

Mushroom head pushbutton actuators



LPC B614...



LPC B616...



LPC B674...



LPC B6634



LPC B6644



LPC B684...

Order code	Colour	Qty per pkg	Wt
		n°	[kg]

SPRING RETURN.
Ø40mm/1.6" (without mounting adapter).

LPC B6142	Black	10	0.033
LPC B6143	Green	10	0.033
LPC B6144	Red	10	0.033
LPC B6145	Yellow	10	0.033
LPC B6146	Blue	10	0.033

SPRING RETURN.
Ø60mm/2.4" (without mounting adapter).

LPC B6162	Black	10	0.038
LPC B6163	Green	10	0.038
LPC B6164	Red	10	0.038
LPC B6165	Yellow	10	0.038
LPC B6166	Blue	10	0.038

LATCH, PULL TO RELEASE
Ø40mm/1.6" (without mounting adapter).
For normal stopping.

LPC B6742	Black	10	0.097
LPC B6744	Red	10	0.097

For emergency stopping, ISO 13850 compliant.

LATCH, TURN TO RELEASE
Ø40mm/1.6" (without mounting adapter).
For normal stopping.

LPC B6342	Black	10	0.046
LPC B6344	Red	10	0.046

Ø30mm/1.2" (without mounting adapter).
For emergency stopping, ISO 13850 compliant.

LPC B6634	Red	10	0.079
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Ø40mm/1.6" (without mounting adapter).
For emergency stopping, ISO 13850 compliant.

LATCH, TURN KEY TO RELEASE
Ø40mm/1.6" (without mounting adapter). Key code n° 455.
For normal stopping.

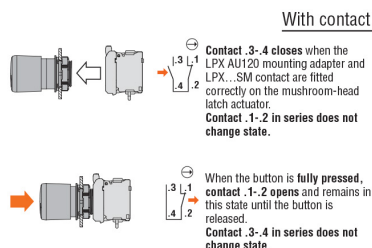
LPC B6842	Black	10	0.083
LPC B6842R [Ⓜ]	Black	1	0.083

For emergency stopping, ISO 13850 compliant.

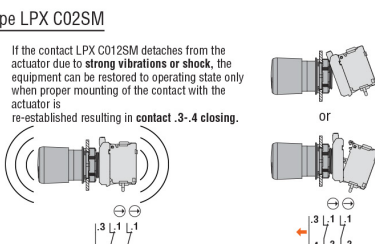
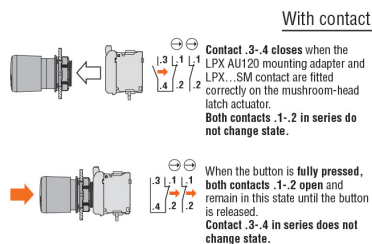
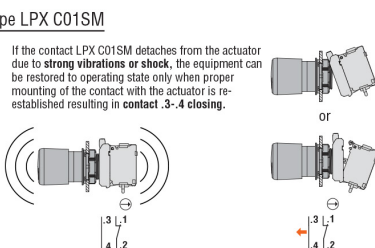
LPC B6844	Red	10	0.083
LPC B6844R [Ⓜ]	Red	1	0.083

[Ⓜ] Versions with different key codes.
Complete with the numeric code of the key.
The following versions are available: 421E, 458A, 520E, 3131A, 3433E.
Example of complete code: LPC B6844R 421E.

Normal operation of auto-monitor contact mounted on surface or on cover of control stations



In case of detachment of only the contact element and/or of the mounting adapter with contact element



Operational characteristics

- Any mounting position allowed
- Ambient conditions:
 - Operating temperature: -25...+70°C
 - Storage temperature: -40...+85°C
- Degree of protection:
 - Per IEC/EN: IP66, IP67 and IP69K
 - Per UL/CSA: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials

Polyamide.

Mechanical endurance

- Operating force: <0.5kg / 1.1lb (actuator).
Mechanical life:
- Mushroom head spring return buttons: 5,000,000 cycles
 - Mushroom head latch buttons: 300,000 cycles.

Mounting adapter

Type: LPX AU120.
Actuators are installed through a Ø22mm/Ø0.89" drilling with a threaded fixing ring (Tmax = 2.3Nm / 1.69lbf) also on the cover of LPZ control stations.
The mounting adapter directly snaps onto the actuator.

Contact elements for mushroom-head spring return and latch button actuators

Type	Termination
Front-mount types snap onto LPX AU120 mounting adapter (to purchase separately). For SPRING-RETURN types, up to 9 contacts can be fitted: 3 each on the left, middle and right, one behind the other. For LATCH types, up to 6 contacts can be fitted: 2 each on the left, middle and right, one behind the other. They can also be fitted internally on the cover surface of LPZ control stations, up to 3 elements per actuator.	LPX C10 Screw
	LPX CF10 Faston
	LPXCS10 Spring clamp
1EM	LPX C10A Screw
1NC	LPX C01 Screw
	LPX CF01 Faston
1LB	LPX CS01 Spring clamp
	LPX C01D Screw

Base-mount types snap into LPZ control station base.
See example on page 7-25.
Up to 3 contacts can be fitted per control station actuator.

1NO	LPX CB10 Screw
1NC	LPX CB01 Screw

AUTO-MONITOR CONTACT with MUSHROOM-HEAD LATCH TYPES only: 2 elements max of this type can be mounted.

Extra two contacts can be fitted on the right.
Two elements per actuator can be fixed internally on the cover surface of LPZ control stations of which one auto-monitor type. No LED element can be installed.

Auto-monitor 1NC	LPX C01SM	Screw (2 stacked in the middle - LPX AU120 pos.1/3-4/6)
1NO	LPX C10	Screw (2 stacked on the right)
	LPX CF10	Faston (2 stacked on the right)
1NC	LPX C01	Screw (2 stacked on the right)
	LPX CF01	Faston (2 stacked on the right)

AUTO-MONITOR CONTACT with MUSHROOM-HEAD LATCH TYPES only: 2 elements max of this type can be mounted.
Only one of this type per actuator can be fixed internally on the cover surface of LPZ control stations. No LED element can be installed.

Auto-monitor 2NC	LPX C02SM	Screw (2 stacked)
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All these actuators are standard-supplied with action plug for middle contacts.

Certifications and compliance

Certifications obtained: UL Listed for USA and Canada (cULus - File E93601), as Auxiliary Devices; EAC, CCC. Pending at time of catalogue printing: RINA. Compliant with standards, IEC/EN 60947-1, IEC/EN 60947-5-1, UL508, CSA C22.2 n°14.

Pushbutton actuators, spring return



LPC B10...



LPC B20...



LPC B30...

Push-push button actuators



LPC Q10...



LPC Q20...

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
Flush (without mounting adapter). Spring return.			
LPC B102	Black	10	0.025
LPC B103	Green	10	0.025
LPC B104	Red	10	0.025
LPC B105	Yellow	10	0.025
LPC B106	Blue	10	0.025
LPC B108	White	10	0.025
Extended (without mounting adapter). Spring return.			
LPC B202	Black	10	0.027
LPC B203	Green	10	0.027
LPC B204	Red	10	0.027
LPC B205	Yellow	1	0.027
LPC B206	Blue	1	0.027
LPC B208	White	1	0.027
Shrouded (without mounting adapter). Spring return.			
LPC B302	Black	10	0.027
LPC B303	Green	10	0.027
LPC B304	Red	10	0.027
LPC B305	Yellow	1	0.027
LPC B306	Blue	1	0.027
LPC B308	White	1	0.027

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
Flush (without mounting adapter). Push on-push off.			
LPC Q102●	Black	10	0.025
LPC Q103●	Green	10	0.025
LPC Q104●	Red	10	0.025
LPC Q105●	Yellow	1	0.025
LPC Q106●	Blue	1	0.025
LPC Q108●	White	1	0.025
Extended (without mounting adapter). Push on-push off.			
LPC Q202●	Black	10	0.027
LPC Q203●	Green	10	0.027
LPC Q204●	Red	10	0.027
LPC Q205●	Yellow	1	0.027
LPC Q206●	Blue	1	0.027
LPC Q208●	White	1	0.027

● Use contact elements LPX C10A (EM) and LPXC01 (NC) only.
Contact elements LPX C10 (NO) and LPX C01D (LB) cannot be fitted on these actuators.

Operational characteristics

- Any mounting position allowed
- Ambient conditions:
 - Operating temperature: -25...+70°C
 - Storage temperature: -40...+85°C
- Degree of protection:
 - Per IEC/EN: IP66, IP67 and IP69K
 - Per UL/CSA: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials

Polyamide.

Mechanical endurance

- Operating force: <0.5kg / 1.1lb (actuator).
Mechanical life:
- Spring return actuators: 5,000,000 cycles
 - Push-push actuators: 500,000 cycles.

Mounting adapter

Type: LPX AU120.
Actuators are installed through a Ø22mm/Ø0.89" drilling with a threaded fixing ring (Tmax = 2.3Nm / 1.69lbf) also on the cover of LPZ control stations.
The mounting adapter directly snaps onto the actuator.

Contact elements for spring-return button actuators

Type	Termination	
1NO	LPX C10	Screw
	LPX CF10	Faston
	LPXCS10	Spring clamp
1EM	LPX C10A	Screw
1NC	LPX C01	Screw
	LPX CF01	Faston
	LPX CS01	Spring clamp
1LB	LPX C01D	Screw

Base mount types snap into LPZ control station base.
See example on page 7-25.
Up to 3 contacts can be fitted per control station actuator.

1NO	LPX CB10	Screw
1NC	LPX CB01	Screw

Contact elements for push-push button actuators

Type: LPX C10A (1EM early make, screw terminals)
LPX C01 (1NC, screw terminals)

Contacts snap onto LPX AU120 adapter and also internally on the cover surface of LPZ control stations.
Up to 6 contacts can be fitted: 2 each on the left, middle and right, one behind of the other; up to 3 elements per control station actuator.

All these actuators are standard supplied with action plug for middle contacts.

Certifications and compliance

Certifications obtained: UL Listed for USA and Canada, (cULus - File E93601), as Auxiliary Devices; EAC, CCC. Pending at time of catalogue printing: RINA.
Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-5-1, UL508, CSA C22.2 n° 14

Accessories and spare parts



LPX A130



LPX A140



LPX AU00



LPX P01



LPX B0



LPX B104



LPX B203



LPX BL105



LPX BL206

Order code	Description	Qty per pkg n°	Wt [kg]
LPX A127	Transparent diffuser for double-touch buttons	10	0.001
LPX A130	Threaded plug for unused drilled holes (grey)	10	0.007
LPX A140	Action plug for centre contact	50	0.001
LPX A150	Rod for mechanical reset button (l=150mm/5.91in)	10	0.006
LPX A170	Spare standard key set for selector switches or mushroom-head buttons, key code n° 455	10	0.008
LPX A170R ^①	Spare key set for selector switches or mushroom head buttons, LPC.. R type	1	0.008
LPX AU00	Threaded ring for actuator fixing	20	0.002
LPX P01	M20 cable gland with threaded ring for LPZ control stations	50	0.012
LPX B0	Flush-extended spring return actuator with no cap or lens	10	0.013
LPX B3	Shrouded spring return actuator with no cap or lens	10	0.014
LPX Q0	Flush-extended push-push actuator with no cap	10	0.013
LPX QL0	Illuminated flush-extended push-push actuator with no lens	10	0.013

Flush cap for spring-return actuators.

LPX B102	Black	10	0.002
LPX B103	Green	10	0.002
LPX B104	Red	10	0.002
LPX B105	Yellow	10	0.002
LPX B106	Blue	10	0.002
LPX B108	White	10	0.002

Extended cap for spring-return actuators.

LPX B202	Black	10	0.003
LPX B203	Green	10	0.003
LPX B204	Red	10	0.003
LPX B205	Yellow	10	0.003
LPX B206	Blue	10	0.003
LPX B208	White	10	0.003

Flush lens for illuminated spring-return actuators.

LPX BL103	Green	10	0.002
LPX BL104	Red	10	0.002
LPX BL105	Yellow	10	0.002
LPX BL106	Blue	10	0.002
LPX BL107	Transparent	10	0.002

Extended lens for illuminated spring-return actuators.

LPX BL203	Green	10	0.003
LPX BL204	Red	10	0.003
LPX BL205	Yellow	10	0.003
LPX BL206	Blue	10	0.003
LPX BL207	Transparent	10	0.003

① Versions with different key code. Complete with the numeric code of the key. The following versions are available: 421E, 458A, 520E, 3131A, 3433E. Example of complete code: LPX A170R421E.

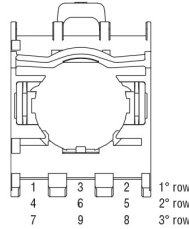
Mounting adapter



LPX AU120

Order code	Description	Qty per pkg	Wt [kg]
LPX AU120	Mounting adapter	10	0.019

Rear view
(reference for element installation)



Contact elements



LPX C...



LPX C01SM

LPX C02SM



LPX E...



LPX CF01

LPX CF10

Order code	Function	Qty per pkg	Wt [kg]
	All SPST	n°	[kg]

Screw termination.
Without mounting adapter.

LPX C10⊕	NO⊕	10	0.011
LPX C10A	EM⊕	10	0.011
LPX C01⊖	NC⊖	10	0.011
LPX C01D⊖⊕	LB⊖⊕	10	0.011

Screw termination. Without mounting adapter.
Auto-monitor contact elements for non-illuminated latch mushroom-head pushbuttons.

LPX C01SM⊖⊕	1NC⊖⊕	1	0.022
LPX C02SM⊖⊕	2NC⊖⊕	1	0.033

Screw termination.
With mounting adapter.

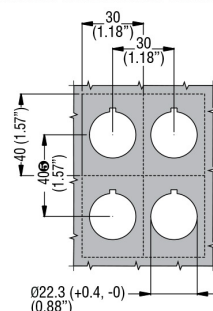
LPX E10⊕	NO⊕	10	0.029
LPX E01⊖	NC⊖	10	0.029

Faston termination.
Without mounting adapter.

LPX CF10⊕	NO⊕	10	0.012
LPX CF01⊖	NC⊖	10	0.012

- ⊕ Use LPX C10A (EM) or LPX C01 (NC) type only with push-push actuators. Not suitable for push-push actuators.
- ⊖ Normally open contact with early make operation.
- ⊕ Direct (positive) opening action ⊖ in accordance with IEC/EN 60947-5-1.
- ⊖ Normally closed contact with late break operation.

Drillings - Minimum recommended distances



⊖ When using Faston, pitch is 85mm / 3.35" minimum.

Operational characteristics

- Any mounting position allowed.
- LPX AU120 adapter directly snaps onto the actuator fixed on the mounting surface.
- All LPX C... types snap onto LPX AU120 mounting adapter:
 - See the combinations given under "Contact elements" in the right-hand column for each type of pushbutton and selector switch.
 - A maximum of 3 contacts or 2 contacts and 1 LED element (LPX L... mounted in the middle position) can be fixed internally on the cover surface of LPZ control stations.
- A maximum of 2 LPX C...SM contacts can be installed on LPX AU120 adapter exclusively on non-illuminated mushroom-head latch actuators:
 - In pos. 1-3 (on the left side only of LPX AU120; refer to REAR VIEW drawing), one only LPX C01SM or LPX C02SM element can be fitted.
 - One extra LPX...SM can be installed in pos. 4-6 (stacked behind the first on the LPX AU120).
 - With LPX C01SM, a maximum of two contacts LPX C0... or LPX C1... can be fitted on the right side in LPX AU120 pos. 2 and 5, one behind the other.
 - On the internal surface of LPZ control station covers, one only LPX C01SM or LPX C02SM contact can be mounted on LPX AU120 pos. 1 (on the left). With LPX C01SM, one extra element LPX C0... or LPX C1... can be fitted on the right (LPX AU120 pos. 2).
 - No LED element can be used with LPX...SM types.
- Maximum tightening torque for screw terminals: 1Nm / 0.74lbf.
- Ambient conditions:
 - Operating temperature: -25...+70°C
 - Storage temperature: -40...+85°C.
- Degree of protection per IEC/EN:
 - IP20 for screw termination
 - IP00 for Faston termination.

General characteristics of contact elements

Wiping effect, dual scraping-oscillating action
IEC rated insulation voltage: 690V
IEC rated thermal current Ith: 10A
Conductivity: 5V 1mA
UL/CSA and IEC/EN 60947-5-1 designation: A600 Q600.

IEC operational power in AC15:

[V]	12	24	48	120	240	400	480	500	600
[A]	6	6	6	6	3	1.9	1.5	1.4	1.2

IEC operational power in DC13:

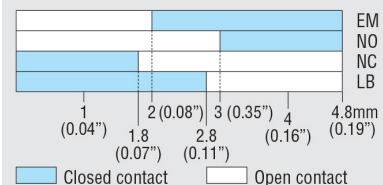
[V]	12	24	48	125	250	440	500	600
[A]	3	3	1.5	0.55	0.27	0.15	0.13	0.1

Short-circuit protection fuse: max calibre 10A gG/SC.

Contact resistance: ≤20mΩ.

Terminals: Clamp screw with washer
Faston 1-6.35mm(0.25") or 2-2.8mm (0.11").

Stroke of contact elements



Maximum conductor cross section for screw terminals
1 or 2 2.5mm² or AWG14 cables.

Mechanical and electrical endurance

Operating force: ≤0.5kg / 1.1lb (auxiliary contacts).
Electrical life: 1,000,000 cycles for LPXC10/01/E10/E01, LPXC01SM/C02SM, LPXCF10/01; 600,000 cycles for LPXC10A/01D.

Certifications and compliance

Certifications obtained: UL Listed for USA and Canada (cULus - File E93601), as Auxiliary Devices; EAC, CCC. Pending at time of catalogue printing: RINA. Compliant with standards: IEC/EN 60947-1, IEC/EN 60947-5-1, UL508, CSA C22.2 n° 14.