 600 V, Ie = 1.2 A or Ue = 240 V, Ie = 3 A $\overline{\overline{\cdot}}$ DC-13: Q600 or Ue = 600 V, Ie = 0.1 A or Ue = 250 V, Ie = 0.27 A \sim AC-15: A300 or Ue = 240 V, Ie = 3 A $\overline{\overline{\cdot}}$ DC-13: Q300 or Ue = 250 V, Ie = 0.27 A conforming to EN/IEC 60947-5-1 Appendix A
Thermal current (Ithe)		A	10
Rated insulation voltage (Ui)	ZB2 BE●●●, XEN G●●●●, XAC S●●●● XEN T●●●●	V	600, degree of pollution 3
		V	400, degree of pollution 3, conforming to EN/IEC 60947-1
Rated impulse withstand voltage (U imp)		kV	6, conforming to EN/IEC 60947-1
Positive operation			Mushroom head pushbutton: N/C contact with positive opening operation conforming to EN/IEC 60947-5-1 Appendix K
Contact operation			N/C or N/O slow break
Resistance across terminals		MΩ	≤ 25
Operating force		N	Operators - with 1 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.

Operational power

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

a.c. supply \sim 50/60 Hz
 \sim Inductive circuit

d.c. supply $\overline{\overline{\cdot}}$
Power broken in W for 1 million operating cycles



Voltage V	24	48	120
Power broken in W	65	48	40




Pendant control stations

Double insulated, type XAC A

For control circuits

Complete stations "ready for use"

For control of single-speed motors

Functions	Number of operators	Contact block(s) and scheme		Reference	Weight kg
		Per direction	For Emergency stop		
	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 trigger action latching Emergency stop stop Ø 30 mm operator ZA2 BS834 (1)	1 N/O ZB2 BE101	1 N/C ZB2 BE102	XAC A2714 (1)	0.575
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	1 N/C ZB2 BE102	XAC A2814 (1)	0.600
		1 N/O ZB2 BE101	1 N/C + N/C + N/C XEN T1192	XAC A27141 (1)	0.615
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	1 N/C + N/C + N/C XEN T1192	XAC A28141 (1)	0.635

(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

Pendant control stations

Double insulated, type XAC A

For control circuits

Complete stations "ready for use"

DF 565925

XAC A471
XAC A481

530226

XAC A4714
XAC A4814
XAC A47141
XAC A48141

530224

XAC A671
XAC A681XAC A6714
XAC A6814

For control of single-speed motors (continued)

Functions	Number of operators	Contact block(s) and scheme		Reference	Weight kg
		Per direction	For Emergency stop		
	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
		1 N/O ZB2 BE101	1 N/C ZB2 BE102 	XAC A4714 (1)	0.800
	4 mechanically interlocked between pairs + 1 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844 (1)	1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	1 N/C ZB2 BE102 	XAC A4814 (1)	0.815
		1 N/O ZB2 BE101	1 N/C + N/C + N/C XEN T1192 	XAC A47141 (1)	0.835
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	1 N/C + N/C + N/C XEN T1192 	XAC A48141 (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
		1 N/O ZB2 BE101	1 N/C ZB2 BE102 	XAC A6714 (1)	0.845
	6 mechanically interlocked between pairs + 1 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844 (1)	1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	1 N/C ZB2 BE102 	XAC A6814 (1)	0.935

(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 3850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

Pendant control stations

Double insulated, type XAC A

For control circuits

Complete stations "ready for use"

DF-565526

XAC A67141
XAC A68141

DF-565527

XAC A871
XAC A881

For control of single-speed motors (continued)

Functions	Number of operators	Contact block(s) and scheme	Reference	Weight kg
		Per direction	For Emergency stop	
	6 mechanically interlocked between pairs + 1 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844 (1)	1 N/O ZB2 BE101	1 N/C + N/C + N/C XEN T1192	XAC A67141 (1) 0.880
		1 N/C + 1 N/O ZB2 BE102 + ZB2 BE101	1 N/C + N/C + N/C XEN T1192	XAC A68141 (1) 0.970
	8 mechanically interlocked between pairs	1 N/O on 7 operators ZB2 BE101 and 1 N/C on the 8 th 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	Reference	Weight kg
		Per direction	For Emergency stop	
	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 trigger action latching Emergency stop Ø 30 mm operator ZA2 BS834 (1)	1 N/C + N/O + N/O staggered XEN G1191	1 N/C ZB2 BE102	XAC A2914 (1) 0.570
		1 N/C + N/O + N/O staggered XEN G1191	1 N/C + N/C + N/C XEN T1192	XAC A29141 (1) 0.605

(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

Pendant control stations

Double insulated, type XAC A

For control circuits

Complete stations “ready for use”

DF56528



XAC A491

530231



XAC A4914
XAC A49141

DF56528



XAC A492

537743



XAC A4924
XAC A49241

For control of 2-speed motors (continued)

Functions	Number of operators	Contact block(s) and scheme	Reference	Weight kg
		Per direction	For Emergency stop	
	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 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844 (1)	1 N/C + N/O + N/O staggered XEN G1191	1 N/C ZB2 BE102	XAC A4914 (1) 0.675
		1 N/C + N/O + N/O staggered XEN G1191	1 N/C + N/C + N/C XEN T1192	XAC A49141 (1) 0.700
(a) (b)	4 mechanically interlocked between pairs	1 N/C + N/O + N/O staggered (a) XEN G1191	–	XAC A492 0.675
		1 N/O (b) ZB2 BE101		
	4 mechanically interlocked between pairs + 1 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844 (1)	1 N/C + N/O + N/O staggered (a) XEN G1191	1 N/C ZB2 BE102	XAC A4924 (1) 0.700
		1 N/O (b) ZB2 BE101		
		1 N/C + N/O + N/O staggered (a) XEN G1191	1 N/C + N/C + N/C XEN T1192	XAC A49241 (1) 0.735
		1 N/O (b) ZB2 BE101		

(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

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. The first cut-out can only be used for the Emergency stop function.

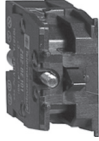
Pendant control stations

Double insulated, type XAC A

For control circuits

Separate components and spare parts

530238



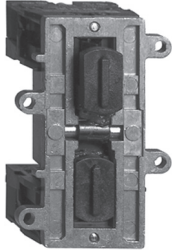
ZB2 BE101
ZB2 BE102

530237



XEN G1191
XEN G1491

530236



XEN G3781
XEN G3791

530239



XEN T1192

Contact blocks for front mounting

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
	2-speed	N/C + N/O + N/O simultaneous (1)		XEN G1491	0.040
		N/C + N/O + N/O staggered (1)		XEN G1191	0.040
Double block, latching slow break (2)	Single-speed	N/O		XEN G3781	0.060
		N/O		XEN G3791	0.060
	2-speed	N/O		XEN G3791	0.060
		N/C		XEN G3791	0.060

Isolating switch, slow break, for front mounting

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.

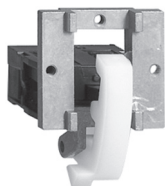
Pendant control stations

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

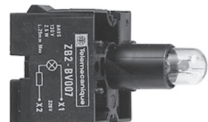


ZB2 BV006

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

530242



ZB2 BV007

(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 $U \leq 130$ V or neon bulb 110 V $\leq U \leq 400$ V. Maximum power: 2.6 W, maximum \varnothing : 11 mm, maximum length: 28 mm. See page 6/26.

Pendant control stations

Double insulated, type XAC A

For control circuits

Separate components and spare parts

530243



XAC A94●●

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

530249

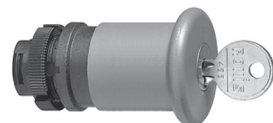


ZA2 BS834

Operating heads for front or base mounting

Description	Colour	Type	Reference	Weight kg
Trigger action latching Emergency stop (1) Turn to release	Red	Ø 30 mm	ZA2 BS834	0.040
		Ø 40 mm	ZA2 BS844	0.050
Trigger action latching Emergency stop (2) Key release (n° 455) Key withdrawal in rest (unactuated) position	Red	Ø 30 mm	ZA2 BS934	0.060
		Ø 40 mm	ZA2 BS944	0.065
Selector switches (3), standard handle (Not to be used with XEN G●●●● contact blocks)	Black	2 position, stay put	ZA2 BD2	0.018
		3 position, stay put (4)	ZA2 BD3	0.018
Key switches (2) (key n° 455) Key withdrawal in left and right-hand position	—	2 position, stay put	ZA2 BG4	0.042
		3 position, stay put (4)	ZA2 BG5	0.042
Key switch (2) (key n° 455) Key withdrawal in left-hand position	—	2 position, stay put	ZA2 BG2	0.042
Key switch (2) (key n° 455) Spring return from right to left Key withdrawal in left-hand position	—	2-position	ZA2 BG6	0.042
Key switch (4) (2) (key n° 455) Key withdrawal in centre position	—	3 position, stay put	ZA2 BG3	0.042
Wobblesticks (5) Operates in all directions for fast stop	Black	—	ZA2 BB2	0.060
	Red	—	ZA2 BB4	0.060

DF538493



ZA2 BS944

530245



ZA2 BD●

530246



ZA2 BG●

DF565529



ZA2 BB●

(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

(2) Other key numbers available on request, please consult your Regional Sales Office.

(3) Selector switches available with other mechanical functions, please consult your Regional Sales Office.

(4) Only suitable for front mounting.

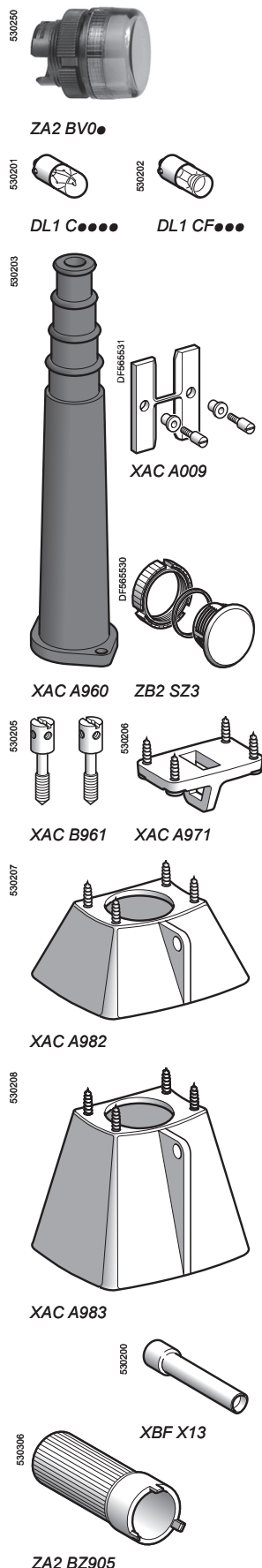
(5) Base mounting recommended.

Pendant control stations

Double insulated, type XAC A

For control circuits

Separate components and spare parts



Pilot light heads

Description	Colour	Reference	Weight kg
For use with incandescent bulbs			
Lens cap with bezel and fixing nut	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 bezel and fixing nut	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
Tightening tool for fixing nut	—	ZA2 BZ905 0.060
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 Emergency stop head pushbutton	XAC A982 0.025
	For key switch or key release latching Emergency stop head pushbutton	XAC A983 0.045
Bulb extractor	For BA 9s base fitting bulbs	XBF X13 0.025

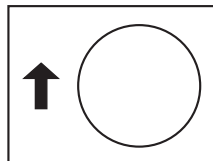
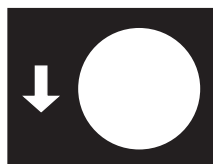
Pendant control stations

Double insulated, type XAC A

For control circuits

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

53/209

White background,
black symbolBlack background,
white symbolRed background,
white symbol

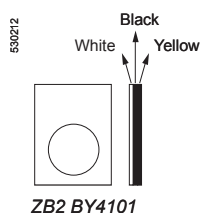
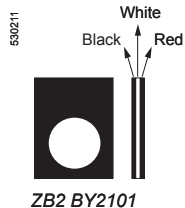
Function Symbol	Reference	Weight kg	Function Symbol	Reference	Weight kg
Raise, slow 	ZB2 BY4901	0.001	Lower, slow 	ZB2 BY2904	0.001
Raise, fast 	ZB2 BY4902	0.001	Lower, fast 	ZB2 BY2905	0.001
Raise, slow-fast 	ZB2 BY4903	0.001	Lower, slow-fast 	ZB2 BY2906	0.001
Right, slow 	ZB2 BY4907	0.001	Left, slow 	ZB2 BY2910	0.001
Right, fast 	ZB2 BY4908	0.001	Left, fast 	ZB2 BY2911	0.001
Right, slow-fast 	ZB2 BY4909	0.001	Left, slow-fast 	ZB2 BY2912	0.001
Forward, slow 	ZB2 BY4913	0.001	Reverse, slow 	ZB2 BY2916	0.001
Forward, fast 	ZB2 BY4914	0.001	Reverse, fast 	ZB2 BY2917	0.001
Forward, slow-fast 	ZB2 BY4915	0.001	Reverse, slow-fast 	ZB2 BY2918	0.001
Slew right, slow 	ZB2 BY4919	0.001	Slew left, slow 	ZB2 BY2922	0.001
Slew right, fast 	ZB2 BY4920	0.001	Slew left, fast 	ZB2 BY2923	0.001
Slew right, slow-fast 	ZB2 BY4921	0.001	Slew left, slow-fast 	ZB2 BY2924	0.001
Slow 	ZB2 BY4933	0.001	Fast 	ZB2 BY4934	0.001
Klaxon 	ZB2 BY4932	0.001	Start-Klaxon 	ZB2 BY4935	0.001
Start 	ZB2 BY4930	0.001	Stop 	ZB2 BY2931	0.001

Pendant control stations

Double insulated, type XAC A

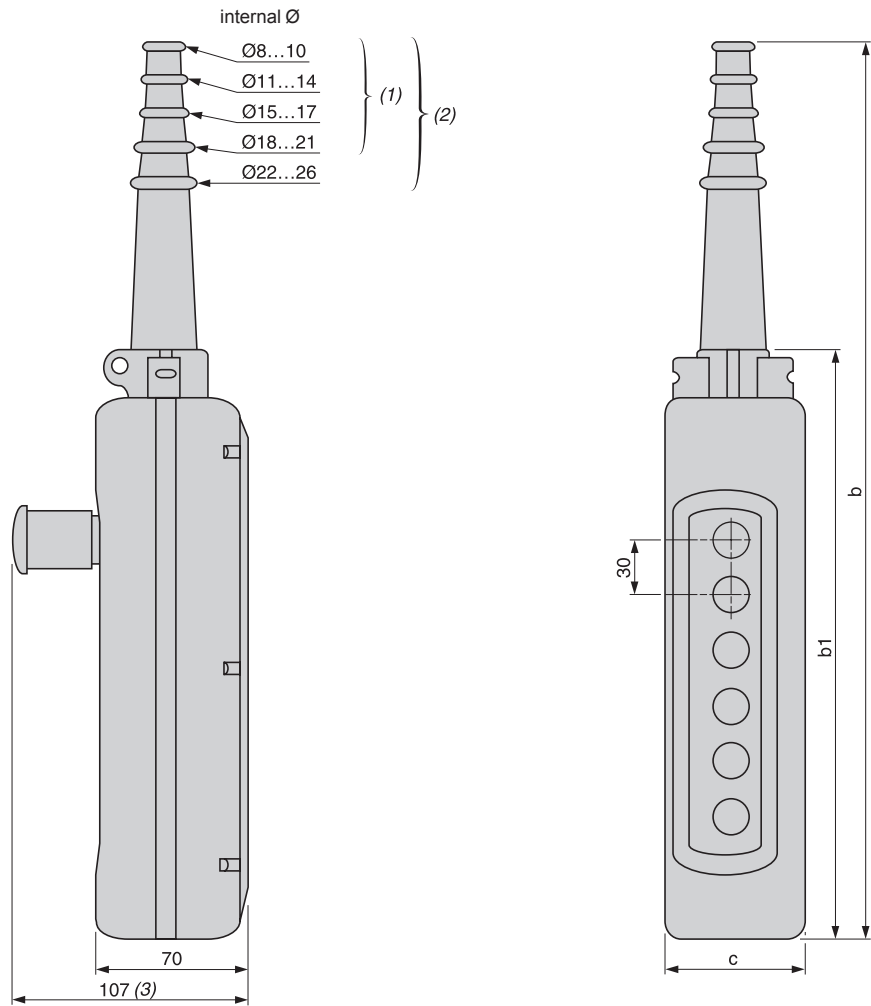
For control circuits

Legends 30 x 40 mm



Text	Reference	Weight kg	Text	Reference	Weight kg
<ul style="list-style-type: none"> 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 English text			With French text		
For pushbuttons			For pushbuttons		
Start	ZB2 BY2303	0.001	Marche	ZB2 BY2103	0.001
Stop	ZB2 BY2304	0.001	Arrêt	ZB2 BY2104	0.001
Forward	ZB2 BY2305	0.001	Avant	ZB2 BY2105	0.001
Reverse	ZB2 BY2306	0.001	Arrière	ZB2 BY2106	0.001
Up	ZB2 BY2307	0.001	Montée	ZB2 BY2107	0.001
Down	ZB2 BY2308	0.001	Descente	ZB2 BY2108	0.001
Right	ZB2 BY2309	0.001	Droite	ZB2 BY2109	0.001
Left	ZB2 BY2310	0.001	Gauche	ZB2 BY2110	0.001
On	ZB2 BY2311	0.001	En service	ZB2 BY2111	0.001
Off	ZB2 BY2312	0.001	Hors service	ZB2 BY2112	0.001
Power on	ZB2 BY2326	0.001	Sous tension	ZB2 BY2126	0.001
Slow	ZB2 BY2327	0.001	Lent	ZB2 BY2127	0.001
Fast	ZB2 BY2328	0.001	Vite	ZB2 BY2128	0.001
Klaxon	ZB2 BY2125	0.001	Klaxon	ZB2 BY2125	0.001
For selector switches			For selector switches		
–	–	0.001	Arrêt-Marche	ZB2 BY2166	–
Off-On	ZB2 BY2367	0.001	Hors-en	ZB2 BY2167	0.001
With special texts					
<ul style="list-style-type: none"> 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.				

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 to 8-way XAC A stations.
(3) With trigger action Emergency stop head operator.

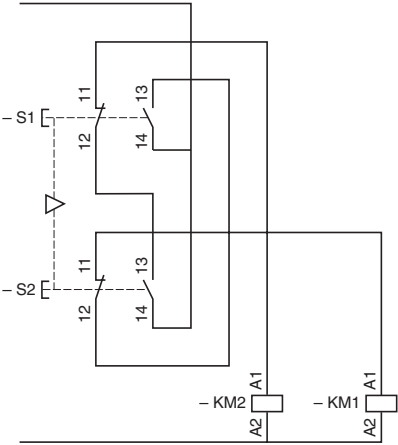
Protective guards
XAC A982 XAC A983



Application schemes (typical examples)

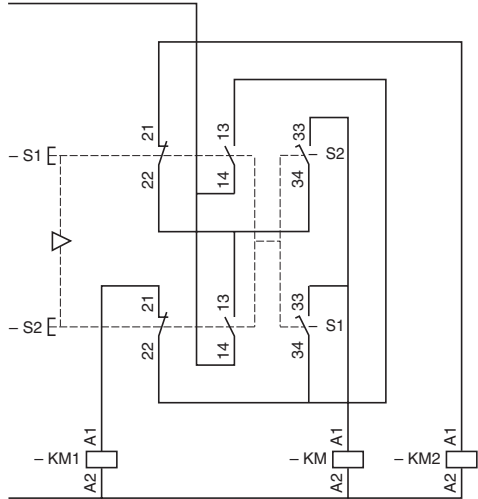
For control of single-speed reversing motor

Contact blocks ZB2 BE101 + ZB2 BE102



For control of 2-speed reversing motor

2 contact blocks XEN G1191



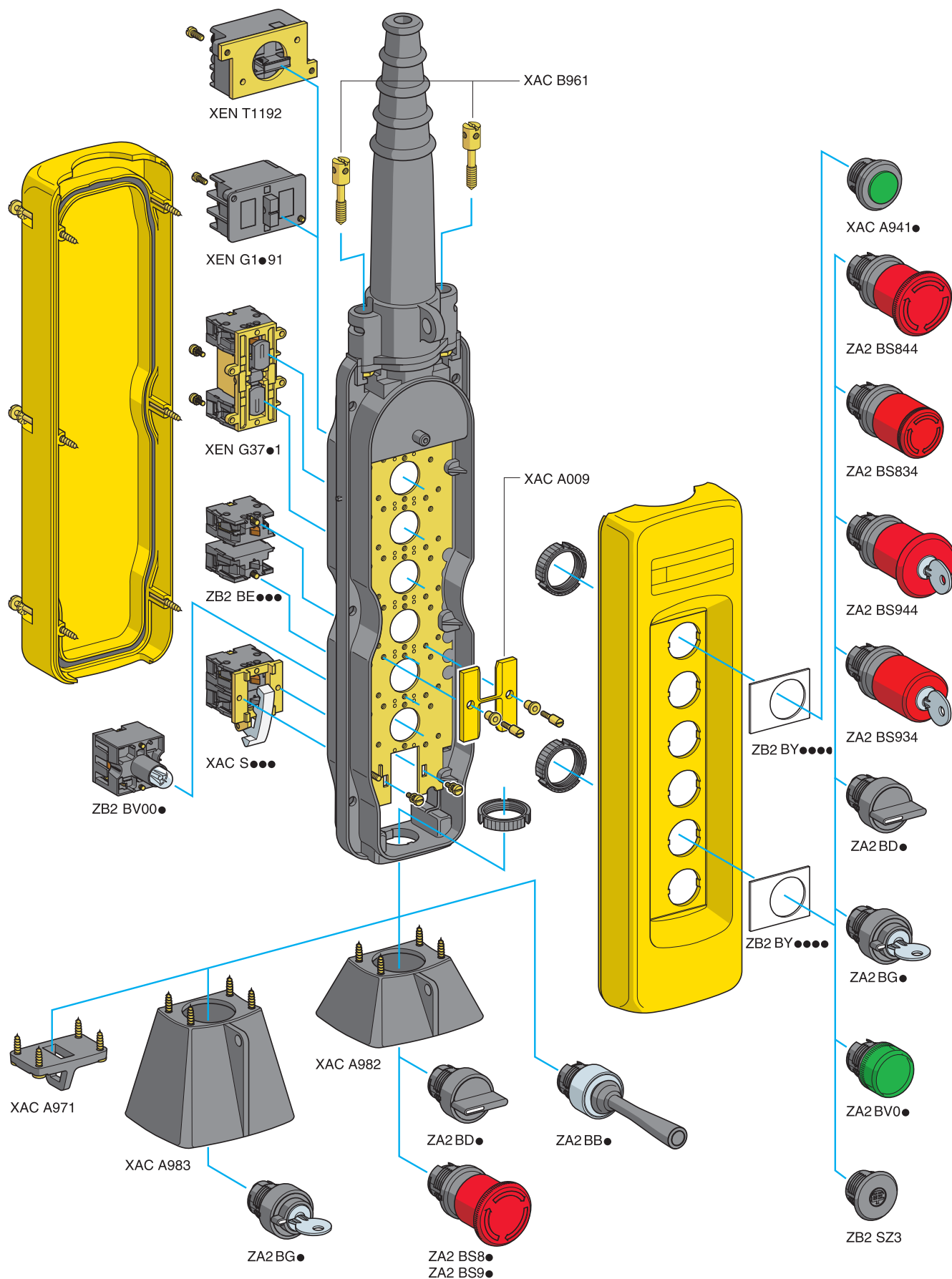
KM: high speed contactor

Pendant control stations

Double insulated, type XAC A

For control circuits

Variable composition stations, factory assembled

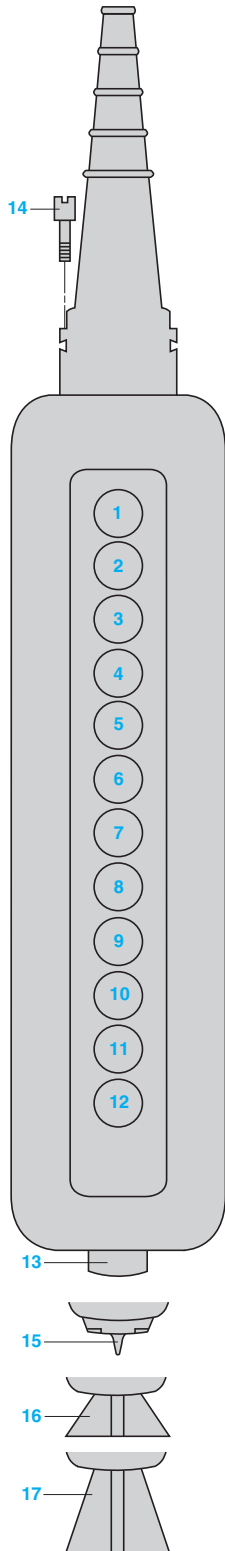


Pendant control stations

Double insulated, type XAC A

For control 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 A09 reference

Unit reference of empty enclosure, see page 6/23	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		Total price
Reference	Unit price	Reference	Unit price	Reference	Unit 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	X	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 Emergency stop head pushbutton, mounted in base		XAC A982	
17 Protective guard for key switch or key release Emergency stop head pushbutton, mounted in base		XAC A983	

Mechanical interlocking (2)

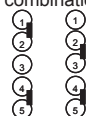
Reference	Quantity	Unit price
XAC A009		
Factory assembly:		Additional cost XAC 9VA for fitting of 1 head or 1 blanking plug
Number of heads or blanking plugs to be fitted		
		X

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



Environment

Conformity to standards			EN/IEC 60947-5-1, CSA C22-2 n° 14
Product certifications	XAC B		Standard version: 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 60068-2-6
Shock resistance			100 gn conforming to IEC 60068-2-27
Electric shock protection	XAC B		Class II
	XAC M		Class I conforming to IEC 61140
Degree of protection			IP 65 conforming to IEC 60529; 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			\sim AC-15: A300 or Ue = 240 V, Ie = 3 A \cdots DC-13: Q300 or Ue = 250 V, Ie = 0.27 A conforming to EN/IEC 60947-5-1 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 60947-1
	XEN B●●●●, XEN D1●●●, XEN D2●●●		400, degree of pollution 3, conforming to IEC 60947-1
Rated impulse withstand voltage (U imp)		kV	6, conforming to IEC 60947-1
Positive operation			Mushroom head pushbutton: N/C contact with positive opening operation conforming to EN/IEC 60947-5-1 Appendix K
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 (1 st speed), 30 (2 nd speed); XEN D3●●●, XEN D4●●●: 25; XES B2011: 7; XES D1181, XES D1281: 15 (1 st speed), 25 (2 nd 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		mm ²	Screw and captive cable clamp terminals. Clamping capacity: 1 x 2.5 or 2 x 1.5 with or without cable end

Operational power

conforming to EN/IEC 60947-5-1 Appendix C

Utilisation categories AC-15 and DC-13

For 1 million operating cycles

Operating rate: 3600 operating cycles/hour

Load factor: 0.5

 \sim Inductive circuit

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

a.c. supply \sim 50/60 Hz

Voltage	V	24	48	127	230
\sim mm	VA	140	385	525	455

d.c. supply \cdots

Voltage	V	24	48	120
\sim mm	W	60	45	42

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

a.c. supply \sim 50/60 Hz

Voltage	V	24	48	127	230
\sim mm	VA	140	210	640	680

d.c. supply \cdots

Voltage	V	24	48	120
\sim mm	W	48	31	35

Contact blocks XES B2011, XES D1181, XES D1281

a.c. supply \sim 50/60 Hz

Voltage	V	24	48	127	230
\sim mm	VA	50	100	450	750

d.c. supply \cdots

Voltage	V	24	48	120
\sim mm	W	140	140	95

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

Environment

Conformity to standards			EN/IEC 60947-5-1 EN/IEC 60204-32, UL 508, CSA C22-2 n° 14 EN/IEC 60947-5-5 and EN/ISO 13850: 2006 for versions with trigger action Emergency stop EN/IEC 60947-3
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 60068-2-6
Shock resistance			100 gn conforming to IEC 60068-2-27
Electric shock protection			Class II conforming to IEC 61140
Degree of protection			IP 65 conforming to IEC 60529
Mechanical durability (in millions of operating cycles)			1 except for XAC B91● and XAC CB92●: 0.4
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 60947-1
	XAC S●99	V	400, degree of pollution 3, conforming to IEC 60947-1
	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 60947-1
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
Operational power	3 phases, 2 poles XES D1●●●		Utilisation categories AC-3 and AC-4 conforming to EN/IEC 60947-3 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
	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
Mechanical durability (in millions of operating cycles) Utilisation categories AC-3 and AC-4 conforming to EN/IEC 60947-3 Appendix A Duty cycle comprising 75% AC-3, 25% AC-4 Operating rate: 600 operating cycles per hour Load factor: 0.4	3 phases, 3 poles XES D2●●●		3 kW-240 V = 0.7 3 kW-400 V = 1

Pendant control stations

Double insulated, type XAC B

For power circuits (direct switching)

Complete stations "ready for use"

DF565569



XAC B219
XAC B220

DF565569



XAC B3195
XAC B3205

DF565570



XAC B491
XAC B493

DF565571



XAC B4916
XAC B4936

DF565572



XAC B4915
XAC B4935

For control of single-speed motors

Functions	Number of operators	Contact blocks Per direction	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 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844	2-pole XES D1191(1)	1 N/C + N/C + N/C XAC S499	2.2 kW	XAC B3195 ▲	0.940
		3-pole XES D2201(1)	1 N/C + N/C + N/C XAC S499	3 kW	XAC B3205 ▲	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 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844	2-pole XES D1191(1)	1 N/C + N/C + N/C XAC S499	2.2 kW	XAC B4916 ▲	1.260
		3-pole XES D2201(1)	1 N/C + N/C + N/C XAC S499	3 kW	XAC B4936 ▲	1.390
	4 mechanically interlocked between pairs + 1 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844 mounted in base	2-pole XES D1191(1)	1 N/C + N/C + N/C XAC S3991	2.2 kW	XAC B4915 ▲	1.350
		3-pole XES D2201(1)	1 N/C + N/C + N/C XAC S3991	3 kW	XAC B4935 ▲	1.480

(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

▲ Available 3rd quarter of 2008

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 B6916
XAC B6936

DF565575

XAC B6915
XAC B6935

DF565576



XAC B229

DF565577



XAC B3295

For control of single-speed motors (continued)

Functions	Number of operators	Contact blocks Per direction	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 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844	2-pole XES D1191(1)	1 N/C + N/C + N/C XAC S499	2.2 kW	XAC B6916 ▲	1.410
		3-pole XES D2201(1)	1 N/C + N/C + N/C XAC S499	3 kW	XAC B6936 ▲	1.610
	6 mechanically interlocked between pairs + 1 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844 mounted in base	2-pole XES D1191(1)	1 N/C + N/C + N/C XAC S3991	2.2 kW	XAC B6915 ▲	1.500
		3-pole XES D2201(1)	1 N/C + N/C + N/C XAC S3991	3 kW	XAC B6935 ▲	1.700

For control of 2-speed motors

Functions	Number of operators	Contact blocks Per direction	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 trigger action latching Emergency stop Ø 40 mm operator ZA2 BS844	2-pole XES D1291(1)	1 N/C + N/C + N/C XAC S499	2.2 kW	XAC B3295 ▲	0.990

(1) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

▲ Available 3rd quarter of 2008

Pendant control stations

Double insulated, type XAC B

For control or power circuits

Empty enclosures

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.

DF565578



XAC B020

DF565579



XAC B030

DF565580



XAC B02●

DF565581



XAC B04●

DF565582



XAC B06●

DF565583



XAC B08●

DF565584



XAC B12●

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



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.

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

DF565587



XAC M08

DF565586



XAC M04

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.

Pendant control stations

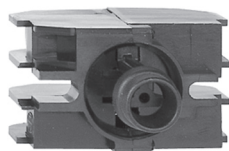
Double insulated, type XAC B

Metal, type XAC M

For control circuits

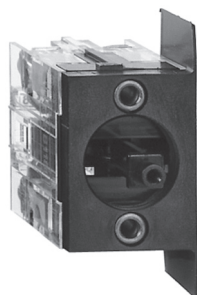
Separate components and spare parts

DF565588



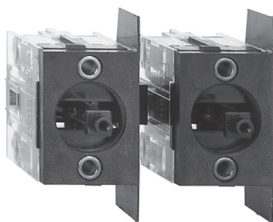
XEN C1111

DF565589



XEN B1181

DF566590



XEN D2611

Contact blocks for front mounting, slow break

Description	Application	Function	Scheme	Operator centres mm	Reference	Weight 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

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

Pendant control stations

Double insulated, type XAC B

Metal, type XAC M

For control circuits

Separate components and spare parts

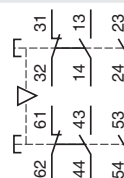
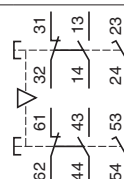
Contact blocks for front mounting, slow break (continued)

Description	Application Function	Scheme	Operator centres mm	Reference	Weight kg
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Spring return (continued)

Double block
2 spring return operators
mechanically interlocked

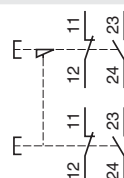
Single-speed C/O + N/O

30 **XEN D1631** 0.11040 (1) **XEN D2631** 0.1102-speed 2 step
C/O + N/O
staggered30 **XEN D1641** 0.11040 (1) **XEN D2641** 0.110

Latching

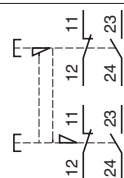
Double block
1 latching operator released
by 1 spring return operator

Single-speed N/C + N/O

30 **XEN D3801** 0.17040 (1) **XEN D4801** 0.170

Double block
2 latching operators

Single-speed N/C + N/O

30 **XEN D3811** 0.17040 (1) **XEN D4811** 0.170

Contact blocks for front mounting, snap action

Description	Application Function	Scheme	Operator centres mm	Reference	Weight kg
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Spring return

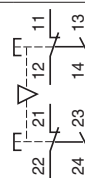
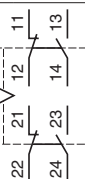
Single block
1 spring return operator (2)

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** 0.1402-speed C/O + N/O
staggered40 (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●●.

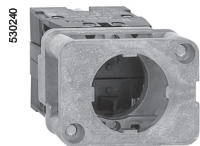
Pendant control stations

Double insulated, type XAC B

Metal, type XAC M

For control circuits

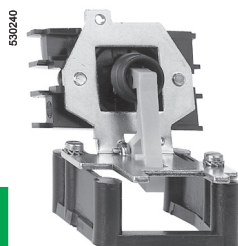
Separate components and spare parts



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		XAC S411	0.070
	N/C		XAC S412	0.070
	N/O + N/O		XAC S413	0.070
	N/C + N/C		XAC S414	0.070
	N/C + N/O		XAC S415	0.070



XAC S4111

Contact blocks for base mounting (1)

Description	Function	Scheme	Reference	Weight kg
Spring return Slow break	N/O		XAC S4111	0.100
	N/C		XAC S4121	0.100
	N/O + N/O		XAC S4131	0.100
	N/C + N/C		XAC S4141	0.100
	N/C + N/O		XAC S4151	0.100

Pilot light bodies for front mounting

Description	Supply voltage	Scheme	Reference	Weight kg
Direct supply Bulb not included (2)	≤ 400 V		XAC V06	0.050
Direct supply, through resistor Incandescent BA 9s base fitting 130 V bulb included	230 V		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 $U \leq 130$ V or neon bulb 110 V $\leq U \leq 400$ V. Maximum power: 2.6 W, maximum \varnothing : 11 mm, maximum length: 26 mm. See page 6/50.

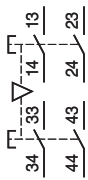
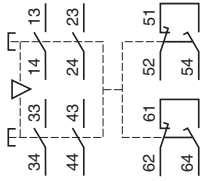
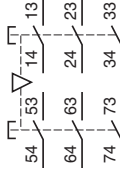
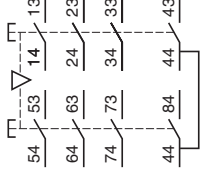
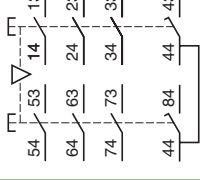
Pendant control stations

Double insulated, type XAC B

For power circuits (direct switching)

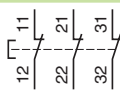
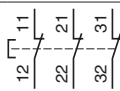
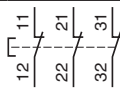
Separate components and spare parts

Contact blocks, snap action

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

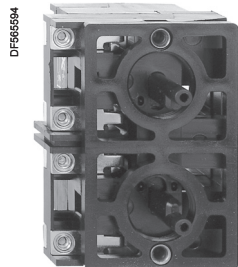
In the interests of safety, it is imperative that these isolating blocks only be used with a stay put or latching type operating head to ensure complete isolation when the pendant station is not in use.

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

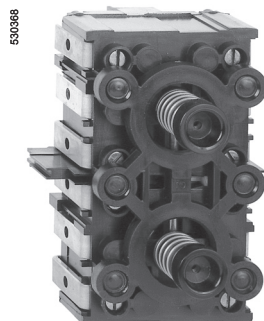
(1) Auxiliary contacts are slow break.

(2) Mounting with operating heads ZA2 B●●●, except ZA2 BD● and ZA2 BG● (see page 6/47).

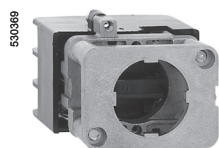
(3) Mounting with operating head ZA2 BS944 (see page 6/47).



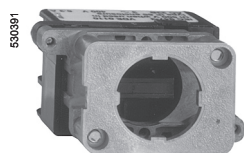
XES D1191



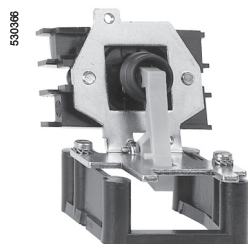
XES D2201



XAC S399



XAC S499



XAC S3991

Pendant control stations

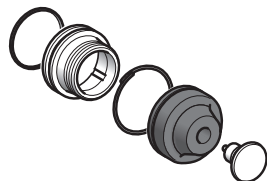
Double insulated, type XAC B

Metal, type XAC M

For control or power circuits

Separate components and spare parts

DF645596

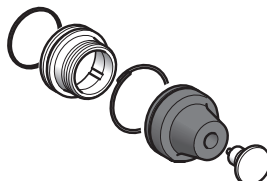


XAC B911●

Booted operators

For use with contact block	Travel	Operating temperature	Colour of insert	Sold in lots of	Unit reference	Weight kg
XEN B●●●●	4 mm	- 25...+ 70 °C (1)	White	10	XAC B9111	0.005
XEN C●●●●			Black	10	XAC B9112	0.005
XEN D●●●●			Green	10	XAC B9113	0.005
XES B2011			Red	10	XAC B9114	0.005
XES D2201			Yellow	10	XAC B9115	0.005
XES D2241			Blue	10	XAC B9116	0.005
XES D2251			Brown	10	XAC B9119	0.005
	16 mm	- 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
XES D1181		- 25...+ 70 °C (1)	White	10	XAC B9211	0.005
XES D1191			Black	10	XAC B9212	0.005
XES D1281			Green	10	XAC B9213	0.005
XES D1291			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

DF645597



XAC B921●

6

Booted operators (silicone boot)

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

DF645598



ZA2 BP●

(1) Polychloroprene boots.

(2) Silicone boots.

Pendant control stations

Double insulated, type XAC B

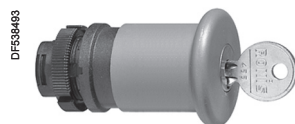
Metal, type XAC M

For control or power circuits

Separate components and spare parts



ZA2 BS844



ZA2 BS944



ZA2 BD



ZA2 BG



ZA2 BB



ZA2 BV0

Operating heads for front or base mounting (1)

Description	Colour	Type	Reference	Weight kg
Trigger action latching Emergency stop (2)	Red	Ø 30 mm	ZA2 BS834	0.028
Turn to release (Emergency stop function)		Ø 40 mm	ZA2 BS844	0.033
Trigger action latching Emergency stop (2) (3)	Red	Ø 30 mm	ZA2 BS934	0.060
Key release (n° 455)		Ø 40 mm	ZA2 BS944	0.065
Key withdrawal in rest (unactuated) position (Emergency stop function)				
Selector switches, standard handle (4)	Black	2 position, stay put	ZA2 BD2	0.018
		3 position, stay put (5)	ZA2 BD3	0.018
Key switches (key n° 455) (3)	—	2 position, stay put	ZA2 BG4	0.042
Key withdrawal in left and right-hand positions		3 position, stay put (5)	ZA2 BG5	0.042
Key switches (key n° 455) (3)	—	2 position, stay put	ZA2 BG2	0.042
Key withdrawal in left-hand position				
Key switches (key n° 455) (3)	—	2 position	ZA2 BG6	0.042
Spring return from right to left Key withdrawal in left-hand position				
Key switches (key n° 455) (4) (3)	—	3 position, stay put (5)	ZA2 BG3	0.042
Key withdrawal in centre position				
Wobblesticks (6)	Black	—	ZA2 BB2	0.060
Operates in all directions for fast stop	Red	—	ZA2 BB4	0.060

Operating head for isolating block

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

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 XAC M can only be guaranteed by using the operating heads ZA2 B● listed above.

(2) Trigger action mechanically latching Emergency stop pushbuttons conform to standards EN/IEC 60204-32, EN/ISO 13850: 2006, Machinery directive 98/37/EC and standard EN/IEC 60947-5-5.

(3) Other key numbers available on request, please consult your Regional Sales Office.

(4) Selector switches or key switches with other mechanical functions: please consult your Regional Sales Office.

(5) Only suitable for front mounting.

(6) Base mounting recommended.

Environment

Conformity to standards			EN/IEC 60947-5-1
Ambient air temperature	For storage	°C	- 40...+ 70
	For operation	°C	- 25...+ 70
Degree of protection			IP 65 conforming to IEC 60529
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		mm ²	Terminal connectors, maximum clamping capacity: 2 x 1.5 mm ² or 1 x 2.5 mm ²

Contact block characteristics

Thermal current (I _{the})	A	6
Rated insulation voltage (U _i)	V	250, degree of pollution 3, conforming to IEC 60947-1
Rated operational characteristics conforming to 947-5-1 Appendix C Utilisation categories AC-15 and DC-13		
~ Inductive circuit		
a.c. supply ~ 50/60 Hz Power broken in VA for 1 million operating cycles		
Voltage V		48 110 230
~ VA		30 30 30
d.c. supply --- Power broken in W for 1 million operating cycles		
Voltage V		48 110
~ W		48 12

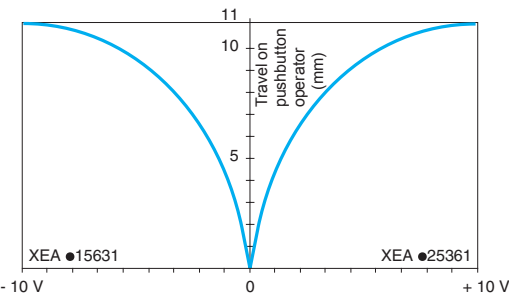
Analogue circuit characteristics

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)

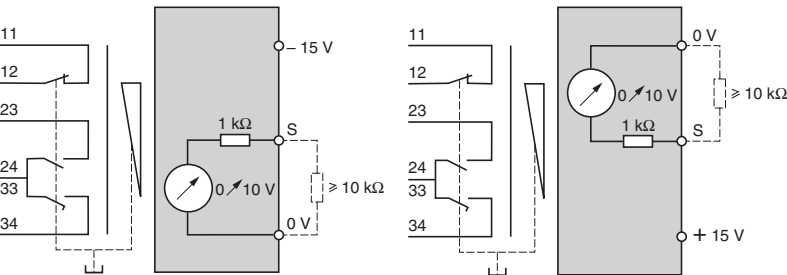
Contact state



Equivalent output schemes

XEA 15361

XEA 25361



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

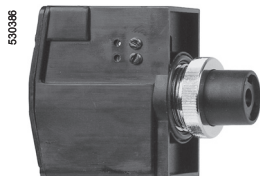
Pendant control stations

Double insulated, type XAC B

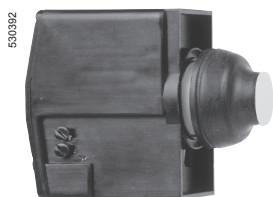
Metal, type XAC M

For control circuits

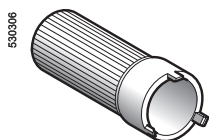
Separate components: pushbuttons with analogue output (1)



XEA C●5361



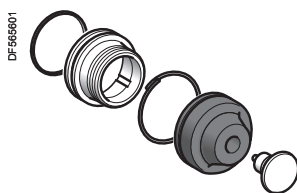
XEA B●5361



ZA2 BZ905



XAC X1



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.

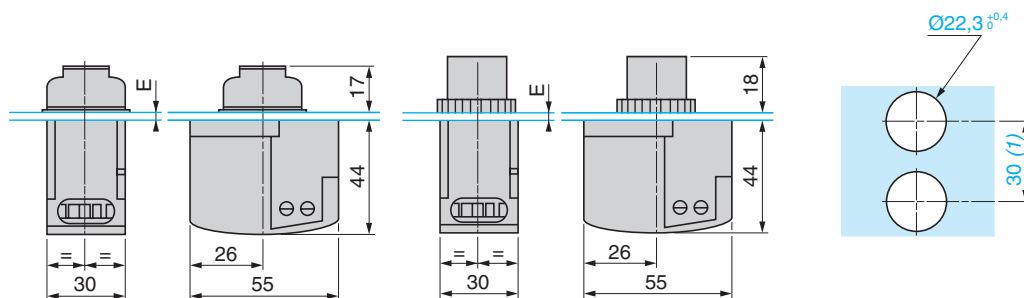
(2) Pushbutton supplied with 1 white insert and 1 black insert.

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.

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●●●

530311



XAC B91●

530310



XAC B92●

530309



XAC B90●

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

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

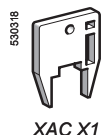
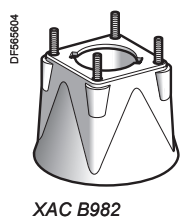
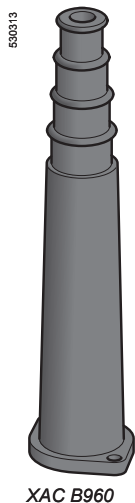
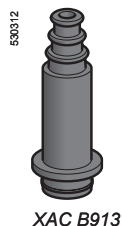
Pendant control stations

Double insulated, type XAC B

Metal, type XAC M

For control or power circuits

Separate components and spare parts



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	Emergency stop 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

Pendant control stations

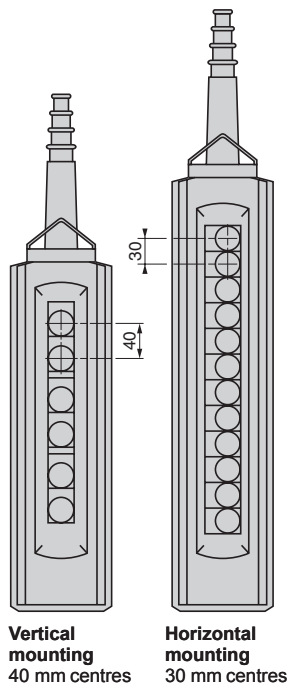
Double insulated, type XAC B

Metal, type XAC M

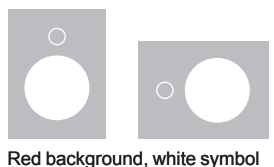
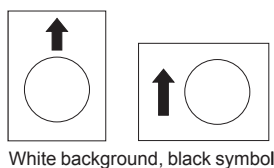
For control or power circuits































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































DF565665



DF565665



Symbol Reference	Symbol	Reference	Weight
Vertical mounting 40 mm centres		Horizontal mounting 30 mm centres	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	Symbol	Reference	Weight
Vertical mounting 40 mm centres		Horizontal mounting 30 mm centres	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

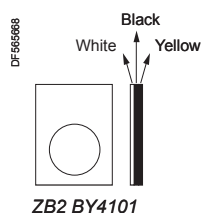
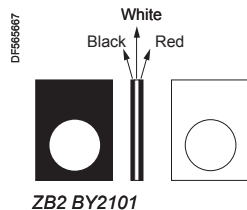
Pendant control stations

Double insulated, type XAC B

Metal, type XAC M









For control or power circuits

Legends 30 x 40 mm



Text	Reference	Weight kg	Text	Reference	Weight kg
<ul style="list-style-type: none"> 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			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			For selector switches		
Arrêt-Marche	ZB2 BY2166	0.001	–	–	–
Hors-En	ZB2 BY2167	0.001	Off-On	ZB2 BY2367	0.001
With special texts					
<ul style="list-style-type: none"> 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.					

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

Pendant control stations

Double insulated, type XAC B

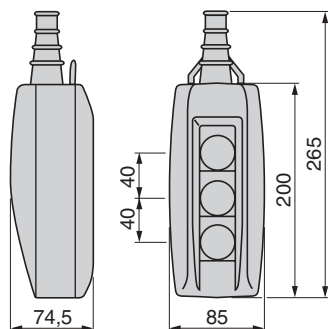
Metal, type XAC M

For control or power circuits

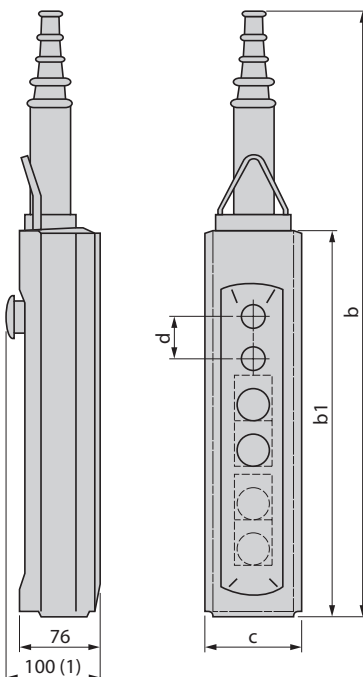
(XAC M: products for maintenance purposes only)

Pendant control stations

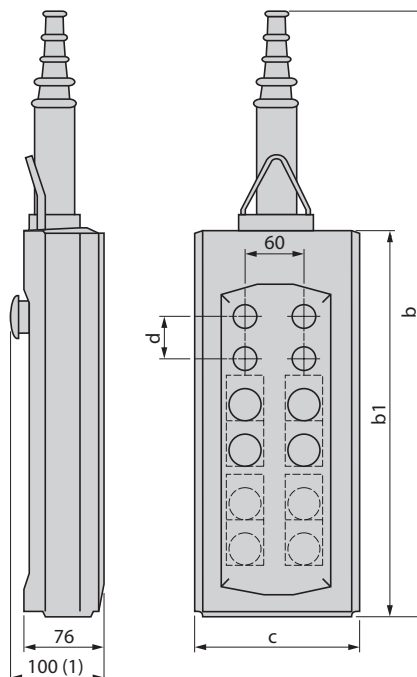
XAC B... (2 and 3-way)



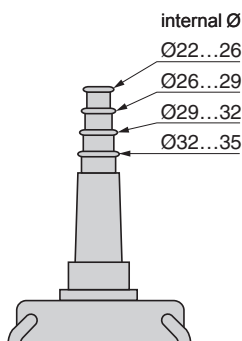
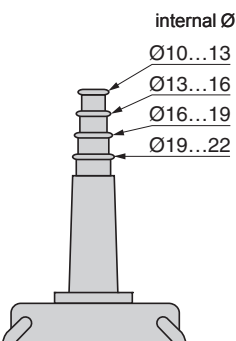
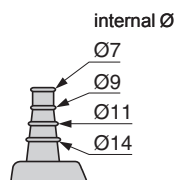
XAC B... (2 to 12-way, 1 row)
XAC M... (4 to 8-way, 1 row)



XAC B... (12-way, 2 rows)



Protective cable sleeves

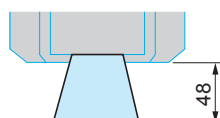


(1) With mushroom head operator.

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

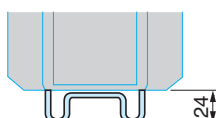
Protective guards

XAC B982



Lower support rings

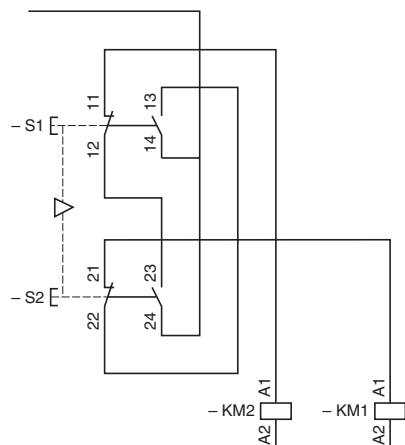
XAC B971, B972



Control circuits

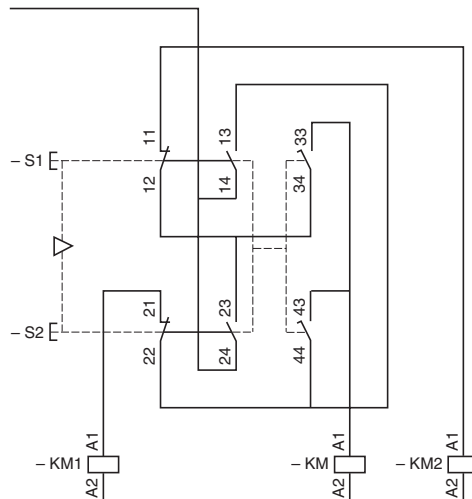
For control of single-speed reversing motor

Contact block **XES D1181**



For control of 2-speed reversing motor

Contact block **XES D1281**



KM: high speed contactor

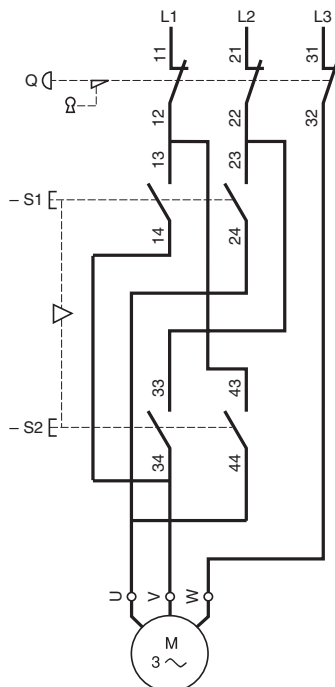
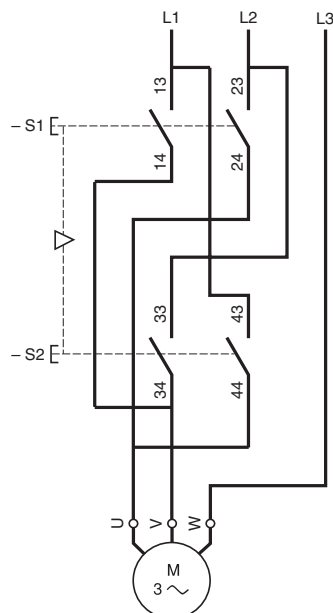
Power circuits

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 trigger action latching Emergency stop operator (ZA2 BS944).



Pendant control stations

Double insulated, type XAC B

Metal, type XAC M

For control or power circuits

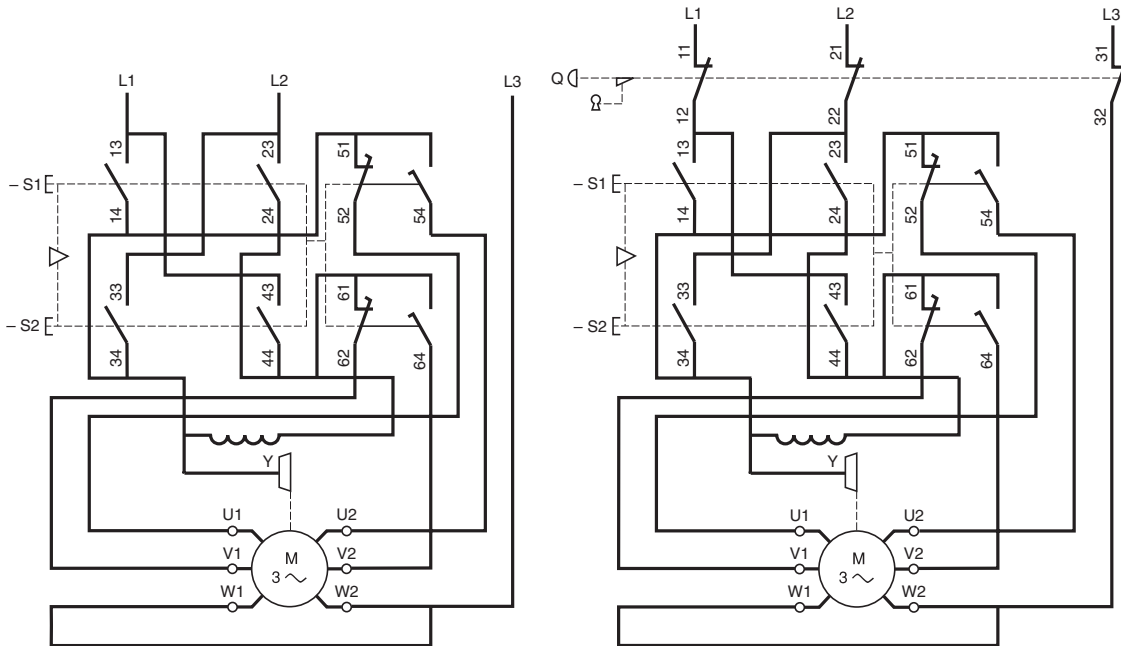
Power circuits (continued)

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

Contact block XES D1291

Application example:

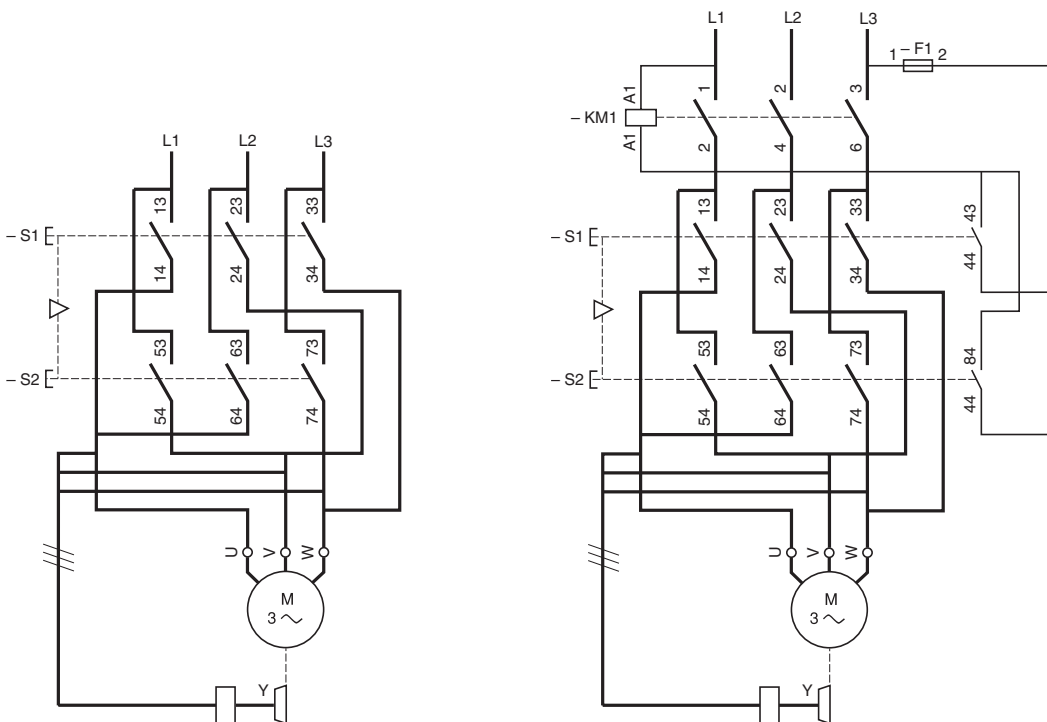
Combined with 3-pole isolating block XAC S399 or XAC S3991, shown in the unoperated position (pendant station "supplied"), fitted with key release trigger action latching Emergency stop operator (ZA2 BS944).



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

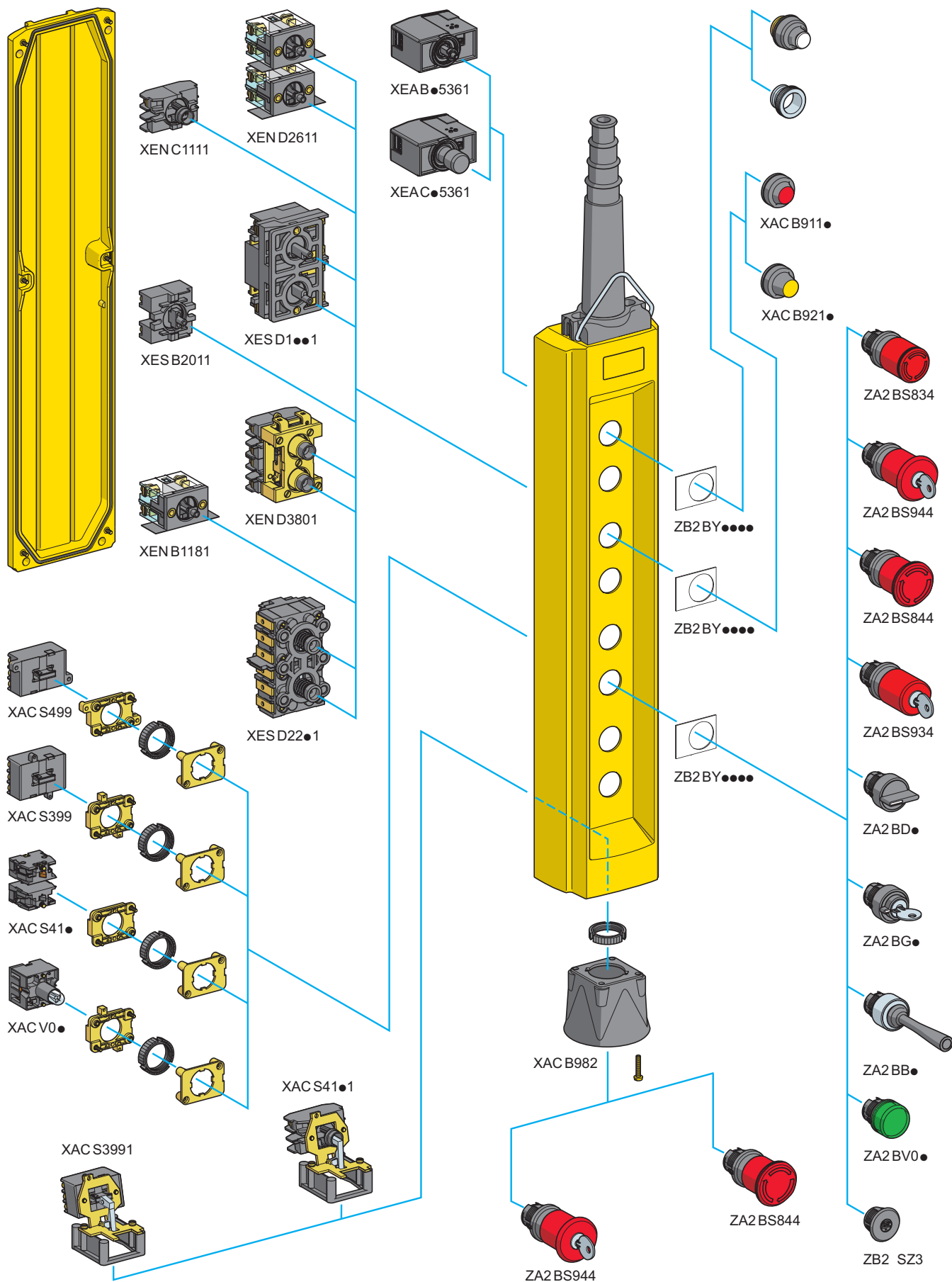


Pendant control stations

Double insulated, type XAC B

Metal, type XAC M

For control or power circuits



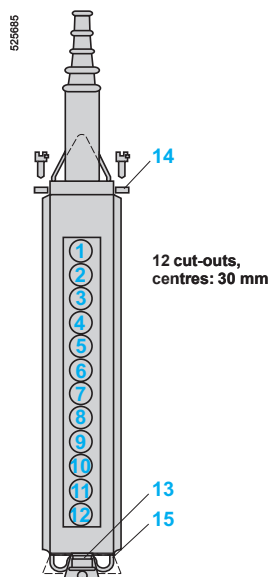
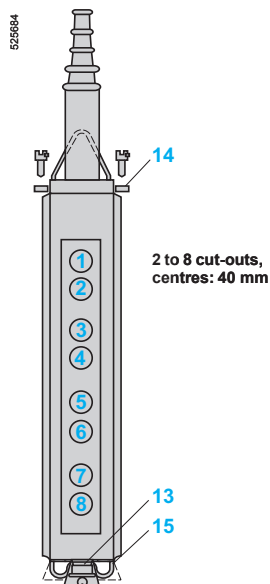
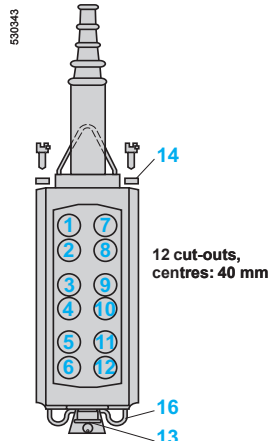
Pendant control stations

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



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 <input type="text"/>		

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 6/47		Total price
Reference	Unit price	Reference	Unit price	Reference	Unit 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

X

Additional cost XAC 9VA for
fitting of 1 head or 1 blanking
plug

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

Description	<input checked="" type="checkbox"/>	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		

Total price of assembled pendant station

(1) Obtain the empty enclosure price.

Environment

Conformity to standards		EN/IEC 60947-5-1 EN/IEC 60204-32, UL 508, CSA C22-2 n° 14 EN/IEC 60947-5-5 and EN/ISO 13850: 2006 for versions with trigger action Emergency stop EN/IEC 60947-3
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 60068-2-6
Shock resistance		100 gn conforming to IEC 60068-2-27
Electric shock protection		Class II conforming to IEC 61140
Degree of protection		IP 65 conforming to IEC 60529 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 EN/IEC 60947-5-1 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 XEN B●●●●, XEN D1●●●, XEN D2●●●	V 500, degree of pollution 3 400, degree of pollution 3, conforming to IEC 60947-1
Rated impulse withstand voltage (U imp)	kV	6, conforming to IEC 60947-1
Positive operation		Mushroom head pushbutton: N/C contact with positive opening operation conforming to EN/IEC 60947-5-1 Appendix K
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 (1 st speed), 30 (2 nd speed); XEN D3●●●, XEN D4●●●: 25; XES B2011: 7; XES D1181, XES D128: 15 (1 st speed), 25 (2 nd 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	mm ²	Screw and captive cable clamp terminals. Clamping capacity: 1 x 2.5 or 2 x 1.5 with or without cable end

Operational power

Conforming to EN/IEC 60947-5-1 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
~mm	VA	140	385	525	455

d.c. supply ---

Voltage	V	24	48	120
~mm	W	60	45	42

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

a.c. supply ~ 50/60 Hz

Voltage	V	24	48	127	230
~mm	VA	140	210	640	680

d.c. supply ---

Voltage	V	24	48	120
~mm	W	48	31	35

Contact blocks XES B2011, XES D1181, XES D1281

a.c. supply ~ 50/60 Hz

Voltage	V	24	48	127	230
~mm	VA	50	100	450	750

d.c. supply ---

Voltage	V	24	48	120
~mm	W	140	140	95

Pendant control stations

Double insulated, type XAC F

For control circuits

Empty enclosures

(XAC F: Products for maintenance purposes only)

DF565800



XAC F0000

DF565801



XAC F0001

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

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.

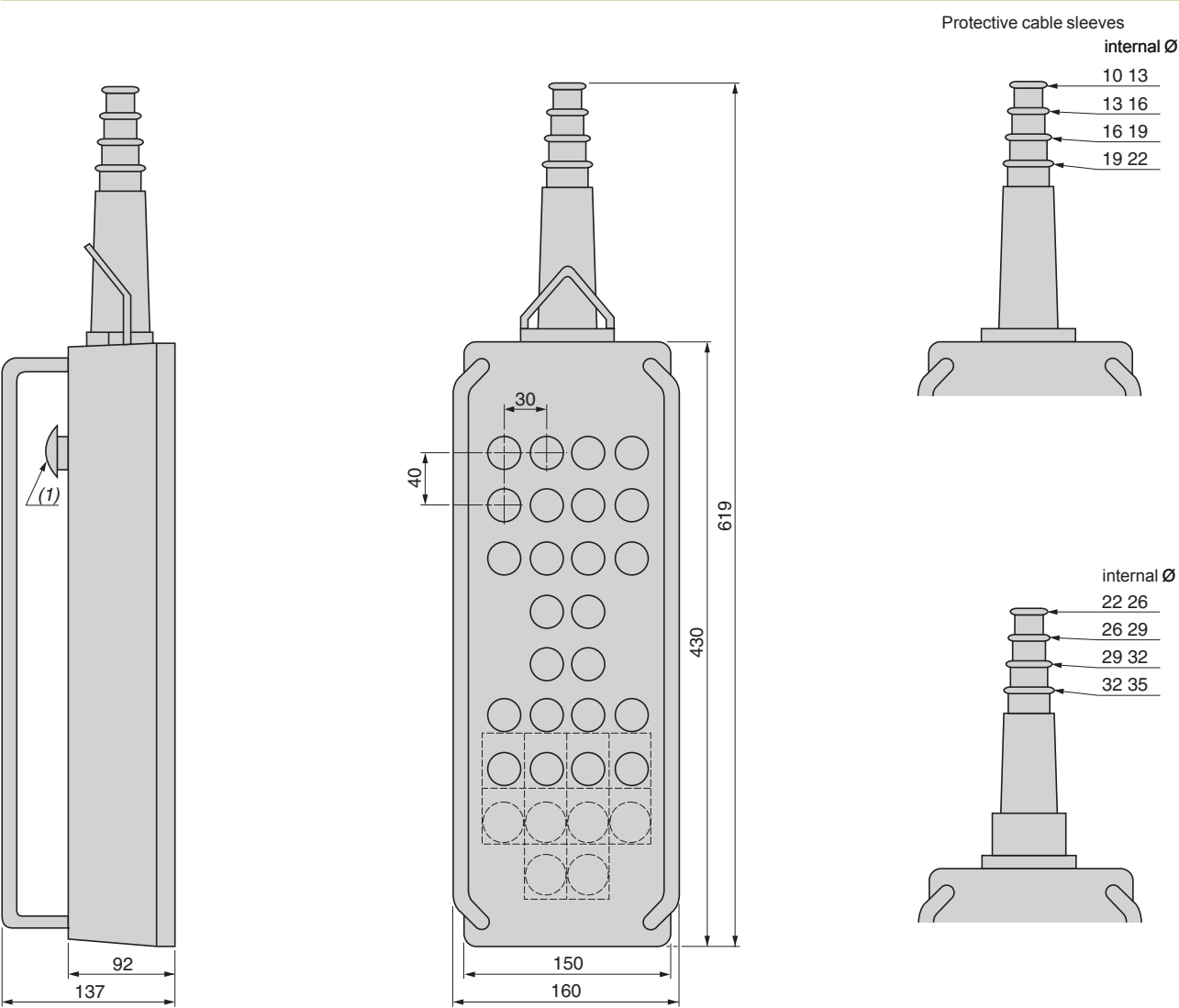
See separate components, pages 6/42 to 6/54

(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.

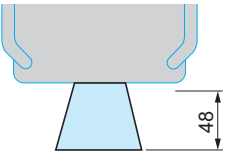
Pendant control stations
Double insulated, type XAC F
For control circuits
(XAC F: Products for maintenance purposes only)

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



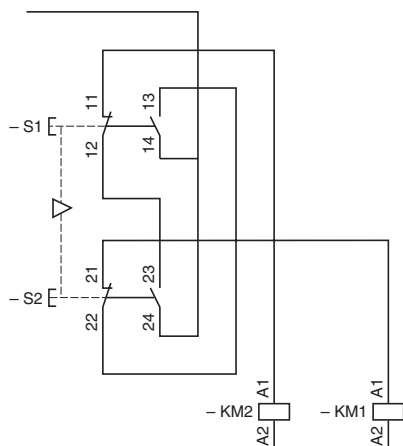
(1) With mushroom head operator.

Protective guards
XAC B982



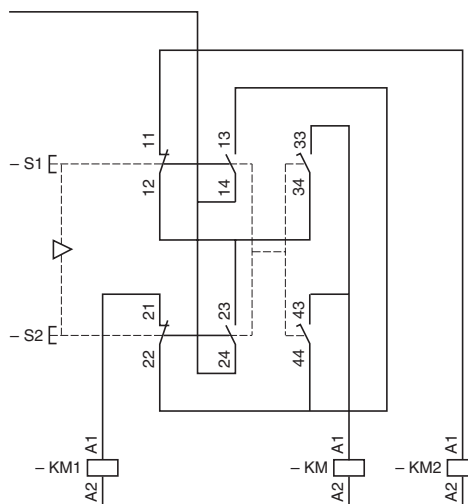
For control of single-speed reversing motor

Contact block XES D1181



For control of 2-speed reversing motor

Contact block XES D1281



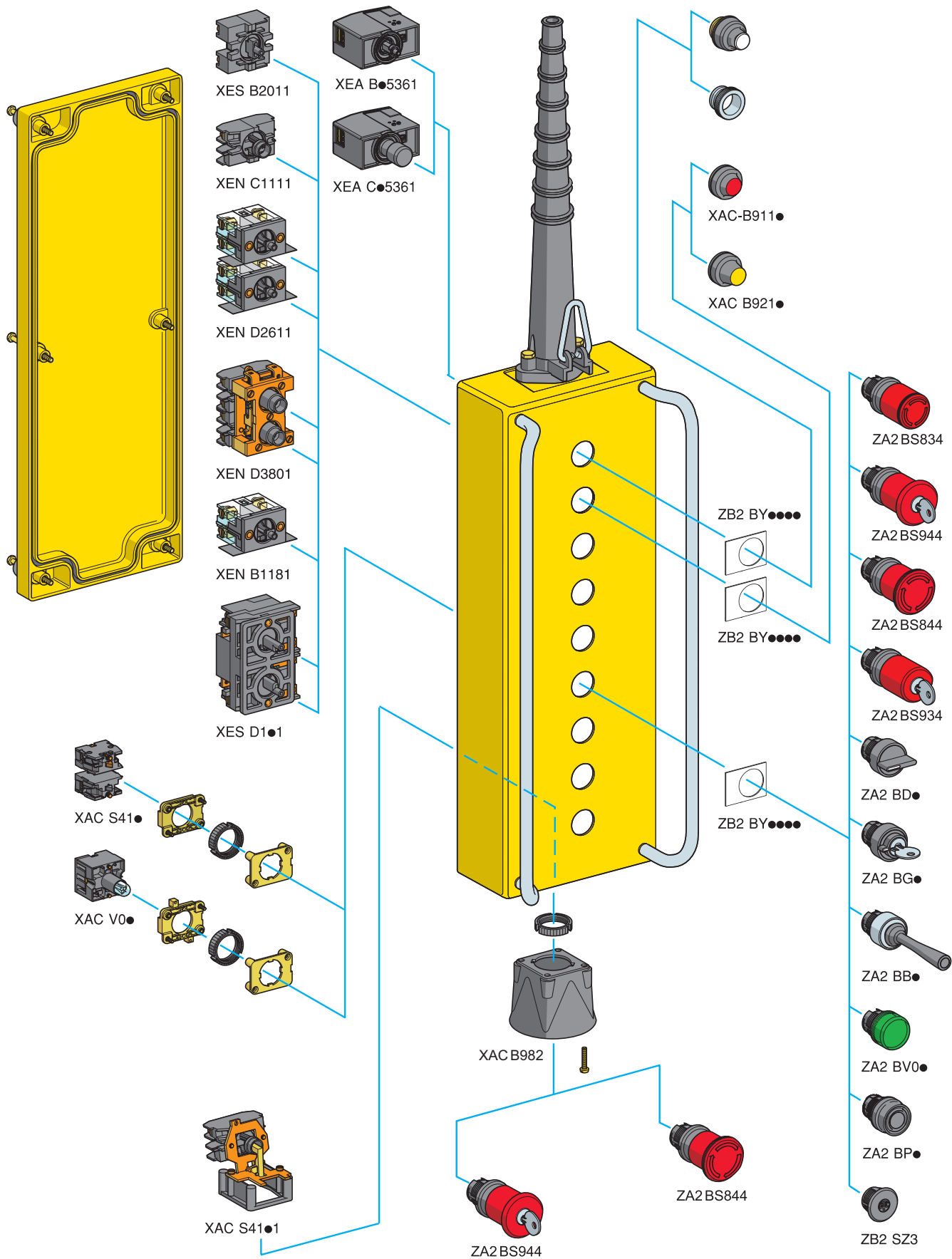
KM: high speed contactor

Pendant control stations

Double insulated, type XAC F

For control circuits

(XAC F: Products for maintenance purposes only)



Pendant control stations


Double insulated, type XAC F

For control circuits

Variable composition stations, factory assembled

(XAC F: Products for maintenance purposes only)



 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.

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

Enter the order with XAC F09 reference

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

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
---	--	--

[illegible]

Unit mounted in base, if required (2)


Factory assembled:

Number of heads or
blanking plugs to be fitted

Additional cost **XAC 9VA** for fitting of 1 head or 1 blanking plug

$$\boxed{} \times \boxed{}$$

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

Complementary accessories, see page 612 (check 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.

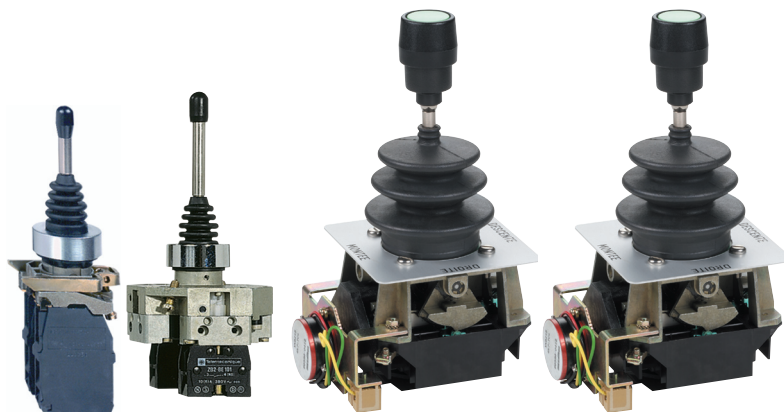
Applications

"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)		
Number of directions	Basic	
	Variable composition	
Number of movements		
Maximum number of notches in each direction		
Types of lever movement	Notched	with stayput operation with spring return to zero operation
	Unnotched	with spring return to zero operation
Operating schemes		
Maximum number of contacts per movement		
Contact (1)	Supply	
	Nominal thermal current	
Mechanical durability of contact blocks (in millions of operating cycles)		
Control device		
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		
Maximum number of potentiometers per movement		

1 in each direction	1 in each direction	1 in each direction
2 or 4 depending on model	4	4
—	8	8
1 or 2	2	2
XD2: 1 or 2 XD4, XD5: 1	3	3
■	■	■
■	■	■
—	■	■
Predefined cams	Predefined cams	Variable composition cams
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
~ and ---	~ and ---	~ and ---
10 A	10 A	10 A
5	1	1
Vertical lever	Vertical lever	Vertical lever
■	■	■
—	■	■
—	■	■
—	■	■
—	■	■
Fixed composition 30° in each direction	Variable composition	Variable composition
—	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)

1/123, 1/85 and 1/165

6/72

6/72

(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"
Compact and fully configurable unit
For control of cranes, overhead travelling cranes, etc. Can be installed on fixed seated controller desks type XJC

"Heavy hoisting"
Extremely robust and fully configurable unit
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
6/78	6/86	6/86	6/91

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

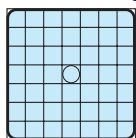
Articulated mechanical assembly that holds the control lever, lever gate, actuating mechanism, cam carriers, contacts and potentiometer adaptation device.

Control lever

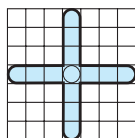
Operating device that enables separate or simultaneous control of the movements. Fitted to it are dust and damp protecting bellows, the handle and mechanical and electrical safety devices that are actuated when the controller lever is returned to its zero (centre) position.

Lever gate

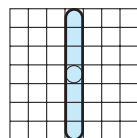
Standard lever gates



universal

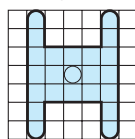
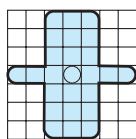


"cross"



"I"

Examples of special lever gates



2 types of lever gate:

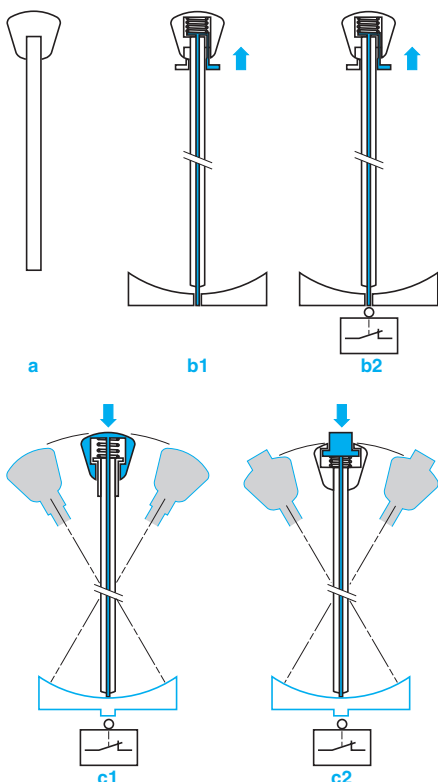
■ Standard types:

- 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.

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).

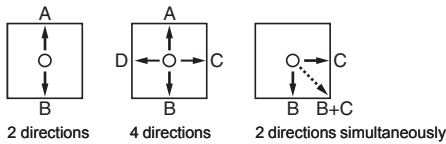
When the upper section of the knob is pushed downwards it pushes a sliding rod within the lever.

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).

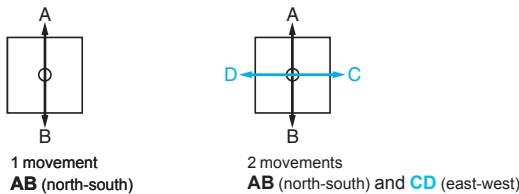
Mechanical operation identical to that described above.

The handle is fixed and it is only the pushbutton that operates the sliding rod.

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°).

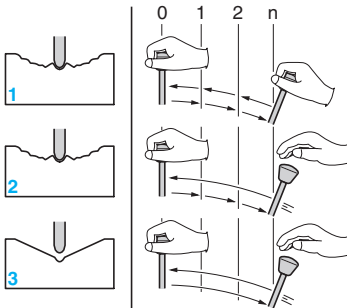
Diagonal movement is the operation of 2 directions simultaneously.

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.

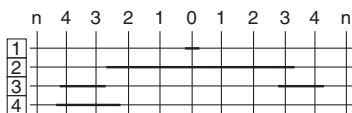
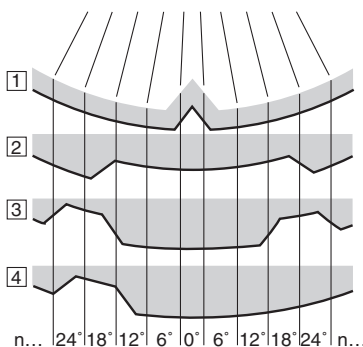
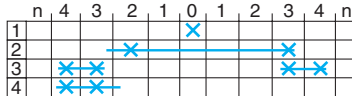
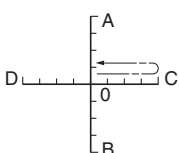
3 Unnotched positions, with spring return to zero operation.

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****Controller scheme****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.

Cam carriers

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

Cam actuation of contacts

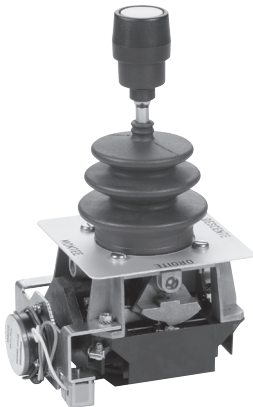
When actuated by the cam lobe, the contact opens thus ensuring positive opening operation. Therefore, the presence of a cam corresponds to the absence of a cross or line on the scheme.

Example of graphic representation of a scheme

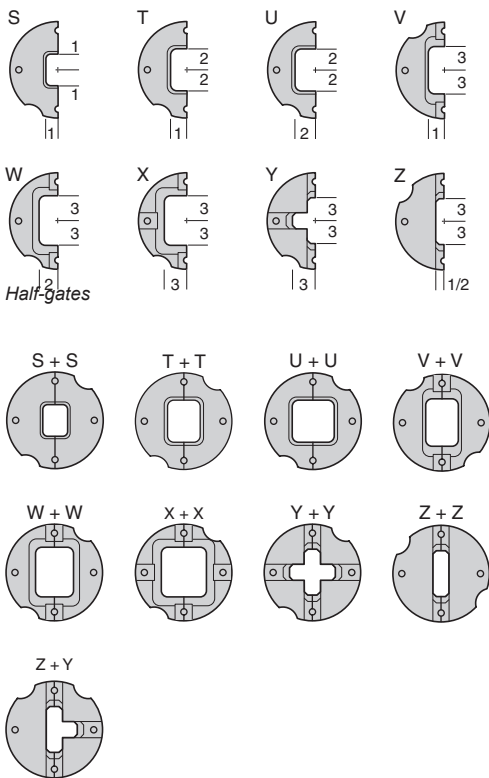
The various methods for indicating the operating sequence of the contacts and the ordering grids for XK controllers are shown opposite.

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).

109229-34_M



XKB ●



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.

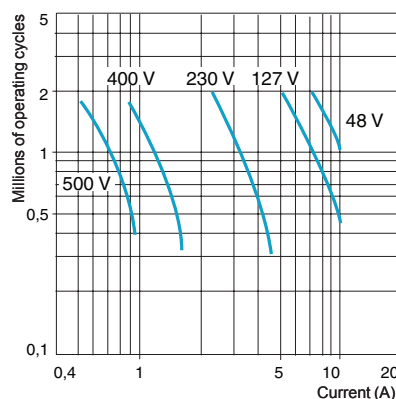
Environment			
Conformity to standards			EN/IEC 60947-5-1, UL 508, CSA C22-2 n° 14
Product certifications			XKB: UL, A360, P300, “Pilot duty”, CSA ~ 300 V “heavy duty”, --- “standard duty”, CCC, RMRS
Protective treatment			Standard version “TC”
Ambient air temperature	For storage	°C	- 40...+ 70
	For operation	°C	- 20...+ 70
Operating position			All positions
Vibration resistance	Conforming to EN/IEC 60068-2-6		6 gn (1 to 70 Hz)
Shock resistance	Conforming to EN/IEC 60068-2-27		20 gn, duration 11 ms
Electric shock protection	Conforming to EN/IEC 61140		Class I
Maximum operating lever force required in each direction		daN	< 1.7
Degree of protection	Conforming to EN/IEC 60529		IP 54 (unit with simple handle mounted in dust and damp proof enclosure) IP 20 (contact block)
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 60947-5-1, UL 508, CSA C22-2 n° 14
Rated insulation voltage	V		~ 500 conforming to IEC 60947-1, degree of pollution 3
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

Operational power
Conforming to IEC 60947-5-1 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
~ 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 mm ² , □ maximum, with or without cable end: 2 x 1.5 mm ² or 1 x 2.5 mm ²
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Reference of controller type XKB

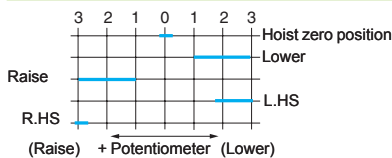
		Model	Contacts	Handle	Lever movement		Potentiometer adaptation
					AB	CD	
XKB							
Model							
With predefined scheme		A					
With variable composition scheme		E					
Contact blocks							
Block with 4 contacts per movement	Screw clamp terminal connections		1				
	6.3 clip connections		2				
Block 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 (1)					2		
Notched positions, with spring return to zero operation					3		
On movement CD							
Movement not required (blocked)						0	
Notched positions, with stayput operation						1	
Unnotched positions, with spring return to zero operation (1)						2	
Notched positions, with spring return to zero operation						3	
Potentiometer adaptation							
Without adaptation nor potentiometer							0
With 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 movement recommended when using a potentiometer.

(2) Potentiometer type and value to be stated when ordering. For standard application potentiometers see page 6/100.

Requirement	Composition of the reference (see page 6/72)						
A 2 movement controller: “hoist-long travel”. “Universal” lever gate, limited to 2 “lower” positions.	XKB	E	3	4	2	3	7
Model							
With variable composition scheme (customised elect. 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”



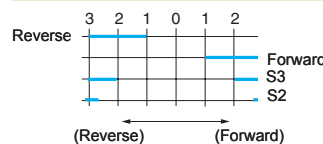
Lever gate

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.

Legend

Without legend	<input type="checkbox"/>
With blank legend, XKB Y1	<input type="checkbox"/>
With “traverse-slew” symbols, XKB Y2	<input type="checkbox"/>
With “hoist-long travel” symbols, XKB Y3	<input type="checkbox"/>

Electrical scheme for movement CD “long travel”



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:

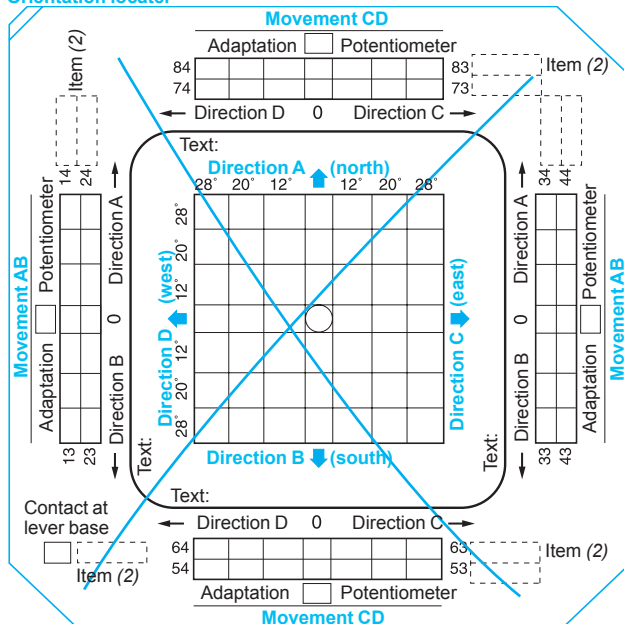
With specific engraved text, **XKB Y1001**
(clearly state the text on the scheme below)
Left-hand operated unit

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.

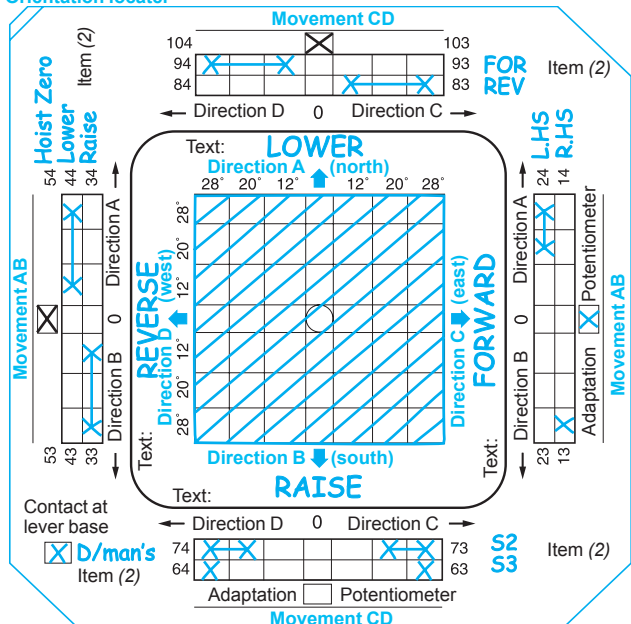
Scheme 1: 4 contacts per movement (viewed from above)

Orientation locator



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

Orientation locator



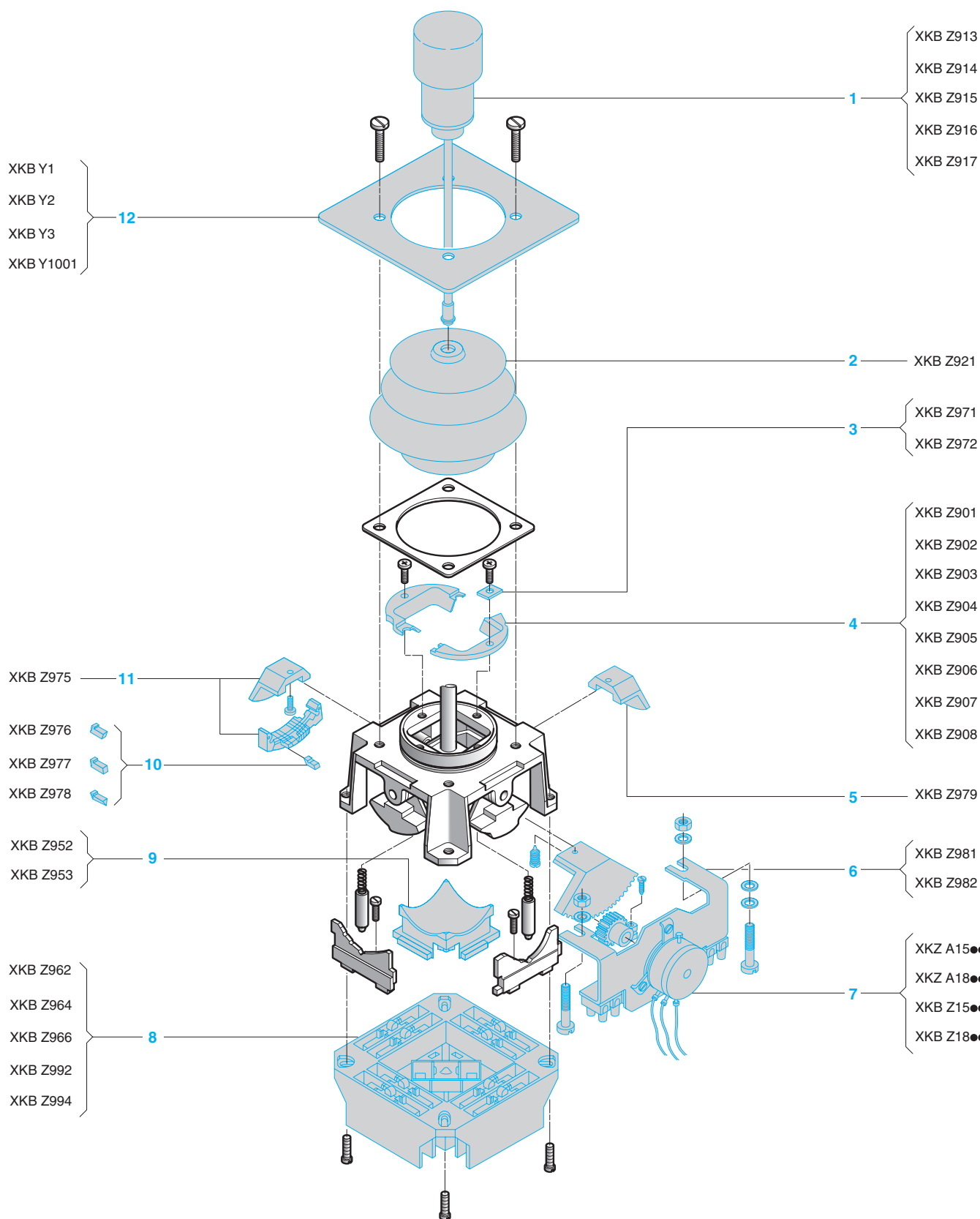
(1) Additional help for completing the order form is available from your Regional Sales Office.

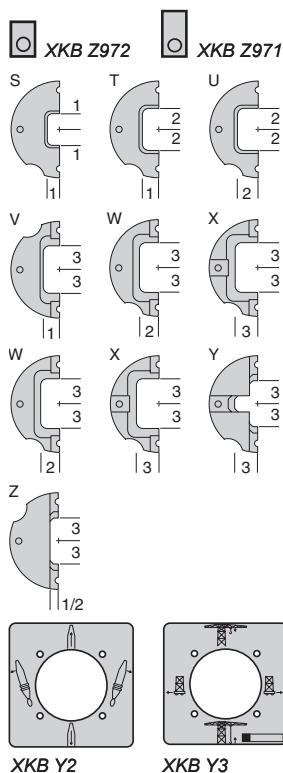
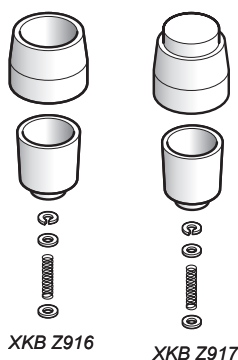
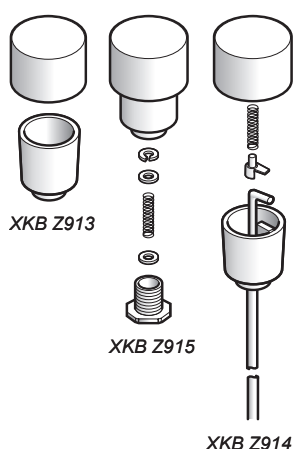
(2) Reserved for contact identification in the automation system scheme. It is not possible to mark it on the controller.

Spring return operation: only 1 contact can be used with spring return at each notch.

Controllers

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





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 6/100 and 6/101	–

(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.

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.**

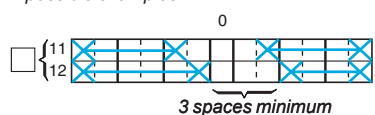
- From 1 to 5 mechanical positions.
- Overlapping contact operation possible (see graphic representation on page 6/69) except between the 4th and last position.

- **Variable composition cams, 12° per position; 2-contact cam carriers.**

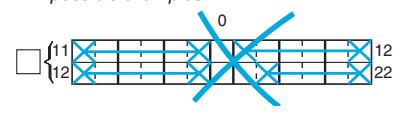
- From 1 to 3 mechanical positions.
- The contacts can be actuated 6° by 6° approx., except under the following conditions:

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:

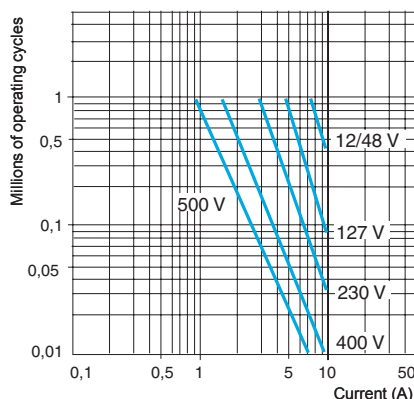
- mounted directly on the mechanical block when used with 2-contact variable composition cams,
- mounted at the extremity of the contact supports when used with 4 and 8-contact variable composition cams.

Environment			
Conformity to standards		EN/IEC 60947-5-1, CSA C22-2 n° 14	
Product certifications		CSAA600, Q 600, CCC, RMRS	
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 60068-2-6	
Shock resistance		15 gn, duration 11 ms, conforming to IEC 60068-2-27	
Electric shock protection		Class I, conforming to IEC 61140	
Maximum operating lever force required in each direction		daN	Notched positions, with stayput operation: < 1.5
Degree of protection			Notched or unnotched positions, with spring return to zero operation: < 3.5
			IP 54 conforming to IEC 60529 (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 60947-5-1, CSA C 22-2 n° 14	
Rated insulation voltage	V	≈ 500 conforming to IEC 60947-1, degree of pollution 3	
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
mm	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
------------	---

Reference of controller type XKD

	Lever	Handle	Movement AB			Movement CD		
			No. of blocks	Lever movement	Potentiometer adaptation	No. of blocks	Lever movement	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		4						
With N/C + N/O contact		5						
With N/O + N/O contact		6						
With built-in flush pushbutton		7						
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				1				
3 notches (1)				2				
5 notches (starting from 12°) or 6 notches (starting from 6°) (2) (3)				3				
Notched positions, with spring return to zero operation				4				
3 notches (1)				5				
5 notches (starting from 12°) or 6 notches (starting from 6°) (2) (3)								
Unnotched positions, with spring return to zero operation (4)								
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							1	
3 notches (1)							2	
5 notches (starting from 12°) or 6 notches (starting from 6°) (2) (3)							3	
Notched positions, with spring return to zero operation							4	
3 notches (1)							5	
5 notches (starting from 12°) or 6 notches (starting from 6°) (2) (3)								
Unnotched positions, with spring return to zero operation (4)								
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 movement recommended when using a potentiometer.

(5) Potentiometer type and value to be stated on the order form, see pages 6/100 and 6/101

(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.

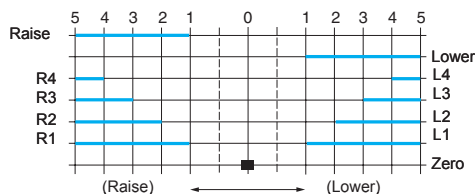
Requirement

A 2 movement controller: “hoist-traverse”.

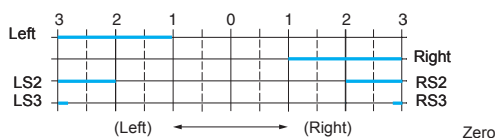
“Cross” type lever gate.

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 4 contacts, a 2-contact block can be selected (drum n° 2), which does not increase the size of the base, together with 1 x 2-contact block (drum n° 4).

The lever gate will limit the lever travel to 3 notches.

Composition of the reference (see page 6/78)

	XKD F	1	2	4	4	0	2	3	3
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 2 blocks							2		
Type of lever movement 3 notched positions, with spring return to zero operation								3	
Potentiometer adaptation Without adaptation nor potentiometer									3

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 6/78)

	Lever	Handle	Movement AB			Movement CD		
	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

Movement CD

Adaptation ☐ Potentiometer

Drum n°2

Choice of cam carriers (1)

(a) (b) (c)

Potentiometer adaptation

Cross ☒ the position on the scheme

On movement AB

Type/Size:

Value:

On movement CD

Type/Size:

Value:

Drum n°3

Item (2)

Zero 4 3 2 1 Lower Raise

Movement AB

Adaptation ☐ Potentiometer

Choice of cam carriers (1)

(a) (b) (c)

Drum n°1

Item (2)

Adaptation ☐ Potentiometer

Movement AB

Choice of cam carriers (1)

(a) (b) (c)

Drum n°4

Item (2)

Adaptation ☐ Potentiometer

Movement CD

Choice of cam carriers (1)

(a) (b) (c)

LOWER (north) Ex: 5 notches

RAISE (south) Ex: 3 notches

Direction A (west) Direction B (east)

Direction C (west) Direction D (east)

Text: 36° 30° 24° 18° 12° 6° 12° 18° 24° 30° 36°

Text: 36° 30° 24° 18° 12° 6° 12° 18° 24° 30° 36°

Text: 36° 30° 24° 18° 12° 6° 12° 18° 24° 30° 36°

Text: 36° 30° 24° 18° 12° 6° 12° 18° 24° 30° 36°

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

N/C 51-52

N/O K1-K2

Item (2)

Legend

Without legend ☐

With blank legend, XKD Y1 ☐

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

Left-hand operated unit ☒

Right-hand operated unit ☐

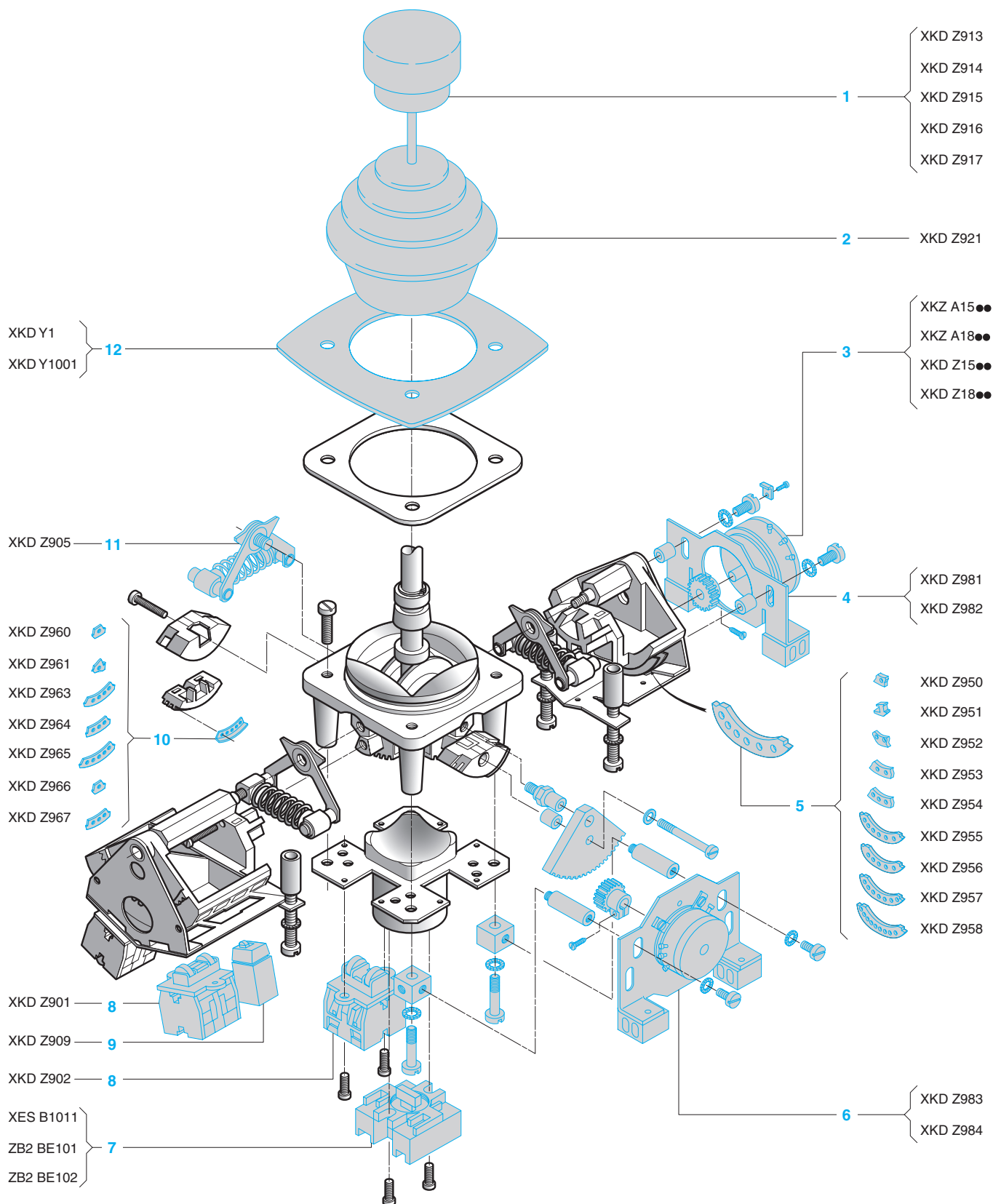
■ Electrical overlapping of contacts is not possible between the 5th and 6th notches.

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

(1) Additional help for completing the order form is available from your Regional Sales Office.

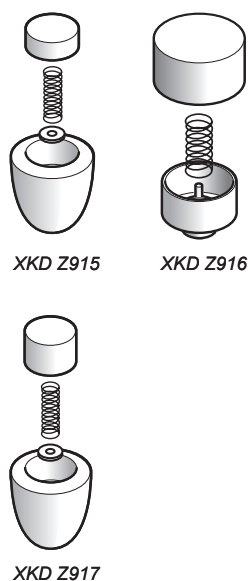
Controllers

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



Controllers

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

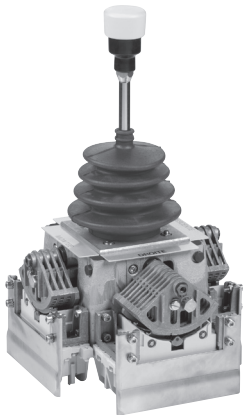


Description	Item	Characteristics	Unit reference	Weight kg
Bellows	2	Bellows + 1 flat seal	XKD Z921	0.075
Handles △ Not interchangeable between different models	1	Simple	XKD Z913	0.060
		With zero (centre) position interlocking	XKD Z914	0.035
		“Dead man’s” type	XKD Z915	0.040
		With built-in flush pushbutton	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 With marker XKD Z902	0.050 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 N/O ZB2 BE101	0.015 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 Size 18 XKD Z982	0.120 0.130
	6	Directly on mechanical block	Size 15 XKD Z983 Size 18 XKD Z984	0.120 0.130
Potentiometers for controllers XKD	3	–	XKZ A15●●, A18●● XKD Z15●●, Z18●● See pages 6/100 and 6/101	–

(1) Including 15 tooth pinion.

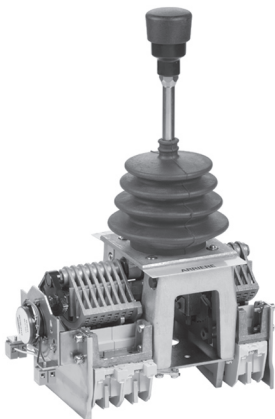
- The maximum lever travel of 36° per direction corresponds to a potentiometer shaft rotation of 168°.
- Levers with friction drive facility are available under certain conditions. Please consult your Regional Sales Office.

100231_33_M



XKM A

100232_37_M



XKM B

100233_38_M



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.

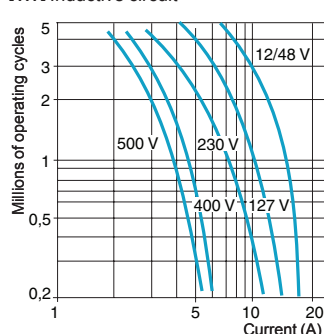
Potentiometers mounted at the extremity of the contact supports or directly onto the faces of the mechanical block.

Environment			
Conformity to standards			EN/IEC 60947-5-1, CSA C22-2 n° 14
Product certifications			CSA 600 V max. (≈) “heavy duty”, RMRS
Protective treatment			Standard version “TC”
Ambient air temperature	For storage	°C	- 40...+ 70 °C
	For operation	°C	- 10...+ 55 °C
Operating position			All positions
Vibration resistance	Conforming to IEC 60068-2-6		2 gn (10 to 500 Hz)
Shock resistance	Conforming to IEC 60068-2-27		Direction of shocks on vertical axis: 15 gn Direction of shocks on horizontal and transversal axes: 100 gn
Electric shock protection	Conforming to IEC 61140		Class I
Maximum operating lever force required in each direction		daN	< 4 for 4 simultaneously actuated contacts (to 1 st notch) < 4.5 for 4 simultaneously actuated contacts for spring return to zero version (maintained against end stop)
Degree of protection	Conforming to IEC 60529		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	16 conforming to IEC 60947-5-1
Rated insulation voltage		V	≈ 500 conforming to IEC 60947-1 degree of pollution 3 ≈ 600 conforming to CSA C22-2 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 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 60947-5-1 Appendix C
Utilisation categories AC-15 and DC-13
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 mm ² , □ maximum: 2 x 2.5 mm ² with cable end
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Reference of a controller type XKM A or XKM B

					Movement AB			Movement CD (XKM A only)		
	Model	Lever	Handle	Contacts	No. of blocks	Lever movement	Potentiometer adaptation	No. of blocks	Lever movement	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				
		Increased lever force				2				
	6 notches (2)	Normal lever force				3				
		Increased lever force				4				
Notched positions, with spring return to zero operation	5 notches (1)					5				
	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	
		Increased lever force							2	
	6 notches (2)	Normal lever force							3	
		Increased lever force							4	
Notched positions, with spring return to zero operation	5 notches (1)								5	
	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 movement 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 6/100 and 6/101.

Requirement

A 2 movement controller: “hoist-long travel”.

Universal 200 mm lever gate, limited to 4 notches on the “raise” and “lower” directions (1st notch at 12°).

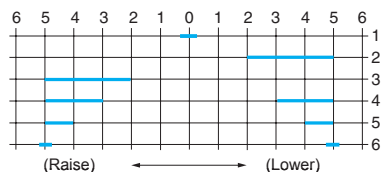
Potentiometer adaptation on movement CD. Potentiometer selected: 4700 Ω, size 15, standard model.

“Dead man’s” handle with 1 C/O contact.

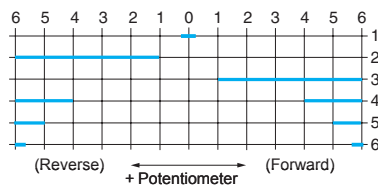
Movement AB: type of lever movement: notched positions, with spring return to zero operation and 5 notches (starting from 12°).

Movement CD: type of lever movement: unnotched positions, with spring return to zero operation.

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 on next page),
- 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 on next page).
- Directly on the mechanical block.

Composition of the reference (see page 6/86)

	XKM	A	1	4	1	2	5	0	2	7	2
Model		A									
2 movements (AB + CD)											
Control lever			1								
Short: length 200 mm (standard)											
Handle				4							
“Dead man’s” type with 1 C/O contact											
Type of contacts					1						
Standard double-break											
Movement AB											
Number of 4-contact blocks						2					
2 blocks (i.e. 8 contacts when 6 contacts required)											
Type of lever movement							5				
Notched positions, with spring return to zero operation and 5 notch sectors (starting from 12°)											
Potentiometer								0			
Without adaptation device nor potentiometer											
Movement CD											
Number of 4-contact blocks									2		
2 blocks (i.e. 8 contacts when 6 contacts required)											
Type of lever movement										7	
Unnotched positions, with spring return to zero operation											
Potentiometer											2
With potentiometer adaptation device + size 15, 4700 Ω potentiometer											

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 6/86)

[illegible]

Number of identical units

1 **XKM** **A** **1** **4** **1** **2** **5** **0** **2** **7** **2**

For Schneider Electric use only

[illegible]

Scheme: viewed from above

Lever gate

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

<p>Potentiometer adaptation</p> <p>Cross <input checked="" type="checkbox"/> the position on the scheme</p> <p>On movement AB</p> <p>Type/Size:</p> <p>Value:</p> <p>On movement CD</p> <p>Type/Size:</p> <p>Value: 4700 Ω</p>
--

Adaptation ☐ **Potentiometer**

Item 2	Adaptation (n)	Potentiometer (n)
0	1	1
6	2	2
12	3	3
18	4	4
24	5	5
30	6	6
36	7	7

Text: **LOWER (xkm y1108)** Ex: 6 notches

Direction A (north) ↑ 6° 12° 18° 24° 30° 36°

Direction D (west) ↑ 6° 12° 18° 24° 30° 36°

Direction C (east) ↓ 12° 18° 24° 30° 36°

Direction B (south) ↓ 12° 18° 24° 30° 36°

Text: **RAISE (xkm y1107)** Ex: 5 notches

Text: **REVERSE (xkm y1106)** Ex: 6 notches

Text: **FORWARD (xkm y1105)** Ex: 5 notches

	←	→	Adaptation	Potentiometer	Drum
(1)	13				14
	23				24
3 1	33				34
	43				44
	13				14
3 2	23				24
	33				34
	43				44
	13				14
3 3	23				24
	33				34
	43				44

n°1

← Direction D 0 Direction C →

(1)	13											14	
2	23	1										24	
	33											34	
	43											44	
	43											44	
2	23	2										24	
	33											34	
	43											44	
	13											14	
	23											24	
2	33	1										34	
	43											44	

Adaptation ☐ Potentiometer

Movement CD

Drum n°4

Item (2)

Legend (1 for each direction)	
Without legend	<input type="checkbox"/>
With blank legend, XKM Y1	<input type="checkbox"/>
Legend with specific engraving (clearly state text on this scheme)	
Left-hand operated unit	<input type="checkbox"/>
Right-hand operated unit	<input type="checkbox"/>
Legend with standard text (see page 6/95)	
Left hand operated unit	<input checked="" type="checkbox"/>
Right-hand operated unit	<input type="checkbox"/>

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)

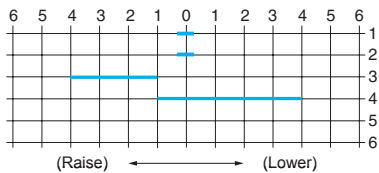
 2 simultaneous contacts maximum with spring return can be used at 6° and then 4 contacts at each subsequent 6° position.

(1) Additional help for completing the order form is available from your Regional Sales Office.

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 6/86)

	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			

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 6/86)										
	Model	Lever	Handle	Type of contact	Movement AB		Potentiometer adaptation	Movement CD		
					No. of blocks	Lever movement		No. of blocks	Lever movement	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											

Lever gate

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

Drum n°3

Movement AB

Adaptation

Potentiometer

Item (2)

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)

Scheme: viewed from above

Movement CD

Adaptation

Potentiometer

Drum n°2

Item (2)

Potentiometer adaptation

Cross ☒ the position on the scheme

On movement AB

Type/Size:

Value:

On movement CD

Type/Size:

Value: 4700 Ω

Drum n°1

Movement AB

Adaptation

Potentiometer

Item (2)

LOWER (XKM Y1108)

Direction A (north)

Direction B (south)

Direction C (east)

Direction D (west)

RAISE (XKM Y1107)

Drum n°4

Item (2)

Legend (1 for each direction)

Without legend

With 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 6/95)

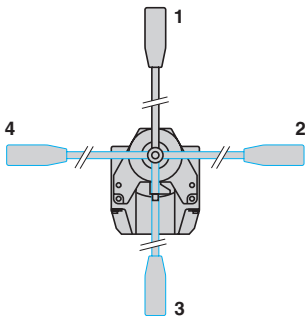
Left hand operated unit

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.

(1) Additional help for completing the order form is available from your Regional Sales Office.

Reference of controller type XKM C

			Lever	Contacts	Movement AB		Potentiometer adaptation
			No. of blocks	Lever movement			
XKM C							
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) 1 st mechanical notch at 12°.							
(2) 1 st mechanical notch at 6°.							
(3) Type of lever movement 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 6/100.							

Requirement

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

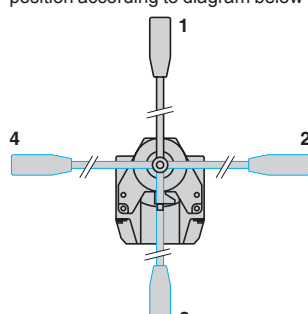
Movement AB:

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 6/91)

	Lever	Contacts	Movement AB		
	No. of blocks	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 movement 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 6/100.

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 6/91)

		Model	Lever	Contacts	Movement AB		Potentiometer adaptation
					No. of blocks	Lever movement	
Number of identical units	<input type="text"/>	XKM	<input type="text" value="C"/>	<input type="text" value="1"/>	<input type="text" value="2"/>	<input type="text" value="3"/>	<input type="text" value="0"/>

For Schneider Electric Industries use only

Order N°	Item N°	MOD	LEV	POI	GLV	CTS	MAN	POT
		XKM	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Potentiometer adaptation

Cross ☒ the required position on the scheme below.

On movement AB

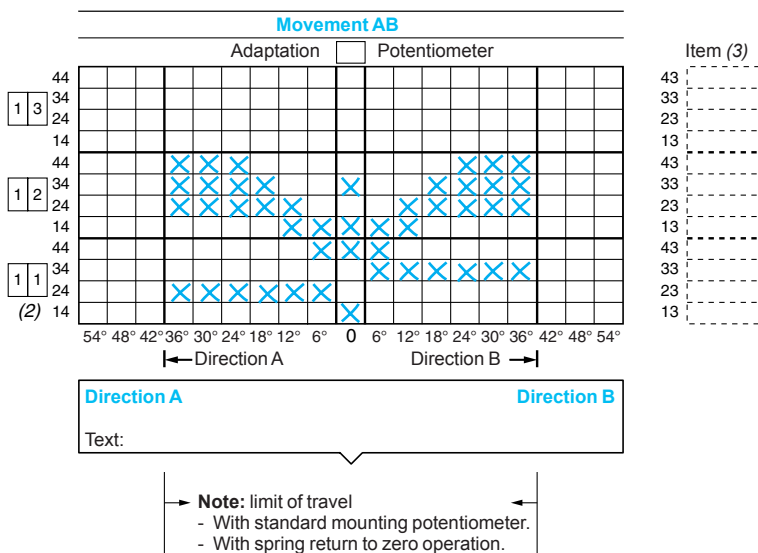
Type/size:

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.

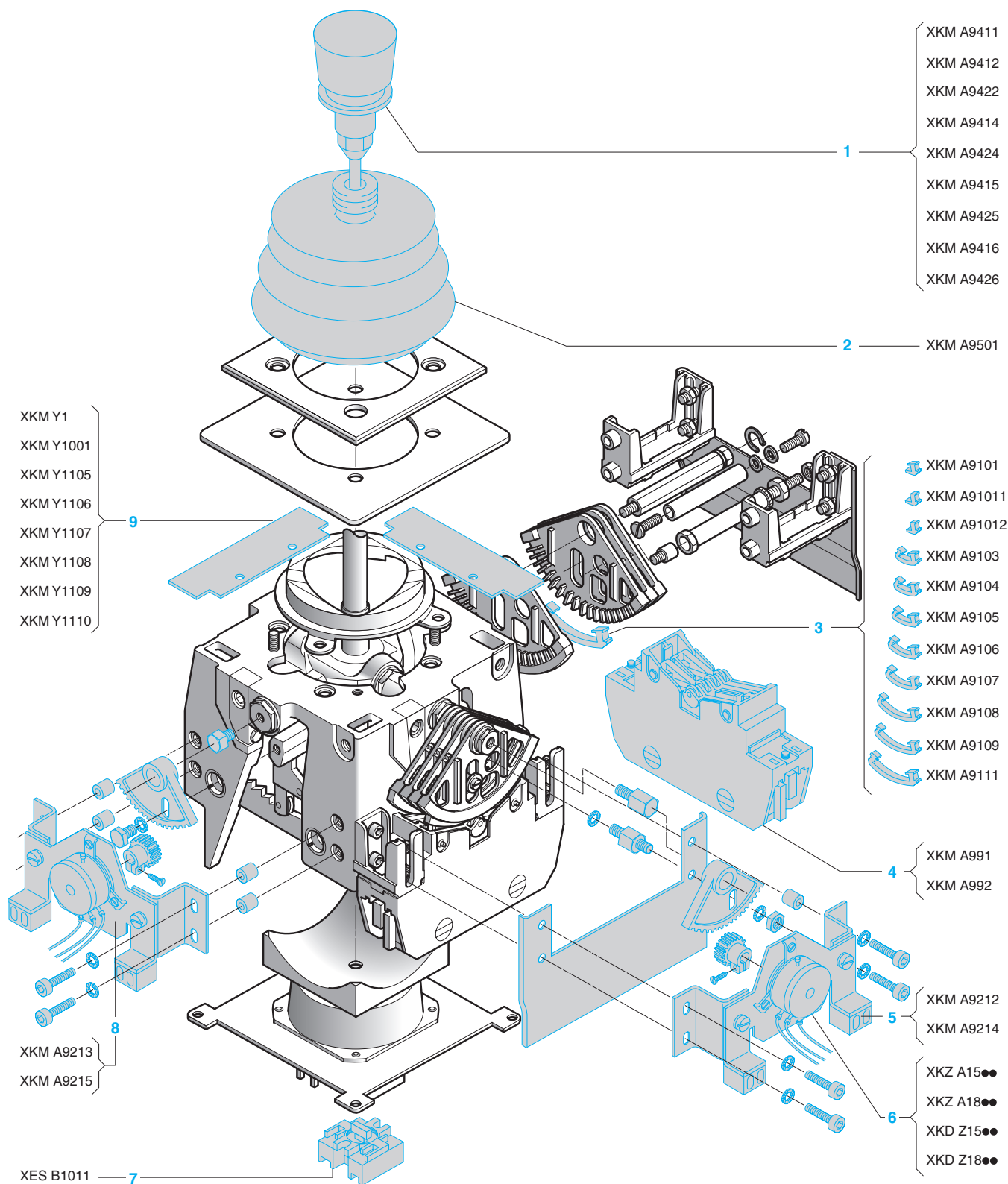
(1) Additional help for completing the order form is available from your Regional Sales Office.

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

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

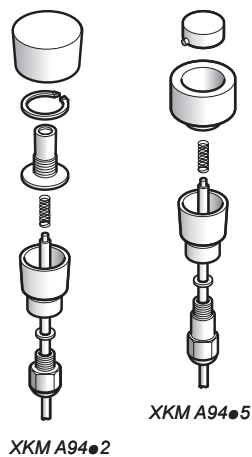
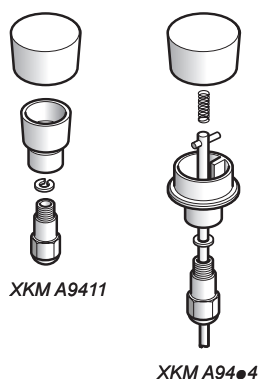
Controllers

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



Controllers

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



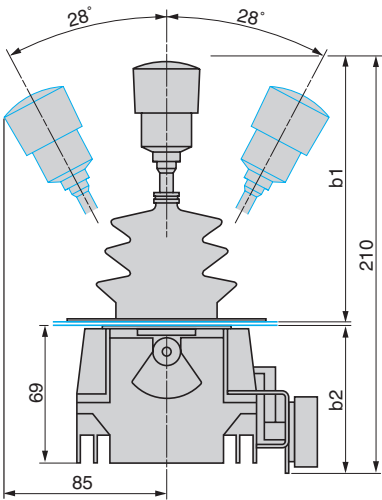
Description	Item	Characteristics	Unit reference	Weight kg
Bellows	2	–	XKM A9501	0.120
Simple handle	1	–	For short or long lever XKM A9411	0.085
Handles + rods	1	With zero (centre) position interlocking	For short lever XKM A9414	0.145
			For long lever XKM A9424	0.155
		“Dead man’s” type	For short lever 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 <i>Sold in lots of 50</i>	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
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
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 6/100 and 6/101	–

(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.

XKB A, XKB E

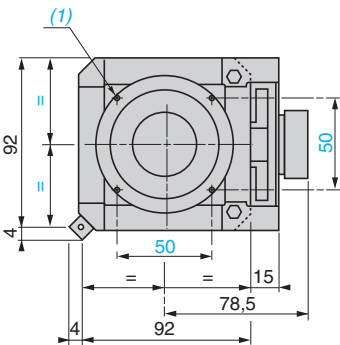


		b1	b2
XKB A,	with size 15 (3 W) potentiometer	129...134	75
XKB E	with size 18 (4 W) potentiometer	129...134	80

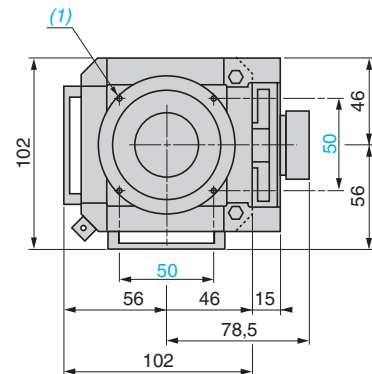
(1) Fixing by 4 M5 screws.

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

4-contact block

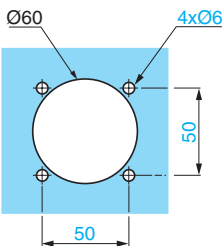


4-contact block + 1 zero position contact

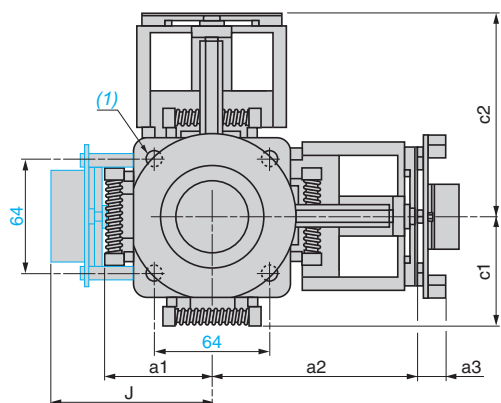
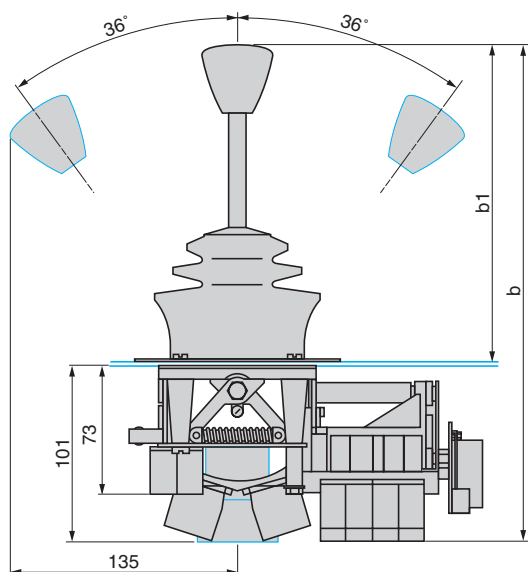


Panel cut-out

thickness 1 to 6 mm



XKD F



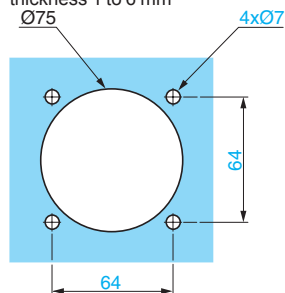
	b	b1
XKD F with short lever	288	181...186
XKD F with long lever	338	236...241

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

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

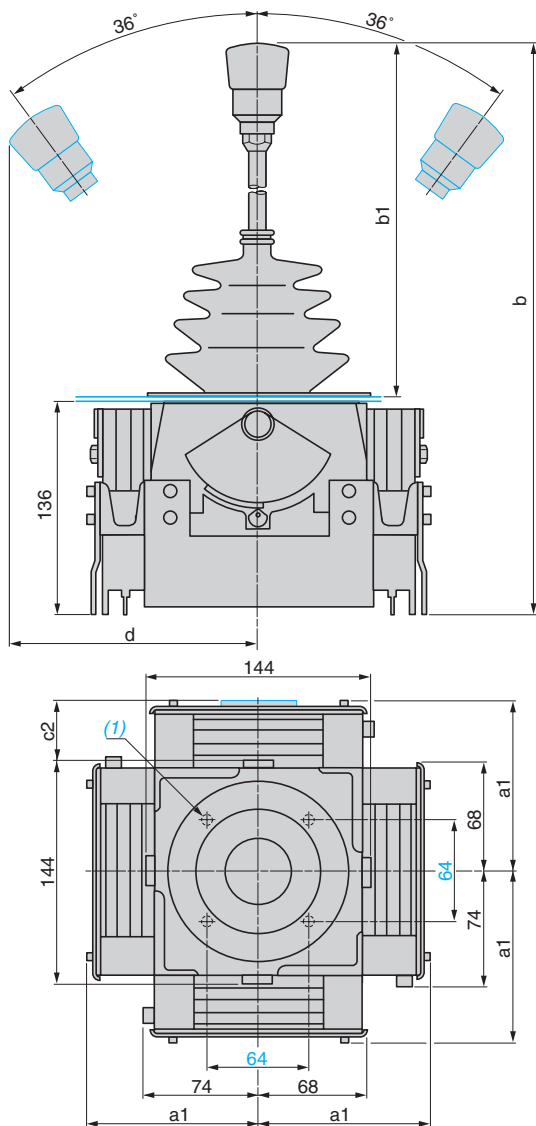
Panel cut-out

thickness 1 to 6 mm

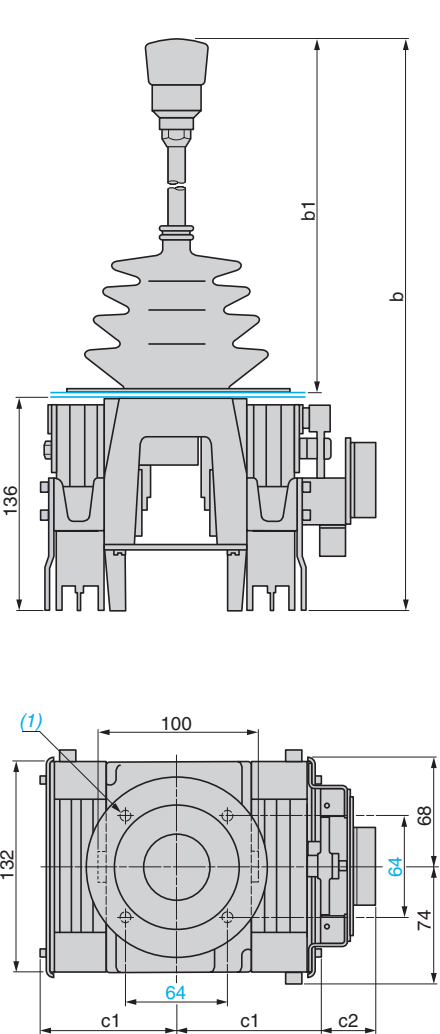


(1) Fixing by 4 M6 screws.

XKMA



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

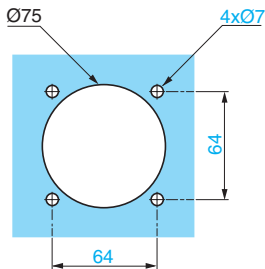
		a1	c1
XKM A, XKM B	with 4 contacts	110	88
	with 8 contacts	140	118
	with 12 contacts	170	148

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

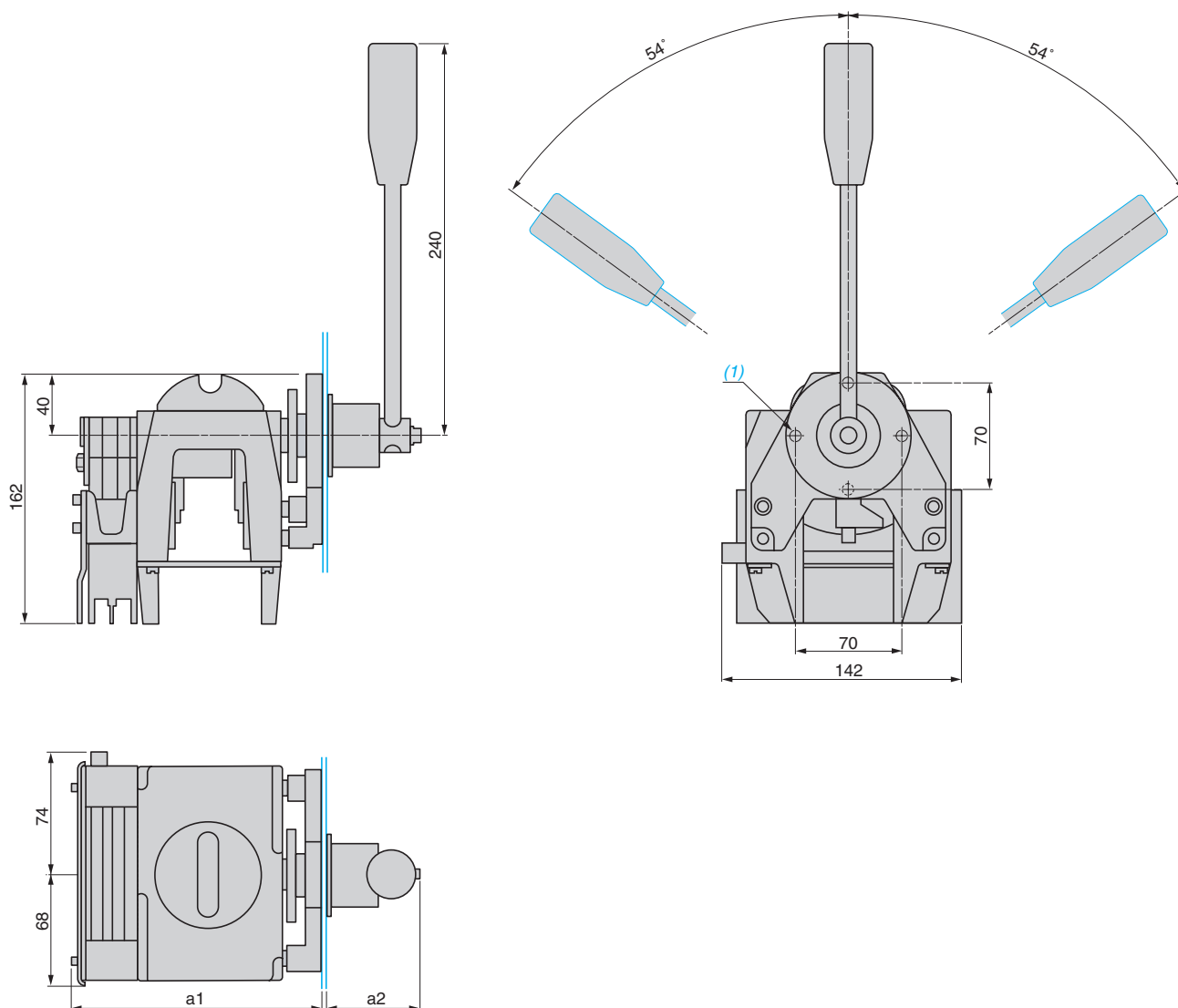
(1) Fixing by 4 M6 screws.

Panel cut-out

thickness 1 to 6 mm



XKM C

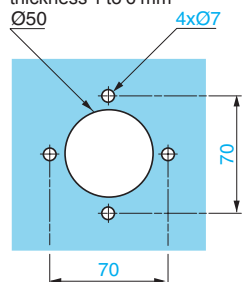


		a1	a2
XKM C	with 4 contacts	157	36 to 41
	with 8 contacts	187	36 to 41
	with 12 contacts	217	36 to 41

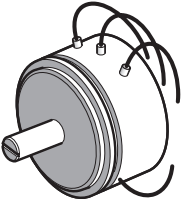
(1) Fixing by 4 M6 screws.

Panel cut-out

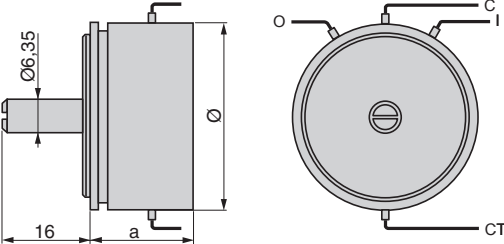
thickness 1 to 6 mm

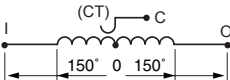


Mechanical characteristics		
Potentiometer type	XKZ A15●●●	XKZ A18●●●
Size	15	18
Mounting method	By the body ("synchro" type)	
Rotational operation	Continuous	
Function	Linear (1% resolution)	
Operating angle	360°	
Mechanical durability (in millions of operating cycles)	3	1
Electrical characteristics		
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 A1●●●●	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.

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**

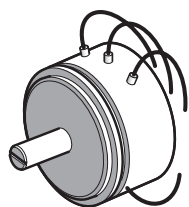
Mechanical characteristics

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●●●

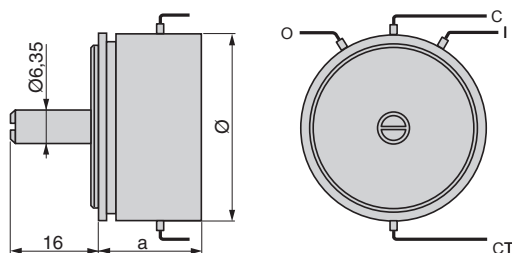
Potentiometers for controllers XKB

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

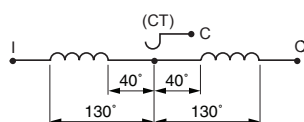


The pinion included with the adaptation simply clamps onto the potentiometer operating shaft (diameter 6.35 mm, length 16 mm).

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

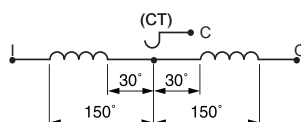
Connections

XKB Z15●●, XKB Z18●●



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

XKD Z15●●, XKD Z18●●



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