

# PUSHBUTTONS AND SELECTOR SWITCHES SERIES **PL**atinum

*Quality touch!*



 **Lovato**  
**electric**

ENERGY AND AUTOMATION

# Pushbuttons and selector switches Ø22mm



Quality touch!



## LOW ACTUATOR PROFILE

The external actuator bezel has a low profile and reduced front thickness.

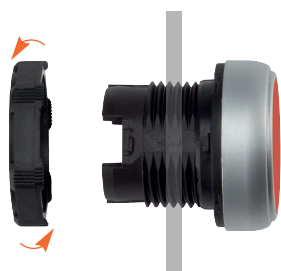
## HIGH DEGREE OF PROTECTION

The actuators have been tested to guarantee a degree of protection per IEC/EN IP66, IP67, IP69K and UL Type 4X, appropriate for use even in extreme ambient conditions.

## QUICK AND EASY ACTUATOR INSTALLATION

## CUSTOMISING CAPABILITY

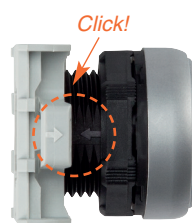
To simplify stock management, the series includes actuators without cap or lens and separate caps and lenses for quick installation or replacement on spring return and push-push types; all these are sold as accessories.



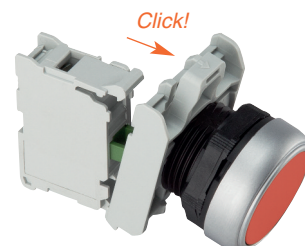
- Actuator fixing on the mounting surface, is obtained using its **threaded ring**, easily rotated by hand or by socket spanner/wrench.



- There is an **anti-rotation fastener** which collapses inside the gasket to allow fitting also when drilled holes are round without reference index.
- The sealing gasket for the actuator mounting surface has a gripping action (suction effect) offering additional **adhesion properties**.



- The mounting adapter and actuators each have **clearly visible reference** indications making the snap-on fitting between the two easy and intuitive.



- Electrical contact and LED elements are **snapped onto** the mounting adapter.
- The activation of the middle contacts is standard supplied on all non-illuminated spring return and push-push button or selector switch actuators.

## Pushbuttons, spring return

FLUSH

LPC B10



2 ■  
3 ■  
4 ■  
5 ■  
6 ■  
8 □

EXTENDED

LPC B20



2 ■  
3 ■  
4 ■  
5 ■  
6 ■  
8 □

SHROUDED

LPC B30



2 ■  
3 ■  
4 ■  
5 ■  
6 ■  
8 □

## Pushbuttons, spring return, with symbol

NOTE: other different symbols are available also for illuminated types.

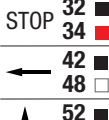
FLUSH

LPC B11



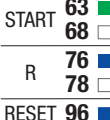
0 02 ■  
04 ■  
13 ■  
18 □  
23 ■  
28 □

LPC B11



STOP 32 ■  
34 ■  
42 ■  
48 □  
52 ■  
58 □

LPC B11



START 63 ■  
68 □  
R 76 ■  
78 □  
RESET 96 ■

EXTENDED

LPC B21



0 02 ■  
04 ■  
STOP 32 ■  
34 ■

## Illuminated buttons, spring return

FLUSH

LPC BL10



3 ■  
4 ■  
5 ■  
6 ■  
7 □ transp.

EXTENDED

LPC BL20



3 ■  
4 ■  
5 ■  
6 ■  
7 □ transp.

## Mechanical reset buttons, spring return

FLUSH

LPC R100



2 ■  
3 ■  
4 ■  
6 ■

FLUSH WITH SYMBOL



RESET LPC R1196 ■

EXTENDED



LPC R2004 ■

NOTE: contact elements can be mounted.

## Push-push buttons

FLUSH

LPC Q10



2 ■  
3 ■  
4 ■  
5 ■  
6 ■  
8 □

EXTENDED

LPC Q20



2 ■  
3 ■  
4 ■  
5 ■  
6 ■  
8 □

## Illuminated push-push buttons

FLUSH

LPC QL10



3 ■  
4 ■  
5 ■  
6 ■  
7 □ transp.

EXTENDED

LPC QL20



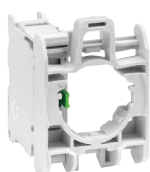
3 ■  
4 ■  
5 ■  
6 ■  
7 □ transp.

## Pilot light heads



LPL  
3 ■  
4 ■  
5 ■  
6 ■  
7 □ transp.  
1187 □ transp.  
(symbol indicating dangerous voltage)

## Contact elements



LPC E  
NO 1.3 10  
1.4  
NC 1.1 01  
1.2



LPC C  
NO 1.3 10  
1.4  
NC 1.1 01  
1.2  
EM 1.7 10A  
1.8 Early make  
LB 1.5 01D  
1.6 Late break



LPC CS  
NO 1.3 10  
1.4  
NC 1.1 01  
1.2  
EM 1.7 10A  
1.8 Early make



LPC CF  
NO 1.3 10  
1.4  
NC 1.1 01  
1.2

MOUNTING: Frontal  
TERMINATION: Screw  
MOUNTING ADAPTER: With

Frontal  
Screw  
Without

Frontal  
Spring (push-in technology)  
Without

Frontal  
Faston  
Without

## Mounting adapter



LPC AU120

Mounting adapter for contact and LED elements with actuators. Allows mounting also on control station cover.



## Mushroom head buttons

FOR EMERGENCY STOPPING ISO 13850 COMPLIANT.

Ø30mm. Turn to release.



LPC B6634 ■

Ø40mm. Turn to release.



LPC B6644 ■

FOR NORMAL STOPPING.

Ø40mm. Turn to release.



LPC B634  
2 ■  
4 ■

Ø40mm. Pull to release.



LPC B6744 ■

Ø40mm. Pull to release.



LPC B6742 ■

### Version with Ronis keys

Types available with 5 different key codes; add "R" suffix to order code and complete with numeric code from the following: 421E, 458A, 520E, 3131A or 3433E.



Ø40mm. Turn key to release.



LPC B6844 ■ ①

Ø40mm. Turn key to release.



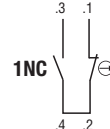
LPC B6842 ■ ①

## Auto-monitor

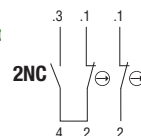
Screw termination. Without mounting adapter. Auto-monitor contact elements for non-illuminated latch mushroom-head pushbuttons.



LPX C01SM



LPX C02SM



## Mushroom head buttons, spring return

Ø40mm LPC B614

2 ■  
3 ■  
4 ■  
5 ■  
6 ■



Ø60mm LPC B616

2 ■  
3 ■  
4 ■  
5 ■  
6 ■



## Illuminated mushroom head buttons, turn to release

Ø40mm. For emergency stopping, ISO 13850 compliant.

LPC BL6644 ■



Ø40mm. For normal stopping.

LPC BL614

3 ■  
5 ■  
6 ■



## Illuminated mushroom head buttons, spring return

Ø40mm

LPC BL614

3 ■  
4 ■  
5 ■  
6 ■  
8 □



## Plastic control stations without actuators



LPZ P

1A5 ■ for 1 actuator  
1A8 □ for 1 actuator  
2A5 ■ for 2 actuators  
2A8 □ for 2 actuators  
3A8 □ for 3 actuators

LPZ P

4A8 □ for 4 actuators  
5A8 □ for 5 actuators  
6A8 □ for 6 actuators

## Metal control stations without actuators



LPZ M

1A5 ■ for 1 actuator  
1A5P ■ for 1 actuator shrouded  
1A8 □ for 1 actuator  
2A5 ■ for 2 actuators  
2A8 □ for 2 actuators

LPZ M

3A8 □ for 3 actuators  
4A8 □ for 4 actuators  
5A8 □ for 5 actuators  
6A8 □ for 6 actuators

## Plastic control stations with one actuator

Grey cover



LPZ P1 B8 01  
(with one actuator  
LPC B6744)

LPZ P1 B8 02  
(with one actuator  
LPC B344)

Yellow cover



LPZ P1 B5 02  
(with one actuator  
LPC B6344)

LPZ P1 B5 03  
(with one actuator  
LPC B6644)

## Contact and LED elements for plastic control stations

Screw termination. Direct snap-in mounting on LPZ plastic control station base.

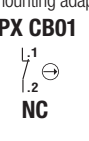
CONTACT ELEMENTS w/o mounting adapter

LED ELEMENTS, STEADY LIGHT w/o mounting adapter



LPX CB10

1.3  
1.4 NO



LPX CB01

1.1  
1.2 NC



LPX LPB

Voltage ↑ Colour  
12-30VAC/DC B 3 ■  
85-140VAC E 4 ■  
185-265VAC M 5 ■  
6 ■  
8 □

Total protection against overvoltages and stray currents in wiring, to reduce flickering phenomenon and withstand vibrations

## LED elements



LPX LF

Voltage ↑ Colour  
18-30VAC/DC B 3 ■  
85-140VAC E 4 ■  
185-265VAC M 5 ■  
6 ■  
8 □



LPX LP

Voltage ↑ Colour  
12-30VAC/DC B 3 ■  
85-140VAC E 4 ■  
185-265VAC M 5 ■  
6 ■  
8 □



LPX LPS

Voltage ↑ Colour  
12-30VAC/DC B 3 ■  
85-140VAC E 4 ■  
185-265VAC M 5 ■  
6 ■  
8 □



LPX LE

Voltage ↑ Colour  
12-30VAC/DC B 3 ■  
85-140VAC/DC E 4 ■  
185-265VAC/DC M 5 ■  
6 ■  
8 □

MOUNTING:	Frontal	Frontal	Frontal	Frontal
TERMINATION:	Screw	Screw	Spring	Screw
LIGHT:	Flashing	Steady	Steady	Steady
PROTECTION:	Against overvoltages and stray currents in wiring, to reduce flickering phenomenon and withstand vibrations			Against overvoltages and to withstand vibrations



## Selector switches

Knob



2 position  
LPC S1  
20  
21

3 position  
LPC S1  
30  
31  
32  
33

Lever



2 position  
LPC S2  
20  
21

3 position  
LPC S2  
30  
31  
32  
33

Knob cap



2 position  
LPC S4  
20  
21

3 position  
LPC S4  
30  
31  
32  
33

Key



2 position  
LPC S3  
20  
21  
40

3 position  
LPC S3  
30  
31  
32  
33  
50

LPC S3

60  
70  
80  
90

### Version with Ronis keys

Types available with 5 different key codes; add "R" suffix to order code and complete with numeric code from the following: 421E, 458A, 520E, 3131A or 3433E.



### Type of positions and rotation angles

- Maintained position
- Spring return position
- Key extraction position

2 position

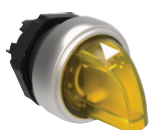


3 position



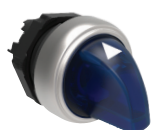
## Illuminated selector switches

2 POSITION KNOB



LPC SL12  
03  
04  
05  
06  
08  
13  
14  
15  
16  
18

3 POSITION KNOB



LPC SL13  
03  
04  
05  
06  
08  
13  
14  
15  
16  
18

LPC SL13  
23  
24  
25  
26  
28  
33  
34  
35  
36  
38

## USB and RJ45 communication interfaces



LPC D

USB 01 3.0 A-A connection type  
USB 03 3.0 A-B connection type  
USB 05 3.0 B-A connection type  
RJ45 06 Ethernet connection type (shielded)

## Double-touch buttons, spring return

2 FLUSH



LPC B71  
12  
13  
14  
22  
23  
24  
START/STOP 33

1 EXTENDED AND 1 FLUSH



LPC B72  
12  
13  
14  
22  
23  
24  
START/STOP 33

## Triple-touch buttons, spring return

2 EXTERNAL FLUSH AND 1 MIDDLE EXTENDED



LPC B73  
STOP 45  
STOP 55  
STOP 65  
STOP 75

## Double-touch buttons, spring return, white indicator light

2 FLUSH



LPC BL71  
12  
13  
14  
22  
23  
24  
START/STOP 33

1 EXTENDED AND 1 FLUSH



LPC BL72  
12  
13  
14  
22  
23  
24  
START/STOP 33

## Monoblock potentiometer drives



LPC PA  
001 1 kΩ  
002 2,5 kΩ  
005 5 kΩ  
010 10 kΩ  
050 50 kΩ  
100 100 kΩ  
500 500 kΩ

## Joysticks (IP65)



WITHOUT MECHANICAL INTERLOCK

8 LM2T J 200 400  
201 401



WITH MECHANICAL INTERLOCK IN CENTRE POSITION

8 LM2T J 210 410  
211 411

----- Instable positions

—— Stable positions

## Pulse and steady tone monoblock buzzers



Supply voltage  
9-15VAC/DC  
18-30VAC/DC  
85-140VAC/DC  
185-265VAC/DC

IP40  
LPC ZSA  
LPC ZSB  
LPC ZSE  
LPC ZSM



Supply voltage  
9-15VAC/DC  
18-30VAC/DC  
85-140VAC/DC  
185-265VAC/DC

IP66  
LPC ZSA IP  
LPC ZSB IP  
LPC ZSE IP  
LPC ZSM IP

IP40: 90dB sound intensity at 10 cm.  
IP66: 80dB sound intensity at 10 cm.

## LED integrated monoblock pilot lights, steady light



LPM L  
Voltage ↑ ↑ Colour  
12VAC/DC A 3  
24VAC/DC B 4  
48VAC/DC D 5  
120VAC E 6  
230VAC M 7

PLatinum  
Quality touch!

# Accessories

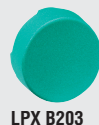


## Labels with text for LPX AU100 legend holder



8 LM2T AGB230

Order code	Description
LPX A127	Transparent diffuser for double-touch buttons
LPX A130	Threaded plug for unused drilled holes (grey)
LPX A140	Action plug for centre contact
LPX A150	Rod for mechanical reset button (l=150mm)
LPX A170	Spare standard key set for selector switches or mushroom-head buttons, key code n° 455
LPX A170R ②	Spare key set for selector switches or mushroom head buttons, LPC... R type
LPX B0	Flush-extended spring return actuator with no cap or lens
LPX B3	Shrouded spring return actuator with no cap or lens



Order code	Description
LPXQ0	Flush-extended push-push actuator with no cap
LPXQL0	Illuminated flush-extended push-push actuator with no lens
Flush cap for spring-return actuators.	
LPX B102	Black
LPX B103	Green
LPX B104	Red
LPX B105	Yellow
LPX B106	Blue
LPX B108	White
Extended cap for spring-return actuators.	
LPX B202	Black
LPX B203	Green
LPX B204	Red
LPX B205	Yellow
LPX B206	Blue
LPX B208	White



Order code	Description
Flush lens for illuminated spring-return actuators.	
LPX BL103	Green
LPX BL104	Red
LPX BL105	Yellow
LPX BL106	Blue
LPX BL107	Transparent
Extended lens for illuminated spring-return actuators.	
LPX BL203	Green
LPX BL204	Red
LPX BL205	Yellow
LPX BL206	Blue
LPX BL207	Transparent

② Versions with different key code. Complete with the numeric code of the key. The following versions are available: 421E, 458A, 520E, 3131A, 3433E.

Order code	Description
LPX AU00	Threaded ring for actuator fixing
LPX AU100	Label holder for blank or engraved plastic LPX AU109 label
LPX AU109	Engravable silver plastic label to use with LPX AU100 holder
LPX AU105	Label holder for blank or engraved LPX AU108 label
LPX AU108	Engravable silver plastic label to use with LPX AU105 holder
LPX AU13 ③④	Rubber boot for flush button LPC B1/BL1/R1...
LPX AU14 ③④	Rubber boot for buttons LPC B2/B3/BL2/R2...
LPX AU157	Rubber boot for double and triple-touch buttons, transparent
LPX AU167 ④⑤	Rubber boot for mushroom head buttons, LPC B63/B66/B67/BL66..., transparent
LPX AU158 ④⑥	Padlockable protection, Ø5-8mm locks for buttons LPC B66/B67/B68/BL66..., for LPC B34... Ø5-6mm locks only
LPX AU159 ④⑥	Shroud for buttons LPC B63..., LPC B66/67/68/BL66...
LPX DIN ④⑥	Adapter for mounting LPC... buttons on DIN rail 35mm/1.38" wide (2 modules)
LPX P01	M20 cable gland with threaded ring for LPZ control stations
8 LM2T A161	Ø30mm hole size adapter set for 22mm (use 2 per hole)
8 LM2T A185	Selector protection shroud for knob type only
8 LM2T A200	Socket spanner/wrench for fixing ring fitting, metal

③ For flush and extended push buttons, complete the order code by adding the digit of the required colour: 2 (black); 3 (green); 4 (red); 5 (yellow); 6 (blue); 7 (transparent); 8 (white). For illuminated push buttons, add only digit 7 (transparent).

④ Cannot be used when LPX AU100 or LPX AU105 is fitted.

⑤ Cannot be used when LPX AU158 is fitted.

⑥ Cannot be used when LPX AU167 is fitted.

## Plastic disk for mushroom head pushbuttons



LPX AU113



LPX AU110

Order code	Text
LPX AU113	EMERGENCY/STOP Ø90mm
LPX AU115	EMERGENCY/STOP Ø60mm
LPX AU118	ARRET D'URGENCE / NOT-AUS / PARO EMERGENCIA Ø60mm
LPX AU123	Emergency stop IEC 60417-5638 Ø60mm
LPX AU124	Emergency stop IEC 60417-5638 Ø90mm
LPX AU110	EMERGENCY STOP adhesive label, size 34.5x65mm

Order code	Text
General use.	
8 LM2T AU206	Blank for writing
8 LM2T AU207	Sheet with 108 labels for laser printing ⑦
8 LM2T AU208 ③	Sheet with 108 laser-printed labels ⑦
8 LM2T AGB216	CLOSE
8 LM2T AGB220	EMERGENCY
8 LM2T AGB231	FAST
8 LM2T AGB263	FAULT
8 LM2T AGB215	FORWARD
8 LM2T AGB228	LEFT
8 LM2T AGB218	LOWER
8 LM2T AGB221	OFF
8 LM2T AGB223	ON
8 LM2T AGB211	OPEN
8 LM2T AGB229	POWER ON
8 LM2T AGB227	RAISE

Order code	Text
8 LM2T AGB226	RESET
8 LM2T AGB222	REVERSE
8 LM2T AGB217	RIGHT
8 LM2T AGB241	RUNNING
8 LM2T AGB224	SLOW
8 LM2T AGB225	START
8 LM2T AGB230	STOP
8 LM2T AGB214	STOP RESET
8 LM2T AGB240	THERMAL FAULT
8 LM2T AGB237	TRIP
International labels for pushbuttons.	
8 LM2T AU200	O
8 LM2T AU201	I
8 LM2T AU202	II

Order code	Text
For selector switches.	
8 LM2T AI233	AUTO-MAN
8 LM2T AI234	AUTO-O-MAN
8 LM2T AI241	MAN-AUTO
8 LM2T AI242	MAN-O-AUTO
8 LM2T AGB235	FWD-O-REV
8 LM2T AGB236	OFF-ON
8 LM2T AGB232	STOP-START
International labels for selector switches.	
8 LM2T AU203	O-I
8 LM2T AU204	I-II
8 LM2T AU205	I-O-II

⑦ Recommended use with LPX AU109 blank label.

③ Complete code with required label text.



## ● HIGH DEGREE OF PROTECTION

- IP66: Powerful water jets
- IP67: Water immersion at one metre
- IP69K: Powerful water jets at high pressure and temperature
- Type 4X: UL/CSA directives in regards powerful water jets.



## ● ELEGANT STYLE AND ERGONOMIC DESIGN

All the series elements have an ergonomic design and, at the same time, particular care has been given to detail aesthetics.



## ● LONG ACTUATOR MECHANICAL LIFE

- 5,000,000 cycles: Pushbutton actuators and mechanical reset buttons
- 1,000,000 cycles: Selectors, double and triple-touch actuators
- 300,000 cycles: Emergency-stop actuators.



## ● MATERIALS RESISTANT TO OILS, SOLVENTS AND HYDROCARBONS



## ● USAGE AT EXTREME TEMPERATURE CONDITIONS

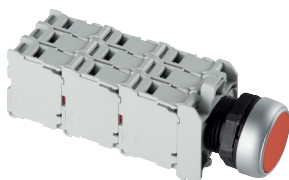
Range between -25° and +70°C.



## ● INTERNATIONAL CERTIFICATIONS

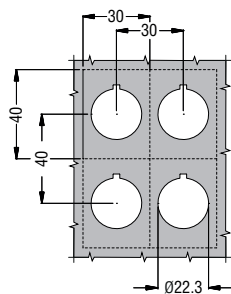


### ● CONTACT ELEMENTS

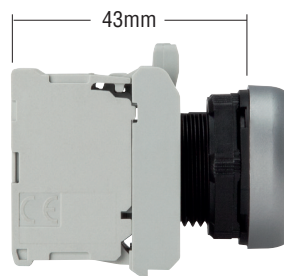


- Miniaturised size
- High electric conductivity - 5V 1mA
- **Up to 9 contact elements** can be installed, 3 rows of 3 elements
- Available versions: Front and base mount with screw terminals while front-mount only with faston and spring-clamp terminals
- Contact operation with double breaking action, direct (positive) opening action and wiping effect.

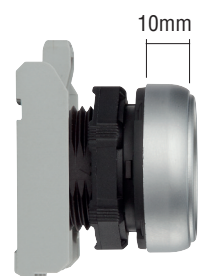
### ● REDUCED DIMENSIONS AND INTERAXIS



- Minimum pitch between drillings:
- 30x40mm for two single actuators on a mounting surface
  - 30x55mm for double and triple-touch actuators or when spring clamp contacts are used.



- Total depth, from the external mounting surface to the end of the first contact element is just **43mm**.



- **Low actuator profile**  
The external actuator bezel has a low profile and reduced front thickness.





ENERGY AND AUTOMATION

[www.LovatoElectric.com](http://www.LovatoElectric.com)

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