

Control and signalling units Ø 22

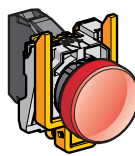
Harmony[®] style 4

Pushbuttons, switches and pilot lights with chromium plated metal bezel

Description

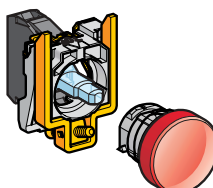
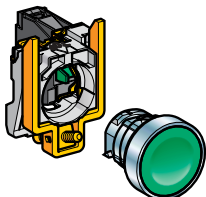
Complete units
XB4 B

The Ø 22 range of metal control and signalling units comprises:

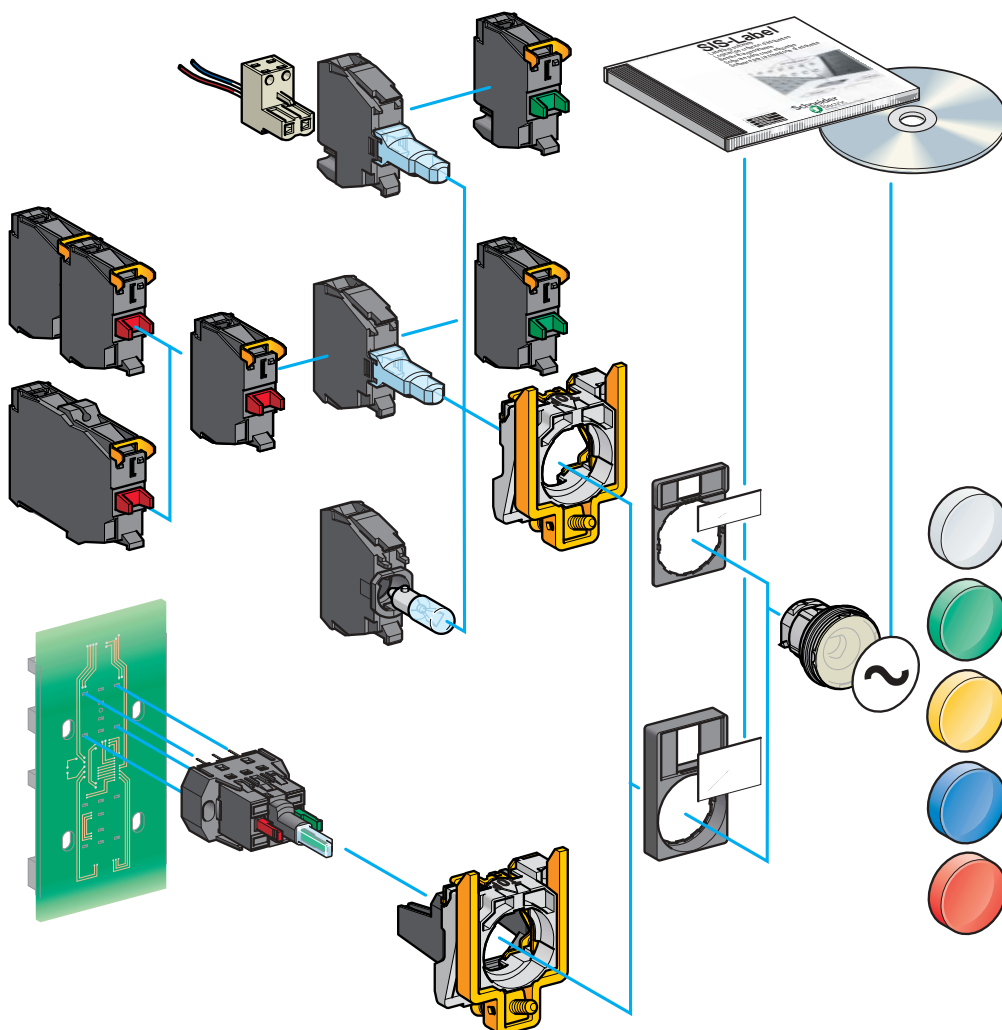


Pilot lights

Sub-assemblies ZB4 B



ZB component parts and accessories



Schematic library

Contact functions (pushbuttons and Emergency stop pushbuttons)

Pushbutton N/O contact	Pushbutton N/C contact	Mushroom head spring return N/O contact	Emergency stop mushroom head - Push-pull N/C contact
Emergency stop trigger action mushroom head Push-pull N/O + N/C contacts	Emergency stop mushroom head Turn to release N/C contact	Emergency stop mushroom head Turn to release, with key N/C contact	Emergency stop trigger action mushroom head Turn to release N/O + N/C contacts
Emergency stop mushroom head Trigger action Turn to release, with key N/O + N/C contacts	Double-headed pushbutton N/O + N/C contacts	Early make contact block N/O contact	Late break contact block N/C contact

Contact functions (selector switches)

Selector switch 2-position stay put N/O contact	Selector switch 3-position stay put N/O + N/O contacts	Selector switch 3-position, 2 spring return to centre N/O + N/O contacts	Selector switch 2-position stay put, key withdrawal from LH position - N/O contact
Selector switch 2-position spring return from right to left, key withdrawal from LH position - N/O contact			

Signalling functions

Pilot light with BA 9s incandescent bulb	LED pilot light	Pilot light with integral transformer ~ 230 V primary, 6 V secondary BA 9s incandescent bulb or LED

Combined functions, contact + signalling (pushbuttons and selector switches)

Illuminated pushbutton BA 9s incandescent bulb N/O + N/C contacts	Illuminated pushbutton with LED N/O + N/C contacts	Illuminated pushbutton with integral transformer, ~ 230 V 50/60 Hz primary, 6 V secondary BA 9s incandescent bulb or LED N/O + N/C contacts
Double-headed pushbutton with LED pilot light	Illuminated selector switch with LED - 2-position stay put N/O + N/C contacts	

Joystick controller functions

2 direction		4 direction	
Without spring return	With spring return	Without spring return	With spring return

Control and signalling units Ø 22

Harmony® style 4

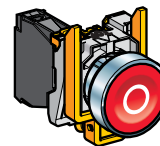
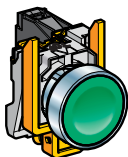
Pushbuttons, switches and pilot lights with chromium plated metal bezel
Complete units, XB4 B

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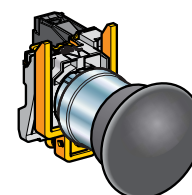
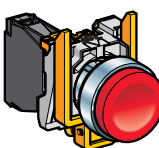
Complete units

Contact functions

Pushbuttons, spring return



Flush push

XB4 BA41/BA42
see page 1/54XB4 BA3311
see page 1/54XB4 BA4322
see page 1/54

Booted flush push

XB4 BP41/BP42
see page 1/54

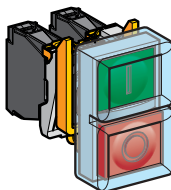
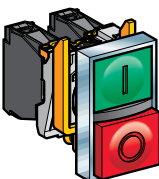
Projecting push

XB4 BL42
see page 1/54

Mushroom head

XB4 BC21
see page 1/54

Double-headed pushbuttons, spring return



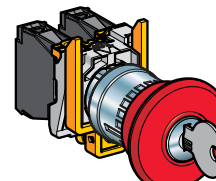
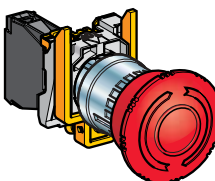
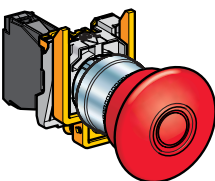
Flush push + projecting push

XB4 BL845
see page 1/54

Booted flush push + projecting push

XB4 BL945
see page 1/54

Ø 40 Emergency stop mushroom head pushbuttons with or without trigger action



Push-pull

XB4 BT42/BT845
see page 1/55

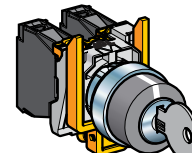
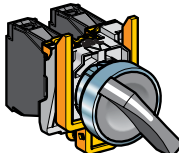
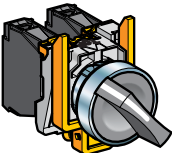
Turn to release

XB4 BS542/BS8445
see page 1/55

Key release

XB4 BS142/BS9445
see page 1/55

Selector switches and key switches



Standard black handle

XB4 BD
see page 1/55

Long black handle

XB4 BJ
see page 1/55

Key switches

XB4 BG
see page 1/55

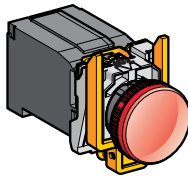
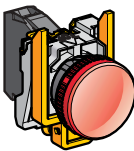
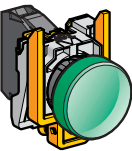
Control and signalling units Ø 22

Harmony® style 4
Pushbuttons, switches and pilot lights with chromium
plated metal bezel
Complete units, XB4 B

Complete units

Signalling functions

Pilot lights



With integral LED

XB4 BVB/BVG/BVM
see page 1/56

For BA 9s bulb
Direct supply

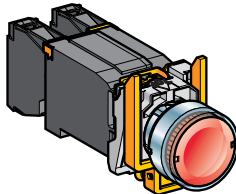
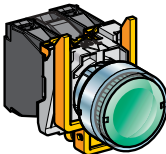
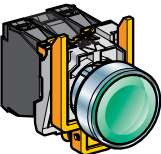
XB4 BV6
see page 1/57

Via integral transformer

XB4 BV3/BV4
see page 1/57

Combined functions (contact + signalling)

Illuminated pushbuttons, spring return, flush push



With integral LED

XB4 BW3•B5/BW3•G5/BW3•M5
see page 1/58

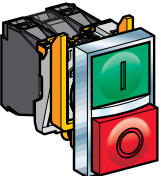
For BA 9s bulb
Direct supply

XB4 BW3•65
see page 1/58

Via integral transformer

XB4 BW3•35/BW3•45
see page 1/59

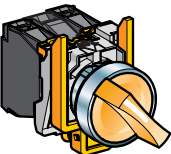
Double-headed pushbuttons, spring return, with pilot light



With integral LED

XB4 BW84•5
see page 1/59

Illuminated selector switches, standard handle



With integral LED

XB4 BK12•B5/BK12•G5/BK12•M5
see page 1/59

Control and signalling units Ø 22

Harmony® style 4

Pushbuttons, switches and pilot lights with chromium plated metal bezel

Sub-assemblies, ZB4 B

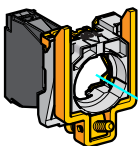
1

Non illuminated units for user assembly

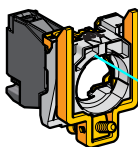
For pushbuttons, spring return, without marking

Contact functions

Body sub-assemblies



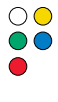
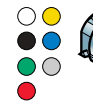
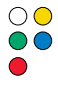
Screw clamp terminals

ZB4 BZ10/BZ141
see page 1/60

Plug-in connector

ZB4 BZ10/4/BZ1414
see page 1/60

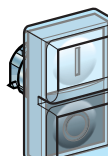
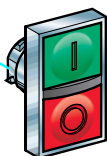
Head sub-assemblies

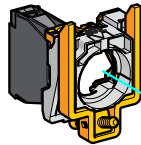
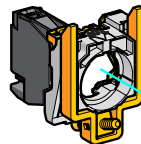
Flush push
without cap
ZB4 BA0
see page 1/61Flush push
with set of 6 caps
ZB4 BA9
see page 1/61Flush push
ZB4 BA
see page 1/61Flush push for
insertion of legend
ZB4 BA8
see page 1/61Projecting push
ZB4 BL
see page 1/61Recessed push
ZB4 BA6
see page 1/61Booted flush push
ZB4 BP
see page 1/61Booted flush push for
insertion of legend
ZB4 BP8
see page 1/61Flush push
ZB4 BA3/4
ZB4 BA334/335
see page 1/62Projecting push
ZB4 BL3
see page 1/62Flush push
ZB4 BH0
see page 1/62Projecting push
ZB4 BH
see page 1/62

For pushbuttons, spring return, with marking

For "push-push to release" pushbuttons

For double-headed pushbuttons, spring return

Flush pushes (IP 40/IP 66)
Without/with marking
ZB4 BA81
ZB4 BA82
see page 1/63ZB4 BA91
ZB4 BA92
see page 1/63Flush push + projecting push (IP 40/IP 66)
Without/with marking
ZB4 BL83
ZB4 BL84
see page 1/63ZB4 BL93
ZB4 BL94
see page 1/63

Non illuminated units
for user assembly
(continued)For mushroom head
pushbuttons, spring returnBody
sub-assembliesScrew clamp
terminalsZB4 BZ10●/BZ141
see page 1/60For mushroom head
pushbuttons, latching,
with or without trigger action

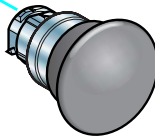
Plug-in connector

ZB4 BZ10●4/BZ1414
see page 1/60For selector switches
and key switches

For toggle switches

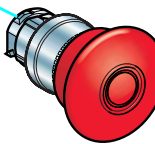
Contact functions

Head sub-assemblies



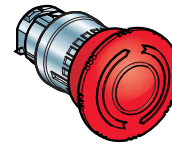
● ● ● ● ● ●
 Ø 30
 Ø 40
 Ø 60

Spring return

ZB4 BC/BR
see page 1/64

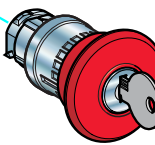
● ● ● ● ● ●
 Ø 40
 Ø 60

Push-pull

ZB4 BT84, ZB4 BT●/BX●
see page 1/65

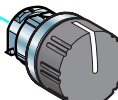
● ● ● ● ● ●
 Ø 30
 Ø 40
 Ø 60

Turn to release

ZB4 BS9●4, ZB4 BS4●/BS5●/BS6●
see page 1/65

● ● ● ● ● ●
 Ø 30
 Ø 40
 Ø 60

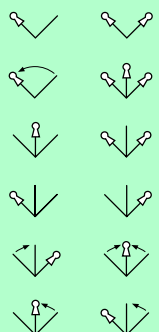
Key release

ZB4 BS9●4/BS7●/BS1●/BS2●
see page 1/65Standard black
handle (1)ZB4 BD
see page 1/66Long black handle
(1)ZB4 BJ
see page 1/66Knurled black knob
(1)ZB4 BD●9
see page 1/66

Key switch (2)

ZB4 BG
see page 1/67

2-position

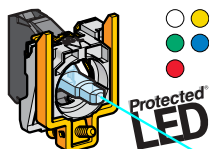
ZB4 BD●8
see page 1/96(1) Switch handle and
knob positions(2) Key switch
positions
Key withdrawal
positions

1

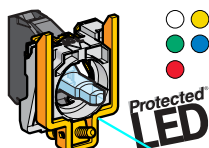
Pilot lights for user assembly

Signalling functions

Body sub-assemblies with integral LED



Screw clamp terminals
ZB4 BVB/BVG/BVM
see page 1/68



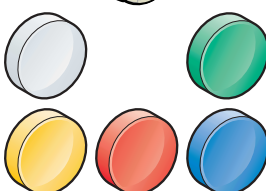
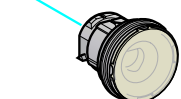
Plug-in connector
ZB4 BVB/BVG/BVM
see page 1/68

Head sub-assemblies



With lens mounted

ZB4 BV03
see page 1/69



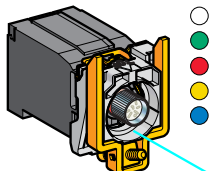
With 5 separate lenses not mounted

ZB4 BV003
see page 1/69

Body sub-assemblies for BA 9s bulb



Direct supply
Screw clamp terminals
ZB4 BV6
see page 1/69



Via integral transformer
Screw clamp terminals
ZB4 BV/BV3D/
BV5D see page 1/69

Head sub-assemblies



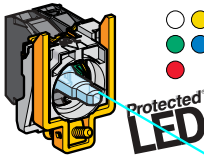
With lens mounted

ZB4 BV02
see page 1/69

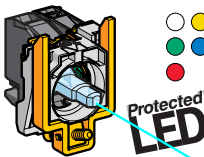
Illuminated pushbuttons for user assembly

For illuminated pushbuttons, spring return

Body sub-assemblies with integral LED



Screw clamp terminals
ZB4 BW0B/BW0G/
BW0M see pages 1/72
and 1/43



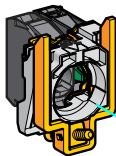
Plug-in connector
ZB4 BW0B...4/
BW0G...4/BW0M...4
see pages 1/74 and
1/43

For double-headed pushbuttons, spring return, with pilot light

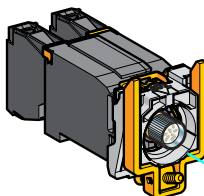
For illuminated, "push-push to release" push-buttons and illuminated selector switches with standard handle

For illuminated pushbuttons, spring return

Body sub-assemblies for BA9s bulb



Direct supply
Screw clamp terminals
ZB4 BW0B
see page 1/76



Via integral transformer
Screw clamp terminals
ZB4 BW03/4/5/3D/5D
see page 1/76

Combined functions (contact + signalling)

Head sub-assemblies



Flush push

ZB4 BW3p3
see page 1/77



Flush push with illuminated ring

ZB4 BW9...3
see page 1/77



Flush push for insertion of legend

ZB4 BA...8
see page 1/77



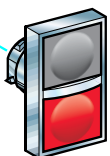
Booted flush push

ZB4 BW5...3
see page 1/77

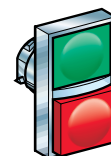


Projecting push

ZB4 BW1...3
see page 1/77

Flush push
Without/with marking

ZB4 BW81...3
see page 1/78

ZB4 BW82...3
see page 1/78Flush push + projecting push
Without/with marking

ZB4 BW83...3
see page 1/78

ZB4 BW84...3
see page 1/78

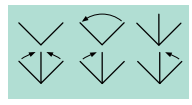
Flush or projecting "push-push to release"

ZB4 BH0...3/BH...3
see page 1/78



Selector switches with standard handle

ZB4 BK1...3
see page 1/79



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Environment

Protective treatment standard version			"TH" treatment
Ambient air temperature around the device	Storage	°C	- 40...+ 70
	Operation	°C	- 25...+ 70: LED and neon bulb versions - 25...+ 55: incandescent bulb version
Electric shock protection	Conforming to IEC 60536		Class I
Degree of protection	Conforming to IEC 60529		IP 66
	Conforming to NEMA		NEMA type 4X and 13, unless otherwise stated
Resistance to high pressure washer		Pa	70 x 10 ⁵ (70 bar); distance: 0.1 m Temperature: 55 °C
Mechanical shock protection	Conforming to IEC 50102		Non illuminated heads: IK 03
			Illuminated heads: IK 05
Conforming to standards			IEC/EN 60947-1, IEC/EN 60947-5-1, IEC/EN 60947-5-4, IEC/EN 60947-5-5, EN 418 (trigger action Emergency stop, see pages 1/55 and 1/65) JIS C 4520, UL 508, CSA C22-2 n° 14
Product certifications	UL Listed, CSA		Standard single contacts with screw clamp terminals: A600; Q600 Double contacts with screw clamp terminals: A600; Q600 Light blocks with screw clamp terminals Joystick controllers XD4 PA/ZD4 PA: A600; R300 Special contact blocks: □ ZBE 201: A300; Q300 □ ZBE 202: A600; Q600
	UL Recognized, CSA		Standard single contacts for plug-in connector: A300; R300 Standard contacts for printed circuit board: B300; R300
	BV, RINA, LROS, DNV, GL		Standard single contacts and double contacts with screw clamp terminals:
Terminal referencing	Conforming to EN 50005 and EN 50013		

Characteristics of contact or combined contact and light functions

Mechanical characteristics

Contact operation	N/C or N/O		Slow break
Positive operation	Conforming to IEC/EN 60947-5-1 appendix K		All functions incorporating an N/C contact are positive opening operation
Operating travel (to change the electrical state)	Pushbutton	mm	Changing N/C state: 1.5 Changing N/O state: 2.6 Total travel: 4.3
Operating force	Pushbutton	N	Changing N/C state: 3.5 Changing N/O state: 3.8
	Additional contact only (extra to change state)	N	Single N/C contact: 2 Single N/O contact: 2.3
		N	Double N/C contact: 3.4 Double N/O contact: 5 Double contact N/C + N/O: 4.6
	Emergency stop with N/C + N/O	N	Standard push-pull: 45 Trigger action push-pull: 50
		N	Standard turn to release and key release: 40 Standard turn to release and key release, trigger action: 44

Characteristics of contact or combined contact and light functions (continued)

Mechanical characteristics (continued)

Operating torque (to change the electrical state)	Selector switches		N.m	N/O contact: 0.14
	Additional contact only		N.m	N/O contact: 0.05
Mechanical durability (in millions of operating cycles)	Pushbutton	Spring		5
		Double-headed		1
		Push-push to release		0.5
	Selector switch	Non illuminated		3
		Illuminated		1
	Toggle switches			0.5
	Emergency stop pushbuttons			0.3 with 3 contacts
	Joystick controllers			1
	Standard contact block only			5
	Low power switching contact block only (dust protected)			0.5
Vibration resistance	Conforming to IEC 60068-2-6			Frequency: 2 to 500 Hz: 5 gn
Electric shock resistance	Conforming to IEC 60068-2-27			All functions except mushroom head pushbuttons, spring return: □ half sine wave acceleration 11 ms: 50 gn □ half sine wave acceleration 18 ms: 30 gn Mushroom head pushbutton, spring return: □ half sine wave acceleration 11 ms: 10 gn
Electrical characteristics				
Cabling capacity	Conforming to IEC 60947-1		mm²	Screw clamp terminals Min: 1 x 0.22 without cable end Max: 2 x 1.5 with cable end Cross headed screw (Pozidrive or Philips type 1), slotted for flat 4 and 5.5 mm screwdriver Tightening torque: 0.8 N.m (max. 1.2 N.m)
Contact material	Silver alloy (Ag / Ni)			Standard single and double blocks with screw clamp terminals Blocks for plug-in connector Standard blocks for printed circuit board connection
	Gold flashed (Ag / Ni / Au)			Low power switching contact blocks with screw clamp terminals Low power switching contact blocks for printed circuit board connection
Short-circuit protection	Conforming to IEC/EN 60947-5-1		A	Standard single and double blocks with screw clamp terminals: 10 (gG cartridge fuse conforming to IEC 60269-1) Blocks for plug-in connector: 4 (gG cartridge fuse conforming to IEC 60269-1) Standard blocks for printed circuit board connection: 4 (gG cartridge fuse conforming to IEC 60269-1)
Rated thermal current	Conforming to IEC/EN 60947-5-1		A	Standard single and double blocks with screw clamp terminals: 10 Blocks for plug-in connector: 10 Standard blocks for printed circuit board connection: 6
Rated insulation voltage	Conforming to IEC 60947-1		V	Standard single and double blocks with screw clamp terminals: Ui = 600, degree of pollution 3 Blocks for plug-in connector or Faston connectors: Ui = 250, degree of pollution 3 Standard blocks for printed circuit board connection: Ui = 250, degree of pollution 3
Rated impulse withstand voltage	Conforming to IEC 60947-1		kV	Standard single and double blocks with screw clamp terminals: Uimp = 6 Blocks for plug-in connector: Uimp = 4 Standard blocks for printed circuit board connection: Uimp = 4

1

1.3

Characteristics of contact or combined contact and light functions (continued)

Electrical characteristics (continued)

Rated operational characteristics
Conforming to IEC/EN 60947-5-1

a.c. supply:
utilisation category AC-15

Standard single and double blocks with screw clamp terminals: A600: $U_e = 600\text{ V}$ and $I_e = 1.2\text{ A}$ or $U_e = 240\text{ V}$ and $I_e = 3\text{ A}$ or $U_e = 120\text{ V}$ and $I_e = 6\text{ A}$

Blocks for plug-in connector:
A300: $U_e = 120\text{ V}$ and $I_e = 6\text{ A}$ or $U_e = 240\text{ V}$ and $I_e = 3\text{ A}$

Standard blocks for printed circuit board connection:
B300: $U_e = 120\text{ V}$ and $I_e = 3\text{ A}$ or $U_e = 240\text{ V}$ and $I_e = 1.5\text{ A}$

Special contact blocks:

□ ZBE 201: A300: $U_e = 240\text{ V}$ and $I_e = 3\text{ A}$ or $U_e = 120\text{ V}$ and $I_e = 6\text{ A}$ (with insulation voltage $U_i = 500\text{ V}$)

□ ZBE 202: A600: $U_e = 600\text{ V}$ and $I_e = 1.2\text{ A}$ or $U_e = 240\text{ V}$ and $I_e = 3\text{ A}$ or $U_e = 120\text{ V}$ and $I_e = 6\text{ A}$

d.c. supply:
utilisation category DC-13

Standard single and double blocks with screw clamp terminals:
Q600: $U_e = 600\text{ V}$ and $I_e = 0.1\text{ A}$ or $U_e = 250\text{ V}$ and $I_e = 0.27\text{ A}$ or $U_e = 125\text{ V}$ and $I_e = 0.55\text{ A}$

Joystick controllers XD4 PA/ZD4 PA:

R300: $U_e = 125\text{ V}$ and $I_e = 0.22\text{ A}$ or $U_e = 250\text{ V}$ and $I_e = 0.1\text{ A}$

Blocks for plug-in connector:

R300: $U_e = 125\text{ V}$ and $I_e = 0.22\text{ A}$ or $U_e = 250\text{ V}$ and $I_e = 0.1\text{ A}$

Standard blocks for printed circuit board connection:

R300: $U_e = 125\text{ V}$ and $I_e = 0.22\text{ A}$ or $U_e = 250\text{ V}$ and $I_e = 0.1\text{ A}$

Special contact blocks:

□ ZBE 201: Q300: $U_e = 125\text{ V}$ and $I_e = 0.55\text{ A}$ or $U_e = 250\text{ V}$ and $I_e = 0.27\text{ A}$

□ ZBE 202: Q600: $U_e = 600\text{ V}$ and $I_e = 0.1\text{ A}$ or $U_e = 250\text{ V}$ and $I_e = 0.27\text{ A}$ or $U_e = 125\text{ V}$ and $I_e = 0.55\text{ A}$

Characteristics of special contact blocks for low power switching

VA
A
V

P max: 12
I max: 0.1
U max: 24

Electrical durability
Conforming to IEC/EN 60947-5-1 appendix C
Operating rate 3600 operating cycles/hour
Load factor: 0.5

a.c. supply for 1 million operating cycles
utilisation category AC-15

V
A

Standard single blocks with screw clamp terminals:

24	120	230
4	3	2

V
A

Standard double blocks with screw clamp terminals and blocks for plug-in connector:

24	120	230
3	1.5	1

d.c. supply for 1 million operating cycles
utilisation category DC-13

V
A

Standard single blocks with screw clamp terminals:

24	110
0.5	0.2

V
A

Standard double blocks with screw clamp terminals and blocks for plug-in connector:

24	110
0.4	0.15

Electrical reliability

Failure rate
Conforming to IEC/EN 60947-5-4

In clean environment

Standard blocks:
- at 17 V and 5 mA, $\lambda < 10^{-8}$
- at 5 V and 1 mA, $\lambda < 10^{-6}$

Special blocks with gold flashed contacts, for low power switching:
- at 5 V and 1 mA, $\lambda < 10^{-7}$

In dusty environment

Special blocks with gold flashed contacts and dust protection for low power switching only:
- at 5 V and 1 mA, $\lambda < 10^{-7}$

Characteristics of illuminated units (pilot lights)

Mechanical characteristics

Vibration resistance	Conforming to IEC 60068-2-6	Frequency: 12 to 500 Hz: 5 gn
Electric shock resistance	Conforming to IEC 60068-2-27	Half sine wave acceleration 11 ms: 50 gn Half sine wave acceleration 18 ms: 30 gn

Electrical characteristics

Cabling capacity	Conforming to IEC 60947-1	mm ²	Screw clamp terminals Min: 1 x 0.22 without cable end (1 x 0.34 for linking) Max: 2 x 1.5 with cable end
Rated insulation voltage	Conforming to IEC 60947-1	V	Direct supply pilot light blocks (BA 9s bulb): Ui = 250 degree of pollution 3 Pilot light blocks with integral LED: Ui = 250 degree of pollution 3 Pilot light blocks with transformer: Ui = 600 degree of pollution 3
Rated impulse withstand voltage	Conforming to IEC 60947-1	kV	Direct supply pilot light blocks (BA 9s bulb): Uimp = 4 Pilot light blocks with integral LED: Uimp = 4 Pilot light blocks with transformer: Uimp = 6

Specific characteristics of single light blocks with integral LED

Voltage limits	For rated voltage	V	12 V: 10 to 15 \approx ; 10.2 to 13.8 \sim 24 V: 19.2 to 30 \approx ; 21.6 to 26.4 \sim 24 to 120 V: 20 to 132 \approx 48 to 120 V: 40 to 132 \sim 240 V: 195 to 264 \sim
Current consumption	Applicable to all colours	mA	Blocks with \approx 12 V supply: 18 Blocks with \approx 24 V supply: 18 Blocks with \sim 120 V supply: 14 Blocks with \sim 240 V supply: 14
Service life	At rated voltage and at an ambient temperature of 25 °C	H	100 000
Surge withstand	Conforming to IEC 61000-4-5	kV	1
Resistance to fast transients	Conforming to IEC 61000-4-4	kV	2
Resistance to electromagnetic fields	Conforming to IEC 61000-4-3	V/m	10
Resistance to electrostatic discharges	Conforming to IEC 61000-4-2	kV	8: in free air, on insulating parts 6: on contact, on metal parts
Direct parallel connection across inductive load E.g. contactor coil or solenoid	Maximum power of load	VA	For high power applications (\geq 30 VA), a ZBZ V● LED suppressor must be connected across the light block terminals (see page 1/83)
Electromagnetic emission	Conforming to EN 55011		Class B

Specific characteristics

Body/fixing collar

Tightening torque of fixing screw		N.m	0.8 (max. 1.2)
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Hour counters and annunciators

Voltage limits	Hour counter and annunciator		\pm 10% of the nominal voltage
Current consumption	Hour counter	mA	XB5 DSB: 7 to 15 XB5 DSG: 8 XB5 DSM: 8
	Annunciator	mA	5

User assembly of other units
using body + head sub-assemblies:
see pages 1/60 to 1/64

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814084



XB4 BA31

1.3

814085



XB4 BA4322

814086



XB4 BP51

814087



XB4 BL42

814088



XB4 BC21

814089



XB4 BL845

Pushbuttons, spring return (screw clamp terminal connections)

Shape of head	Type of push	Type of contact		Marking	Colour of push	Reference	Weight kg
		N/O	N/C				
	Flush	1	—	—	Black	XB4 BA21 (ZB4 BZ101 + ZB4 BA2)	0.080
					Green	XB4 BA31 (ZB4 BZ101 + ZB4 BA3)	0.080
					Yellow	XB4 BA51 (ZB4 BZ101 + ZB4 BA5)	0.080
					Blue	XB4 BA61 (ZB4 BZ101 + ZB4 BA6)	0.080
		—	1	—	Red	XB4 BA42 (ZB4 BZ102 + ZB4 BA4)	0.080
	Flush	1	—	"I" (white)	Green	XB4 BA3311 (ZB4 BZ101 + ZB4 BA331)	0.080
	Flush	—	1	"O" (white)	Red	XB4 BA4322 (ZB4 BZ102 + ZB4 BA432)	0.080
	Flush (1)	1	—	↑ (black)	White	XB4 BA3341 (ZB4 BZ101 + ZB4 BA334)	0.080
	Flush (1)	1	—	↑ (white)	Black	XB4 BA3351 (ZB4 BZ101 + ZB4 BA335)	0.080
	Booted, clear silicone (colour of push unobscured)	1	—	—	Black	XB4 BP21 (ZB4 BZ101 + ZB4 BP2)	0.082
					Green	XB4 BP31 (ZB4 BZ101 + ZB4 BP3)	0.082
					Yellow	XB4 BP51 (ZB4 BZ101 + ZB4 BP5)	0.082
					Blue	XB4 BP61 (ZB4 BZ101 + ZB4 BP6)	0.082
		—	1	—	Red	XB4 BP42 (ZB4 BZ102 + ZB4 BP4)	0.082
	Projecting	—	1	—	Red	XB4 BL42 (ZB4 BZ102 + ZB4 BL4)	0.081
	Mushroom head Ø 40	1	—	—	Black	XB4 BC21 (ZB4 BZ101 + ZB4 BC2)	0.122

Double-headed pushbuttons, spring return (screw clamp terminal connections)

Shape of head	Description	Type of contact		Degree of protection	Reference	Weight kg
		N/O	N/C			
	1 green flush push (marked "I") 1 red projecting push (marked "O")	1	1	IP 40	XB4 BL845 (ZB4 BZ105 + ZB4 BL8434)	0.106
				IP 66	XB4 BL945 (ZB4 BZ105 + ZB4 BL9434)	0.111

(1) Product supplied with cap not clipped-in, allowing orientation through 360° in 90° steps.




User assembly of other units
using body + head assemblies:
see pages 1/65 to 1/67




Control and signalling units Ø 22

Harmony® style 4

Pushbuttons and switches with chromium plated metal
bezel

Complete units, XB4 B

Emergency stop and mushroom head pushbuttons, Ø 40 (red) (screw clamp terminal connections)						
Shape of head	Type of push	Type of contact		Reference	Weight	kg
		N/O	N/C			
 XB4 BT845	Trigger action Push-pull (2)	1	1	XB4 BT845 (1) (ZB4 BZ105 + ZB4 BT84)	0.136	
 XB4 BS9445	Trigger action Turn to release (2)	1	1	XB4 BS8445 (1) (ZB4 BZ105 + ZB4 BS844)	0.130	
		–	2	XB4 BS8444 (1) (ZB4 BZ104 + ZB4 BS844)	0.130	
		1	2	XB4 BS84441 (1) (ZB4 BZ141 + ZB4 BS844)	0.140	
	Trigger action Key release (key n° 455) (2)	1	1	XB4 BS9445 (1) (ZB4 BZ105 + ZB4 BS944)	0.170	
	Push-pull	–	1	XB4 BT42 (1) (ZB4 BZ102 + ZB4 BT4)	0.125	
 XB4 BS542	Turn to release	–	1	XB4 BS542 (1) (ZB4 BZ102 + ZB4 BS54)	0.118	
	Key release (key n° 455)	–	1	XB4 BS142 (1) (ZB4 BZ102 + ZB4 BS14)	0.133	


Selector switches and key switches (screw clamp terminal connections)						
Shape of head	Type of operator	Type of contact		Number and type of positions (3)	Reference	Weight
		N/O	N/C			
 XB4 BD33	Standard handle, black	1	–	2 - stay put	XB4 BD21 (ZB4 BZ101 + ZB4 BD2)	0.095
		1	–	2 - spring return from right to left	XB4 BD41 (ZB4 BZ101 + ZB4 BD4)	0.105
		1	1	2 - stay put	XB4 BD25 (ZB4 BZ105 + ZB4 BD2)	0.105
		2	–	3 - stay put	XB4 BD33 (ZB4 BZ103 + ZB4 BD3)	0.105
				3 - spring return to centre	XB4 BD53 (ZB4 BZ103 + ZB4 BD5)	0.105
 XB4 BJ33	Long handle, black	1	–	2 - stay put	XB4 BJ21 (ZB4 BZ101 + ZB4 BJ2)	0.096
		2	–	3 - stay put	XB4 BJ33 (ZB4 BZ103 + ZB4 BJ3)	0.105
				3 - spring return to centre	XB4 BJ53 (ZB4 BZ103 + ZB4 BJ5)	0.105
 XB4 BG33	Key switches (key n° 455)	1	–	2 - stay put	XB4 BG21 (ZB4 BZ101 + ZB4 BG2)	0.117
					XB4 BG41 (ZB4 BZ101 + ZB4 BG4)	0.117
				2 - spring return to left	XB4 BG61 (ZB4 BZ101 + ZB4 BG6)	0.117
		2	–	3 - stay put	XB4 BG03 (ZB4 BZ103 + ZB4 BG0)	0.127
					XB4 BG33 (ZB4 BZ103 + ZB4 BG3)	0.127

(1) Mushroom for Emergency stop pushbuttons conform to standard IEC/EN 60947-5-5 and to Machinery Directive 98/37/EC.

Mushroom for trigger action Emergency stop pushbuttons conform to standard EN 418.

Please consult your Regional Sales Office for full details of these standards and directives.

(2) Maximum number of additional contacts: 2.

(3) The symbol  indicates key withdrawal position(s).

User assembly of other units
using body + head sub-assemblies:
see pages 1/68 and 1/69

Control and signalling units Ø 22

Harmony® style 4
Pilot lights with metal bezel
Complete units, XB4 B

1



XB4 BVB5

1.3

Pilot lights with integral LED (screw clamp terminal connections)				
Shape of head	Supply voltage (V)	Colour	Reference	Weight kg
 	~ 24	White	XB4 BVB1 (ZB4 BVB1 + ZB4 BV013)	0.080
		Green	XB4 BVB3 (ZB4 BVB3 + ZB4 BV033)	0.080
		Red	XB4 BVB4 (ZB4 BVB4 + ZB4 BV043)	0.080
		Yellow	XB4 BVB5 (ZB4 BVB5 + ZB4 BV053)	0.080
		Blue	XB4 BVB6 (ZB4 BVB6 + ZB4 BV063)	0.080
	~ 48...120	White	XB4 BVG1 (ZB4 BVG1 + ZB4 BV013)	0.080
		Green	XB4 BVG3 (ZB4 BVG3 + ZB4 BV033)	0.080
		Red	XB4 BVG4 (ZB4 BVG4 + ZB4 BV043)	0.080
		Yellow	XB4 BVG5 (ZB4 BVG5 + ZB4 BV053)	0.080
		Blue	XB4 BVG6 (ZB4 BVG6 + ZB4 BV063)	0.080
	~ 230...240	White	XB4 BVM1 (ZB4 BVM1 + ZB4 BV013)	0.080
		Green	XB4 BVM3 (ZB4 BVM3 + ZB4 BV033)	0.080
		Red	XB4 BVM4 (ZB4 BVM4 + ZB4 BV043)	0.080
		Yellow	XB4 BVM5 (ZB4 BVM5 + ZB4 BV053)	0.080
		Blue	XB4 BVM6 (ZB4 BVM6 + ZB4 BV063)	0.080

User assembly of other units
using body + head sub-assemblies:
see pages 1/68 and 1/69

Control and signalling units Ø 22


Harmony® style 4
Pilot lights with metal bezel
Complete units, XB4 B



XB4 BV64



XB4 BV33

Pilot lights for BA 9s bulb (screw clamp terminal connections)				
Shape of head	Supply voltage (V)	Colour	Reference	Weight kg
Direct supply, for BA 9s U ≤ 250 V, 2.4 W bulb (bulb not included)				
	≤ 250	White	XB4 BV61 (ZB4 BV6 + ZB4 BV01)	0.075
		Green	XB4 BV63 (ZB4 BV6 + ZB4 BV03)	0.075
		Red	XB4 BV64 (ZB4 BV6 + ZB4 BV04)	0.075
		Yellow	XB4 BV65 (ZB4 BV6 + ZB4 BV05)	0.075
Via integral transformer 1.2 VA, 6 V secondary, BA 9s incandescent bulb (bulb included)				
	~ 110...120 50/60 Hz	White	XB4 BV31 (ZB4 BV3 + ZB4 BV01)	0.152
		Green	XB4 BV33 (ZB4 BV3 + ZB4 BV03)	0.152
		Red	XB4 BV34 (ZB4 BV3 + ZB4 BV04)	0.152
		Yellow	XB4 BV35 (ZB4 BV3 + ZB4 BV05)	0.152
	~ 230 - 50 Hz ~ 220...240 - 60 Hz	White	XB4 BV41 (ZB4 BV4 + ZB4 BV01)	0.152
		Green	XB4 BV43 (ZB4 BV4 + ZB4 BV03)	0.152
		Red	XB4 BV44 (ZB4 BV4 + ZB4 BV04)	0.152
		Yellow	XB4 BV45 (ZB4 BV4 + ZB4 BV05)	0.152

User assembly of other units
using body + head sub-assemblies:
see pages 1/72 to 1/77

Control and signalling units Ø 22

Harmony® style 4

Illuminated pushbuttons and switches with chromium
plated metal bezel
Complete units, XB4 B

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1.3



XB4 BW33B5



XB4 BW34G5

Illuminated pushbuttons, spring return, flush push							
Shape of head	Description	Type of contact		Supply voltage	Colour of push	Reference	Weight
		 N/O	 N/C				
Screw clamp terminal connections							
 Integral LED 		1	1	≈ 24	White	XB4 BW31B5 (ZB4 BW0B15 + ZB4 BW313)	0.097
					Green	XB4 BW33B5 (ZB4 BW0B35 + ZB4 BW333)	0.097
					Red	XB4 BW34B5 (ZB4 BW0B45 + ZB4 BW343)	0.097
					Yellow	XB4 BW35B5 (ZB4 BW0B55 + ZB4 BW353)	0.097
					Blue	XB4 BW36B5 (ZB4 BW0B65 + ZB4 BW363)	0.097
				~ 48...120	White	XB4 BW31G5 (ZB4 BW0G15 + ZB4 BW313)	0.097
					Green	XB4 BW33G5 (ZB4 BW0G35 + ZB4 BW333)	0.097
					Red	XB4 BW34G5 (ZB4 BW0G45 + ZB4 BW343)	0.097
					Yellow	XB4 BW35G5 (ZB4 BW0G55 + ZB4 BW353)	0.097
					59	Blue	XB4 BW36G5 (ZB4 BW0G65 + ZB4 BW363)
				~ 230...240	White	XB4 BW31M5 (ZB4 BW0M15 + ZB4 BW313)	0.097
					Green	XB4 BW33M5 (ZB4 BW0M35 + ZB4 BW333)	0.097
					Red	XB4 BW34M5 (ZB4 BW0M45 + ZB4 BW343)	0.097
					Yellow	XB4 BW35M5 (ZB4 BW0M55 + ZB4 BW353)	0.097
					Blue	XB4 BW36M5 (ZB4 BW0M65 + ZB4 BW363)	0.097
	Direct supply, for BA 9s 2.4 W max bulb not included	1	1	≤ 250	White	XB4 BW3165 (ZB4 BW065 + ZB4 BW31)	0.097
					Green	XB4 BW3365 (ZB4 BW065 + ZB4 BW33)	0.097
					Red	XB4 BW3465 (ZB4 BW065 + ZB4 BW34)	0.097
					Yellow	XB4 BW3565 (ZB4 BW065 + ZB4 BW35)	0.097


User assembly of other units
using body + head sub-assemblies:
see pages 1/72 to 1/79

Control and signalling units Ø 22

Harmony® style 4

Illuminated pushbuttons and switches with chromium
plated metal bezel
Complete units, XB4 B


Illuminated pushbuttons, spring return, flush push (continued)

Shape of head	Description	Type of contact		Supply voltage	Colour of push	Reference	Weight
		N/O	N/C				
				V			kg
Screw clamp terminal connections							
	Via integral transformer 1.2 VA 6 V secondary, BA 9s incandescent bulb included	1	1	~ 110...120 50/60 Hz	White	XB4 BW3135 (ZB4 BW035 + ZB4 BW31)	0.169
					Green	XB4 BW3335 (ZB4 BW035 + ZB4 BW33)	0.169
					Red	XB4 BW3435 (ZB4 BW035 + ZB4 BW34)	0.169
					Yellow	XB4 BW3535 (ZB4 BW035 + ZB4 BW35)	0.169
				~ 230 50 Hz ~ 220...240 60 Hz	White	XB4 BW3145 (ZB4 BW045 + ZB4 BW31)	0.170
					Green	XB4 BW3345 (ZB4 BW045 + ZB4 BW33)	0.170
					Red	XB4 BW34M5 (ZB4 BW045 + ZB4 BW34)	0.170
					Yellow	XB4 BW3545 (ZB4 BW045 + ZB4 BW35)	0.170

XB4 BW3545

Double-headed pushbuttons, spring return, with integral LED pilot light (IP 40) (1)


Screw clamp terminal connections

	1 flush green push (marked "I") 1 yellow pilot light 1 projecting red push (marked "O") Protected LED	1	1	~ 24	—	XB4 BW84B5 (ZB4 BW0B55 + ZB4 BW843743)	0.116
				~ 48...120	—	XB4 BW84G5 (ZB4 BW0G55 + ZB4 BW843743)	0.116
				~ 230...240	—	XB4 BW84M5 (ZB4 BW0M55 + ZB4 BW843743)	0.116

XB4 BW84B5

Illuminated selector switches with integral LED (2-position stay put)

Screw clamp terminal connections



Shape of head	Type of operator	Type of contact		Supply voltage	Colour of handle	Reference	Weight
		N/O	N/C				
				V			kg
Screw clamp terminal connections							
	Standard handle Protected LED	1	1	~ 24	Green	XB4 BK123B5 (ZB4 BW0B35 + ZB4 BK1233)	0.111
					Red	XB4 BK124B5 (ZB4 BW0B45 + ZB4 BK1243)	0.111
					Yellow	XB4 BK125B5 (ZB4 BW0B55 + ZB4 BK1253)	0.111
				~ 48...120	Green	XB4 BK123G5 (ZB4 BW0G35 + ZB4 BK1233)	0.111
					Red	XB4 BK124G5 (ZB4 BW0G45 + ZB4 BK1243)	0.111
					Yellow	XB4 BK125G5 (ZB4 BW0G55 + ZB4 BK1253)	0.111
				~ 230...240	Green	XB4 BK123M5 (ZB4 BW0M35 + ZB4 BK1233)	0.111
					Red	XB4 BK124M5 (ZB4 BW0M45 + ZB4 BK1243)	0.111
					Yellow	XB4 BK125M5 (ZB4 BW0M55 + ZB4 BK1253)	0.111



XB4 BK124B5

(1) For IP 66 degree of protection, fit a clear sealing boot: **ZBW 008** or **ZBW 008A**. See page 1/95.



To combine with heads:
see pages 1/61 to 1/67

Complete bodies with screw clamp terminal connections

Description	Type of contact		Reference	Weight kg
	 N/O	 N/C		
Fixing collar + single contact block	1	–	ZB4 BZ101	0.053
	–	1	ZB4 BZ102	0.053
	2	–	ZB4 BZ103	0.062
	–	2	ZB4 BZ104	0.062
	1	1	ZB4 BZ105	0.062
	1	2	ZB4 BZ141	0.072

Description	Type of contact		Reference	Weight kg
	 N/O+N/C	 N/O+N/O		
Fixing collar + specific contact block for overlapping contacts function	1	–	ZB4 BZ106	0.062
Fixing collar + specific contact block for sequencing contacts function	–	1	ZB4 BZ107	0.062

Complete bodies for plug-in connector ⁽¹⁾

Description	Type of contact		Reference	Weight kg
	 N/O	 N/C		
Fixing collar + single contact block	1	–	ZB4 BZ1014	0.050
	–	1	ZB4 BZ1024	0.050
	2	–	ZB4 BZ1034	0.058
	–	2	ZB4 BZ1044	0.058
	1	1	ZB4 BZ1054	0.058
	1	2	ZB4 BZ1414	0.064

Contact blocks

Description	Reference
Separate contact blocks	See page 1/82

(1) Connecting cables and connector for plug-in connector contact blocks: see page 1/84.

Other versions Complete bodies with Faston connector terminals (6.35 or 2 x 2.8).
Please consult your Regional Sales Office.

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1.3

814133



ZB4 BZ101

814134



ZB4 BZ102

814346



ZB4 BZ106

814346



ZB4 BZ107

814135



ZB4 BZ1014

814136



ZB4 BZ1024

Control and signalling units Ø 22

Harmony® style 4

Pushbuttons and switches with chromium plated metal bezel
Sub-assemblies, ZB4 B: heads

To combine with bodies:
see page 1/60



ZB4 BA0



ZB4 BA4



ZB4 BA38



ZB4 BP2S



ZB4 BP18



ZB4 BP183



ZB4 BL1



ZB4 BA34



ZB4 BA36

Heads for spring return pushbuttons - unmarked

Shape of head	Type of push	Colour	Reference	Weight kg
	Without cap (1)	–	ZB4 BA0	0.028
	Flush, with set of 6 coloured caps	6 colours (2)	ZB4 BA9	0.038
	Flush	White	ZB4 BA1	0.029
		Black	ZB4 BA2	0.029
		Green	ZB4 BA3	0.029
		Red	ZB4 BA4	0.029
		Yellow	ZB4 BA5	0.029
		Blue	ZB4 BA6	0.029
		Grey	ZB4 BA8	0.029
	Flush with transparent cap, for insertion of legend (3)	White	ZB4 BA18	0.028
		Green	ZB4 BA38	0.028
		Red	ZB4 BA48	0.028
		Yellow	ZB4 BA58	0.028
		Blue	ZB4 BA68	0.028
	Booted (clear silicone) (colour of push unobscured)	White	ZB4 BP1	0.031
		Black	ZB4 BP2	0.031
		Green	ZB4 BP3	0.031
		Red	ZB4 BP4	0.031
		Yellow	ZB4 BP5	0.031
		Blue	ZB4 BP6	0.031
	Booted (coloured silicone) can be replaced without dismantling the head, compatible with legend holder	White	ZB4 BP1S	0.034
		Black	ZB4 BP2S	0.034
		Green	ZB4 BP3S	0.034
		Red	ZB4 BP4S	0.034
		Yellow	ZB4 BP5S	0.034
		Blue	ZB4 BP6S	0.034
	Booted (clear silicone) for insertion of legend (colour of push unobscured)	White	ZB4 BP18	0.034
		Green	ZB4 BP38	0.034
		Red	ZB4 BP48	0.034
		Yellow	ZB4 BP58	0.034
		Blue	ZB4 BP68	0.034
	Booted (clear), integral boot (colour of push unobscured)	White	ZB4 BP183	0.026
		Green	ZB4 BP383	0.026
		Red	ZB4 BP483	0.026
		Yellow	ZB4 BP583	0.026
		Blue	ZB4 BP683	0.026
	Projecting	White	ZB4 BL1	0.030
		Black	ZB4 BL2	0.030
		Green	ZB4 BL3	0.030
		Red	ZB4 BL4	0.030
		Yellow	ZB4 BL5	0.030
		Blue	ZB4 BL6	0.030
	Flush (high guard)	White	ZB4 BA14	0.034
		Black	ZB4 BA24	0.034
		Green	ZB4 BA34	0.034
		Red	ZB4 BA44	0.034
		Yellow	ZB4 BA54	0.034
		Blue	ZB4 BA64	0.034
	Recessed (high guard)	White	ZB4 BA16	0.034
		Black	ZB4 BA26	0.034
		Green	ZB4 BA36	0.034
		Red	ZB4 BA46	0.034
		Yellow	ZB4 BA56	0.034
		Blue	ZB4 BA66	0.034

Heads with black metal bezel

To order, add the suffix **7** to the references selected above.
Example: **ZB4 BA0** becomes **ZB4 BA07**.

(1) Coloured cap to be ordered separately: see page 1/86.

(2) Head supplied with 6 different coloured caps (white, black, green, red, yellow, blue).




(3) For legend ordering information, see page 1/92.

Other versions



For booted heads with flush push, please consult your Regional Sales Office.

To combine with bodies:
see page 1/60

Heads for spring return pushbuttons - marked

Shape of head	Type of push	Marking Text	Colour	Colour of push	Reference	Weight kg
	Flush	I	White	Green	ZB4 BA331	0.029
			Black	White	ZB4 BA131	0.029
		II	White	Green	ZB4 BA336	0.029
			Black	White	ZB4 BA136	0.029
		START	White	Green	ZB4 BA333	0.029
			Black	White	ZB4 BA133	0.029
		ON	White	Green	ZB4 BA341	0.029
			Black	White	ZB4 BA141	0.029
		MARCHE	White	Green	ZB4 BA342	0.029
			Black	White	ZB4 BA142	0.029
			White	Black	ZB4 BA245	0.029
			Black	White	ZB4 BA145	0.029
		O	White	Red	ZB4 BA432	0.029
				Black	ZB4 BA232	0.029
		ARRET	White	Red	ZB4 BA433	0.029
				Black	ZB4 BA233	0.029
		STOP	White	Red	ZB4 BA434	0.029
				Black	ZB4 BA234	0.029
		OFF	White	Red	ZB4 BA435	0.029
				Black	ZB4 BA235	0.029
		↑ (1)	White	Black	ZB4 BA335	0.029
			Black	White	ZB4 BA334	0.029
	Projecting	O	White	Red	ZB4 BL432	0.030
				Black	ZB4 BL232	0.030
		ARRET	White	Red	ZB4 BL433	0.030
				Black	ZB4 BL233	0.030
		STOP	White	Red	ZB4 BL434	0.030
				Black	ZB4 BL234	0.030
		OFF	White	Red	ZB4 BL435	0.030
				Black	ZB4 BL235	0.030

Heads for "push-push to releas" pushbuttons (2)

Shape of head	Type of push	Colour of push	Reference	Weight kg
	Flush	White	ZB4 BH01	0.029
		Black	ZB4 BH02	0.029
		Green	ZB4 BH03	0.029
		Red	ZB4 BH04	0.029
		Yellow	ZB4 BH05	0.029
		Blue	ZB4 BH06	0.029
	Projecting	White	ZB4 BH1	0.029
		Black	ZB4 BH2	0.029
		Green	ZB4 BH3	0.029
		Red	ZB4 BH4	0.029
		Yellow	ZB4 BH5	0.029
		Blue	ZB4 BH6	0.029

Heads with black metal bezel

To order, add the suffix **7** to the references selected above.
Example: **ZB4 BA331** becomes **ZB4 BA3317**.

(1) Head supplied with cap not clipped-in, allowing orientation through 360° in 90° steps.

(2) Maximum of 1 row of 3 contact blocks on associated body/fixing collar sub-assembly.

1



ZB4 BA331

1.3



ZB4 BA334



ZB4 BL432



ZB4 BH02

To combine with bodies:
see page 1/60



ZB4 BA8134



ZB4 BL8312



ZB4 BL9312







ZB4 BL8434



ZB4 BL8412

Heads for double-headed, spring return pushbuttons

Shape of head	Description	Colour of pushes	Degree of protection	Reference	Weight kg
Without function marking on pushes					
	2 flush pushes	Green	IP 40 (1)	ZB4 BA8134	0.047
		Red	IP 66	ZB4 BA9134	0.052
		White	IP 40 (1)	ZB4 BA8112	0.047
		Black	IP 66	ZB4 BA9112	0.052
	1 flush push 1 projecting push	Green	IP 40 (1)	ZB4 BL8334	0.046
		Red	IP 66	ZB4 BL9334	0.051
		White	IP 40 (1)	ZB4 BL8312	0.046
		Black	IP 66	ZB4 BL9312	0.051
With function marking on pushes					
	2 flush pushes (marked "I") (marked "O")	Green	IP 40 (1)	ZB4 BA8234	0.047
		Red	IP 66	ZB4 BA9234	0.052
		White	IP 40 (1)	ZB4 BA8212	0.047
		Black	IP 66	ZB4 BA9212	0.052
	1 flush push (marked "I") 1 projecting push (marked "O")	Green	IP 40 (1)	ZB4 BL8434	0.046
		Red	IP 66	ZB4 BL9434	0.051
		White	IP 40 (1)	ZB4 BL8412	0.046
		Black	IP 66	ZB4 BL9412	0.051

Heads with black metal bezel




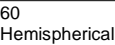
To order, add the suffix 7 to the references selected above.
Example: ZB4 BA8134 becomes ZB4 BA81347.

(1) NEMA type 1

Control and signalling units Ø 22
Harmony® style 4
Pushbuttons and switches with chromium plated metal bezel
Sub-assemblies, ZB4 B: heads

To combine with bodies:
see page 1/60

Mushroom heads for spring return pushbuttons







Shape of head	Diameter of push mm	Colour of push	Reference	Weight kg
	30	Black	ZB4 BC24	0.075
		Green	ZB4 BC34	0.075
		Red	ZB4 BC44	0.075
		Yellow	ZB4 BC54	0.075
		Blue	ZB4 BC64	0.075
	40	Black	ZB4 BC2	0.074
		Green	ZB4 BC3	0.074
		Red	ZB4 BC4	0.074
		Yellow	ZB4 BC5	0.074
		Blue	ZB4 BC6	0.074
	60	Black	ZB4 BR2	0.093
		Green	ZB4 BR3	0.093
		Red	ZB4 BR4	0.093
		Yellow	ZB4 BR5	0.093
		Blue	ZB4 BR6	0.093
	60 Hemispherical	Black	ZB4 BR216	0.054
		Green	ZB4 BR316	0.054
		Red	ZB4 BR416	0.054
		Yellow	ZB4 BR516	0.054
		Blue	ZB4 BR616	0.054

Heads with black metal bezel

To order, add the suffix **7** to the references selected above.
Example: **ZB4 BC24** becomes **ZB4 BC247**.

To combine with bodies:
see page 1/60

Mushroom heads for latching pushbuttons (Emergency stop: colour red)

Shape of head	Type of push	Push Ø (mm)	Colour	Reference	Weight kg
	Trigger action Push-pull (2)	40	Red	ZB4 BT84 (1)	0.078
	Trigger action Turn to release (2)	30	Red	ZB4 BS834 (1)	0.068
		40	Red	ZB4 BS844 (1)	0.073
		60	Red	ZB4 BS864 (1)	0.093
	Trigger action Key release (key n° 455) (2 keys included with head) (2) (4)	30	Red	ZB4 BS934 (1)	0.094
		40	Red	ZB4 BS944 (1) (3)	0.098
		60	Red	ZB4 BS964 (1)	0.118
	Push-pull	40	Black	ZB4 BT2	0.077
			Red	ZB4 BT4 (1)	0.077
		60	Black	ZB4 BX2	0.095
			Red	ZB4 BX4 (1)	0.095
	Turn to release	30	Black	ZB4 BS42	0.066
			Red	ZB4 BS44 (1)	0.066
		40	Black	ZB4 BS52	0.070
			Red	ZB4 BS54 (1)	0.070
			Yellow	ZB4 BS55	0.070
		60	Black	ZB4 BS62	0.090
			Red	ZB4 BS64 (1)	0.090
	Key release (key n° 455) (2 keys included with head) (4)	30	Black	ZB4 BS72	0.066
			Red	ZB4 BS74 (1)	0.066
		40	Black	ZB4 BS12	0.070
			Red	ZB4 BS14 (1) (3)	0.070
		60	Black	ZB4 BS22	0.090
			Red	ZB4 BS24 (1)	0.090

Heads with black metal bezel

To order, add the suffix **7** to the references selected above.

Example: **ZB4 BT84** becomes **ZB4 BT847**.

(1) Mushroom heads for Emergency stop pushbuttons conform to standard IEC/EN 60947-5-5 and to Machinery Directive 98/37/EC.

Mushroom heads for trigger action Emergency stop pushbuttons conform to standard EN 418.

Please consult your Regional Sales Office for full details of these standards and directives.

(2) Maximum number of contacts fitted to the associated body: 4.

Example: 4 single contact blocks, 2 double contact blocks, or 2 single contact blocks + 1 double contact block. See page 1/82.

(3) Other key numbers:

- key n° 421E: add suffix **12** to the reference.

- key n° 458A: add suffix **10** to the reference.

- key n° 520E: add suffix **14** to the reference.







































- key n° 3131A: add suffix **20** to the reference.

Example: To order a Ø 40 red mushroom head for a trigger action, latching pushbutton, with release by key n° 421E, the reference becomes: **ZB4 BS94412**.

(4) For specific keys with other numbers, please consult your Regional Sales Office.

To combine with bodies:
see page 1/60


Heads for selector switches (1)

Shape of head	Type of operator	Number and type of positions (2)	Reference	Weight kg
	Standard handle, black (3)	2 - stay put 	ZB4 BD2	0.044
		2 - stay put with actuation of the centre contact 	ZB4 BD2M	0.044
		2 - spring return from right to left 	ZB4 BD4	0.044
		2 - spring return from right to left with actuation of centre contact 	ZB4 BD4M	0.044
		3 - stay put 	ZB4 BD3	0.044
		3 - spring return to centre 	ZB4 BD5	0.044
		3 - spring return from left to centre 	ZB4 BD7	0.044
		3 - spring return from right to centre 	ZB4 BD8	0.044
		2 - stay put 	ZB4 BJ2	0.044
		2 - stay put with actuation of the centre contact 	ZB4 BJ2M	0.044
	Long handle, black	2 - spring return from right to left 	ZB4 BJ4	0.044
		2 - spring return from right to left with actuation of centre contact 	ZB4 BJ4M	0.044
		3 - stay put 	ZB4 BJ3	0.044
		3 - spring return to centre 	ZB4 BJ5	0.044
		3 - spring return from left to centre 	ZB4 BJ7	0.044
		3 - spring return from right to centre 	ZB4 BJ8	0.044
		2 - stay put 	ZB4 BJ291	0.044
			ZB4 BJ292	0.044
			ZB4 BJ294	0.044
		2 - spring return from right to left 	ZB4 BJ491	0.044
	Long handle, padlockable	3 - stay put 	ZB4 BJ391	0.044
			ZB4 BJ392	0.044
			ZB4 BJ393	0.044
			ZB4 BJ394	0.044
			ZB4 BJ395	0.044
			ZB4 BJ396	0.044
			ZB4 BJ397	0.044
		3 - spring return to centre 	ZB4 BJ593	0.044
		3 - spring return from right to centre 	ZB4 BJ891	0.044
			ZB4 BJ893	0.044
			ZB4 BJ895	0.044
		3 - spring return from left to centre 	ZB4 BJ792	0.044
			ZB4 BJ793	0.044
			ZB4 BJ796	0.044
				

Heads with black metal bezel

To order, add the suffix **7** to the references selected above. Example: **ZB4 BD2** becomes **ZB4 BD27**.

(1) Can only be used for actuation of end row (side) mounted contacts.

(2) The symbol  indicates the padlocking positions.

(3) For handles in other colours, please consult your Regional Sales Office

To combine with bodies:
see page 1/60



ZB4 BD29

Heads for selector switches (continued) (1)

Shape of head	Type of operator	Number and type of positions (2)		Reference (3)	Weight kg
	Knurled knob, black	2 - stay put		ZB4 BD29	0.046
		2 - spring return from right to left		ZB4 BD49	0.046
		3 - stay put		ZB4 BD39	0.046
		3 - spring return to centre		ZB4 BD59	0.046
		3 - spring return from left to centre		ZB4 BD79	0.046
		3 - spring return from right to centre		ZB4 BD89	0.046
	Key (n° 455) (4)	2 - stay put		ZB4 BG2	0.069
				ZB4 BG4	0.069
		2 - stay put with actuation of the centre contact		ZB4 BG2M	0.069
				ZB4 BG4M	0.069
		2 - spring return from right to left		ZB4 BG6	0.069
		2 - spring return from right to left with actuation of centre contact		ZB4 BG6M	0.069
		3 - stay put		ZB4 BG0	0.069
				ZB4 BG3	0.069
				ZB4 BG5	0.069
				ZB4 BG9	0.069
				ZB4 BG09	0.069
		3 - spring return from left to centre		ZB4 BG1	0.069
		3 - spring return to centre		ZB4 BG7	0.069
		3 - spring return from right to centre		ZB4 BG8	0.069
				ZB4 BG08	0.069



ZB4 BG8

Heads for toggle switches (black lever)

Shape of head	Description	Type of position	Reference	Weight kg
	2-position	Stay put	ZB4 BD28	0.026
		Spring return	ZB4 BD48	0.026



ZB4 BD28

Heads with black metal bezel

To order, add the suffix **7** to the references selected above.
Example: **ZB4 BG2** becomes **ZB4 BG27**.

(1) Can only be used for actuation of end row (side) mounted contacts.

(2) The symbol indicates key withdrawal position(s).

(3) Other key numbers:

- key n° 421E: add suffix **12** to the reference.
- key n° 458A: add suffix **10** to the reference.
- key n° 520E: add suffix **14** to the reference.
- key n° 3131A: add suffix **20** to the reference.

Example:

For a switch head with key n° 421E, 2-position stay put with key withdrawal from the left-hand position, the reference becomes: **ZB4 BG212**.

(4) For specific keys with other numbers, please consult your Regional Sales Office.

To combine with heads for integral LED:
see page 1/71

1

8114207



ZB4 BV●●

Complete bodies (fixing collar + light block with integral LED)

Light source	Supply voltage V	Colour of light source	Reference	Weight kg
Screw clamp terminal connections				
Integral LED Protected[®] LED	≈ 12	White	ZB4 BVJ1	0.054
		Green	ZB4 BVJ3	0.054
		Red	ZB4 BVJ4	0.054
		Yellow	ZB4 BVJ5	0.054
		Blue	ZB4 BVJ6	0.054
	≈ 24 (1)	White	ZB4 BVB1	0.054
		Green	ZB4 BVB3	0.054
		Red	ZB4 BVB4	0.054
		Yellow	ZB4 BVB5	0.054
		Blue	ZB4 BVB6	0.054
	≈ 24...120	White	ZB4 BVBG1	0.054
		Green	ZB4 BVBG3	0.054
		Red	ZB4 BVBG4	0.054
		Yellow	ZB4 BVBG5	0.054
		Blue	ZB4 BVBG6	0.054
	~ 48...120 (1)	White	ZB4 BVG1	0.054
		Green	ZB4 BVG3	0.054
		Red	ZB4 BVG4	0.054
		Yellow	ZB4 BVG5	0.054
		Blue	ZB4 BVG6	0.054
	~ 230...240 (1)	White	ZB4 BVM1	0.054
		Green	ZB4 BVM3	0.054
		Red	ZB4 BVM4	0.054
		Yellow	ZB4 BVM5	0.054
		Blue	ZB4 BVM6	0.054

Complete bodies with 3-terminal "test" function (fixing collar + light block with integral LED + block for "test light" function)

Light source	Supply voltage V	Colour of light source	Reference	Weight kg
Screw clamp terminal connections				
Integral LED Protected[®] LED	≈ 24 (2)	White	ZB4 BVB1156	0.054
		Green	ZB4 BVB3156	0.054
		Red	ZB4 BVB4156	0.054
		Yellow	ZB4 BVB5156	0.054
		Blue	ZB4 BVB6156	0.054

Complete bodies with flashing pilot light (fixing collar + light block with integral LED)

Light source	Supply voltage V	Colour of light source	Reference	Weight kg
Screw clamp terminal connections				
Integral LED Protected[®] LED	≈ 24	White	ZB4 BV18B1	0.054
		Green	ZB4 BV18B3	0.054
		Red	ZB4 BV18B4	0.054
		Yellow	ZB4 BV18B5	0.054
		Blue	ZB4 BV18B6	0.054
	~ 48...120	White	ZB4 BV18G1	0.054
		Green	ZB4 BV18G3	0.054
		Red	ZB4 BV18G4	0.054
		Yellow	ZB4 BV18G5	0.054
		Blue	ZB4 BV18G6	0.054
	~ 230...240	White	ZB4 BV18M1	0.054
		Green	ZB4 BV18M3	0.054
		Red	ZB4 BV18M4	0.054
		Yellow	ZB4 BV18M5	0.054
		Blue	ZB4 BV18M6	0.054

(1) Complete bodies with Faston connector terminals (6.35 or 2 x 2.8).

Please consult your Regional Sales Office.

(2) For a 120 or 230 V ~ supply, use complete body ZB4 BVG● or ZB4 BVM● with block for test function type ZBZ M156, see page 1/83.

To combine with heads for integral LED:
see page 1/71



ZB4 BV...4

Complete bodies (fixing collar + light block with integral LED)

Light source	Supply voltage V	Colour of light source	Reference	Weight kg
Plug-in connector (1)				
Integral LED Protected LED	≈ 24	White	ZB4 BVB14	0.053
		Green	ZB4 BVB34	0.053
		Red	ZB4 BVB44	0.053
		Yellow	ZB4 BVB54	0.053
		Blue	ZB4 BVB64	0.053
	~ 48...120	White	ZB4 BVG14	0.053
		Green	ZB4 BVG34	0.053
		Red	ZB4 BVG44	0.053
		Yellow	ZB4 BVG54	0.053
		Blue	ZB4 BVG64	0.053
	~ 230...240	White	ZB4 BVM14	0.053
		Green	ZB4 BVM34	0.053
		Red	ZB4 BVM44	0.053
		Yellow	ZB4 BVM54	0.053
		Blue	ZB4 BVM64	0.053

(1) Connecting cables and connector for plug-in connector light blocks: see page 1/84.

Other versions

Complete bodies with Faston connector terminals (6.35 or 2 x 2.8).
Please consult your Regional Sales Office.

To combine with heads for BA 9s bulb:
see page 1/71

1



ZB4 BV6

1.3



ZB4 BV156



ZB4 BV●

Complete bodies (fixing collar + light block for BA 9s bulb, incandescent, neon or LED)**Screw clamp terminal connections**

Description	Light source	Supply voltage V	Colour of light source	Reference	Weight kg
Direct supply	BA 9s bulb, 2.4 W max Not included (1)	≤ 250	–	ZB4 BV6	0.052
Direct supply "Test" function (3 terminals)	BA 9s bulb, 2.4 W max Not included (1)	≤ 250	–	ZB4 BV156	0.062
Via integral transformer 1.2 VA 6 V secondary	BA9s incandescent bulb, included	~ 110...120 50/60 Hz	–	ZB4 BV3	0.130
		~ 230 50 Hz	–	ZB4 BV4	0.130
		~ 220...240 60 Hz	–		
		~ 400 50 Hz	–	ZB4 BV5	0.131
		~ 440...480 60 Hz	–	ZB4 BV8	0.128
		~ 550...600 60 Hz	–	ZB4 BV9	0.131
	BA9s base fitting LED included	~ 110...120 50/60 Hz	White	ZB4 BV3D1	0.134
			Green	ZB4 BV3D3	0.134
			Red	ZB4 BV3D4	0.134
			Yellow	ZB4 BV3D5	0.134
			Blue	ZB4 BV3D6	0.134
		~ 230 50 Hz ~ 220...240 60 Hz	White	ZB4 BV4D1	0.134
			Green	ZB4 BV4D3	0.134
			Red	ZB4 BV4D4	0.134
			Yellow	ZB4 BV4D5	0.134
			Blue	ZB4 BV4D6	0.134
		~ 400 50/60 Hz	White	ZB4 BV5D1	0.134
			Green	ZB4 BV5D3	0.134
			Red	ZB4 BV5D4	0.134
			Yellow	ZB4 BV5D5	0.134
			Blue	ZB4 BV5D6	0.134

(1) Bulbs to be ordered separately.

Other versions

Complete bodies with Faston connector terminals (6.35 or 2 x 2.8).
Please consult your Regional Sales Office.









ZB4 BV063



ZB4 BV04

Heads

Shape of head	For use with body comprising light source type	Colour of lens	Reference	Weight kg
With plain lens				
	Integral LED only 	White	ZB4 BV013	0.026
		Green	ZB4 BV033	0.026
		Red	ZB4 BV043	0.026
		Yellow	ZB4 BV053	0.026
		Blue	ZB4 BV063	0.026
	BA 9s bulb (incandescent, neon or LED only)	White	ZB4 BV01	0.027
		Green	ZB4 BV03	0.027
		Red	ZB4 BV04	0.027
		Yellow	ZB4 BV05	0.027
		Blue	ZB4 BV06	0.027
		Clear	ZB4 BV07	0.027
	With plain lens, for insertion of legend (1)			
	Integral LED only 	White	ZB4 BV013E	0.026
		Green	ZB4 BV033E	0.026
		Red	ZB4 BV043E	0.026
		Yellow	ZB4 BV053E	0.026
		Blue	ZB4 BV063E	0.026
With grooved lens (2)				
	Integral LED only 	White	ZB4 BV013S	0.026
		Green	ZB4 BV033S	0.026
		Red	ZB4 BV043S	0.026
		Yellow	ZB4 BV053S	0.026
		Blue	ZB4 BV063S	0.026
	BA 9s bulb (neon or LED only)	White	ZB4 BV01S	0.027
		Green	ZB4 BV03S	0.027
		Red	ZB4 BV04S	0.027
		Yellow	ZB4 BV05S	0.027
		Blue	ZB4 BV06S	0.027
		Clear	ZB4 BV07S	0.027

(1) For legend ordering information, see page 1/92.

(2) For use in bright ambient light conditions (outdoors in sunlight, for example). For heads with grooved lens, the use of "high luminosity" LEDs is recommended, see page 1/83.

Control and signalling units Ø 22
Harmony® style 4
Illuminated pushbuttons and switches with chromium
plated metal bezel
Sub-assemblies, ZB4 B: bodies

To combine with heads for integral LED:
see pages 1/77 to 1/79

1



ZB4 BW0003

1.3

Complete bodies (fixing collar + single contact block + light block with integral LED)

Light source	Supply voltage	Type of contact (1)		Colour of light source	Reference	Weight
	V	N/O	N/C			kg
Screw clamp terminal connections						
Integral LED Protected LED	≈ 24	1	–	White	ZB4 BW0B11	0.064
				Green	ZB4 BW0B31	0.064
				Red	ZB4 BW0B41	0.064
				Yellow	ZB4 BW0B51	0.064
				Blue	ZB4 BW0B61	0.064
		–	1	White	ZB4 BW0B12	0.064
				Green	ZB4 BW0B32	0.064
				Red	ZB4 BW0B42	0.064
				Yellow	ZB4 BW0B52	0.064
				Blue	ZB4 BW0B62	0.064
		2	–	White	ZB4 BW0B13	0.074
				Green	ZB4 BW0B33	0.074
				Red	ZB4 BW0B43	0.074
				Yellow	ZB4 BW0B53	0.074
				Blue	ZB4 BW0B63	0.074
		1	1	White	ZB4 BW0B15	0.074
				Green	ZB4 BW0B35	0.074
				Red	ZB4 BW0B45	0.074
				Yellow	ZB4 BW0B55	0.074
				Blue	ZB4 BW0B65	0.074
	~ 48...120	1	–	White	ZB4 BW0G11	0.064
				Green	ZB4 BW0G31	0.064
				Red	ZB4 BW0G41	0.064
				Yellow	ZB4 BW0G51	0.064
				Blue	ZB4 BW0G61	0.064
		–	1	White	ZB4 BW0G12	0.064
				Green	ZB4 BW0G32	0.064
				Red	ZB4 BW0G42	0.064
				Yellow	ZB4 BW0G52	0.064
				Blue	ZB4 BW0G62	0.064

Other versions

Complete bodies with Faston connector terminals (6.35 or 2 x 2.8).
Please consult your Regional Sales Office.

(1) Can be fitted with additional contact blocks: see page 1/82.

Control and signalling units Ø 22

Harmony® style 4

Illuminated pushbuttons and switches with chromium plated metal bezel

Sub-assemblies, ZB4 B: bodies

To combine with heads for integral LED:
see pages 1/77 to 1/79

ZB4 BW0003

Complete bodies (fixing collar + single contact block + light block with integral LED) (continued)

Light source	Supply voltage	Type of contact (1)		Colour of light source	Reference	Weight
		N/O	N/C			
	V					kg
Screw clamp terminal connections (continued)						
Integral LED Protected LED	~ 48...120	2	—	White	ZB4 BW0G13	0.074
				Green	ZB4 BW0G33	0.074
				Red	ZB4 BW0G43	0.074
				Yellow	ZB4 BW0G53	0.074
				Blue	ZB4 BW0G63	0.074
		1	1	White	ZB4 BW0G15	0.074
				Green	ZB4 BW0G35	0.074
				Red	ZB4 BW0G45	0.074
				Yellow	ZB4 BW0G55	0.074
				Blue	ZB4 BW0G65	0.074
	~ 230...240	1	—	White	ZB4 BW0M11	0.064
				Green	ZB4 BW0M31	0.064
				Red	ZB4 BW0M41	0.064
				Yellow	ZB4 BW0M51	0.064
				Blue	ZB4 BW0M61	0.064
		—	1	White	ZB4 BW0M12	0.064
				Green	ZB4 BW0M32	0.064
				Red	ZB4 BW0M42	0.064
				Yellow	ZB4 BW0M52	0.064
				Blue	ZB4 BW0M62	0.064
		2	—	White	ZB4 BW0M13	0.074
				Green	ZB4 BW0M33	0.074
				Red	ZB4 BW0M43	0.074
				Yellow	ZB4 BW0M53	0.074
				Blue	ZB4 BW0M63	0.074
		1	1	White	ZB4 BW0M15	0.074
				Green	ZB4 BW0M35	0.074
				Red	ZB4 BW0M45	0.074
				Yellow	ZB4 BW0M55	0.074
				Blue	ZB4 BW0M65	0.074
400 V, 50 Hz		1	1	White	ZB4 BW05B15	0.168
				Green	ZB4 BW05B35	0.168
				Red	ZB4 BW05B45	0.168
				Yellow	ZB4 BW05B55	0.168
				Blue	ZB4 BW05B65	0.168
		1	1	White	ZB4 BW08B15	0.168
				Green	ZB4 BW08B35	0.168
				Red	ZB4 BW08B45	0.168
				Yellow	ZB4 BW08B55	0.168
				Blue	ZB4 BW08B65	0.168
550/600 V, 60 Hz		1	1	White	ZB4 BW09B15	0.168
				Green	ZB4 BW09B35	0.168
				Red	ZB4 BW09B45	0.168
				Yellow	ZB4 BW09B55	0.168
				Blue	ZB4 BW09B65	0.168

Other versionsComplete bodies with Faston connector terminals (6.35 or 2 x 2.8).
Please consult your Regional Sales Office.

(1) Can be fitted with additional contact blocks: see page 1/82.

Control and signalling units Ø 22
Harmony® style 4
Illuminated pushbuttons and switches with chromium
plated metal bezel
Sub-assemblies, ZB4 B: bodies


To combine with heads for integral LED:
see pages 1/77 to 1/79

1



ZB4 BW00014

1.3



Complete bodies (fixing collar + single contact block + light block with integral LED) (continued)						
Light source	Supply voltage	Type of contact (1)		Colour of light source	Reference	Weight
						
	V	N/O	N/C			kg
Plug-in connector (2)						
<div>Integral LED</div> <div>Protected LED</div>	≈ 24	1	–	White	ZB4 BW0B114	0.060
				Green	ZB4 BW0B314	0.060
				Red	ZB4 BW0B414	0.060
				Yellow	ZB4 BW0B514	0.060
				Blue	ZB4 BW0B614	0.060
		–	1	White	ZB4 BW0B124	0.060
				Green	ZB4 BW0B324	0.060
				Red	ZB4 BW0B424	0.060
				Yellow	ZB4 BW0B524	0.060
				Blue	ZB4 BW0B624	0.060
		2	–	White	ZB4 BW0B134	0.067
				Green	ZB4 BW0B334	0.067
				Red	ZB4 BW0B434	0.067
				Yellow	ZB4 BW0B534	0.067
				Blue	ZB4 BW0B634	0.067
		1	1	White	ZB4 BW0B154	0.067
				Green	ZB4 BW0B354	0.067
				Red	ZB4 BW0B454	0.067
				Yellow	ZB4 BW0B554	0.067
				Blue	ZB4 BW0B654	0.067
	∼ 48...120	1	–	White	ZB4 BW0G114	0.060
				Green	ZB4 BW0G314	0.060
				Red	ZB4 BW0G414	0.060
				Yellow	ZB4 BW0G514	0.060
				Blue	ZB4 BW0G614	0.060
		–	1	White	ZB4 BW0G124	0.060
				Green	ZB4 BW0G324	0.060
				Red	ZB4 BW0G424	0.060
				Yellow	ZB4 BW0G524	0.060
				Blue	ZB4 BW0G624	0.060
Other versions		Complete bodies with Faston connector terminals (6.35 or 2 x 2.8). Please consult your Regional Sales Office.				

(1) Can be fitted with additional contact blocks: see page 1/84.
(2) Connecting cables and connector for plug-in connector electrical blocks: see page 1/84.

To combine with heads for integral LED:
see pages 1/77 to 1/79



ZB4 BW00034

Complete bodies (fixing collar + single contact block + light block with integral LED) (continued)						
Light source	Supply voltage	Type of contact (1)		Colour of light source	Reference	Weight
	V					kg
		N/O	N/C			
Screw clamp terminal connections (2) (continued)						
<div>Protected[®]</div> <div>LED</div>	~ 48...120	2	—	White	ZB4 BW0G134	0.067
				Green	ZB4 BW0G334	0.067
				Red	ZB4 BW0G434	0.067
				Yellow	ZB4 BW0G534	0.067
				Blue	ZB4 BW0G634	0.067
		1	1	White	ZB4 BW0G154	0.067
				Green	ZB4 BW0G354	0.067
				Red	ZB4 BW0G454	0.067
				Yellow	ZB4 BW0G554	0.067
				Blue	ZB4 BW0G654	0.067
	~ 230...240	1	—	White	ZB4 BW0M114	0.060
				Green	ZB4 BW0M314	0.060
				Red	ZB4 BW0M414	0.060
				Yellow	ZB4 BW0M514	0.060
				Blue	ZB4 BW0M614	0.060
		—	1	White	ZB4 BW0M124	0.060
				Green	ZB4 BW0M324	0.060
				Red	ZB4 BW0M424	0.060
				Yellow	ZB4 BW0M524	0.060
				Blue	ZB4 BW0M624	0.060
	2	—	White	ZB4 BW0M134	0.067	
			Green	ZB4 BW0M334	0.067	
			Red	ZB4 BW0M434	0.067	
			Yellow	ZB4 BW0M534	0.067	
			Blue	ZB4 BW0M634	0.067	
	1	1	White	ZB4 BW0M154	0.067	
			Green	ZB4 BW0M354	0.067	
			Red	ZB4 BW0M454	0.067	
			Yellow	ZB4 BW0M554	0.067	
			Blue	ZB4 BW0M654	0.067	
Other versions		Complete bodies with Faston connector terminals (6.35 or 2 x 2.8). Please consult your Regional Sales Office.				

(1) Can be fitted with additional contact blocks: see page 1/84.

(2) Connecting cables and connector for plug-in connector electrical blocks: see page 1/84.

To combine with heads for BA9s bulbs:
see pages 1/77 to 1/79

Complete bodies (fixing collar + single contact block + light block for BA 9s bulb, incandescent, neon or LED)

Description	Light source	Supply voltage	Type of contact (1)		Colour of light source	Reference	Weight
			N/O	N/C			
		V					kg
Screw clamp terminal connections							
Direct supply	BA 9s 2.4 W max. bulb Not included (2)	≤ 250	1	—	—	ZB4 BW061	0.063
			—	1	—	ZB4 BW062	0.063
			2	—	—	ZB4 BW063	0.073
			1	1	—	ZB4 BW065	0.073
Via integral transformer 1.2 VA, 6 V secondary	BA9s incandescent bulb, included	~ 110...120 50/60 Hz	1	—	—	ZB4 BW031	0.141
			1	1	—	ZB4 BW035	0.151
		~ 230 50 Hz	1	—	—	ZB4 BW041	0.141
		~ 220...240 60 Hz	1	1	—	ZB4 BW045	0.151
		~ 400 50 Hz	1	—	—	ZB4 BW051	0.141
			1	1	—	ZB4 BW055	0.151
	BA9s base fitting LED included	~ 110...120 50/60 Hz	1	1	White	ZB4 BW03D15	0.151
					Green	ZB4 BW03D35	0.151
					Red	ZB4 BW03D45	0.151
					Yellow	ZB4 BW03D55	0.151
					Blue	ZB4 BW03D65	0.151
		~ 230 50 Hz ~ 220...240 60 Hz	1	1	White	ZB4 BW04D15	0.151
					Green	ZB4 BW04D35	0.151
					Red	ZB4 BW04D45	0.151
					Yellow	ZB4 BW04D55	0.151
					Blue	ZB4 BW04D65	0.151
		~ 400 50/60 Hz	1	1	White	ZB4 BW05D15	0.152
					Green	ZB4 BW05D35	0.152
					Red	ZB4 BW05D45	0.152
					Yellow	ZB4 BW05D55	0.152
					Blue	ZB4 BW05D65	0.152

Other versions

Complete bodies with integral transformer incorporating Faston connector terminals (6.35 or 2 x 2.8). Please consult your Regional Sales Office.

(1) Can be fitted with additional contact blocks: see page 1/82.

(2) Bulb to be ordered separately: see page 1/94.

To combine with bodies:
see pages 1/72 to 1/76



ZB4 BW333



ZB4 BW563



ZB4 BW113











ZB4 BW33



ZB4 BW14

Heads for spring return illuminated pushbuttons


Shape of head	Type of push	Colour	Reference	Weight kg
With plain lens				
Only for use with bodies comprising a light source with integral LED				
	Flush	White	ZB4 BW313	0.026
		Green	ZB4 BW333	0.026
		Red	ZB4 BW343	0.026
		Yellow	ZB4 BW353	0.026
		Blue	ZB4 BW363	0.026
	Flush with illuminated ring	White	ZB4 BW913	0.026
		Green	ZB4 BW933	0.026
		Red	ZB4 BW943	0.026
		Yellow	ZB4 BW953	0.026
		Blue	ZB4 BW963	0.026
	Flush with clear boot	White	ZB4 BW513	0.031
		Green	ZB4 BW533	0.031
		Red	ZB4 BW543	0.031
		Yellow	ZB4 BW553	0.031
		Blue	ZB4 BW563	0.031
	Flush for insertion of legend	White	ZB4 BA18	0.028
		Green	ZB4 BA38	0.028
		Red	ZB4 BA48	0.028
		Yellow	ZB4 BA58	0.028
		Blue	ZB4 BA68	0.028
	Projecting	White	ZB4 BW113	0.029
		Green	ZB4 BW133	0.029
		Red	ZB4 BW143	0.029
		Yellow	ZB4 BW153	0.029
		Blue	ZB4 BW163	0.029
Only for use with bodies comprising a light source with BA 9s bulb (incandescent, neon or LED)				
	Flush	White	ZB4 BW31	0.027
		Green	ZB4 BW33	0.027
		Red	ZB4 BW34	0.027
		Yellow	ZB4 BW35	0.027
		Blue	ZB4 BW36	0.027
	Projecting	Clear	ZB4 BW37	0.027
		White	ZB4 BW11	0.028
		Green	ZB4 BW13	0.028
		Red	ZB4 BW14	0.028
		Yellow	ZB4 BW15	0.028
	Projecting	Blue	ZB4 BW16	0.028
		Clear	ZB4 BW17	0.028

Heads with black metal bezel


To order, add the suffix **7** to the references selected above.
Example: **ZB4 BW313** becomes **ZB4 BW3137**.

To combine with bodies:
see pages 1/72 to 1/76

Heads for spring return illuminated pushbuttons (continued)

Shape of head	Type of push	Colour	Reference	Weight kg
With grooved lens (1)				
Only for use with bodies comprising a light source with integral LED				
	Flush	White	ZB4 BW313S	0.026
		Green	ZB4 BW333S	0.026
		Red	ZB4 BW343S	0.026
		Yellow	ZB4 BW353S	0.026
		Blue	ZB4 BW363S	0.026
	Projecting	White	ZB4 BW113S	0.026
		Green	ZB4 BW133S	0.026
		Red	ZB4 BW143S	0.026
		Yellow	ZB4 BW153S	0.026
		Blue	ZB4 BW163S	0.026

Only for use with bodies comprising a light source with BA 9s bulb (incandescent, neon or LED)

	Flush	White	ZB4 BW31S	0.027
		Green	ZB4 BW33S	0.027
		Red	ZB4 BW34S	0.027
		Yellow	ZB4 BW35S	0.027
		Blue	ZB4 BW36S	0.027
		Clear	ZB4 BW37S	0.027
	Projecting	White	ZB4 BW11S	0.027
		Green	ZB4 BW13S	0.027
		Red	ZB4 BW14S	0.027
		Yellow	ZB4 BW15S	0.027
		Blue	ZB4 BW16S	0.027
		Clear	ZB4 BW17S	0.027

Heads with black metal bezel

To order, add the suffix **7** to the references selected above.

Example: **ZB4 BW313S** becomes **ZB4 BW3137S**.

(1) For use in bright ambient light conditions (outdoors in sunlight, for example). For heads with grooved lens, the use of "high luminosity" LEDs is recommended, see page 1/83.

To combine with bodies:
see pages 1/72 to 1/76



ZB4 BH033



ZB4 BH63



ZB4 BW812743




ZB4 BW823743







ZB4 BW841723

Heads for illuminated "push-push to release" pushbuttons (1)

Shape of head	Type of push	Colour of lens	Reference	Weight kg
Only for use with bodies comprising a light source with integral LED				
	Flush	White	ZB4 BH013	0.026
		Green	ZB4 BH033	0.026
		Red	ZB4 BH043	0.026
		Yellow	ZB4 BH053	0.026
		Blue	ZB4 BH063	0.026
	Projecting	White	ZB4 BH13	0.026
		Green	ZB4 BH33	0.026
		Red	ZB4 BH43	0.026
		Yellow	ZB4 BH53	0.026
		Blue	ZB4 BH63	0.026

Heads with pilot light for double-headed, spring return pushbuttons (IP 40) (2)

Shape of head	Description	Colour of pushes	Colour of pilot light	Reference	Weight kg
Only for use with bodies comprising a light source with integral LED "high luminosity" (3)					
■ Without function marking on push					
	1 flush push 1 central pilot light 1 flush push	Black	Clear (4)	ZB4 BW812743	0.047
		Red			
		Green	Clear (4)	ZB4 BW813743	0.047
		Red			
	1 flush push 1 central pilot light 1 projecting push	White	Clear (4)	ZB4 BW811723	0.047
		Black			
		Black	Clear (4)	ZB4 BW832743	0.046
		Red			
	1 flush push (marked "I") 1 central pilot light 1 flush push (marked "O")	Green	Clear (4)	ZB4 BW823743	0.047
		Red			
		White	Clear (4)	ZB4 BW821723	0.047
		Black			
	1 flush push (marked "I") 1 central pilot light 1 projecting push (marked "O")	Black	Clear (4)	ZB4 BW842743	0.046
		Red			
		Green	Clear (4)	ZB4 BW843743	0.046
		Red			
	1 projecting push (marked "O")	White	Clear (4)	ZB4 BW841723	0.046
		Black			

Heads with black metal bezel

To order, add the suffix 7 to the references selected above.

Example: ZB4 BW812743 becomes ZB4 BW8127437.

(1) Maximum of 1 row of 2 contact blocks on associated body/ fixing collar sub-assembly.

(2) NEMA type 1. For head with IP 66 degree of protection (NEMA type 4X), fit a clear sealing boot ZBW 008: see page 1/95.

(3) "High luminosity" LED, see page 1/83.

(4) Colour of centrally positioned pilot light determined by the colour of the LED incorporated in the body assembly.


To combine with bodies:
see pages 1/72 to 1/76

1




ZB4 BW413

Heads for spring return Ø40 mushroom head illuminated pushbuttons

Shape of head	Colour of push	Reference	Weight kg
Only for use with bodies comprising a light source with integral LED "high luminosity" (1)			
 Protected LED	White	ZB4 BW413	0.051
	Green	ZB4 BW433	0.051
	Red	ZB4 BW443	0.051
	Yellow	ZB4 BW453	0.051
	Blue	ZB4 BW463	0.051

1.3

Heads for latching Ø 40 mushroom head illuminated pushbuttons

Shape of head	Type of push	Colour of push	Reference	Weight kg
Only for use with bodies comprising a light source with integral LED "high luminosity" (1)				
 Protected LED	Push-pull	White	ZB4 BW613	0.051
		Green	ZB4 BW633	0.051
		Red	ZB4 BW643	0.051
		Yellow	ZB4 BW653	0.051
		Blue	ZB4 BW663	0.051

Heads with black metal bezel

To order, add the suffix 7 to the references selected above.
Example: ZB4 BK1213 becomes ZB4 BK12137.








(1) "High luminosity" LED, see page 1/83.

Control and signalling units Ø 22
Harmony® style 4
Illuminated pushbuttons and switches with chromium
plated metal bezel
Sub-assemblies, ZB4 B: heads

To combine with bodies:
see pages 1/72 to 1/76



ZB4 BK1343

Heads for illuminated selector switches, standard handle ⁽¹⁾					
Shape of head	Number and type of positions	Colour of handle	Reference	Weight kg	
Only for use with bodies comprising a light source with integral LED					
	2 - stay put 	White	ZB4 BK1213	0.040	
		Green	ZB4 BK1233	0.040	
		Red	ZB4 BK1243	0.040	
		Yellow	ZB4 BK1253	0.040	
		Blue	ZB4 BK1263	0.040	
	2 - spring return from right to left 	White	ZB4 BK1413	0.040	
		Green	ZB4 BK1433	0.040	
		Red	ZB4 BK1443	0.040	
		Yellow	ZB4 BK1453	0.040	
		Blue	ZB4 BK1463	0.040	
	3 - stay put 	White	ZB4 BK1313	0.040	
		Green	ZB4 BK1333	0.040	
		Red	ZB4 BK1343	0.040	
		Yellow	ZB4 BK1353	0.040	
		Blue	ZB4 BK1363	0.040	
	3 - spring return to centre 	White	ZB4 BK1513	0.040	
		Green	ZB4 BK1533	0.040	
		Red	ZB4 BK1543	0.040	
		Yellow	ZB4 BK1553	0.040	
		Blue	ZB4 BK1563	0.040	
	3 - spring return from right to centre 	White	ZB4 BK1813	0.040	
		Green	ZB4 BK1833	0.040	
		Red	ZB4 BK1843	0.040	
		Yellow	ZB4 BK1853	0.040	
		Blue	ZB4 BK1863	0.040	
	3 - spring return from left to centre 	White	ZB4 BK1713	0.040	
		Green	ZB4 BK1733	0.040	
		Red	ZB4 BK1743	0.040	
		Yellow	ZB4 BK1753	0.040	
		Blue	ZB4 BK1763	0.040	

Heads with black metal bezel

To order, add the suffix 7 to the references selected above.
Example: ZB4 BK1213 becomes ZB4 BK12137.

(1) NEMA type 13.

Control and signalling units Ø 22

Harmony® style 4

Pushbuttons, switches and pilot lights with chromium plated metal bezel

Separate components and accessories: electrical blocks

1



ZBE 101



ZBE 102

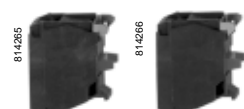
1.3



ZBE 203



ZBE 204

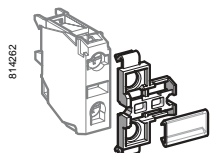


ZBE 201

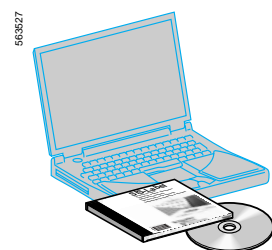
ZBE 202



ZB4 BZ009



ZBZ 001



XBY 2U

Contact blocks with screw clamp terminal connections ⁽¹⁾

Description	Type of contact		Sold in lots of	Unit reference	Weight kg
	N/O	N/C			
Standard single contact blocks	1	—	5	ZBE 101	0.011
	—	1	5	ZBE 102	0.011
Standard double contact blocks	2	—	5	ZBE 203	0.020
	—	2	5	ZBE 204	0.020
	1	1	5	ZBE 205	0.020
Special contact blocks for low power switching with gold flashed contacts	1	—	5	ZBE 1016	0.012
	—	1	5	ZBE 1026	0.012
Special contact blocks for low power switching with gold flashed contacts and dust protection (2)	1	—	5	ZBE 1016P	0.012
	—	1	5	ZBE 1026P	0.012
Description	Type of contact		Sold in lots of	Unit reference	Weight kg
	N/O	N/C			
Specific contact block for early make contact function	1	—	5	ZBE 201	0.011
Specific contact block for late break contact function	—	1	5	ZBE 202	0.011

Body/fixing collar

For use on	Sold in lots of	Unit reference	Weight kg
Electrical block (contact or light)	10	ZB4 BZ009	0.038

Clip-on legend holders for electrical blocks with screw clamp terminal connections

Application	Sold in lots of	Unit reference	Weight kg
Identification of an XB4 B control or signalling unit	10	ZBZ 001	0.001

Sheet of 50 blank legends

For use on	Sold in lots of	Unit reference	Weight kg
Legend holder ZBZ 001	10	ZBY 001	0.023

“SIS Label” labelling software (for legends ZBY 001)

Application	Reference	Weight kg
Legend design for English, French, German, Italian, Spanish	XBY 2U	0.100

(1) The contact blocks enable variable composition of body sub-assemblies. Maximum number of rows possible: 3. Either 3 rows of 3 single contacts or 1 row of 3 double contacts + 1 row of 3 single contacts (double contact blocks occupy 2 rows).

(2) It is not possible to fit an additional contact block on the back of these blocks.

Other versions

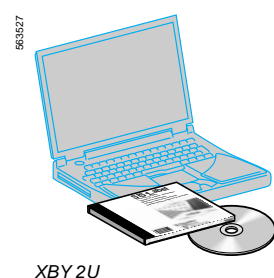
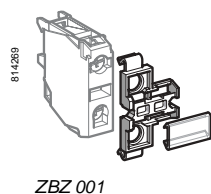
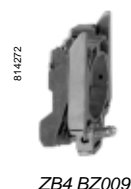
Contact blocks with Faston connector terminals (6.35 or 2 x 2.8). Please consult your Regional Sales Office.

Control and signalling units Ø 22

Harmony® style 4

Pushbuttons, switches and pilot lights with chromium plated metal bezel

Separate components and accessories: electrical blocks



Light blocks with screw clamp terminals

Description	Supply voltage V	Colour of light source	Sold in lots of	Unit reference	Weight kg
Integral LED (to combine with heads for integral LED) Protected LED	≈ 12	White	5	ZBV J1 (1)	0.017
		Green	5	ZBV J3 (1)	0.017
		Red	5	ZBV J4 (1)	0.017
		Yellow	5	ZBV J5 (1)	0.017
		Blue	5	ZBV J6 (1)	0.017
	≈ 24	White	5	ZBV B1 (1)	0.017
		Green	5	ZBV B3 (1)	0.017
		Red	5	ZBV B4 (1)	0.017
		Yellow	5	ZBV B5 (1)	0.017
		Blue	5	ZBV B6 (1)	0.017
	≈ 24...120	White	5	ZBV BG1	0.017
		Green	5	ZBV BG3	0.017
		Red	5	ZBV BG4	0.017
		Yellow	5	ZBV BG5	0.017
		Blue	5	ZBV BG6	0.017
	≈ 48...120	White	5	ZBV G1 (1)	0.017
		Green	5	ZBV G3 (1)	0.017
		Red	5	ZBV G4 (1)	0.017
		Yellow	5	ZBV G5 (1)	0.017
		Blue	5	ZBV G6 (1)	0.017
	≈ 230...240	White	5	ZBV M1 (1)	0.017
		Green	5	ZBV M3 (1)	0.017
		Red	5	ZBV M4 (1)	0.017
		Yellow	5	ZBV M5 (1)	0.017
		Blue	5	ZBV M6 (1)	0.017
		Blue	5	ZBV 6	0.016
Direct supply for BA 9s 2.4 W max. bulb Not included (2)	≤ 250	–	5	ZBV 6	0.016

Blocks for “test light” function

For use with	Supply voltage V	Description	Reference	Weight kg
Light blocks	≈ 12 and 24 ≈ 24...120	Single module, 1 connecting wire	ZBZ G156 (3)	0,010
Light blocks with integral LED	≈ 48...230	Double module, with connecting wires	ZBZ M156 (4)	0,010

LED suppressors

For use with	Supply voltage V	Reference	Weight kg
Light blocks with integral LED fitted with screw clamp terminal connections	≈ 120	ZBZ VG	0.010
	≈ 230	ZBZ VM	0.010

Body/fixing collar

For use with	Sold in lots of	Unit reference	Weight kg
Electrical block (contact or light)	10	ZB4 BZ009	0.038

Clip-on legend holders for electrical blocks with screw clamp terminal connections

Identification of an XB4 B control or signalling unit	10	ZBZ 001	0.001
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Sheet of 50 blank legends

Legend holder ZBZ 001	10	ZBY 001	0.023
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“SIS Label” labelling software (for legends ZBY 001)

Application	Reference	Weight kg
Legend design for English, French, German, Italian, Spanish	XBY 2U	0.100

(1) To order a “high luminosity” version, add the suffix **S** to the reference (example: **ZBV B5S** for a yellow, 24 V, high luminosity light block).

(2) Bulb to be ordered separately, see page 1/94.

(3) Block for use with ≈ light blocks with integral LED types **ZBV J●**, **ZBV B●**, **ZBV BG●** or with direct supply light block for BA 9s bulb, **ZBV 6**.

(4) Block for use with ≈ light blocks with integral LED types **ZBV G●**, **ZBV M●**, see connections on page 1/102.

Other versions Light blocks with Faston connector terminals (6.35 or 2 x 2.8).
Please consult your Regional Sales Office.

Control and signalling units Ø 22

Harmony® style 4

Pushbuttons, switches and pilot lights with chromium plated metal bezel

Separate components and accessories: electrical blocks

1

814278



ZBE 1014

814279



ZBE 1024

1.3

814280



ZBV B4

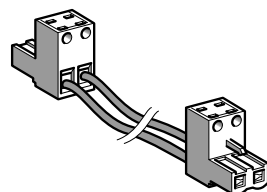
Contact blocks for plug-in connector

Description	Type of contact		Sold in lots of	Unit reference	Weight kg
	N/O	N/C			
Standard contact blocks	1	–	5	ZBE 1014	0.009
	–	1	5	ZBE 1024	0.009

Light blocks for plug-in connector

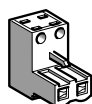
Description	Supply voltage V	Colour of light source	Sold in lots of	Unit reference	Weight kg
Integral LED (to combine with heads for integral LED) Protected LED	~ 24	White	5	ZBV B14	0,016
		Green	5	ZBV B34	0,016
		Red	5	ZBV B44	0,016
		Yellow	5	ZBV B54	0,016
		Blue	5	ZBV B64	0,016
	~ 48...120	White	5	ZBV G14	0,016
		Green	5	ZBV G34	0,016
		Red	5	ZBV G44	0,016
		Yellow	5	ZBV G54	0,016
		Blue	5	ZBV G64	0,016
	~ 230...240	White	5	ZBV M14	0,016
		Green	5	ZBV M34	0,016
		Red	5	ZBV M44	0,016
		Yellow	5	ZBV M54	0,016
		Blue	5	ZBV M64	0,016

530719



APE 1C2250

814281



APE 1PAD21

814277



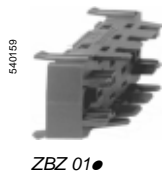
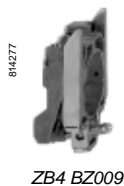
ZB4 BZ009

Connecting cables and connector

Description	Number of connectors	Wire c.s.a. mm ²	Length mm	Sold in lots of	Unit reference	Weight kg
Cables with connectors 2-pin, 5.08 mm pitch	1	0.75	500	8	APE 1C2150	0,120
	2	0.75	500	8	APE 1C2250	0.180
Self-stripping connector 2-pin, 5.08 mm pitch	–	0.75	–	16	APE 1PAD21	0.080
Spring terminal connector 2-pin, 5.08 mm pitch	–	0.2 to 2.5	–	10	APE 1PRE21	0.003

Body/fixing collar

For use with	Sold in lots of	Unit reference	Weight kg
Electrical block (contact or light)	10	ZB4 BZ009	0.038

**Contact blocks for printed circuit board connection ⁽¹⁾**

Description	Type of contact		Sold in lots of	Unit reference	Weight kg
	N/O	N/C			
Standard contact blocks	1	—	10	ZBE 701	0.002
	—	1	10	ZBE 702	0.002
Special contact blocks for low power switching with gold flashed contacts	1	—	10	ZBE 7016 ▲	0.003
	—	1	10	ZBE 7026 ▲	0.003

Light blocks for printed circuit board connection ⁽¹⁾

Description	Supply voltage V	Colour of LED	Sold in lots of	Unit reference	Weight kg
Integral LED (to combine with heads for integral LED) Protected LED	≈ 24	White	5	ZBV B17	0.004
		Green	5	ZBV B37	0.004
		Red	5	ZBV B47	0.004
		Yellow	5	ZBV B57	0.004
		Blue	5	ZBV B67	0.004

Adaptor (socket) for printed circuit board connection

For use with	Thickness of printed circuit board mm	Sold in lots of	Unit reference	Weight kg
Electrical block (contact or light)	1.6 ± 0.2	10	ZBZ 010	0.008
	2.2 ± 0.2	10	ZBZ 011	0.008
	3.2 ± 0.2	10	ZBZ 012	0.008

Body/fixing collar

For use with	Sold in lots of	Unit reference	Weight kg
Electrical block (contact or light)	10	ZB4 BZ009	0.038

Accessories specifically for printed circuit board mounting ⁽¹⁾

Description	Application	Sold in lots of	Unit reference	Weight kg
Fixing collar/pillar	Printed circuit board support	10	ZB4 BZ079	0.003
Fixing screw for printed circuit board	Fixing collar/pillar ZB4 BZ079	10	ZBZ 006	0.011

⁽¹⁾ For details of support drilling and of printed circuit board: see page 1/105.
Must be used in conjunction with adaptor (socket) ZBZ 010.

▲ Available: 4th quarter 2005.

Control and signalling units Ø 22

Harmony® style 4

Pushbuttons, switches and pilot lights with chromium plated metal bezel

Separate components and accessories: for heads

1

814292
ZBA ●

1.3

814293
ZBL ●814294
ZBA ●33

Pushbutton caps - unmarked

For use with	Type of push	Colour	Sold in lots of	Unit reference	Weight kg
ZB4 BA0 circular pushbutton heads supplied without cap	Flush	White	10	ZBA 1	0.001
		Black	10	ZBA 2	0.001
		Green	10	ZBA 3	0.001
		Red	10	ZBA 4	0.001
		Yellow	10	ZBA 5	0.001
		Blue	10	ZBA 6	0.001
		6 colours (1)	1	ZBA 9	0.006
	Projecting	White	10	ZBL 1	0.001
		Black	10	ZBL 2	0.001
		Green	10	ZBL 3	0.001
		Red	10	ZBL 4	0.001
		Yellow	10	ZBL 5	0.001
		Blue	10	ZBL 6	0.001
		6 colours (1)	1	ZBL 9	0.006

Pushbutton caps - marked

For use with	Type of push	Marking Text	Colour	Colour of cap	Unit reference	Weight kg
ZB4 BA0 circular pushbutton heads supplied without cap (sold in lots of 10)	Flush	I (2)	White	Green	ZBA 331	0.001
			Black	White	ZBA 131	0.001
		II	White	Green	ZBA 336	0.001
			Black	White	ZBA 136	0.001
		III	White	Green	ZBA 337	0.001
			Black	White	ZBA 137	0.001
		IV	White	Green	ZBA 338	0.001
			Black	White	ZBA 138	0.001
		START (2)	White	Green	ZBA 333	0.001
			Black	White	ZBA 133	0.001
		ON	White	Green	ZBA 341	0.001
			Black	White	ZBA 141	0.001
		MARCHE	White	Green	ZBA 342	0.001
			Black	White	ZBA 142	0.001
		UP (2)	Black	White	ZBA 343	0.001
		DOWN (2)	White	Black	ZBA 344	0.001
		T (2)	White	Black	ZBA 245	0.001
			Black	White	ZBA 145	0.001
		↑ (3)	White	Black	ZBA 335	0.001
			Black	White	ZBA 334	0.001
		O (2)	White	Red	ZBA 432	0.001
				Black	ZBA 232	0.001
		ARRET	White	Red	ZBA 433	0.001
				Black	ZBA 233	0.001
		STOP (2)	White	Red	ZBA 434	0.001
				Black	ZBA 234	0.001
		OFF	White	Red	ZBA 435	0.001
				Black	ZBA 235	0.001
		↓	White	Green	ZBA 346	0.001
		R (2)	White	Blue	ZBA 639	0.001
		+	White	Black	ZBA 2934	0.001
		-	White	Black	ZBA 2935	0.001

(1) Set of 6 different coloured caps: white, black, green, red, yellow, blue.

(2) Double injection moulded marking.

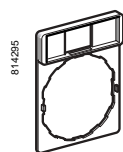
(3) Can be clipped-in at 90° steps, through 360°.

Control and signalling units Ø 22

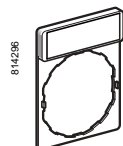
Harmony® style 4

Pushbuttons, switches and pilot lights with chromium plated metal bezel

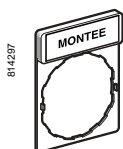
Separate components and accessories: for heads



ZBZ 32



ZBY 101



ZBY 2107

Standard (30 x 40 mm) legend holders for 8 x 27 mm legends (1)

Description	Legend		Sold in lots of	Unit reference	Weight kg
	Colour	Marking			
Without legend	–	–	10	ZBZ 32	0.001
With blank legend (for engraving)	Black or red background	–	10	ZBY 2101	0.002
	White or yellow background	–	10	ZBY 4101	0.002
With 8 x 27 mm legend (with International marking)	Black or red background	O (black background)	1	ZBY 2146	0.002
		O (red background)	1	ZBY 2931	0.002
		I	1	ZBY 2147	0.002
		II	1	ZBY 2148	0.002
		O-I	1	ZBY 2178	0.002
		I-II	1	ZBY 2179	0.002
		I-O-II	1	ZBY 2186	0.002
		AUTO	1	ZBY 2115	0.002
		STOP	1	ZBY 2304	0.002
With 8 x 27 mm legend (with French language marking)	Black or red background (2)	ARRET (red background)	1	ZBY 2104	0.002
		ARRET (black background)	1	ZBY 0104	0.002
		ARRET GENERAL	1	ZBY 2129	0.002
		ARRET REARMEMENT	1	ZBY 2133	0.002
		ARRET D'URGENCE	1	ZBY 2130	0.002
		ARRET-MARCHE	1	ZBY 2166	0.002
		ARRIERE	1	ZBY 2106	0.002
		AUTO CYCLE-CYCLE	1	ZBY 2198	0.002
		AUTO CYCLE-MAIN	1	ZBY 2199	0.002
		AUTO-MAIN	1	ZBY 2164	0.002
		AUTO-O-MAIN	1	ZBY 2185	0.002
		AVANT	1	ZBY 2105	0.002
		AVANT-O-ARRIERE	1	ZBY 2184	0.002
		C-P-C-NORMAL	1	ZBY 2165	0.002
		CYCLE-MAIN	1	ZBY 2197	0.002
		DECLenchement	1	ZBY 2132	0.002
		DEFAUT (black background)	1	ZBY 2134	0.002
		DEFAUT (red background)	1	ZBY 2135	0.002
		DEPART CYCLE	1	ZBY 2195	0.002
		DESCENTE	1	ZBY 2108	0.002
		DROITE	1	ZBY 2109	0.002
		ENCLenchement	1	ZBY 2131	0.002
		EN SERVICE	1	ZBY 2111	0.002
		FERMETURE	1	ZBY 2114	0.002
		GAUCHE	1	ZBY 2110	0.002
		HORS SERVICE	1	ZBY 2112	0.002
		HORS-EN	1	ZBY 2167	0.002
		LENT	1	ZBY 2127	0.002
		MAIN	1	ZBY 2116	0.002
		MARCHE	1	ZBY 2103	0.002
		MONTEE	1	ZBY 2107	0.002
		OUVERTURE	1	ZBY 2113	0.002
		PHASE / PHASE	1	ZBY 2196	0.002
		REARMEMENT (red bk.grnd)	1	ZBY 2123	0.002
		REARMEMENT (black bk.grnd)	1	ZBY 0123	0.002
		SOUS TENSION	1	ZBY 2126	0.002
VITE	1	ZBY 2128	0.002		

(1) For legends, see pages 1/89 to 1/91.

(2) "Start" functions: white letters on black background. "Stop" functions: white letters on red background (unless otherwise specified above).

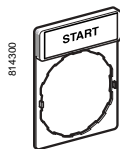
Control and signalling units Ø 22

Harmony® style 4

Pushbuttons, switches and pilot lights with chromium plated metal bezel

Separate components and accessories: for heads

1



ZBY 2303

Standard (30 x 40 mm) legend holders for 8 x 27 mm legends (continued)

Description	Legend Colour	Marking	Reference	Weight kg
With legend (with English language marking)	Black or red background (1)	AUTO-HAND	ZBY 2364	0.002
		AUTO-O-HAND	ZBY 2385	0.002
		CLOSE	ZBY 2314	0.002
		DOWN	ZBY 2308	0.002
		EMERGENCY STOP	ZBY 2330	0.002
		FAST	ZBY 2328	0.002
		FORWARD	ZBY 2305	0.002
		HAND	ZBY 2316	0.002
		HAND-OFF-AUTO	ZBY 2387	0.002
		INCH	ZBY 2321	0.002
		LEFT	ZBY 2310	0.002
		OFF	ZBY 2312	0.002
		OFF-ON	ZBY 2367	0.002
		ON	ZBY 2311	0.002
		OPEN	ZBY 2313	0.002
		POWER ON	ZBY 2326	0.002
		RESET (red background)	ZBY 2323	0.002
		RESET (black background)	ZBY 2322	0.002
		REVERSE	ZBY 2306	0.002
		RIGHT	ZBY 2309	0.002
		RUN	ZBY 2334	0.002
		SLOW	ZBY 2327	0.002
		START	ZBY 2303	0.002
		STOP-START	ZBY 2366	0.002
		UP	ZBY 2307	0.002
With legend (with German language marking)	Black or red background (1)	AB	ZBY 2208	0.002
		AUF	ZBY 2207	0.002
		AUS	ZBY 2204	0.002
		AUS-EIN	ZBY 2266	0.002
		AUS-IN BETRIEB	ZBY 2267	0.002
		AUS-RÜCKSTELLUNG	ZBY 2233	0.002
		AUSSCHALTEN	ZBY 2232	0.002
		AUTO-HAND	ZBY 2364	0.002
		AUTO-O-HAND	ZBY 2385	0.002
		AUTOZYKL-HAND	ZBY 2299	0.002
		AUTOZYKL- 1 ZYKL	ZBY 2298	0.002
		C-P-C-NORMAL	ZBY 2265	0.002
		EIN	ZBY 2203	0.002
		EINSCHALTEN	ZBY 2231	0.002
		HAND	ZBY 2316	0.002
		LANGSAM	ZBY 2227	0.002
		LINKS	ZBY 2210	0.002
		NOT-AUS (red background)	ZBY 2230	0.002
		NOT-AUS (yellow background)	ZBY 22420001	0.002
		NOT-HALT	ZBY 2229	0.002
		ÖFFNEN	ZBY 2213	0.002
		RECHTS	ZBY 2209	0.002
		RÜCKSTELLUNG	ZBY 2223	0.002
		SCHLIESSEN	ZBY 2214	0.002
		SCHNELL	ZBY 2228	0.002
		SPANNUNG EIN	ZBY 2226	0.002
		STEUERUNG AUS	ZBY 2212	0.002
		STEUERUNG EIN	ZBY 2211	0.002
		STÖRUNG (black background)	ZBY 2234	0.002
		STÖRUNG (red background)	ZBY 2235	0.002
		VOR	ZBY 2205	0.002
		VOR-O-ZURÜCK	ZBY 2284	0.002
		ZURÜCK	ZBY 2206	0.002
		ZYKLUS-HAND	ZBY 2297	0.002
		ZYKLUSSTART	ZBY 2295	0.002

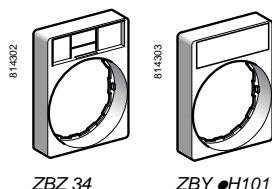
(1) "Start" functions: white letters on black background. "Stop" functions: white letters on red background (unless otherwise specified above).

Control and signalling units Ø 22

Harmony® style 4

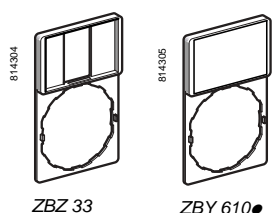
Pushbuttons, switches and pilot lights with chromium plated metal bezel

Separate components and accessories: for heads



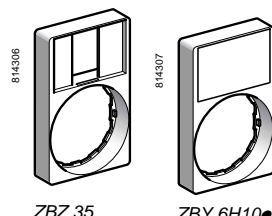
30 x 40 mm legend holders (flush mounting with bezel) for 8 x 27 mm legends

Description	Colour	Sold in lots of	Unit reference	Weight kg
Without legend	—	10	ZBZ 34	0.003
With blank legend	Black or red background	10	ZBY 2H101	0.004
	White or yellow background	10	ZBY 4H101	0.004



Standard (30 x 50 mm) legend holders for 18 x 27 mm legends

Description	Colour	Sold in lots of	Unit reference	Weight kg
Without legend	—	10	ZBZ 33	0.001
With blank legend	Black or red background	10	ZBY 6101	0.002
	White or yellow background	10	ZBY 6102	0.002

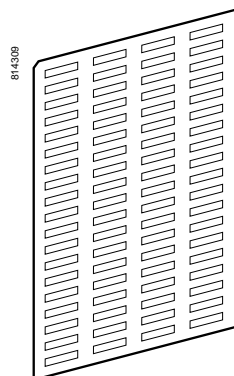


30 x 50 mm legend holders (flush mounting with bezel) for 18 x 27 mm legends

Description	Colour	Sold in lots of	Unit reference	Weight kg
Without legend	—	10	ZBZ 35	0.003
With blank legend	Black or red background	10	ZBY 6H101	0.004
	White or yellow background	10	ZBY 6H102	0.004

Legends for engraving

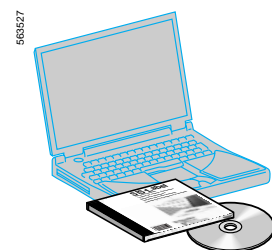
Description	For use with	Colour	Sold in lots of	Unit reference	Weight kg
8 x 27	30 x 40 mm legend holder	Black or red background	10	ZBY 0101	0.001
		White or yellow background	10	ZBY 0102	0.001
18 x 27	30 x 50 mm legend holder	Black or red background	10	ZBY 5101	0.001
		White or yellow background	10	ZBY 5102	0.001



ZBY 4100

Sheets of peel-off legends (with backing board and protective transparent cover)

Description	For use with	Sold in lots of	Unit reference	Weight kg
Sheet of 76 legends 8 x 27 mm	30 x 40 mm legend holders ZBZ 32 and ZBZ 34	10	ZBY 4100	0.043
Sheet of 40 legends 18 x 27 mm	30 x 50 mm legend holders ZBZ 33 and ZBZ 35	10	ZBY 5100	0.044

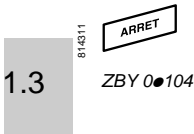
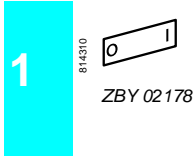


XBY 2U

"SIS Label" labelling software

Application	Reference	Weight kg
Legend design for English, French, German, Italian, Spanish	XBY 2U	0.100

Control and signalling units Ø 22
Harmony® style 4
Pushbuttons, switches and pilot lights with chromium
plated metal bezel
Separate components and accessories: for heads



8 x 27 mm marked legends (for 30 x 40 mm legend holders ZBZ 32 and ZBZ 34)				
Colour	Marking		Reference	Weight kg
Black or red background (1)	International	O (black background)	ZBY 02146	0.001
		O (red background)	ZBY 02931	0.001
		I	ZBY 02147	0.001
		II	ZBY 02148	0.001
		O-I	ZBY 02178	0.001
		I-II	ZBY 02179	0.001
		I-O-II	ZBY 02186	0.001
		AUTO	ZBY 02115	0.001
		STOP	ZBY 02304	0.001
	French	ARRET (red background)	ZBY 02104	0.001
		ARRET (black background)	ZBY 00104	0.001
		ARRET GENERAL	ZBY 02129	0.001
		ARRET REARMEMENT	ZBY 02133	0.001
		ARRET D'URGENCE	ZBY 02130	0.001
		ARRET-MARCHE	ZBY 02166	0.001
		ARRIERE	ZBY 02106	0.001
		AUTO CYCLE-CYCLE	ZBY 02198	0.001
		AUTO CYCLE-MAIN	ZBY 02199	0.001
		AUTO-MAIN	ZBY 02164	0.001
		AUTO-O-MAIN	ZBY 02185	0.001
		AVANT	ZBY 02105	0.001
		AVANT-O-ARRIERE	ZBY 02184	0.001
		C-P-C-NORMAL	ZBY 02165	0.001
		CYCLE-MAIN	ZBY 02197	0.001
		DECLenchement	ZBY 02132	0.001
		DEFAULT (black background)	ZBY 02134	0.001
		DEFAULT (red background)	ZBY 02135	0.001
		DEPART CYCLE	ZBY 02195	0.001
		DESCENTE	ZBY 02108	0.001
		DROITE	ZBY 02109	0.001
		ENclenchement	ZBY 02131	0.001
		EN SERVICE	ZBY 02111	0.001
		FERMETURE	ZBY 02114	0.001
		GAUCHE	ZBY 02110	0.001
		HORS SERVICE	ZBY 02112	0.001
		HORS-EN	ZBY 02167	0.001
		LENT	ZBY 02127	0.001
		MAIN	ZBY 02116	0.001
		MARCHE	ZBY 02103	0.001
		MONTEE	ZBY 02107	0.001
		OUVERTURE	ZBY 02113	0.001
		PHASE / PHASE	ZBY 02196	0.001
		REARMEMENT (red background)	ZBY 02123	0.001
		REARMEMENT (black background)	ZBY 00123	0.001
		SOUS TENSION	ZBY 02126	0.001
		VITE	ZBY 02128	0.001

(1) "Start" functions: white letters on black background. "Stop" functions: white letters on red background (unless otherwise specified above).

Control and signalling units Ø 22

Harmony® style 4

Pushbuttons, switches and pilot lights with chromium plated metal bezel

Separate components and accessories: for heads

8 x 27 mm marked legends (for 30 x 40 mm legend holders ZBZ 32 and ZBZ 34) (continued)

Colour	Marking	Reference	Weight kg
Black or red background (1)	English	AUTO-HAND	ZBY 02364 0.001
		AUTO-O-HAND	ZBY 02385 0.001
		CLOSE	ZBY 02314 0.001
		DOWN	ZBY 02308 0.001
		EMERGENCY STOP	ZBY 02330 0.001
		FAST	ZBY 02328 0.001
		FORWARD	ZBY 02305 0.001
		HAND	ZBY 02316 0.001
		HAND-OFF-AUTO	ZBY 02387 0.001
		INCH	ZBY 02321 0.001
		LEFT	ZBY 02310 0.001
		OFF	ZBY 02312 0.001
		OFF-ON	ZBY 02367 0.001
		ON	ZBY 02311 0.001
		OPEN	ZBY 02313 0.001
		POWER ON	ZBY 02326 0.001
		RESET (red background)	ZBY 02323 0.001
		RESET (black background)	ZBY 02322 0.001
		REVERSE	ZBY 02306 0.001
		RIGHT	ZBY 02309 0.001
		RUN	ZBY 02334 0.001
		SLOW	ZBY 02327 0.001
		START	ZBY 02303 0.001
		STOP-START	ZBY 02366 0.001
		UP	ZBY 02307 0.001
	German	AB	ZBY 02208 0.001
		AUF	ZBY 02207 0.001
		AUS	ZBY 02204 0.001
		AUS-EIN	ZBY 02266 0.001
		AUS-IN BETRIEB	ZBY 02267 0.001
		AUS-RÜCKSTELLUNG	ZBY 02233 0.001
		AUSSCHALTEN	ZBY 02232 0.001
		AUTO-HAND	ZBY 02364 0.001
		AUTO-O-HAND	ZBY 02385 0.001
		AUTOZYKL-HAND	ZBY 02299 0.001
		AUTOZYKL- 1 ZYKL	ZBY 02298 0.001
		C-P-C-NORMAL	ZBY 02265 0.001
		EIN	ZBY 02203 0.001
		EINSCHALTEN	ZBY 02231 0.001
		HAND	ZBY 02316 0.001
		LANGSAM	ZBY 02227 0.001
		LINKS	ZBY 02210 0.001
		NOT-AUS (red background)	ZBY 02230 0.001
		NOT-AUS (yellow background)	ZBY 022420001 0.001
		NOT-HALT	ZBY 02229 0.001
		ÖFFNEN	ZBY 02213 0.001
		RECHTS	ZBY 02209 0.001
		RÜCKSTELLUNG	ZBY 02223 0.001
		SCHLIESSEN	ZBY 02214 0.001
		SCHNELL	ZBY 02228 0.001
		SPANNUNG EIN	ZBY 02226 0.001
		STEUERUNG AUS	ZBY 02212 0.001
		STEUERUNG EIN	ZBY 02211 0.001
		STÖRUNG (black background)	ZBY 02234 0.001
		STÖRUNG (red background)	ZBY 02235 0.001
		VOR	ZBY 02205 0.001
		VOR-O-ZURÜCK	ZBY 02284 0.001
		ZURÜCK	ZBY 02206 0.001
		ZYKLUS-HAND	ZBY 02297 0.001
		ZYKLUSSTART	ZBY 02295 0.001

(1) "Start" functions: white letters on black background. "Stop" functions: white letters on red background (unless otherwise specified above).

Control and signalling units Ø 22

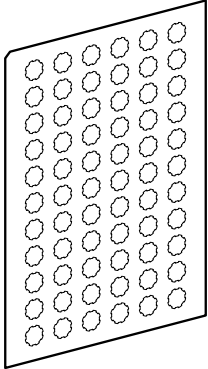
Harmony® style 4

Pushbuttons, switches and pilot lights with chromium plated metal bezel

Separate components and accessories: for heads

1

814316



ZBY 1101

1.3

683527



XBY 2U

814318



ZBY 9130

Legends for pushbuttons, switches and pilot lights XB4 B

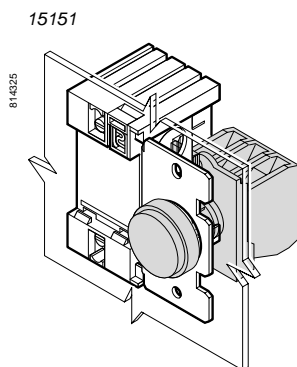
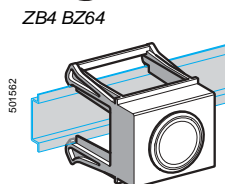
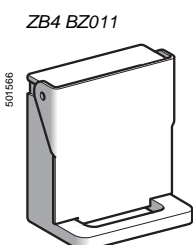
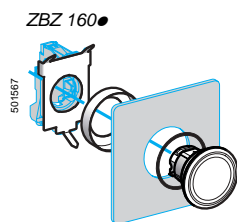
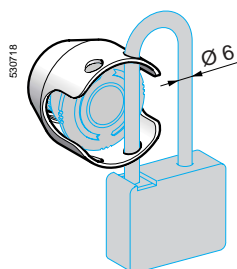
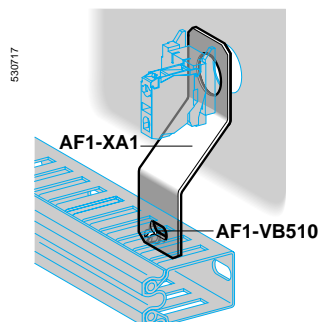
Description	Marking		Sold in lots of	Unit reference	Weight kg
Sheets of 66 circular peel-off transparent self-adhesive legends	Without		10	ZBY 1101	0.017
Strips of 66 circular peel-off transparent self-adhesive legends	International	O	10	ZBY 1146	0.017
		I	10	ZBY 1147	0.017
		II	10	ZBY 1148	0.017
		III	10	ZBY 1149	0.017
		STOP	10	ZBY 1304	0.017
		†	10	ZBY 1912	0.017
	French	ARRET	10	ZBY 1104	0.017
		ARRIERE	10	ZBY 1106	0.017
		AUTO	10	ZBY 1115	0.017
		AVANT	10	ZBY 1105	0.017
		DESCENTE	10	ZBY 1108	0.017
		MAIN	10	ZBY 1116	0.017
		MARCHE	10	ZBY 1103	0.017
		MONTEE	10	ZBY 1107	0.017
	English	HAND	10	ZBY 1316	0.017
		OFF	10	ZBY 1312	0.017
		ON	10	ZBY 1311	0.017
		START	10	ZBY 1303	0.017
	German	AB	10	ZBY 1208	0.017
		AUF	10	ZBY 1207	0.017
		AUS	10	ZBY 1204	0.017
		EIN	10	ZBY 1203	0.017
		ZU	10	ZBY 1214	0.017

“SIS Label” labelling software

Application	Reference	Weight kg
Legend design for English, French, German, Italian, Spanish	XBY 2U	0.100

Circular legends for Emergency stop mushroom head pushbuttons (yellow)

Diameter mm	Marking on yellow background	Reference	Weight kg
60	Without	ZBY 9101	0.004
	ARRET D'URGENCE	ZBY 9130	0.004
	EMERGENCY STOP	ZBY 9330	0.004
	NOT-AUS	ZBY 9230	0.004
90	Without	ZBY 8101	0.008
	ARRET D'URGENCE	ZBY 8130	0.008
	EMERGENCY STOP	ZBY 8330	0.008
	NOT-AUS	ZBY 8230	0.008



Accessories

Description	Application	Colour	Sold in lots of	Unit reference	Weight kg
Cable ducting support	Fixing beneath head		10	AF1 XA1	0.030
M5 x 10 screw, with hexagonal slotted head	For fixing cable ducting		100	AF1 VB510	0.003
Support	For pushbuttons, switches and pilot lights XB4 B		1	DX1 AP52	0.160
Metal guards Padlockable (1)	For Emergency stop function only with the following Ø 40 trigger action pushbuttons: XB4 BT8●, XB4 BS8●, XB4 BS9●, ZB4 BT8●, ZB4 BS8●, ZB4 BS9●.	Chromium plated	1	ZBZ 1600	0.046
		Black	1	ZBZ 1602	0.046
		Red	1	ZBZ 1604	0.046
		Yellow	1	ZBZ 1605	0.046
		Blue	1	ZBZ 1606	0.046
Plastic guard	For selector switches with standard handle or key switches	Black	1	ZBZ 2102	0.005
Metal blanking plug, round, chromium plated (2)	For Ø 22 control and signalling units		10	ZB4 SZ3	0.023
Plastic blanking plug, round, black (3)	For Ø 22 control and signalling units		10	ZB5 SZ3	0.009
Mounting kit	For pushbuttons ZB4 B● with head mounted flush with bezel		1	ZB4 BZ011	0.007
Padlockable flaps	For pushbuttons	Black	1	ZB4 BZ62	0.076
		Red	1	ZB4 BZ64	0.076
		Yellow	1	ZB4 BZ65	0.076
		Blue	1	ZB4 BZ66	0.076
Pushbutton support	For 35 mm DIN rail, for use in modular enclosure (4)		1	15151	0.040

AS-Interface module for Ø 22 control and signalling units

Panel fixing, in conjunction with a Harmony pushbutton or switch

Description	Application	Reference	Weight kg
S7.F profile	4 inputs and 4 outputs direct supply from the bus	XBZ S43	0.100



(1) No isolation function is possible when this guard is fitted.

(2) Requires a ZB4 BZ009 body/fixing collar for mounting, see page 1/82.

(3) Supplied complete with fixing nut.

(4) Marketed under the Merlin Gerin brand.

1



DL1 CJO



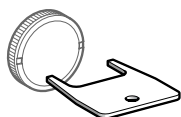
DL1 CE



DL1 CF



XBF X13



ZBZ 8



ZBG 455

BA 9s bulbs and associated accessories

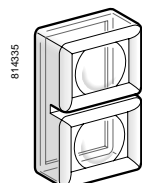
Description	Characteristics	Colour	Sold in lots of	Unit reference	Weight kg
LEDs	≈ 24 V	White	1	DL1 CJ0241	0.002
		Green	1	DL1 CJ0243	0.002
		Red	1	DL1 CJ0244	0.002
		Yellow	1	DL1 CJ0245	0.002
		Blue	1	DL1 CJ0246	0.002
	≈ 48 V	Green	1	DL1 CJ0483	0.002
		Red	1	DL1 CJ0484	0.002
		Yellow	1	DL1 CJ0485	0.002
	6 V - 1.2 W	White	1	DL1 CD0061	0.002
		Green	1	DL1 CD0063	0.002
		Red	1	DL1 CD0064	0.002
		Yellow	1	DL1 CD0065	0.002
		Blue	1	DL1 CD0066	0.002
Incandescent bulbs	6 V - 1.2 W	–	10	DL1 CB006	0.002
	24 V - 2 W	–	10	DL1 CE024	0.002
	120...130 V - 2.4 W	–	10	DL1 CE130	0.002
Neon bulbs	120...130 V	–	10	DL1 CF110	0.002
	230...240 V	–	10	DL1 CF220	0.002
Bulb extractor	–	–	1	XBF X13	0.005
Lens cap tightening tool	Illuminated pushbuttons, with flush push	–	1	ZBZ 8	0.009

Replacement keys for Emergency stop key release heads and key switches

Description	Key number	Reference	Weight kg
Sets of 2 keys	455	ZBG 455	0.013
	421E	ZBG 421E	0.014
	458A	ZBG 458A	0.014
	520E	ZBG 520E	0.014
	3131A	ZBG 3131A	0.014



ZBP 0



ZBW 008



ZBV 01●3



ZBV 01●

Clear boots

Description	For use with pushbutton types	Sold in lots of	Unit reference	Weight kg
Single boots	Flush with circular head	10	ZBP A	0.002
	Projecting with circular head	10	ZBP 0	0.002
	Flush or projecting with circular head for food industry applications	10	ZBP 0A	0.002
Double boots	Flush or projecting double-headed pushbuttons	10	ZBW 008	0.005
	Flush double-headed pushbuttons	10	ZBW 008F	0.005
	Double-headed pushbuttons for food industry applications	10	ZBW 008A	0.005

Coloured boots

Description	Colour	Sold in lots of	Unit reference	Weight kg
Coloured boots (can be replaced without dismantling the head)	Black	10	ZB2 BP012	0.003
	Green	10	ZB2 BP013	0.003
	Red	10	ZB2 BP014	0.003
	Yellow	10	ZB2 BP015	0.003
	Blue	10	ZB2 BP016	0.003

Lens caps

For use on	Colour	Sold in lots of	Unit reference	Weight kg
------------	--------	-----------------	----------------	-----------

Lens caps for light sources with integral LED

Pilot lights	White	10	ZBV 0113	0.002
	Green	10	ZBV 0133	0.002
	Red	10	ZBV 0143	0.002
	Yellow	10	ZBV 0153	0.002
	Blue	10	ZBV 0163	0.002
	5 different coloured grooved lenses (1)	5	ZBV 0103S	0.010
Illuminated pushbuttons, with flush push	White	10	ZBW 9113	0.002
	Green	10	ZBW 9133	0.002
	Red	10	ZBW 9143	0.002
	Yellow	10	ZBW 9153	0.002
	Blue	10	ZBW 9163	0.002
Illuminated pushbuttons, with projecting push	White	10	ZBW 9313	0.002
	Green	10	ZBW 9333	0.002
	Red	10	ZBW 9343	0.002
	Yellow	10	ZBW 9353	0.002
	Blue	10	ZBW 9363	0.002

Lens caps for light sources with BA 9s base fitting

Pilot lights	White	10	ZBV 011	0.002
	Green	10	ZBV 013	0.002
	Red	10	ZBV 014	0.002
	Yellow	10	ZBV 015	0.002
	Blue	10	ZBV 016	0.002
	Clear	10	ZBV 017	0.002
Illuminated pushbuttons, with flush push	White	10	ZBW 911	0.002
	Green	10	ZBW 913	0.002
	Red	10	ZBW 914	0.002
	Yellow	10	ZBW 915	0.002
	Blue	10	ZBW 916	0.002
	Clear	10	ZBW 917	0.002
Illuminated pushbuttons, with projecting push	White	10	ZBW 931	0.002
	Green	10	ZBW 933	0.002
	Red	10	ZBW 934	0.002
	Yellow	10	ZBW 935	0.002
	Blue	10	ZBW 936	0.002
	Clear	10	ZBW 937	0.002

(1) Clear, green, red, yellow, blue.



1



XB4 BA8●1

1.3

Manual overload reset buttons (1)

With flush push					
Shape of head	Travel mm	Actuation distance mm	Colour	Reference	Weight kg
	10	6...16	Black	XB4 BA821	0.037
			Red	XB4 BA841	0.037
			Blue	XB4 BA861	0.037
		16...26	Black	XB4 BA822	0.038
			Red	XB4 BA842	0.038
			Blue	XB4 BA862	0.038
	14	30...130	Black	XB4 BA921	0.058
			Red	XB4 BA941	0.058
			Blue	XB4 BA961	0.058
		130...257	Black	XB4 BA922	0.071
			Red	XB4 BA942	0.071
			Blue	XB4 BA962	0.071



ZB4 BD912

Heads + mounting base for potentiometer

Shape of head	Description	Application	Reference	Weight kg
	For potentiometer with shaft length 44 to 50 mm (potentiometer not included)	For shaft Ø 6 mm	ZB4 BD912	0.080
		For shaft Ø 6.35 mm	ZB4 BD922	0.080



ZB4 BB2

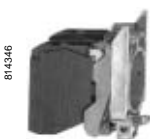
Wobblestick heads

Shape of head	Operation	Colour	Reference	Weight kg
	Omnidirectional, spring return	Black	ZB4 BB2	0.058
		Red	ZB4 BB4	0.058

(1) NEMA type 13.
(2) Cap to be ordered separately, see page 1/86.



ZD4 PA12



ZD4 PA103



ZD4 PA203



ZD4 PA12



XB5 DS●



XB5 KS●



XB5 DT1S

Joystick controllers (54 mm long operating shaft) (1)

Description	Operation	Spring return to zero position	Reference	Weight kg
Complete joystick controllers (screw clamp terminal connections)				
2 direction	1 notch 1 N/O contact per direction	Without	XD4 PA12	0.116
		With	XD4 PA22	0.116
4 direction	1 notch 1 N/O contact per direction	Without	XD4 PA14	0.133
		With	XD4 PA24	0.133

Sub-assemblies for joystick controllers

Description	Functions		Reference	Weight kg
Complete body/contact assemblies (screw clamp terminal connections)	2 direction		ZD4 PA103	0.049
	4 direction		ZD4 PA203	0.058
Complete head assemblies with operating shaft	2 direction, stay put		ZD4 PA12	0.022
	2 direction, spring return to zero position		ZD4 PA22	0.022
	4 direction, stay put		ZD4 PA14	0.022
	4 direction, spring return to zero position		ZD4 PA24	0.022
Legends 30 x 48 mm for engraving	2 direction	Black one side Red reverse	ZBG 2201	0.001
		White one side Yellow reverse	ZBG 2401	0.001
Legends 48 x 48 mm for engraving	4 direction	Black one side Red reverse	ZBG 4201	0.002
		White one side Yellow reverse	ZBG 4401	0.002

Hour counters (2)

Characteristics	Supply voltage V	Reference	Weight kg
Indication 0...9999.9	~ 12...24 - 50/60 Hz	XB5 DSB	0.045
	~ 120 - 60 Hz	XB5 DSG	0.045
	~ 230...240 - 50 Hz	XB5 DSM	0.045

Annunciators (IP 40 NEMA 1) (2)

85 db buzzer, basic: 4 kHz, with continuous or intermittent operation (connection diagram: see page 1/104)	~ 24 - 50/60 Hz	XB5 KSB	0.035
	~ 120 - 50/60 Hz	XB5 KSG	0.035
	~ 230...240 - 50 Hz	XB5 KSM	0.035

Fuse carrier (2)

Description	For use with	Reference	Weight kg
Fuse carrier	5 x 20 mm fuse 6.3 A - 250 V	XB5 DT1S	0.022

(1) Cannot be used with standard contact blocks ZBE 101 (single) or ZBE 20● (double).

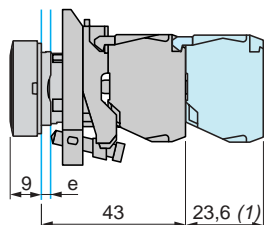
(2) Replacement parts: fixing nut ZB5 AZ901, anti-rotation plate: ZB5 AZ902, tightening key: ZB5 AZ905.

Other versions

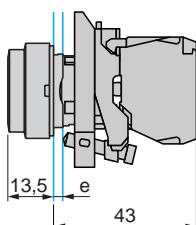
Joystick controllers and complete body/contact assemblies for joystick controllers with Faston connector terminals (6.35 or 2 x 2.8).
Please consult your Regional Sales Office.

Pushbuttons, spring return

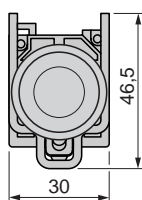
XB4 BA●●



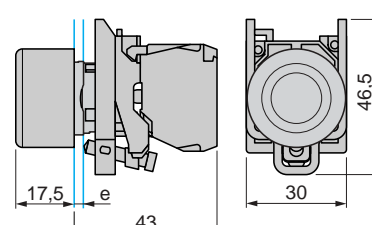
XB4 BL●●



Common face view



XB4 BP●●



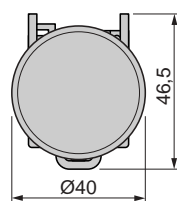
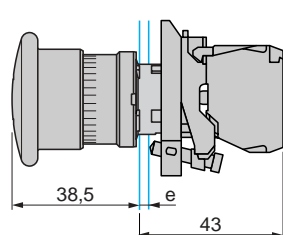
e: panel thickness: 1 to 6 mm

(1) Additional row of contacts or double contact.

e: panel thickness: 1 to 6 mm

Mushroom head

XB4 BC21

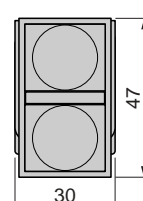
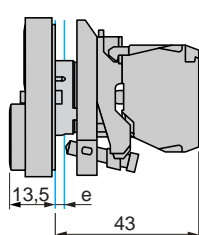


e: panel thickness: 1 to 6 mm

(1) Additional row of contacts or double contact.

Double-headed, spring return

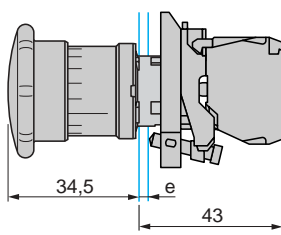
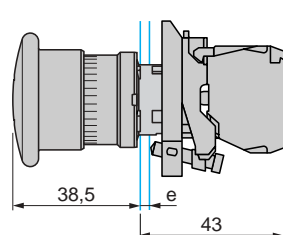
XB4 BL●45, BL●4C5



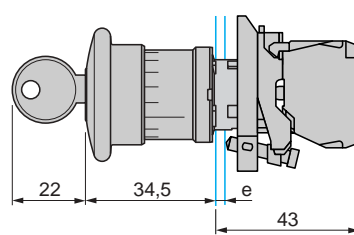
e: panel thickness: 1 to 6 mm

Emergency stop mushroom head pushbuttons

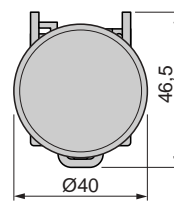
XB4 BT42, BT845



XB4 BS142, BS9445



Common face view



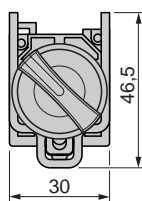
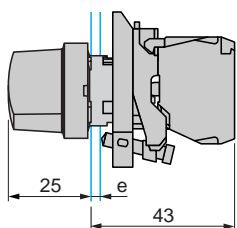
e: panel thickness: 1 to 6 mm

e: panel thickness: 1 to 6 mm

Selector switches

Standard handle operator

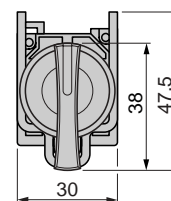
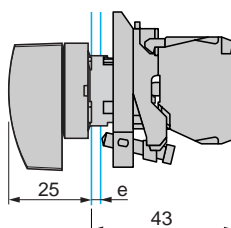
XB4 BD



e: panel thickness: 1 to 6 mm

Long handle operator

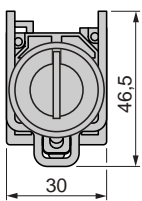
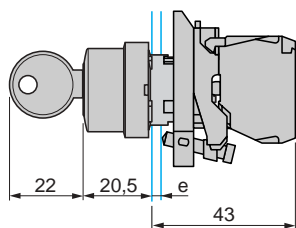
XB4 BJ



e: panel thickness: 1 to 6 mm

Key switches

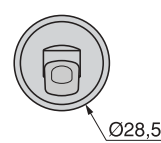
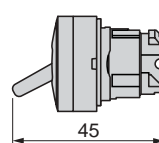
XB4 BG



e: panel thickness: 1 to 6 mm

Heads for toggle switches

ZB4 BD●8



Pilot lights

Integral LED

XB4 BVB●, BVG●, BVM●

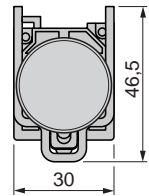
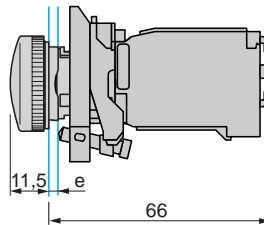
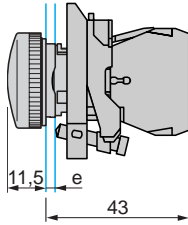
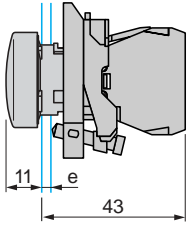
Direct supply

XB4 BV6

Via integral transformer

XB4 BV3●, BV4●

Common face view



e: panel thickness: 1 to 6 mm

e: panel thickness: 1 to 6 mm

Illuminated pushbuttons

Integral LED

XB4 BWB3●●5

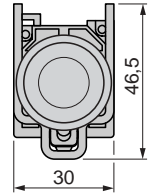
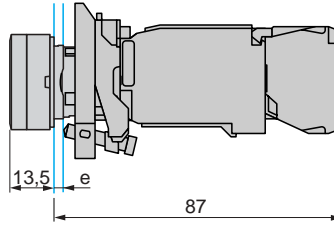
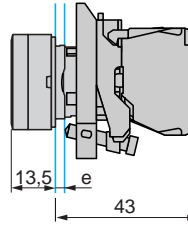
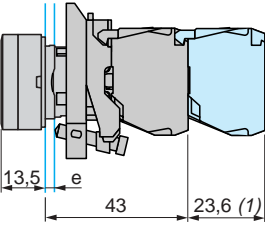
Direct supply

XB4 BW3●65

Via integral transformer

XB4 BW3●●5

Common face view



e: panel thickness: 1 to 6 mm

(1) Additional row of contacts or double contact

e: panel thickness: 1 to 6 mm

Double-headed pushbuttons with pilot light

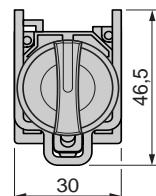
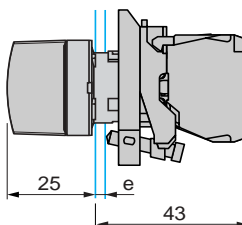
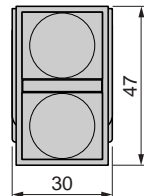
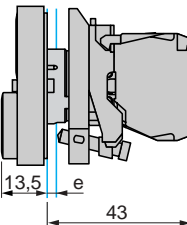
Integral LED

XB4 BW84●5

Illuminated selector switches

Integral LED

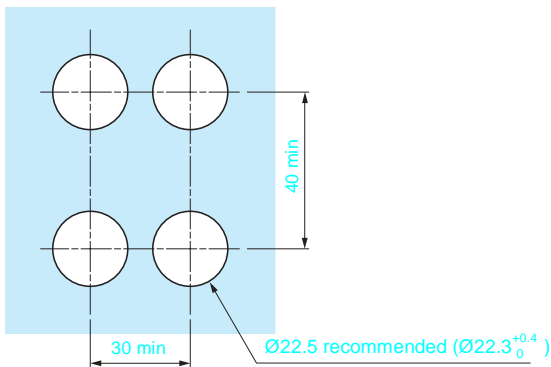
XB4 BK12●●5



e: panel thickness: 1 to 6 mm

e: panel thickness: 1 to 6 mm

Panel cut-out for pushbuttons, switches and pilot lights (1)

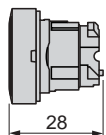


(1) Fixing centres for pushbuttons, switches and pilot lights fitted with Faston connector terminals 32 x 45 min.

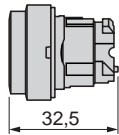
1

Heads for spring return pushbuttons

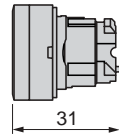
ZB4 BA●, ZB4 BA●●
ZB4 BA●8



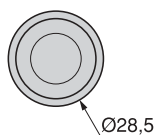
ZB4 BL●, ZB4 BL●●



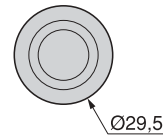
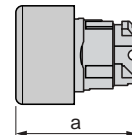
ZB4 BA●4, ZB4 BA●6



Common face view



ZB4 BP●●, ZB4 BP●S, ZB4 BP●83, ZB4 BP●

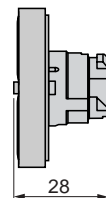


ZB4	a
BP●●	36,5
BP●S	33
BP●83	32
BP●	35

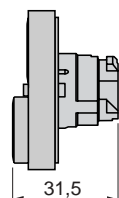
1.3

Heads for double-headed, spring return pushbuttons

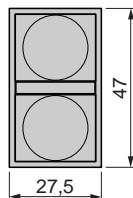
ZB4 BA81●●
ZB4 BA82●●



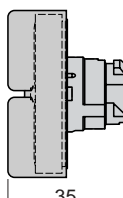
ZB4 BL83●●
ZB4 BL84●●



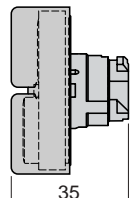
Common face view



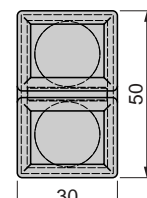
ZB4 BA91●●
ZB4 BA92●●



ZB4 BL93●●
ZB4 BL94●●



Common face view



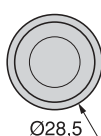
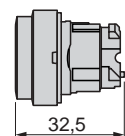
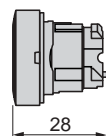
Heads for pushbuttons

Push-push to release

ZB4 BH●●

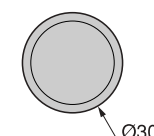
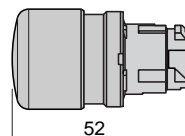
ZB4 BH●

Common
face view

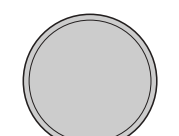
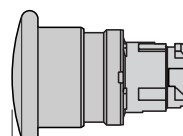


Mushroom head

ZB4 BC●4



ZB4 BC●, ZB4 BR●

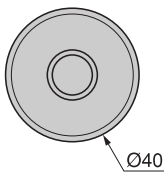
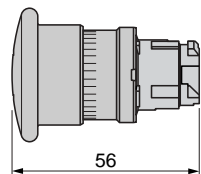


ZB4	Ø
BC●	40
BR●	60

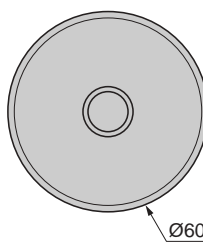
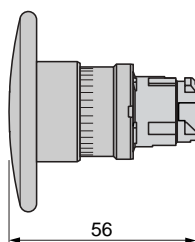
Mushroom heads for latching pushbuttons

Push-pull

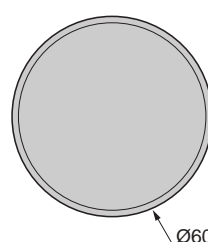
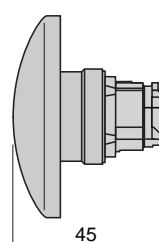
ZB4 BT●, ZB4 BT●4



ZB4 BX2, ZB4 BX4

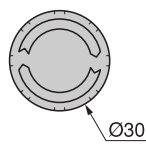
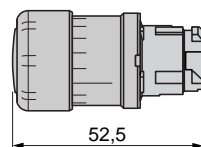


ZB4 BR●16

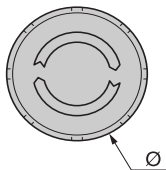
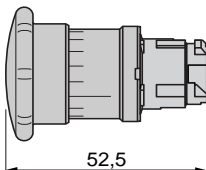


Turn to release

ZB4 BS4●, ZB4 BS834



ZB4 BS5●, ZB4 BS844, ZB4 BS6●



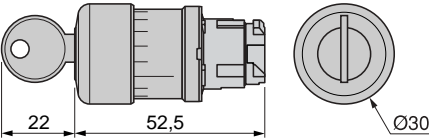
ZB4	Ø
BS5●, BS844	40
BS6●	60

Control and signalling units Ø 22
Harmony® style 4
Pushbuttons, switches and pilot lights with chromium
plated metal bezel
Sub-assemblies, ZB4 B: contact functions

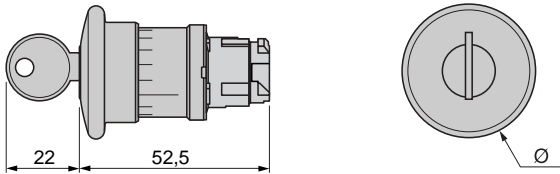
Mushroom heads for latching pushbuttons (continued)

Key release

ZB4 BS7●, ZB4 BS934



ZB4 BS1●, ZB4 BS2●, ZB4 BS944, ZB4 BS964



ZB4	Ø
BS1●, BS944	40
BS2●, BS964	60

Heads for selector switches

Standard handle operator

ZB4 BD●, ZB4 BD0●M



Long handle operator

ZB4 BJ●, ZB4 BD0●M



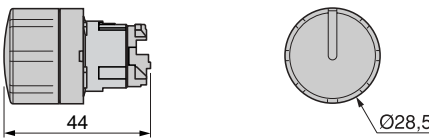
Padlockable long handle operator (6.35 mm shank max.)

ZB4 BJ●9●



Knurled knob, black

ZB4 BD●9



Key switches

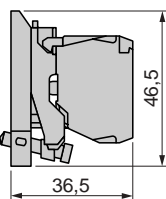
ZB4 BG●, ZB4 BG0●, ZB4 BG0●M



Bodies for pushbuttons and switches

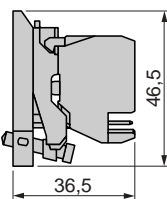
Screw clamp terminal connections

ZB4 BZ10●, ZB4 BZ141



Plug-in connector

ZB4 BZ10●4, ZB4 BZ1414

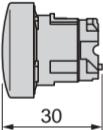


1

Heads for pilot lights, with light source

Integral LED

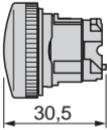
ZB4 BV0●3, ZB4 BV0●3S



30

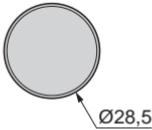
Incandescent, neon or LED

ZB4 BV0●, ZB4 BV0●S



30,5

Common face view



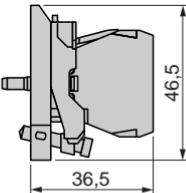
Ø28,5

1.3

Bodies for pilot lights, screw clamp terminal connections

Integral LED

ZB4 BV●●

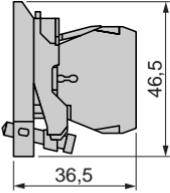


46,5

36,5

Direct supply, for BA 9s bulb

ZB4 BV6

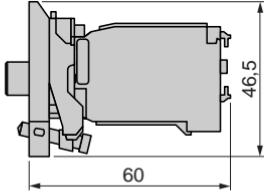


46,5

36,5

Via integral transformer for BA 9s bulb

ZB4 BV●, ZB4 BV●D●



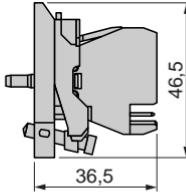
46,5

60

Bodies for pilot lights, plug-in connector

Integral LED

ZB4 BV●●4



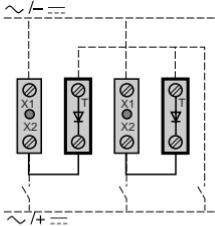
46,5

36,5

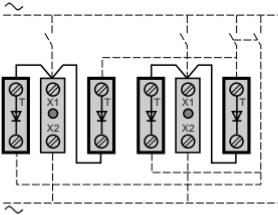
Connections

Blocks for "test light" function

ZBZ G156



ZBZ M156



General:
pages 1/42 to 1/49

Characteristics:
pages 1/50 to 1/53

References:
pages 1/54 to 1/97

1/102



Telemecanique

Heads for spring return illuminated pushbuttons, for light sources

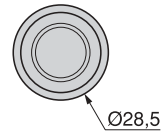
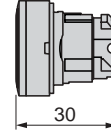
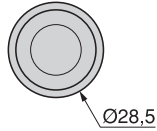
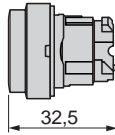
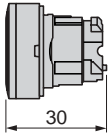
LED

ZB4 BW3●3, ZB4 BW3●3S
ZB4 BW5●3, ZB4 BA●8

ZB4 BW1●3, ZB4 BL●8

Common face view

ZB4 BW9●3



Incandescent or neon

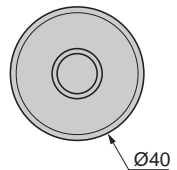
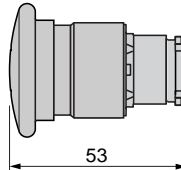
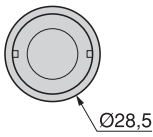
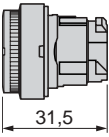
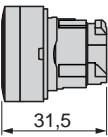
ZB4 BW3●3, ZB4 BW3●S

ZB4 BW1●

Common face view

Heads for Ø 40 mm mushroom head illuminated pushbuttons with LED

ZB4 BW4●3, ZB4 BW6●3

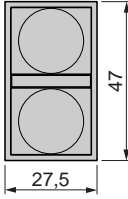
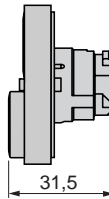
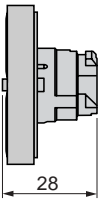


Heads for double-headed pushbuttons with pilot light

ZB4 BW81●●3
ZB4 BW82●●3

ZB4 BW83●●3
ZB4 BW84●●3

Common face view



Heads for illuminated "push-push to release" pushbuttons

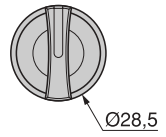
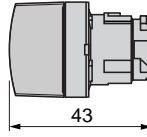
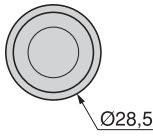
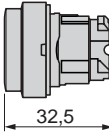
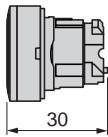
ZB4 BH0●3

ZB4 BH●3

Common face view

Heads for illuminated selector switches with standard handle

ZB4 BK1●●3



Bodies for illuminated pushbuttons and switches

Screw clamp terminal connections

Integral LED

ZB4 BW0●●●

Direct supply, for BA 9s bulb

ZB4 BW06●

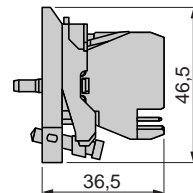
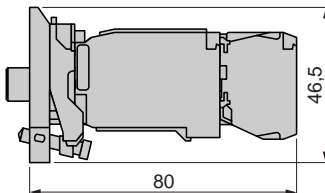
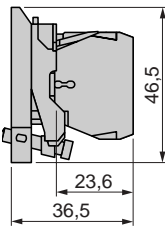
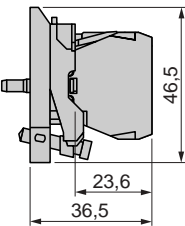
Via integral transformer for BA 9s bulb

ZB4 BW0●●, BW0●D●●

Plug-in connector

Integral LED

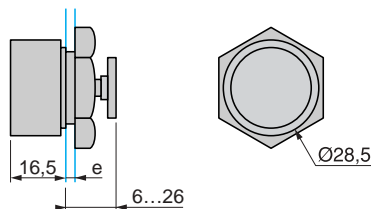
ZB4 BW0●●●4



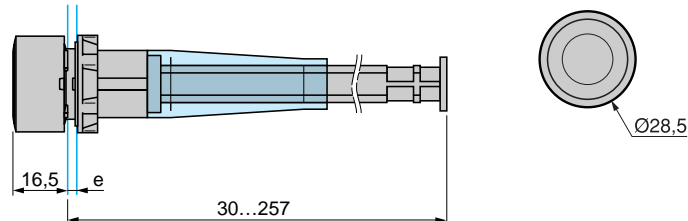
1

Manual overload reset buttons

XB4 BA8●●



XB4 BA9●●

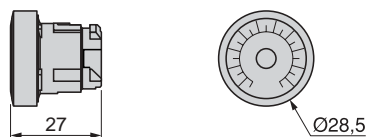


e: panel thickness 1 to 6 mm

1.3

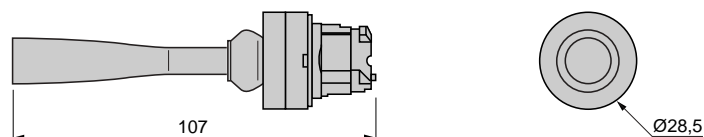
Heads + mounting base for potentiometer

ZB4 BD9●●



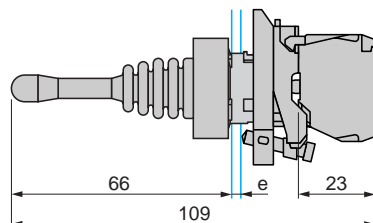
Wobblestick head

ZB4 BB●

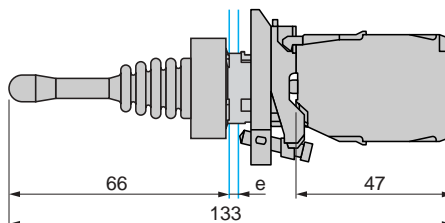


Joystick controllers

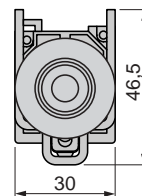
XD4 PA●2



XD4 PA●4



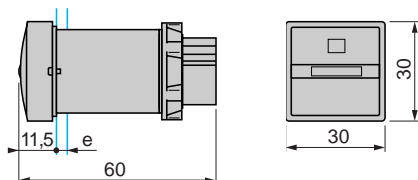
Common face view



e: panel thickness 1 to 6 mm

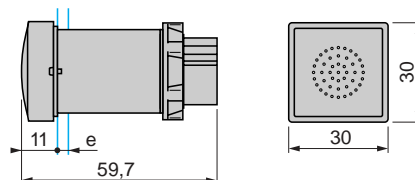
Hour counters

XB5 DS●



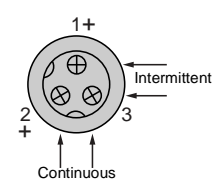
Annunciators

XB5 KS●



Connection diagram

XB5 KS●

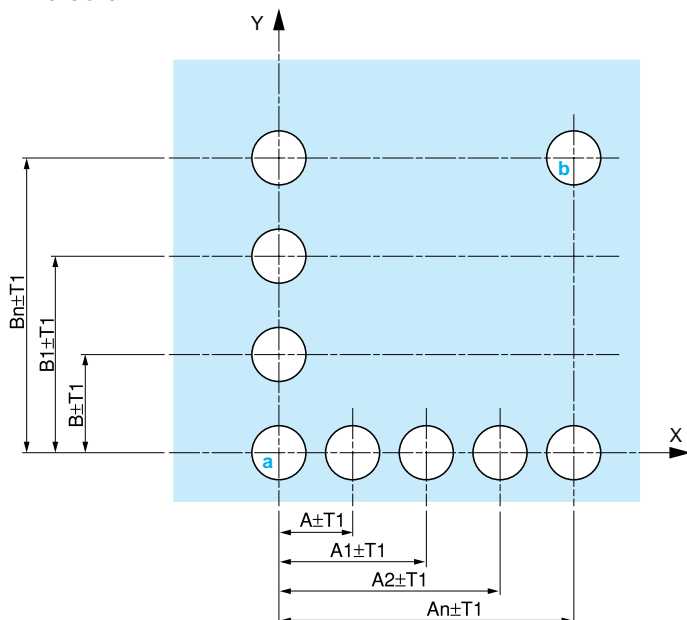


e: panel thickness 1 to 6 mm

Pushbuttons, switches and pilot lights for printed circuit board connection

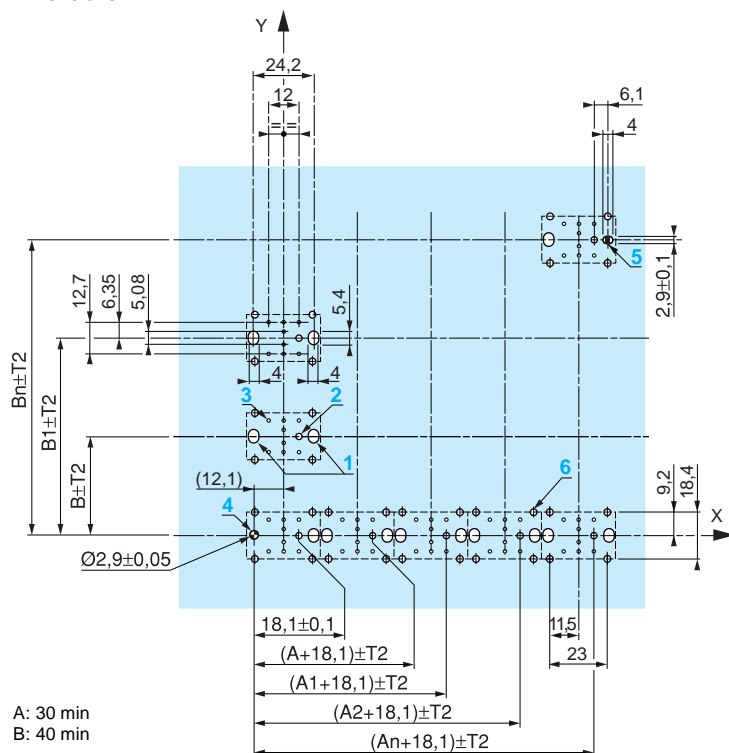
Panel cut-out (viewed from installer's side)

Dimensions in mm



Printed circuit board drillings (viewed from electrical block side)

Dimensions in mm



A: 30 min
B: 40 min

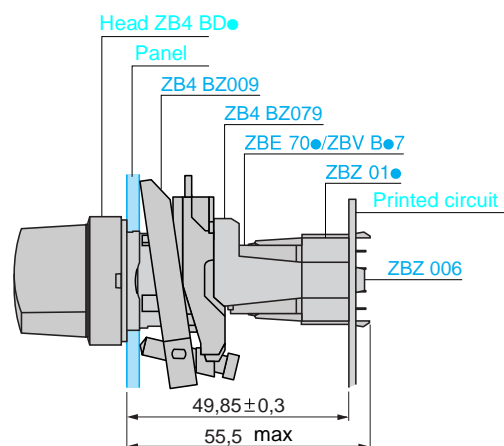
General tolerances of the panel and printed circuit board

The cumulative tolerance must not exceed 0.3 mm: $T1 + T2 = 0.3 \text{ mm max.}$

■ Installation precautions:

- Minimum thickness of circuit board: 1.6 mm.
- Cut-out diameter: $22.4 \text{ mm} \pm 0.1 \text{ mm}$.
- Orientation of body/fixing collar ZB4 BZ009: $\pm 2^\circ 30'$ (excluding cut-outs marked **a** and **b**).
- Tightening torque of screws ZBZ 006: 0.6 N.m. max.
- Allow for one ZB4 BZ079 pillar and its fixing screws:
 - every 90 mm horizontally (X), and 120 mm vertically (Y).
 - with each selector switch head (ZB4 BD●, ZB4 BJ●, ZB4 BG●).

The fixing centres marked **a** and **b** are diagonally opposed and must align with those marked **4** and **5** on the printed circuit board.



■ Mounting of adapter (socket) ZBZ 01●

- 1 2 elongated holes for ZBZ 006 screw access.
- 2 1 hole $\text{Ø } 2.4 \text{ mm} \pm 0.05$ for centring adapter ZBZ 01●.
- 3 8 x $\text{Ø } 1.2 \text{ mm}$ holes.
- 4 1 hole $\text{Ø } 2.9 \text{ mm} \pm 0.05$, for centring the printed circuit board (with cut-out marked **a**).
- 5 1 elongated hole for orientation of the printed circuit board (with cut-out marked **b**).
- 6 4 holes $\text{Ø } 2.4 \text{ mm} \pm 0.05$ for clipping in adapter ZBZ 01●.

Dimensions $A_n + 18.1$ relate to the $\text{Ø } 2.4 \text{ mm} \pm 0.05$ holes for centring adapter ZBZ 01●.