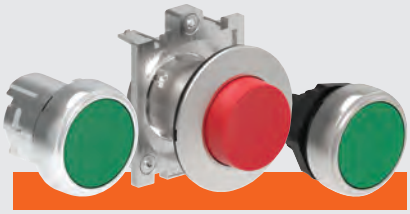
Pushbuttons and selector switches

- Different types of actuators: metal, flat metal and chrome finished plastic
- Simple and snap on installation
- Highly conductive contacts
- Robust for severe ambient conditions
- Contact operation: double breaking action, direct opening operation and self cleaning
- Plastic and metal enclosure.

	Series Sec.	LPS Page	LPF Page	LPC Page
PLatinum series				
Pushbutton actuators, spring return and push-push	7	6	16	24
Mechanical reset button, spring return	7	7	–	25
Pushbutton actuators with symbol, spring return	7	7	17	25
Mushroom-head pushbutton actuators	7	8	–	26
Double and triple-touch button actuators, spring return	7	9	–	27
Selector switch actuators, lever and key	7	10	18	28
Selector switch actuator knobs	7	11	19	29
Illuminated pushbutton actuators, spring return and push-push	7	12	20	30
Illuminated mushroom-head pushbutton actuators	7	12	–	30
Double-touch button actuators, spring return with indicator	7	13	–	31
Illuminated selector actuators	7	13	21	31
Pilot light heads	7	14	22	32
USB and RJ45 communication interfaces	7	–	23	32
Joysticks	7	15	–	–
Monoblock LED pilot lights, steady light	7	–	–	33
Monoblock potentiometers	7	–	–	34
Monoblock buzzers	7	–	–	34

Pushbutton actuators, spring return with symbol	7 - 35
Mounting adapters	7 - 36
Contact elements	7 - 37
LED and test elements	7 - 39
Accessories, spare parts and labels	7 - 44
Plastic control stations	7 - 52
Palm switches	**7- 59**
Metal control stations and enclosures	**7- 60**
Dimensions	**7- 62**
Wiring diagrams	**7- 69**



BUTTON ACTUATORS
- Spring return flush, extended and shrouded
- Push-push flush and extended
- Mushroom-head
- Mechanical reset
- Illuminated.

DOUBLE AND TRIPLE-TOUCH ACTUATORS
- Double-touch with or without indicator
- Triple-touch.

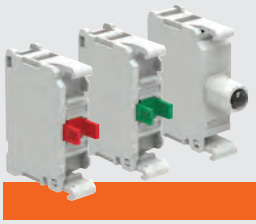
SELECTOR SWITCHES
- Short lever
- Long lever
- Key
- Knob
- Illuminated.

PILOT LIGHTS Ø22mm
- Monoblock LED.

MONOBLOCK BUZZERS Ø22mm
- Continuous or pulse tone.

COMMUNICATION INTERFACES
- USB.
- RJ45.

POTENTIOMETERS Ø22mm
- Potentiometer included in the product with graduated scale
- Potentiometer drives with:
  – graduated scale
  – variable index.



ADD-ON ELEMENTS, ACCESSORIES AND SPARE PARTS
- Mounting adapters
- Contact elements
- Lamp holders
- LED integrated elements
- Labels, label holders, protections, etc.

JOYSTICKS Ø22mm
- 2 directions
- 4 directions
- 2 directions with mechanical interlock
- 4 directions with mechanical interlock
- Complete with contact elements.

PLASTIC CONTROL STATIONS
- 1 to 6 holes option without actuators
- Complete versions from 1 to 3 actuators in various combinations.

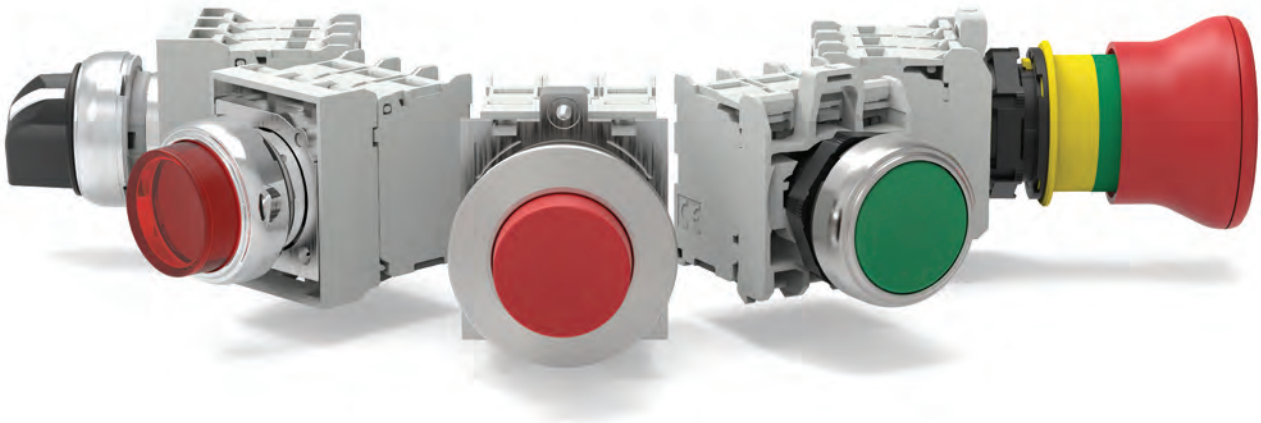
METAL CONTROL STATIONS
- Without actuators (from 1 to 16 holes)
- Version without holes.

A COMPLETE SERIES AT YOUR FINGERTIPS!

PLatinum

- **HIGH DEGREE OF PROTECTION IP66, IP67 and IP69K**
  The actuators have been tested to guarantee a degree of protection per IEC/EN IP66, IP67, IP69K and per UL Type 4X, appropriate for use even in extreme ambient conditions.
- **ELEGANT STYLE AND ERGONOMIC DESIGN**
  All the series elements have an ergonomic design and, at the same time, particular care has been given to the finest detail aesthetics.
- **LONG ACTUATOR MECHANICAL LIFE**
  High performance characteristics assure 5,000,000 cycle mechanical life for spring return actuators, 1,000,000 for double and triple touch units and 300,000 for emergency-stop types.
- **MATERIALS RESISTANT TO OILS, SOLVENTS AND HYDROCARBONS**
- **CUSTOMIZATION**
  To facilitate warehouse management, it is possible to purchase spring return or push-push button actuators without caps or lenses and at the same time caps and lenses as spare parts.
  This allows for custom buttons to be completed from stock.

- **HIGH STANDARDIZATION**
  Contact elements, LED light elements and a wide range of accessories are common to all types of the series.
- **USAGE AT EXTREME TEMPERATURE CONDITIONS**
  Operation temperature range between -25° and +70°C.
- **CERTIFICATIONS: cULus, EAC, RINA and CCC.**



Ø30MM FLAT METAL LPF

- OPERATORS MADE OF ALUMINIUM AND ZINC ALLOY
- ACTUATOR PROFILE OF ONLY 4mm
- HIGH STRENGTH
- ERGONOMIC AND FUNCTIONAL
- SCREW PANEL FIXING
- TYPES
  - spring return and push-push button actuators
  - lever, key and knob selectors
  - illuminated spring return and push-push button actuators
  - illuminated lever selectors
  - USB and RJ45 communication interfaces.

Ø22MM METAL LPS

- OPERATORS MADE OF ALUMINIUM AND ZINC ALLOY
- HIGH STRENGTH AND IMPACT RESISTANCE
- SCREW PANEL FIXING
- TYPES
  - spring return and push-push button actuators
  - spring return mechanical reset button actuators
  - mushroom head push button actuators
  - spring return double and triple-touch button actuators
  - lever, key and knob selector switch actuators
  - illuminated spring return, push-push and mushroom-head actuators
  - spring return double-touch button actuators with indicator
  - illuminated lever selectors
  - joysticks.

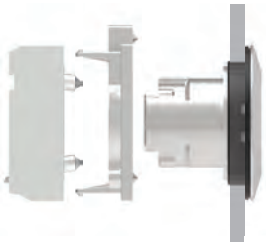
Ø22MM CHROMED PLASTIC LPC

- ACTUATORS MADE OF POLYAMIDE WITH EXTERNAL CHROME RING
- SNAP-ON FAST INSTALLATION OF THE MOUNTING BASE AND CONTACT ELEMENTS
- PANEL FIXING BY THREADED RING
- TYPES
  - spring return and push-push button actuators
  - spring return mechanical reset button actuators
  - mushroom head push button actuators
  - spring return double and triple-touch button actuators
  - lever, key and knob selector switch actuators
  - illuminated spring return, push-push and mushroom-head actuators
  - spring return double-touch button actuators with indicator
  - illuminated lever selectors
  - monoblock LED pilot lights
  - monoblock potentiometers and buzzers
  - USB and RJ45 communication interfaces.

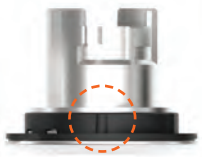
QUICK AND EASY ACTUATOR INSTALLATION

Ø30mm FLAT METAL

- The operator **fits** into the Ø30mm panel hole with an adapter that retains it securely by two screws.



- The operator has a **seal** with **rubber grommets** which ensure stable fitting.



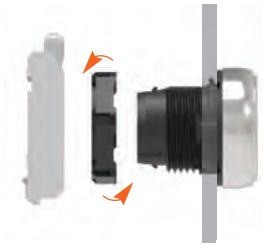
Ø22mm METAL

- The operator **fits** into the Ø22mm panel hole with an adapter that retains it securely by two screws.

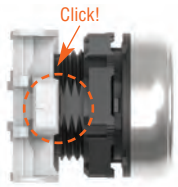
- The operator has a **seal** with **rubber grommets** to ensure stable fitting.

Ø22mm CHROMED PLASTIC

- The operator mounts to the Ø22mm panel hole with a **threaded ring**.
  The mounting base snaps onto the back of the operator itself.



- The operator has a **seal** with **rubber grommets** to ensure stable fitting.
- The anti-rotation lug on the operator collapses into the seal to enable installation even to round holes without an anti-rotation notch.
- The mounting plate and operators have **clearly visible reference marks** to facilitate snapping the operators onto the base.

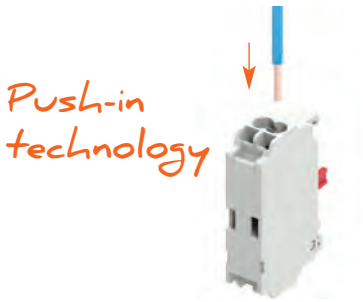


CONTACT ELEMENTS

- Common to all PLatinum series operators.
- Miniaturised size
- High electric conductivity - 5V 1mA
- Up to 9 contact elements can be installed
- Versions with screw, spring-clamp (push-in), Faston and base mount contact blocks for use with LPZP control stations
- Contact operation: double breaking action, direct (positive) action operation and wiping effect.
- Electrical contact and LED elements are **snapped onto** the mounting adapter.
- **The activation of the middle contact is standard supplied** on all non-illuminated spring return and push-push button or selector switch actuators.

CONTACT AND LED ELEMENTS WITH SPRING-CLAMP (PUSH-IN) TECHNOLOGY

PUSH-IN technology reduces the time required to connect stiff cables and cables with crimped terminals. The wire simply inserts into the clamp for a secure, sealed connection - no screwdriver needed!
The clamping force is long-lasting and unaffected by vibration and impact.

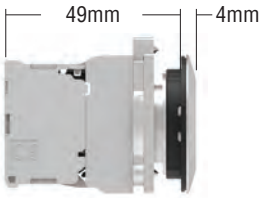


HIGH-LUMINOSITY LED ELEMENTS

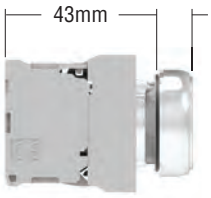
- Miniaturised size
- Long electrical life: 100,000h
- Versions with screw, spring-clamp (push-in) and for bottom of LPZP control stations
- Overvoltage protection
- Withstand vibrations
- Protection against stray currents in wiring
- Flickering phenomenon reduction
- Steady and flashing light versions
- Supply voltages: 12...30VAC/DC, 85...140VAC, 185...265VAC
- Test elements installed alongside and connected with the relative LED element allow checking if all LED elements of the installation are working properly.

LOW PROFILE OPERATORS AND COMPACT FOOTPRINT

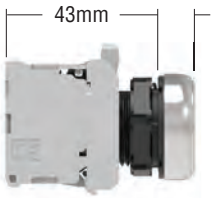
- The operator's external collar has a low profile and reduced front depth.
- The total depth from the panel surface to the first contact element is just 43mm for the Ø22mm metal/plastic type, and 49mm for the Ø30mm flush-mounting metal type.



Ø30mm flat metal



Ø22mm metal



Ø22mm chromed plastic

DOUBLE AND TRIPLE-TOUCH ACTUATORS

- IEC **IP66, IP67, IP69K** and **UL Type 4X** degree of protection
- Double-touch button actuators, with 2 flush or 1 flush and 1 extended buttons
- Triple-touch button actuators with 2 flush and middle extended butons
- Versions with or without indicator.

MECHANICAL RESET BUTTONS

- Rod adjustment directly on acutator front (1...4mm/0.04...0.16")

- Up to 6 contact elements can be mounted.

EMERGENCY STOP ACTUATORS

- Actuator structure suitable to warrant direct opening operation with mechanical latching for emergency stopping per **ISO 13850** and **IEC/EN/BS 60947-5-5**
- There is a green line around the actuator body to spot when the emergency stop is at rest or activated
- Use of **Ronis key**
- Various accessories available (e.g. yellow E-stop disks, padlockable protection, rubber actuator boots, label holders and labels)
- Auto-monitor contact elements are available with functions to:
  - Constantly control the correct installation (mounting adapter and NC contact with the actuator) and proper operation of the NC contact
  - Open the circuit in the case of malfunctions (e.g. the contact detaches from the mounting adapter due to strong vibrations or shock).

SELECTOR SWITCH ACTUATORS

- Lever design assures excellent grip
- Option to differentiate the actuation of the central contact

- **High visibility** on front or side and actuator inscription shows exact switch position

- Use of **Ronis key**

- **Activation of the middle contacts is standard supplied** on 2 and 3 position selector switches.

PILOT LIGHTS

- Protection rating IP66, IP67, IP69K and UL Type 4X for LED monoblock pilot lights and pilot light heads
- Long life and low consumption
- Supply voltages:
  - 110...120VAC, 230VAC, 380...415VAC
  - 110...125VDC, 220VDC
  - 12VAC/DC, 24VAC/DC, 48VAC/DC.

MONOBLOCK POTENTIOMETERS

- Potentiometer included in the product
- Protection rating IP66, IP67 and IP69K and UL Type 4X
- Resistance values from 1 to 500kΩ.

ADAPTER FOR Ø30MM HOLES

- Allows installation of Ø22mm operators in Ø30mm holes
- Two versions; one for buttons and selector switches and one for emergency buttons.

MONOBLOCK BUZZERS

- Continuous or pulse-tone monoblock buzzers in a single product
- IP40 version (90dB/10cm) and IP66, IP67, IP69K and UL Type 4X, version (80dB/10cm) available.

COMMUNICATION INTERFACES

- Protection rating IP65, UL Type 4X
- USB and RJ45 for Ethernet types with data transmission in both directions
- USB type 3.0 (backward compatible with USB 2.0)
- Versions complete with cable.

JOYSTICKS

- Complete with contact elements
- **2 and 4 directions** available versions with or without mechanical interlock.

ACCESSORIES

- DIN rail adapter
- Label holders and labels
- Rubber operator hoods
- Padlockable protection
- Protective covers.

PLASTIC CONTROL STATIONS

- Protection rating IP66, IP67, IP69K and Type 4X per UL
- 1 to 6 hole empty versions
- Complete 1 to 3 operator versions in a variety of combinations
- Quick installation and easy cabling of the contacts and LED elements with mounting to the bottom (snap mounting to the base)
- Option to also install screw-in and spring-mounting LED elements together with the operator inside the cover panel.

MOUNTING THE CONTACTS TO THE BOTTOM OF THE CONTROL STATION

- The use of contact and LED lamp holder elements that snap mount to the bottom of the control station makes for easier cabling.

YELLOW CONTROL STATION WITH ACTUATOR SHROUD

- Protective cover integrated into the button panel cover
- Protection rating IP66, IP67, IP69K and UL Type 4X
- 4 knockout holes for cable wiring
- Kit of 4 caps to protect the screws.

METAL CONTROL STATIONS

- Protection rating IP66, IP67 and UL Type 4X
- From 1 to 16 holes version
- 1 hole version with actuator protection
- Version without holes.

Pushbutton actuators, spring return

LPSB10...

LPSB20...

LPSB30...

new

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
Flush (without mounting adapter). Spring return.			
LPSB102	Black	5	0.031
LPSB103	Green	5	0.031
LPSB104	Red	5	0.031
LPSB105	Yellow	5	0.031
LPSB106	Blue	5	0.031
LPSB108	White	5	0.031
Extended (without mounting adapter). Spring return.			
LPSB202	Black	5	0.033
LPSB203	Green	5	0.033
LPSB204	Red	5	0.033
LPSB205	Yellow	5	0.033
LPSB206	Blue	5	0.033
LPSB208	White	5	0.033
Shrouded (without mounting adapter). Spring return.			
LPSB302	Black	5	0.033
LPSB303	Green	5	0.033
LPSB304	Red	5	0.033
LPSB305	Yellow	5	0.033
LPSB306	Blue	5	0.033
LPSB308	White	5	0.033

Push-push button actuators

LPSQ10...

LPSQ20...

new

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
Flush (without mounting adapter). Push on-push off.			
LPSQ102❶	Black	5	0.031
LPSQ103❶	Green	5	0.031
LPSQ104❶	Red	5	0.031
LPSQ105❶	Yellow	5	0.031
LPSQ106❶	Blue	5	0.031
LPSQ108❶	White	5	0.031
Extended (without mounting adapter). Push on-push off.			
LPSQ202❶	Black	5	0.033
LPSQ203❶	Green	5	0.033
LPSQ204❶	Red	5	0.033
LPSQ205❶	Yellow	5	0.033
LPSQ206❶	Blue	5	0.033
LPSQ208❶	White	5	0.033

❶ **Use contact elements LPXC10A (EM) and LPXC01 (NC) only.**
Contact elements LPXC10 (NO) and LPXC01D (LB) cannot be fitted on these actuators.
For the number of contacts that can be fitted, see the indication here to the side.

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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
An aluminium and zinc alloy (zama) is used for the metal part whereas plastic parts are made of 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
See page 7-36.
Type: LPXAU120M.
The adapter is fixed to the mounting surface by means of incorporated screws (Tmax = 0.8Nm/0.59lb.ft).
Actuators latch onto the mounting adapter by simple rotation.

Contact elements for spring return button actuators
See page 7-36 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120M mounting adapter (to purchase separately). Up to 9 contacts can be fitted: 3 each on the left, middle and right, one behind the other. The LPXAU120M mounting adapter can also be fitted internally to the cover of the LPZ... control station with up to 3 elements per actuator.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw
Base mount types snap into LPZP... control station base. See example on page 7-38.		
Up to 3 contacts can be fitted per control station.		
1NO	LPXCB10	Screw
1NC	LPXCB01	Screw

Contact elements for push-push button actuators
See page 7-37.
Type: LPXC10A (1EM)
LPXC01 (1NC)
Contacts snap onto the mounting adapter which can also be used with LPZ... control stations.
Up to 6 contacts can be fitted: 2 each on the left, middle or right; up to 3 elements can be fitted to the adapter when used with the LPZ... control station.

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

Certifications and compliance
Certifications: cULus.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Mechanical rest buttons, complete unit, spring return

LPSR1196

new

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
Flush (5.2mm/0.2" stroke). Adjustable length 0-150mm/5.9". Complete with shaft (without mounting adapter). Spring return.			
LPSR1002	Black	5	0.044
LPSR1003	Green	5	0.044
LPSR1004	Red	5	0.044
LPSR1006	Blue	5	0.044
LPSR1196❶	Blue (RESET)	5	0.044
Extended (5.2mm/0.2" stroke). Adjustable length 0-150mm/5.9". Complete with shaft (without mounting adapter). Spring return.			
LPSR2004	Red	1	0.046

❶ With "RESET" caption on actuator.
E.g. Not suitable for LPZ... control stations.

Pushbutton actuators, spring return, with symbol

LPSB11...

LPSB21...

new

Order code	Symbol	Colour	Qty per pkg	Wt
			n°	[kg]
Flush (without mounting adapter). Spring return.				
LPSB1102	O	Black	5	0.031
LPSB1104		Red	5	0.031
LPSB1113	I	Green	5	0.031
LPSB1118		White	5	0.031
LPSB1123	II	Green	1	0.031
LPSB1128		White	1	0.031
LPSB1132	STOP	Black	5	0.031
LPSB1134		Red	5	0.031
LPSB1142	← ❶	Black	5	0.031
LPSB1148		White	5	0.031
LPSB1152	↑ ❷	Black	5	0.031
LPSB1158		White	5	0.031
LPSB1163	START	Green	5	0.031
LPSB1168		White	1	0.031
LPSB1176	R	Blue	1	0.031
LPSB1178		White	1	0.031
LPSB1196	RESET	Blue	5	0.031
LPSB1502	◄|►	Black	5	0.031
LPSB1512	►|◄	Black	5	0.031
Extended (without mounting adapter). Spring return.				
LPSB2102	O	Black	5	0.033
LPSB2104		Red	5	0.033
LPSB2132	STOP	Black	1	0.033
LPSB2134		Red	5	0.033

❶ Arrow symbol can be used to indicate right or left.
❷ Arrow symbol can be used to indicate up or down.

Pushbutton actuators, spring return, with special symbols

LPSB...

new

Order code ❹❺	Symbol	Colour	Qty per pkg	Wt
			n°	[kg]
Spring return (without mounting adapter).				
LPSB❶❷18❸	ϟ❻	❸	50	0.033
LPSB❶❷34❸	MAN	❸	50	0.033
LPSB❶❷35❸	AUTO	❸	50	0.033
LPSB❶❷22❸	↗	❸	50	0.033
LPSB❶❷23❸	□◺	❸	50	0.033

Note: for other symbols see page 7- 35.
❶ Add letter "L" if illuminated type is required.
❷ For the type of actuator, add: 1 for flush or 2 for extended.
❸ Add the actuator colour: 2 black only for non-illuminated type; 3 green, 4 red, 5 yellow, 6 blue, 8 white or 7 transparent for illuminated version.
❹ Products available on specific request for a minimum multiple quantity of 50 pieces per type.
❺ Consult Technical support for assistance; see contact details or inside front cover.
❻ Symbol indicating dangerous voltage (IEC 60417 5036-a).
Examples of complete order codes:
LPSB2258 – extended non-illuminated white pushbutton with + symbol;
LPSBL1685 – flush illuminated yellow pushbutton actuator with ⚠ symbol.

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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
An aluminium and zinc alloy (zama) is used for the metal part whereas plastic parts are made of polyamide.

Mechanical endurance
Operating force: <0.5kg/1.1lb (actuator).
Mechanical life: 5,000,000 cycles.

Mounting adapter
See page 7-36.
Type: LPXAU120M.
The adapter is fixed to the mounting surface by means of incorporated screws (Tmax = 0.8Nm/0.59lb.ft).
Actuators latch onto the mounting adapter by simple rotation.

Contact elements for LPSR... mechanical reset buttons
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120M mounting adapter (to purchase separately). Up to 6 contacts can be fitted: 2 each on the left and right, one behind the other.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw

Contact elements for spring return button actuators
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120M mounting adapter (to purchase separately). Up to 9 contacts can be fitted: 3 each on the left, middle and right, one behind the other. The LPXAU120M mounting adapter can also be fitted internally to the cover of the LPZ... control station with up to 3 elements per actuator.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw
Base mount types snap into LPZP... control station base. See example on page 7-38. Up to 3 elements can be fitted to the adapter when used with the LPZ... control station.		
1NO	LPXCB10	Screw
1NC	LPXCB01	Screw

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

Certifications and compliance
Certifications: cULus.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

7

Mushroom head pushbutton actuators

LPSB614...

LPSB674...

LPSB6744

LPSB6634

LPSB6644

LPSB6844

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
SPRING RETURN. Ø40mm/1.57" (without mounting adapter).			
LPSB6142	Black	5	0.038
LPSB6143	Green	5	0.038
LPSB6144	Red	5	0.038
LPSB6145	Yellow	5	0.038
LPSB6146	Blue	5	0.038
Ø60mm/2.36" (without mounting adapter).			
LPSB6162	Black	5	0.044
LPSB6163	Green	1	0.044
LPSB6164	Red	5	0.044
LPSB6165	Yellow	1	0.044
LPSB6166	Blue	1	0.044
LATCH, PULL TO RELEASE. Ø40mm/1.57" (without mounting adapter). For normal stopping.			
LPSB6742	Black	5	0.102
For emergency stopping, ISO 13850 compliant.			
LPSB6744	Red	5	0.102
LATCH, TURN TO RELEASE. Ø30mm/1.18" (without mounting adapter). For emergency stopping, ISO 13850 compliant.			
LPSB6634	Red	5	0.048
Ø40mm/1.57" (without mounting adapter). For normal stopping.			
LPSB6642	Black	5	0.051
Ø40mm/1.57" (without mounting adapter). For emergency stopping, ISO 13850 compliant.			
LPSB6644	Red	5	0.084
LATCH, TURN KEY TO RELEASE. Ø40mm/1.57" (without mounting adapter). Key code n° 455. For normal stopping.			
LPSB6842	Black	5	0.088
LPSB6842R❶	Black	1	0.088
For emergency stopping, ISO 13850 compliant.			
LPSB6844	Red	5	0.088
LPSB6844R❶	Red	1	0.088

❶ 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: LPSB6844R421E.

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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
An aluminium and zinc alloy (zama) is used for the metal part whereas plastic parts are made of polyamide.

Mechanical endurance
Operating force: <0.5kg/1.1lb (actuator).
Mechanical life:
- Spring return mushroom-head actuators: 5,000,000 cycles
- Latch mushroom-head actuators: 300,000 cycles.

Mounting adapter
See page 7-36.
Type: LPXAU120M.
The adapter is fixed to the mounting surface by means of incorporated screws (Tmax = 0.8Nm/0.59lb.ft).
Actuators latch onto the mounting adapter by simple rotation.

Contact elements
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120M 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 4 contacts can be fitted. The LPXAU120M mounting adapter can also be fitted internally to the cover of the LPZ... control station with up to 3 elements per actuator.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw
Base mount types snap into LPZP... control station base. See example on page 7-38. Up to 3 elements can be fitted to the adapter when used with the LPZ... control station.		
1NO	LPXCB10	Screw
1NC	LPXCB01	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.

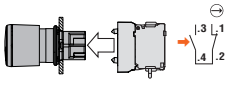
Auto-monitor 1NC	LPXC01SM	Screw (2 stacked in the middle - LPXAU120M pos.1/3-4/6)
1NO	LPXC10	Screw (2 stacked on the right)
	LPXCF10	Faston (2 stacked on the right)
	LPXCS10	Spring clamp (2 stacked on the right)
1NC	LPXC01	Screw (2 stacked on the right)
	LPXCF01	Faston (2 stacked on the right)
	LPXCS01	Spring clamp (2 stacked on the right)
Auto-monitor 2NC	LPXC02SM	Screw (2 stacked)

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

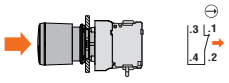
Certifications and compliance
Certifications: cULus.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

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

With contact type LPXC01SM (1NC)



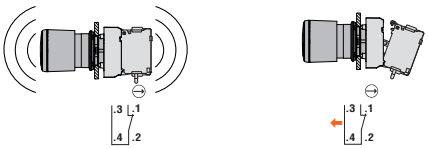
Contact .3-.4 closes when the LPXAU120M mounting adapter and LPX...SM contact are fitted correctly on the mushroom-head latch actuator.
Contact .1-.2 in series does not change state.



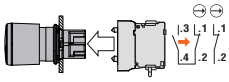
When the button is **fully pressed, contact .1-.2 opens** and remains in this state until the button is released.
Contact .3-.4 in series does not change state.

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

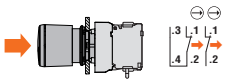
If the contact LPXC01SM detaches from the actuator due to **strong vibrations or shock,** the equipment can be restored to operating state only when proper mounting of the contact with the actuator is re-established resulting in **contact .3-.4 closing.**



With contact type LPXC02SM (2NC)

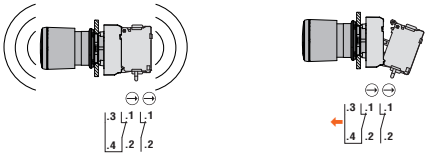


Contact .3-.4 closes when the LPXAU120M mounting adapter and LPX...SM contact are fitted correctly on the mushroom-head latch actuator.
Both contacts .1-.2 in series do not change state.



When the button is **fully pressed, both contacts .1-.2 open** and remain in this state until the button is released.
Contact .3-.4 in series does not change state.

If the contact LPX C02SM detaches from the actuator due to **strong vibrations or shock,** the equipment can be restored to operating state only when proper mounting of the contact with the actuator is re-established resulting in **contact .3-.4 closing.**



Double-touch actuators, spring return

LPSB71...

LPSB72...

new

Order code	Colour	Symbols	Qty per pkg	Wt
			n°	[kg]
Two flush pushbuttons (without mounting adapter). Both spring return.				
LPSB7112	Black/Red	—	5	0.035
LPSB7113	Green/Red	—	5	0.035
LPSB7114	White/Black	—	5	0.035
LPSB7122	Black/Red	I-O	5	0.035
LPSB7123	Green/Red	I-O	5	0.035
LPSB7124	White/Black	I-O	5	0.035
LPSB7133	Green/Red	Start/Stop	5	0.035
LPSB7191	Black/Black	↑ ↓	5	0.035
One extended and one flush pushbuttons (without mounting adapter). Both spring return.				
LPSB7212	Black/Red	—	1	0.035
LPSB7213	Green/Red	—	5	0.035
LPSB7214	White/Black	—	1	0.035
LPSB7222	Black/Red	I-O	5	0.035
LPSB7223	Green/Red	I-O	5	0.035
LPSB7224	White/Black	I-O	1	0.035
LPSB7233	Green/Red	Start/Stop	5	0.035

Triple-touch actuators, spring return

LPSB73...

new

Order code	Symbols	Qty per pkg	Wt
		n°	[kg]
One middle extended buttons (without mounting adapter). Spring return.			
LPSB7345		5	0.035
LPSB7355		5	0.035
LPSB7365		5	0.035
LPSB7375		5	0.035

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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
An aluminium and zinc alloy (zama) is used for the metal part whereas plastic parts are made of polyamide.

Mechanical endurance
Operating force: <0.5kg/1.1lb (actuator).
Mechanical life: 1,000,000 cycles.

Mounting adapter
See page 7-36.
Type: LPXAU120M.
The adapter is fixed to the mounting surface by means of incorporated screws (Tmax = 0.8Nm/0.59lb.ft).
Actuators latch onto the mounting adapter by simple rotation.

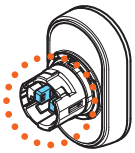
Contact elements
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120M mounting adapter (to purchase separately). For DOUBLE-TOUCH actuators, up to 9 contacts can be fitted: 3 each on the left, middle and right, one behind the other. For TRIPLE-TOUCH actuators, up to 9 contacts can be fitted: 3 each on the left, middle and right, one behind the other. The LPXAU120M mounting adapter can also be fitted internally to the cover of the LPZ... control station with up to 3 elements for double-touch and 3 elements for triple-touch actuators.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw

Base mount types snap into LPZP... control station base.
See example on page 7-38.
For DOUBLE-TOUCH actuators, 2 contacts need to be fitted, one on the left and one on the right.
For TRIPLE-TOUCH actuators, 3 contacts need to be fitted: one each on the left, middle and right.

1NO	LPXCB10	Screw
1NC	LPXCB01	Screw

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



The middle contact activation, with respect to the right and left side contact, can be changed by the user, if required, by removing one mechanism pin. Consult the relative instructions available online in the Downloads section at www.LovatoElectric.com.

Certifications and compliance
Certifications: cULus.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Selector switch actuators lever

LPSS1...

new

Order code	Type of positions	Qty per pkg	Wt
		n°	[kg]
2 positions (without mounting adapter).			
LPSS120		5	0.042
LPSS121		5	0.042
3 positions (without mounting adapter).			
LPSS130		5	0.042
LPSS131		5	0.042
LPSS132		5	0.042
LPSS133		5	0.042

Selector switch actuators long lever

LPSS2...

new

Order code	Type of positions	Qty per pkg	Wt
		n°	[kg]
2 positions (without mounting adapter).			
LPSS220		5	0.045
LPSS221		5	0.045
3 positions (without mounting adapter).			
LPSS230		5	0.045
LPSS231		5	0.045
LPSS232		5	0.045
LPSS233		5	0.045

Selector switch actuators key (Ronis)

LPSS3...

new

Order code	Type of positions	Qty per pkg	Wt
		n°	[kg]
2 positions (without mounting adapter).			
LPSS320		5	0.065
LPSS320R❶		1	0.065
LPSS321		5	0.065
LPSS321R❶		1	0.065
LPSS340		5	0.065
LPSS340R❶		1	0.065
3 positions (without mounting adapter).			
LPSS330		5	0.065
LPSS330R❶		1	0.065
LPSS331		5	0.065
LPSS331R❶		1	0.065
LPSS332❷		5	0.065
LPSS332R❶❷		1	0.065
LPSS333❷		5	0.065
LPSS333R❶❷		1	0.065
LPSS350		5	0.065
LPSS350R❶		1	0.065
LPSS360		5	0.065
LPSS360R❶		1	0.065
LPSS370❷		5	0.065
LPSS370R❶❷		1	0.065
LPSS380❷		5	0.065
LPSS380R❶❷		1	0.065
LPSS390❷		5	0.065
LPSS390R❶❷		1	0.065

❶ 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: LPCS320R421E.
❷ Available only on specific request.

Operational characteristics
- Any mounting position allowed
- Standard key types supplied with Ronis key code n° 455
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection:
  - Per IEC/EN: IP66, IP67 and IP69K
  - Per UL: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
An aluminium and zinc alloy (zama) is used for the metal part whereas plastic parts are made of polyamide.

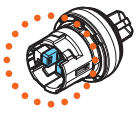
Mechanical endurance
Mechanical life: 1,000,000 cycles.

Mounting adapter
See page 7-36.
Type: LPXAU120M.
The adapter is fixed to the mounting surface by means of incorporated screws (Tmax = 0.8Nm/0.59lb.ft).
Actuators latch onto the mounting adapter by simple rotation.

Contact elements
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120M mounting adapter (to purchase separately). Up to 6 contacts can be fitted: 2 each on the left, middle and right or 3 each on the left and right, one behind the other. The LPXAU120M mounting adapter can also be fitted internally to the cover of the LPZ... control station with up to 3 elements per actuator.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw
Base mount types snap into LPZP... control station base. See example on page 7-38. Up to 3 elements can be fitted to the adapter when used with the LPZ... control station.		
1NO	LPXCB10	Screw
1NC	LPXCB01	Screw

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



The middle contact activation, with respect to the right and left side contact, can be changed by the user, if required, by removing one mechanism pin. Consult the relative instructions available online in the Downloads section at www.LovatoElectric.com.

Type of position
- Maintained position.
- Spring return position.
- • Key extraction position.

Rotation angles
2 positions

3 positions

Special versions
Versions with coloured keys are available upon request. Consult Technical support; see contact details on inside front cover.

Certifications and compliance
Certifications: cULus.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Selector switch actuators knob

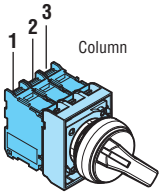
LPSS4...

new

Order code	Type of positions	Qty per pkg	Wt
		n°	[kg]
2 positions (without mounting adapter).			
LPSS420		5	0.042
LPSS421		5	0.042
3 positions (without mounting adapter).			
LPSS430		5	0.042
LPSS431		5	0.042
LPSS432		5	0.042
LPSS433		5	0.042

Contact activation

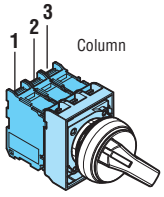
2-position selector switch



Contacts

	1	2	3
A	—	—	—
B	●	●	●

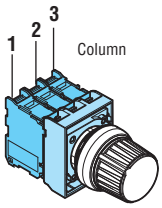
3-position selector switch



Contacts

	1	2	3
A	●	●	—
B	—	—	—
C	—	●	●

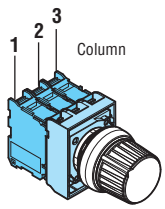
2-position selector switch



Contacts

	1	2	3
A	—	—	—
B	●	●	●

3-position selector switch



Contacts

	1	2	3
A	●	●	—
B	—	—	—
C	—	●	●

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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
An aluminium and zinc alloy (zama) is used for the metal part whereas plastic parts are made of polyamide.

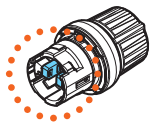
Mechanical endurance
Mechanical life: 1,000,000 cycles.

Mounting adapter
See page 7-36.
Type: LPXAU120M.
The adapter is fixed to the mounting surface by means of incorporated screws (Tmax = 0.8Nm/0.59lb.ft).
Actuators latch onto the mounting adapter by simple rotation.

Contact elements
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120M mounting adapter (to purchase separately). Up to 6 contacts can be fitted: 2 each on the left, middle and right or 3 each on the left and right, one behind the other. The LPXAU120M mounting adapter can also be fitted internally to the cover of the LPZ... control station with up to 3 elements per actuator.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw
Base mount types snap into LPZP... control station base. See example on page 7-38. Up to 3 elements can be fitted to the adapter when used with the LPZ... control station.		
1NO	LPXCB10	Screw
1NC	LPXCB01	Screw

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



The middle contact activation, with respect to the right and left side contact, can be changed by the user, if required, by removing one mechanism pin. Consult the relative instructions available online in the Downloads section at www.LovatoElectric.com.

Type of position
Maintained position.
Spring return position.

Rotation angles
2 positions

3 positions

Certifications and compliance
Certifications: cULus.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Illuminated button actuators, spring return

LPSBL10...

LPSBL20...

new

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
Flush (without mounting adapter). Spring return.			
LPSBL103	Green	5	0.030
LPSBL104	Red	5	0.030
LPSBL105	Yellow	5	0.030
LPSBL106	Blue	5	0.030
LPSBL107	Transparent	5	0.030
Extended (without mounting adapter). Spring return.			
LPSBL203	Green	5	0.032
LPSBL204	Red	5	0.032
LPSBL205	Yellow	5	0.032
LPSBL206	Blue	5	0.032
LPSBL207	Transparent	5	0.032

Illuminated push-push button actuators

LPSQL10...

LPSQL20...

new

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
Flush (without mounting adapter). Push on-push off.			
LPSQL103❶	Green	5	0.030
LPSQL104❶	Red	5	0.030
LPSQL105❶	Yellow	5	0.030
LPSQL106❶	Blue	5	0.030
LPSQL107❶	Transparent	5	0.030
Extended (without mounting adapter). Push on-push off.			
LPSQL203❶	Green	5	0.032
LPSQL204❶	Red	5	0.032
LPSQL205❶	Yellow	5	0.032
LPSQL206❶	Blue	5	0.032
LPSQL207❶	Transparent	5	0.032

❶ **Use contact elements LPXC10A (EM) and LPXC01 (NC) only.**
Contact elements LPXC10 (NO) and LPXC01D (LB) cannot be fitted on these actuators.

Illuminated mushroom head button actuators

LPSBL614...

LPSBL664...

new

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
SPRING RETURN. Ø40mm/1.57" (without mounting adapter).			
LPSBL6143	Green	5	0.040
LPSBL6144	Red	5	0.040
LPSBL6145	Yellow	5	0.040
LPSBL6146	Blue	5	0.040
LPSBL6148	White	5	0.040
LATCH, TURN TO RELEASE. Ø40mm/1.57" (without mounting adapter). For normal stopping.			
LPSBL6643	Green	1	0.045
LPSBL6645	Yellow	1	0.045
LPSBL6646	Blue	1	0.045
For emergency stopping, ISO 13850 compliant.			
LPSBL6644	Red	5	0.045

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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
An aluminium and zinc alloy (zama) is used for the metal part whereas plastic parts are made of 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
- Spring return mushroom-head actuators: 5,000,000 cycles
- Latch mushroom-head actuators: 300,000 cycles.

Mounting adapter
See page 7-36.
Type: LPXAU120M.
The adapter is fixed to the mounting surface by means of incorporated screws (Tmax = 0.8Nm/0.59lb.ft).
Actuators latch onto the mounting adapter by simple rotation.

Contact elements for illuminated spring return and mushroom-head latch actuators
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120M mounting adapter (to purchase separately). For types LPSBL1/BL2/BL61... up to 6 contacts can be fitted: 3 each on the left and right, one behind the other. For types LPSBL66... up to 4 contacts can be fitted: 2 each on the left and right, one behind the other. The LPXAU120M mounting adapter can also be fitted internally to the cover of the LPZ... control station with up to 2 elements per actuator in addition to the LED element in the middle position.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw

Base mount types snap into LPZP... control station base.
See example on page 7-38.
Up to 2 elements per actuator can also be fitted internally to the cover of the LPZ... control station in addition to the LED element in the middle position.

1NO	LPXCB10	Screw
1NC	LPXCB01	Screw

Contact elements for illuminated push-push button actuators
See page 7-37.
Type: LPXC10A (1EM)
LPXC01 (1NC)
Contacts snap onto the adapter also internally on the cover surface of LPZ... control stations.
Up to 4 contacts can be fitted: 2 each on the left and right, one behind the other; up to 2 elements per control station actuator in addition to the LED element in the middle position.

LED light elements
See pages 7-39 to 42.

Certifications and compliance
Certifications: cULus.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Double-touch actuators, spring return, white indicator

LPSBL71...

LPSBL72...

new

Order code	Colour	Symbol	Qty per pkg	Wt
			n°	[kg]
Two flush pushbuttons (without mounting adapter). Both spring return.				
LPSBL7112	Black/Red	—	5	0.035
LPSBL7113	Green/Red	—	5	0.035
LPSBL7114	White/Black	—	1	0.035
LPSBL7122	Black/Red	I-O	5	0.035
LPSBL7123	Green/Red	I-O	5	0.035
LPSBL7124	White/Black	I-O	5	0.035
LPSBL7133	Green/Red	Start/Stop	5	0.035
LPSBL7191	Black/Black	↑ ↓	5	0.035
One extended and one flush pushbuttons (without mounting adapter). Both spring return.				
LPSBL7212	Black/Red	—	1	0.035
LPSBL7213	Green/Red	—	5	0.035
LPSBL7214	White/Black	—	1	0.035
LPSBL7222	Black/Red	I-O	1	0.035
LPSBL7223	Green/Red	I-O	5	0.035
LPSBL7224	White/Black	I-O	5	0.035
LPSBL7233	Green/Red	Start/Stop	5	0.035

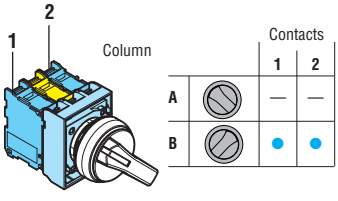
Illuminated selector switch actuators

LPSSL1...

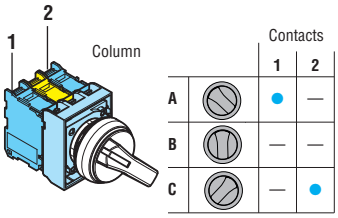
new

Order code	Colour	Type of positions	Qty per pkg	Wt
			n°	[kg]
2 positions (without mounting adapter).				
LPSSL1203	Green	∨	5	0.030
LPSSL1204	Red		5	0.030
LPSSL1205	Yellow		5	0.030
LPSSL1206	Blue		5	0.030
LPSSL1208	White		5	0.030
LPSSL1213	Green	◜∨	5	0.030
LPSSL1214	Red		1	0.030
LPSSL1215	Yellow		1	0.030
LPSSL1216	Blue		1	0.030
LPSSL1218	White		5	0.030
3 positions (without mounting adapter).				
LPSSL1303	Green	∨	5	0.030
LPSSL1304	Red		5	0.030
LPSSL1305	Yellow		5	0.030
LPSSL1306	Blue		5	0.030
LPSSL1308	White		5	0.030
LPSSL1313	Green	◜∨◝	5	0.030
LPSSL1314	Red		1	0.030
LPSSL1315	Yellow		1	0.030
LPSSL1316	Blue		1	0.030
LPSSL1318	White		5	0.030
LPSSL1323	Green	∨◝	5	0.030
LPSSL1324	Red		1	0.030
LPSSL1325	Yellow		1	0.030
LPSSL1326	Blue		1	0.030
LPSSL1328	White		5	0.030
LPSSL1333	Green	◜∨	5	0.030
LPSSL1334	Red		1	0.030
LPSSL1335	Yellow		1	0.030
LPSSL1336	Blue		1	0.030
LPSSL1338	White		5	0.030

Contact activation of 2-position selector switch



Contact activation of 3-position selector switch



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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
An aluminium and zinc alloy (zama) is used for the metal part whereas plastic parts are made of polyamide.

Mechanical endurance
Operating force: <0.5kg/1.1lb (actuator).
Mechanical life:
- Double-touch: 1,000,000 cycles.
- Selector switches: 1,000,000 cycles.

Mounting adapter
See page 7-36.
Type: LPXAU120M.
The adapter is fixed to the mounting surface by means of incorporated screws (Tmax = 0.8Nm/0.59lb.ft).
Actuators latch onto the mounting adapter by simple rotation.

Contact elements
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120M mounting adapter (to purchase separately). For DOUBLE-TOUCH types, up to 6 contacts can be fitted: 3 each on the left and right, one behind the other. For SELECTOR SWITCHES, up to 4 contacts can be fitted: 2 each on the left and right, one behind the other. The LPXAU120M mounting adapter can also be fitted internally to the cover of the LPZ... control station with up to 2 elements per actuator in addition to the LED element in the middle position.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw
Base mount types snap into LPZP... control station base. See example on page 7-38. Up to 2 elements per actuator can also be fitted internally to the cover of the LPZ... control station in addition to the LED element in the middle position.		
1NO	LPXCB10	Screw
1NC	LPXCB01	Screw

Selector switch type of positions
∨ Maintained position.
◜∨ Spring return position.

Selector switch rotation angles
2 positions

3 positions

LED light elements
See pages 7-39 to 42.

Certifications and compliance
Certifications: cULus.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Pilot light heads

LPSL...

new

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
Without mounting adapter.			
LPSL3	Green	5	0.029
LPSL4	Red	5	0.029
LPSL5	Yellow	5	0.029
LPSL6	Blue	5	0.029
LPSL7	Transparent	5	0.029
LPSL1187	Transparent ϟ ❶	5	0.029

❶ With symbol indicating dangerous voltage (IEC/EN 60417 5036-a).

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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
An aluminium and zinc alloy (zama) is used for the metal part whereas plastic parts are made of polyamide.

Mounting adapter
See page 7-36.
Type: LPXAU120M.
The adapter is fixed to the mounting surface by means of incorporated screws (Tmax = 0.8Nm/0.59lb.ft).
Actuators latch onto the mounting adapter by simple rotation.

LED light elements
See pages 7-39 to 42.

Certifications and compliance
Certifications: cULus.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Joysticks

LPSJ4...
(without mechanical interlock)

LPSJ2...
(with mechanical interlock)

Order code	Type of positions	N° auxiliary elements	Qty per pkg	Wt
		NO	n°	[kg]
Without mechanical interlock. Complete with auxiliary contact. Label holder excluded.				
LPSJ200		2	1	0.082
LPSJ201		2	1	0.082
LPSJ400		4	1	0.104
LPSJ401		4	1	0.104
With mechanical interlock in centre position. Complete with auxiliary contact. Label holder excluded.				
LPSJ210		2	1	0.082
LPSJ211		2	1	0.082
LPSJ410		4	1	0.104
LPSJ411		4	1	0.104

Accessories

LPXAU101

Order code	Description	Qty per pkg	Wt
		n°	[kg]
LPXAU101	2-4 directional holder for adhesive legends ❶	1	0.004

❶ See page 7-48 for the complete list of available labels.

Operational characteristics
- Any mounting position allowed
- LPSJ2... types can be used with LPZ... control stations
- Ambient conditions:
  - Operating temperature: -25...+60°C
  - Storage temperature: -40...+70°C
- Degree of protection:
  - Per IEC/EN: IP66
  - Per UL: Type 1, 2, 3R, 4, 4X, 12, 12K
  - IP20 for contact elements.

Materials
An aluminium and zinc alloy (zama) is used for the metal parts whereas plastic parts are made of polyamide and polycarbonate.
The sealing boot is made of NBR rubber.

Mechanical endurance
Mechanical life: 1,000,000 cycles.

General characteristics of contact elements
Wiping action and dual scraping-oscillating effect.
IEC rated insulation voltage: 690V
IEC rated thermal current Ith: 10A
UL/CSA and IEC/EN/BS 60947-5-1 designation: A300 Q300.
IEC/EN operational characteristics in AC15 category:

[V]	12	24	48	120	240
[A]	6	6	6	6	3

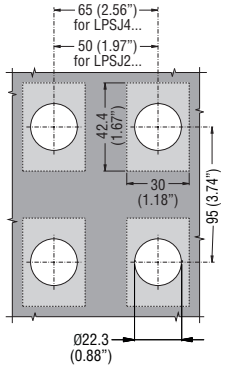
IEC/EN operational characteristics in DC13 category:

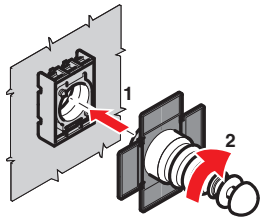
[V]	12	24	48	125	250
[A]	0.55	0.55	0.55	0.55	0.27

Short circuit protection fuse, max calibre: 10A gG/SC.
Contact resistance: ≤20mΩ.
Terminals: Clamp screw with washer
Maximum tightening torque: 1Nm/0.74lb.ft.

Mounting adapter and contact elements
The joystick is standard supplied with the mounting adapter and contact elements.
The adapter is fixed to the mounting surface by means of incorporated screws (Tmax = 0.8Nm/0.59lb.ft).
The joystick latches onto the mounting adapter by simple rotation.
Contact elements snap onto the mounting adapter.
2 LPXC... contacts are mounted on joystick LPSJ2... type and 4 LPXC... contacts on LPSJ4... type.
The mounting adapter and contact elements of LPSJ2... types can be internally mounted on LPZ... control stations covers.

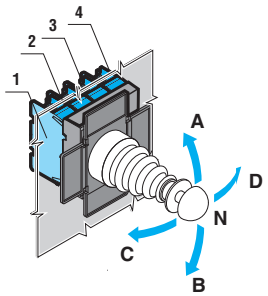
Certifications and compliance
Certifications: cULus.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.



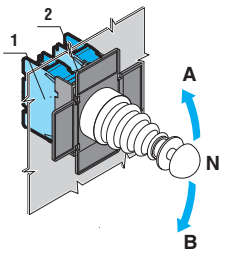


Joystick positions and contact activation

2 instable — 2 stable
4 instable — 4 stable



		A	B	C	D	N
LPXC10	1	●				
	2		●			
	3				●	
	4			●		



		A	B	N
LPXC10	1	●		
	2		●	

Pushbutton actuators, spring return

LPFB10...

LPFB20...

new

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
Flush (without mounting adapter). Spring return.			
LPFB102	Black	5	0.060
LPFB103	Green	5	0.060
LPFB104	Red	5	0.060
LPFB105	Yellow	5	0.060
LPFB106	Blue	5	0.060
LPFB108	White	5	0.060
Extended (without mounting adapter). Spring return.			
LPFB202	Black	5	0.062
LPFB203	Green	5	0.062
LPFB204	Red	5	0.062
LPFB205	Yellow	5	0.062
LPFB206	Blue	5	0.062
LPFB208	White	5	0.062

Push-push button actuators

LPFQ10...

LPFQ20...

new

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
Flush (without mounting adapter). Push on-push off.			
LPFQ102❶	Black	5	0.060
LPFQ103❶	Green	5	0.060
LPFQ104❶	Red	5	0.060
LPFQ105❶	Yellow	5	0.060
LPFQ106❶	Blue	5	0.060
LPFQ108❶	White	5	0.060
Extended (without mounting adapter). Push on-push off.			
LPFQ202❶	Black	5	0.062
LPFQ203❶	Green	5	0.062
LPFQ204❶	Red	5	0.062
LPFQ205❶	Yellow	5	0.062
LPFQ206❶	Blue	5	0.062
LPFQ208❶	White	5	0.062

❶ **Use contact elements LPXC10A (EM) and LPXC01 (NC) only.**
Contact elements LPXC10 (NO) and LPXC01D (LB) cannot be fitted on these actuators.
For the number of contacts that can be fitted, see the indication here to the side.

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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
An aluminium and zinc alloy (zama) is used for the metal part whereas plastic parts are made of 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
See page 7-36.
Type: LPXAU120M.
The actuators fit into a Ø30mm/Ø1.18" hole. The fixing of the base to the mounting surface is made using the adapter supplied with the actuator and the screws incorporated in the base (Tmax = 0.8Nm/0.59lb.ft).

Contact elements for spring return button actuators
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120M mounting adapter (to purchase separately). Up to 9 contacts can be fitted: 3 each on the left, middle and right, one behind the other.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw

Contact elements for push-push button actuators
See page 7-37.
Type: LPXC10A (1EM)
LPXC01 (1NC)
Up to 6 contacts can be fitted: 2 each on the left, middle and right, one behind the other.

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

Certifications and compliance
Certifications: cULus.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Pushbutton actuators, spring return, with symbol

LPFB11...

LPFB21...

new

Order code	Symbol	Colour	Qty per pkg	Wt
			n°	[kg]
Flush (without mounting adapter). Spring return.				
LPFB1102	O	Black	5	0.060
LPFB1104		Red	5	0.060
LPFB1113	I	Green	5	0.060
LPFB1118		White	5	0.060
LPFB1123	II	Green	1	0.060
LPFB1128		White	1	0.060
LPFB1132	STOP	Black	5	0.060
LPFB1134		Red	5	0.060
LPFB1142	←❶	Black	5	0.060
LPFB1148		White	5	0.060
LPFB1152	↑❷	Black	5	0.060
LPFB1158		White	5	0.060
LPFB1163	START	Green	5	0.060
LPFB1168		White	1	0.060
LPFB1176	R	Blue	1	0.060
LPFB1178		White	1	0.060
LPFB1196	RESET	Blue	5	0.060
LPFB1502	◄|►	Black	5	0.060
LPFB1512	►|◄	Black	5	0.060
Extended (without mounting adapter). Spring return.				
LPFB2102	O	Black	5	0.062
LPFB2104		Red	5	0.062
LPFB2132	STOP	Black	1	0.062
LPFB2134		Red	5	0.062

❶ Arrow symbol can be used to indicate right or left.
❷ Arrow symbol can be used to indicate up or down.

Pushbutton actuators, spring return, with special symbols

LPFB...

new

Order code ❹❺	Symbol	Colour	Qty per pkg	Wt
			n°	[kg]
Spring return (without mounting adapter).				
LPFB❶❷18❸	ϟ❻	❸	50	0.062
LPFB❶❷34❸	MAN	❸	50	0.062
LPFB❶❷35❸	AUTO	❸	50	0.062
LPFB❶❷22❸	↗	❸	50	0.062
LPFB❶❷23❸	◻◁	❸	50	0.062

Note: for other symbols see page 7- 35.
❶ Add letter "L" if illuminated type is required.
❷ For the type of actuator, add: 1 for flush or 2 for extended.
❸ Add the actuator colour: 2 black only for non-illuminated type; 3 green, 4 red, 5 yellow, 6 blue, 8 white or 7 transparent for illuminated version.
❹ Products available on specific request for a minimum multiple quantity of 50 pieces per type.
❺ Consult Technical support for assistance; see contact details or inside front cover.
❻ Symbol indicating dangerous voltage (IEC 60417 5036-a).
Examples of complete order codes:
LPFB2258 – extended non-illuminated white pushbutton with + symbol
LPFBL1685 – flush illuminated yellow pushbutton actuator with ⚠ symbol.

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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
An aluminium and zinc alloy (zama) is used for the metal part whereas plastic parts are made of polyamide.

Mechanical endurance
Operating force: <0.5kg/1.1lb (actuator).
Mechanical life: 5,000,000 cycles.

Mounting adapter
See page 7-36.
Type: LPXAU120M.
The actuators fit into a Ø30mm/Ø1.18" hole. The fixing of the base to the mounting surface is made using the adapter supplied with the actuator and the screws incorporated in the base (Tmax = 0.8Nm/0.59lb.ft).

Contact elements for spring return button actuators
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120M mounting adapter (to purchase separately). Up to 9 contacts can be fitted: 3 each on the left, middle and right, one behind the other.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw

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

Certifications and compliance
Certifications: cULus.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Selector switch actuators lever

LPFS1...

new

Order code	Type of positions	Qty per pkg	Wt
		n°	[kg]
2 positions (without mounting adapter).			
LPFS120		5	0.062
LPFS121		5	0.062
3 positions (without mounting adapter).			
LPFS130		5	0.062
LPFS131		5	0.062
LPFS132		5	0.062
LPFS133		5	0.062

Selector switch actuators long lever

LPFS2...

new

Order code	Type of positions	Qty per pkg	Wt
		n°	[kg]
2 positions (without mounting adapter).			
LPFS220		5	0.065
LPFS221		5	0.065
3 positions (without mounting adapter).			
LPFS230		5	0.065
LPFS231		5	0.065
LPFS232		5	0.065
LPFS233		5	0.065

Selector switch actuators key (Ronis)

LPFS3...

new

Order code	Type of positions	Qty per pkg	Wt
		n°	[kg]
2 positions (without mounting adapter).			
LPFS320		5	0.095
LPFS320R❶		1	0.095
LPFS321		5	0.095
LPFS321R❶		1	0.095
LPFS340		5	0.095
LPFS340R❶		1	0.095
3 positions (without mounting adapter).			
LPFS330		5	0.095
LPFS330R❶		1	0.095
LPFS331		5	0.095
LPFS331R❶		1	0.095
LPFS332❷		5	0.095
LPFS332R❶❷		1	0.095
LPFS333❷		5	0.095
LPFS333R❶❷		1	0.095
LPFS350		5	0.095
LPFS350R❶		1	0.095
LPFS360		5	0.095
LPFS360R❶		1	0.095
LPFS370❷		5	0.095
LPFS370R❶❷		1	0.095
LPFS380❷		5	0.095
LPFS380R❶❷		1	0.095
LPFS390❷		5	0.095
LPFS390R❶❷		1	0.095

❶ 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: LPCS320R421E.
❷ Available only on specific request.

Operational characteristics
- Any mounting position allowed
- Standard key types supplied with Ronis key code n° 455
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection:
  - Per IEC/EN: IP66, IP67 and IP69K
  - Per UL: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
An aluminium and zinc alloy (zama) is used for the metal part whereas plastic parts are made of polyamide.

Mechanical endurance
Mechanical life: 1,000,000 cycles.

Mounting adapter
See page 7-36.
Type: LPXAU120M.
The actuators fit into a Ø30mm/Ø1.18" hole. The fixing of the base to the mounting surface is made using the adapter supplied with the actuator and the screws incorporated in the base (Tmax = 0.8Nm/0.59lb.ft).

Contact elements
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120M mounting adapter (to purchase separately). Up to 6 contacts can be fitted: 2 each on the left, middle and right or 3 each on the left and right, one behind the other.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw

Activation of the middle contacts is coupled to the side contacts; the relative mechanism pins are standard supplied.

The middle contact activation, with respect to the right and left side contact, can be changed by the user, if required, by removing one mechanism pin. Consult the relative instructions available online in the Downloads section at www.LovatoElectric.com.

Type of position
- Maintained position.
- Spring return position.
- Key extraction position.

Rotation angles
2 positions

3 positions

Special versions
Versions with coloured keys are available upon request. Consult Technical support; see contact details on inside front cover.

Certifications and compliance
Certifications: cULus.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Selector switch actuators knob

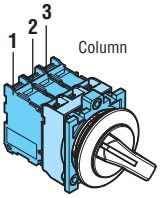
LPFS4...

new

Order code	Type of positions	Qty per pkg	Wt
		n°	[kg]
2 positions (without mounting adapter).			
LPFS420		5	0.072
LPFS421		5	0.072
3 positions (without mounting adapter).			
LPFS430		5	0.072
LPFS431		5	0.072
LPFS432		5	0.072
LPFS433		5	0.072

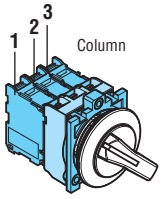
Contact activation

2-position selector switch



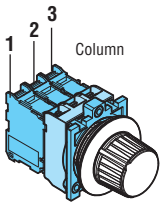
	Contacts 1	2	3
A	—	—	—
B	●	●	●

3-position selector switch



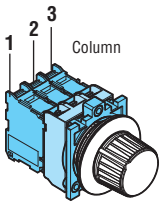
	Contacts 1	2	3
A	●	●	—
B	—	—	—
C	—	●	●

2-position knob selector switch



	Contacts 1	2	3
A	—	—	—
B	●	●	●

3-position knob selector switch



	Contacts 1	2	3
A	●	●	—
B	—	—	—
C	—	●	●

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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
An aluminium and zinc alloy (zama) is used for the metal part whereas plastic parts are made of polyamide.

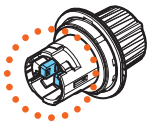
Mechanical endurance
Mechanical life: 1,000,000 cycles.

Mounting adapter
See page 7-36.
Type: LPXAU120M.
The actuators fit into a Ø30mm/Ø1.18" hole. The fixing of the base to the mounting surface is made using the adapter supplied with the actuator and the screws incorporated in the base (Tmax = 0.8Nm/0.59lb.ft).

Contact elements
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120M mounting adapter (to purchase separately). Up to 6 contacts can be fitted: 2 each on the left, middle and right or 3 each on the left and right, one behind the other.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw

Activation of the middle contacts is coupled to the side contacts; the relative mechanism pins are standard supplied.

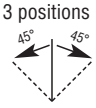


The middle contact activation, with respect to the right and left side contact, can be changed by the user, if required, by removing one mechanism pin. Consult the relative instructions available online in the Downloads section at www.LovatoElectric.com.

Type of position
- Maintained position.
- Spring return position.

Rotation angles
2 positions

3 positions



Certifications and compliance
Certifications: cULus.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Illuminated button actuators, spring return

LPFBL10...

LPFBL20...

new

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
Flush (without mounting adapter). Spring return.			
LPFBL103	Green	5	0.070
LPFBL104	Red	5	0.070
LPFBL105	Yellow	5	0.070
LPFBL106	Blue	5	0.070
LPFBL107	Transparent	5	0.070
Extended (without mounting adapter). Spring return.			
LPFBL203	Green	5	0.072
LPFBL204	Red	5	0.072
LPFBL205	Yellow	5	0.072
LPFBL206	Blue	5	0.072
LPFBL207	Transparent	5	0.072

Illuminated push-push button actuators

LPFQL10...

LPFQL20...

new

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
Flush (without mounting adapter). Push on-push off.			
LPFQL103❶	Green	5	0.070
LPFQL104❶	Red	5	0.070
LPFQL105❶	Yellow	5	0.070
LPFQL106❶	Blue	5	0.070
LPFQL107❶	Transparent	5	0.070
Extended (without mounting adapter). Push on-push off.			
LPFQL203❶	Green	5	0.072
LPFQL204❶	Red	5	0.072
LPFQL205❶	Yellow	5	0.072
LPFQL206❶	Blue	5	0.072
LPFQL207❶	Transparent	5	0.072

❶ **Use contact elements LPXC10A (EM) and LPXC01 (NC) only.**
Contact elements LPXC10 (NO) and LPXC01D (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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
An aluminium and zinc alloy (zama) is used for the metal part whereas plastic parts are made of 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
See page 7-36.
Type: LPXAU120M.
The actuators fit into a Ø30mm/Ø1.18" hole. The fixing of the base to the mounting surface is made using the adapter supplied with the actuator and the screws incorporated in the base (Tmax = 0.8Nm/0.59lb.ft).

Contact elements for illuminated spring return actuators
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120M mounting adapter (to purchase separately). Up to 6 contacts can be fitted: 3 each on the left and right, one behind the other.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw

Contact elements for illuminated push-push button actuators
See page 7-37.
Type: LPXC10A (1EM)
LPXC01 (1NC)
Up to 4 contacts can be fitted: 2 each on the left and right, one behind the other.

LED light elements
See pages 7-39 to 42.

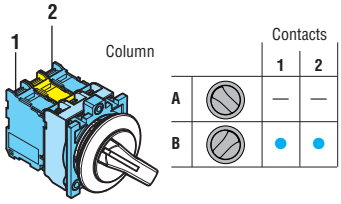
Certifications and compliance
Certifications: cULus.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Illuminated selector switch actuators

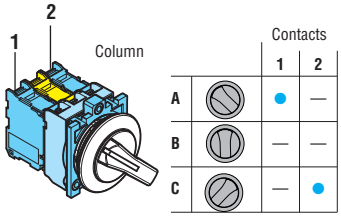
LPFSL1...

new

Contact activation of 2-position selector switch



Contact activation of 3-position selector switch



Order code	Colour	Type of positions	Qty per pkg	Wt
			n°	[kg]
2 positions (without mounting adapter).				
LPFSL1203	Green	⌵	5	0.060
LPFSL1204	Red		5	0.060
LPFSL1205	Yellow		5	0.060
LPFSL1206	Blue		5	0.060
LPFSL1208	White		5	0.060
LPFSL1213	Green	⌵	5	0.060
LPFSL1214	Red		1	0.060
LPFSL1215	Yellow		1	0.060
LPFSL1216	Blue		1	0.060
LPFSL1218	White		5	0.060
3 positions (without mounting adapter).				
LPFSL1303	Green	⌵	5	0.060
LPFSL1304	Red		5	0.060
LPFSL1305	Yellow		5	0.060
LPFSL1306	Blue		5	0.060
LPFSL1308	White		5	0.060
LPFSL1313	Green	⌵	5	0.060
LPFSL1314	Red		1	0.060
LPFSL1315	Yellow		1	0.060
LPFSL1316	Blue		1	0.060
LPFSL1318	White		5	0.060
LPFSL1323	Green	⌵	5	0.060
LPFSL1324	Red		1	0.060
LPFSL1325	Yellow		1	0.060
LPFSL1326	Blue		1	0.060
LPFSL1328	White		5	0.060
LPFSL1333	Green	⌵	5	0.060
LPFSL1334	Red		1	0.060
LPFSL1335	Yellow		1	0.060
LPFSL1336	Blue		1	0.060
LPFSL1338	White		5	0.060

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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
An aluminium and zinc alloy (zama) is used for the metal part whereas plastic parts are made of polyamide.

Mechanical endurance
Operating force: <0.5kg/1.1lb (actuator).
Mechanical life:
- Selector switches: 1,000,000 cycles.

Mounting adapter
See page 7-36.
Type: LPXAU120M.
The actuators fit into a Ø30mm/Ø1.18" hole. The fixing of the base to the mounting surface is made using the adapter supplied with the actuator and the screws incorporated in the base (Tmax = 0.8Nm/0.59lb.ft).

Contact elements
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120M mounting adapter (to purchase separately). Up to 4 contacts can be fitted: 2 each on the left and right, one behind the other.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw

Selector switch type of positions
⌵ Maintained position.
⌵ Spring return position.

Selector switch rotation angles
2 positions

3 positions

LED light elements
See pages 7-39 to 42.

Certifications and compliance
Certifications: cULus.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Pilot light heads

LPFL...

new

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
Without mounting adapter.			
LPFL3	Green	5	0.054
LPFL4	Red	5	0.054
LPFL5	Yellow	5	0.054
LPFL6	Blue	5	0.054
LPFL7	Transparent	5	0.054
LPFL1187	Transparent ϟ ❶	5	0.054

❶ With symbol indicating dangerous voltage (IEC/EN/BS 60417 5036-a).

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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
An aluminium and zinc alloy (zama) is used for the metal part whereas plastic parts are made of polyamide.

Mounting adapter
See page 7-36.
Type: LPXAU120M.
The actuators fit into a Ø30mm/Ø1.18" hole. The fixing of the base to the mounting surface is made using the adapter supplied with the actuator and the screws incorporated in the base (Tmax = 0.8Nm/0.59lb.ft).

LED light elements
See pages 7-39 to 42.

Certifications and compliance
Certifications: cULus.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

USB and RJ45 communication interfaces

LPFD01

new

LPFD01L...

LPFD06

Order code	Description	Qty per pkg	Wt
		n°	[kg]
LPFD01	USB interface, A/A female type connection	1	0.053
LPFD01L050	USB interface, A/A female connection with 0.5m long cable	1	0.095
LPFD01L100	USB interface, A/A female connection with 1m long cable	1	0.115
LPFD03	USB interface, A/B female type connection	1	0.053
LPFD05	USB interface, B/A female type connection	1	0.053
LPFD06	RJ45 interface,, Ethernet connection type	1	0.061
LPFD06L100	RJ45 interface, Ethernet connection with 1m long cable	1	0.125

General characteristics
USB and RJ45 communication interface connectors are used in industrial environments, which in recent years have seen an increase in the number of connections between machines, production lines, equipment and measuring instruments. These interfaces provide the transmission of data in both directions between the various devices.

Operational characteristics
- Rated insulation voltage for LPFD01, LPFD03, LPFD05: 5VAC/DC
- Rated insulation voltage for LPFD06: 50VAC/DC
- Installed through a Ø30mm/Ø1.18" drilling with a threaded fixing ring (Tmax = 0.8Nm/0.59lb.ft)
- Transmission characteristics for LPFD01, LPFD03, LPFD05: 5Gbps (625MB/sec)
- Transmission characteristics for LPFD06: Cat.6
- Rated current for LPFD01, LPFD03, LPFD05: 1.5A
- Rated current for LPFD06: 0.6A
- Insulation resistance: ≥100MOhm
- Contact resistance for LPFD01, LPFD03, LPFD05: ≤30mOhm
- Contact resistance for LPFD06: ≤40mOhm
- USB connector class: 3.0 (backward compatible with USB class 2.0)
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection:
  - Per IEC/EN: IP65 on front (with cap mounted)
  - Per IEC/EN: IP20 at rear
  - Per UL: Type 1, 2, 3R, 4, 4X, 12, 12K on front (with cap mounted).

Materials
An aluminium and zinc alloy (zama) is used for the metal part whereas plastic parts are made of polyamide.

Certifications and compliance
Certifications: cULus.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Pushbutton actuators, spring return

LPCB10...

LPCB20...

LPCB30...

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
Flush (without mounting adapter). Spring return.			
LPCB102	Black	10	0.025
LPCB103	Green	10	0.025
LPCB104	Red	10	0.025
LPCB105	Yellow	10	0.025
LPCB106	Blue	10	0.025
LPCB108	White	10	0.025
Extended (without mounting adapter). Spring return.			
LPCB202	Black	10	0.027
LPCB203	Green	10	0.027
LPCB204	Red	10	0.027
LPCB205	Yellow	1	0.027
LPCB206	Blue	1	0.027
LPCB208	White	1	0.027
Shrouded (without mounting adapter). Spring return.			
LPCB302	Black	10	0.027
LPCB303	Green	10	0.027
LPCB304	Red	10	0.027
LPCB305	Yellow	1	0.027
LPCB306	Blue	1	0.027
LPCB308	White	1	0.027

Push-push button actuators

LPCQ10...

LPCQ20...

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
Flush (without mounting adapter). Push on-push off.			
LPCQ102❶	Black	10	0.025
LPCQ103❶	Green	10	0.025
LPCQ104❶	Red	10	0.025
LPCQ105❶	Yellow	1	0.025
LPCQ106❶	Blue	1	0.025
LPCQ108❶	White	1	0.025
Extended (without mounting adapter). Push on-push off.			
LPCQ202❶	Black	10	0.027
LPCQ203❶	Green	10	0.027
LPCQ204❶	Red	10	0.027
LPCQ205❶	Yellow	1	0.027
LPCQ206❶	Blue	1	0.027
LPCQ208❶	White	1	0.027

❶ **Use contact elements LPXC10A (EM) and LPXC01 (NC) only.**
Contact elements LPXC10 (NO) and LPXC01D (LB) cannot be fitted on these actuators.
For the number of contacts that can be fitted, see the indication here to the side.

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: 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
See page 7-36.
Type: LPXAU120.
Actuators are installed through a Ø22mm/Ø0.87" drilling with a threaded fixing ring (Tmax = 2.3Nm/1.69lb.ft) also on the cover of LPZ... control stations.
The mounting adapter directly snaps onto the actuator.

Contact elements for spring return button actuators
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120 mounting adapter (to purchase separately). Up to 9 contacts can be fitted: 3 each on the left, middle and right, one behind the other. The LPXAU120 mounting adapter can also be fitted internally to the cover of the LPZ... control station with up to 3 elements per actuator.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw
Base mount types snap into LPZP... control station base. See example on page 7-38. Up to 3 contacts can be fitted per LPZ... control station actuator.		
1NO	LPXCB10	Screw
1NC	LPXCB01	Screw

Contact elements for push-push button actuators
See page 7-37.
Type: LPXC10A (1EM)
LPXC01 (1NC)
Contacts snap onto the adapter 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, RINA.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Mechanical rest buttons, complete unit, spring return

LPCR1196

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
Flush (5.2mm/0.2" stroke). Adjustable length 0-150mm/5.9". Complete with shaft (without mounting adapter). Spring return.			
LPCR1002	Black	10	0.038
LPCR1003	Green	10	0.038
LPCR1004	Red	10	0.038
LPCR1006	Blue	10	0.038
LPCR1196❶	Blue (RESET)	10	0.038
Extended (5.2mm/0.2" stroke). Adjustable length 0-150mm/5.9". Complete with shaft (without mounting adapter). Spring return.			
LPCR2004	Red	1	0.040

❶ With "RESET" caption on actuator.
E.g. Not suitable for LPZ... control stations.

Pushbutton actuators, spring return, with symbol

LPCB11...

LPCB21...

Order code	Symbol	Colour	Qty per pkg	Wt
			n°	[kg]
Flush (without mounting adapter). Spring return.				
LPCB1102	O	Black	10	0.025
LPCB1104		Red	10	0.025
LPCB1113	I	Green	10	0.025
LPCB1118		White	10	0.025
LPCB1123	II	Green	1	0.025
LPCB1128		White	1	0.025
LPCB1132	STOP	Black	1	0.025
LPCB1134		Red	10	0.025
LPCB1142	←❶	Black	10	0.025
LPCB1148		White	10	0.025
LPCB1152	↑❷	Black	10	0.025
LPCB1158		White	10	0.025
LPCB1163	START	Green	10	0.025
LPCB1168		White	1	0.025
LPCB1176	R	Blue	1	0.025
LPCB1178		White	1	0.025
LPCB1196	RESET	Blue	10	0.025
LPCB1502	◄|►	Black	10	0.025
LPCB1512	►|◄	Black	10	0.025
Extended (without mounting adapter). Spring return.				
LPCB2102	O	Black	10	0.027
LPCB2104		Red	10	0.027
LPCB2132	STOP	Black	1	0.027
LPCB2134		Red	10	0.027

❶ Arrow symbol can be used to indicate right or left.
❷ Arrow symbol can be used to indicate up or down.

Pushbutton actuators, spring return, with special symbols

LPCB...

Order code ❹❺	Symbol	Colour	Qty per pkg	Wt
			n°	[kg]
Spring return (without mounting adapter).				
LPCB❶❷18❸	⚡❻	❸	50	0.027
LPCB❶❷34❸	MAN	❸	50	0.027
LPCB❶❷35❸	AUTO	❸	50	0.027
LPCB❶❷22❸	↗	❸	50	0.027
LPCB❶❷23❸	▭	❸	50	0.027

Note: for other symbols see page 7- 35.
❶ Add letter "L" if illuminated type is required.
❷ For the type of actuator, add: 1 for flush or 2 for extended.
❸ Add the actuator colour: 2 black only for non-illuminated type; 3 green, 4 red, 5 yellow, 6 blue, 8 white or 7 transparent for illuminated version.
❹ Products available on specific request for a minimum multiple quantity of 50 pieces per type.
❺ Consult Technical support for assistance; see contact details or inside front cover.
❻ Symbol indicating dangerous voltage (IEC 60417 5036-a).
Examples of complete order codes:
LPCB2258 – extended non-illuminated white pushbutton with + symbol
LPCBL1685 – flush illuminated yellow pushbutton actuator with ⚠ symbol.

Operational characteristics
- Any mounting position allowed
- Fine rod adjustment (1-4mm/0.04-0.16") on front with screwdriver by removing actuator cap for mechanical reset buttons
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection:
  - Per IEC/EN: IP66, IP67 and IP69K
  - Per UL: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
Polyamide.

Mechanical endurance
Operating force: <0.5kg/1.1lb (actuator).
Mechanical life: 5,000,000 cycles.

Mounting adapter
See page 7-36.
Type: LPXAU120.
Actuators are installed through a Ø22mm/Ø0.87" drilling with a threaded fixing ring (Tmax = 2.3Nm/1.69lb.ft) also on the cover of LPZ... control stations.
The mounting adapter directly snaps onto the actuator.

Contact elements for mechanical reset buttons
See page 7-37 and 7-38.

Type		Termination
Front mount types snap onto LPXAU120 mounting adapter (to purchase separately), if any contacts are needed. Up to 6 contacts can be fitted: 3 each on the left and right, one behind the other.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw

Contact elements for spring return button actuators
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120 mounting adapter (to purchase separately). Up to 9 contacts can be fitted: 3 each on the left, middle and right; one behind the other. The LPXAU120 mounting adapter can also be fitted internally to the cover of the LPZ... control station with up to 3 elements per actuator.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw
Base mount types snap into LPZP... control station base. See example on page 7-38. Up to 3 contacts can be fitted per LPZ... control station actuator.		
1NO	LPXCB10	Screw
1NC	LPXCB01	Screw

The LPCB... 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, RINA.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Mushroom head pushbutton actuators

LPCB614...

LPCB674...

LPCB6344

LPCB6634

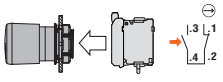
LPCB6644

LPCB684...

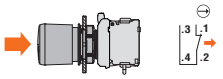
Order code	Colour	Qty per pkg	Wt
		n°	[kg]
SPRING RETURN. Ø40mm/1.57" (without mounting adapter).			
LPCB6142	Black	10	0.033
LPCB6143	Green	10	0.033
LPCB6144	Red	10	0.033
LPCB6145	Yellow	10	0.033
LPCB6146	Blue	10	0.033
Ø60mm/2.36" (without mounting adapter).			
LPCB6162	Black	10	0.038
LPCB6163	Green	1	0.038
LPCB6164	Red	10	0.038
LPCB6165	Yellow	1	0.038
LPCB6166	Blue	1	0.038
LATCH, PULL TO RELEASE. Ø40mm/1.57" (without mounting adapter). For normal stopping.			
LPCB6742	Black	10	0.097
For emergency stopping, ISO 13850 compliant.			
LPCB6744	Red	10	0.097
LATCH, TURN TO RELEASE. Ø40mm/1.57" (without mounting adapter). For normal stopping.			
LPCB6342	Black	10	0.046
LPCB6344	Red	10	0.046
Ø30mm/1.18" (without mounting adapter). For emergency stopping, ISO 13850 compliant.			
LPCB6634	Red	10	0.079
Ø40mm/1.57" (without mounting adapter). For emergency stopping, ISO 13850 compliant.			
LPCB6644	Red	10	0.079
LATCH, TURN KEY TO RELEASE. Ø40mm/1.57" (without mounting adapter). Key code n° 455. For normal stopping.			
LPCB6842	Black	10	0.083
LPCB6842R❶	Black	1	0.083
For emergency stopping, ISO 13850 compliant.			
LPCB6844	Red	10	0.083
LPCB6844R❶	Red	1	0.083

❶ 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: LPCB6844R421E.

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



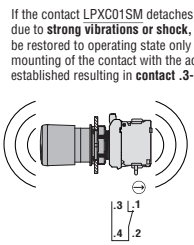
Contact .3-.4 closes when the LPXAU120 mounting adapter and LPX...SM contact are fitted correctly on the mushroom-head latch actuator.
Contact .1-.2 in series does not change state.



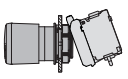
When the button is **fully pressed, contact .1-.2 opens** and remains in this state until the button is released.
Contact .3-.4 in series does not change state.

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

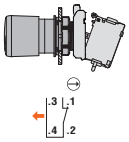
With contact type LPXC01SM (1NC)



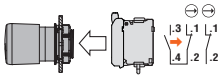
If the contact LPXC01SM detaches from the actuator due to **strong vibrations or shock,** the equipment can be restored to operating state only when proper mounting of the contact with the actuator is re-established resulting in **contact .3-.4 closing.**



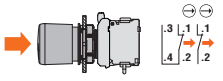
oppure



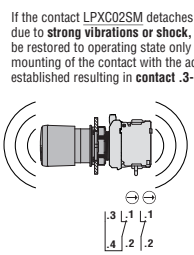
With contact type LPXC02SM (2NC)



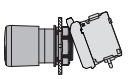
Contact .3-.4 closes when the LPXAU120 mounting adapter and LPX...SM contact are fitted correctly on the mushroom-head latch actuator.
Both contacts .1-.2 in series do not change state.



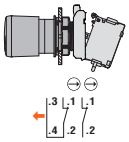
When the button is **fully pressed, both contacts .1-.2 open** and remain in this state until the button is released.
Contact .3-.4 in series does not change state.



If the contact LPXC02SM detaches from the actuator due to **strong vibrations or shock,** the equipment can be restored to operating state only when proper mounting of the contact with the actuator is re-established resulting in **contact .3-.4 closing.**



oppure



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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
Polyamide.

Mechanical endurance
Operating force: <0.5kg1.1lb (actuator).
Mechanical life:
- Spring return mushroom-head actuators: 5,000,000 cycles
- Latch mushroom-head actuators: 300,000 cycles.

Mounting adapter
See page 7-36.
Type: LPXAU120.
Actuators are installed through a Ø22mm/Ø0.87" drilling with a threaded fixing ring (Tmax = 2.3Nm/1.69lb.ft) also on the cover of LPZ... control stations.
The mounting adapter directly snaps onto the actuator.

Contact elements
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120 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 4 contacts can be fitted. The LPXAU120 mounting adapter can also be fitted internally to the cover of the LPZ... control station with up to 3 elements per actuator.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw
Base mount types snap into LPZP... control station base. See example on page 7-38. Up to 3 contacts can be fitted per LPZ... control station actuator.		
1NO	LPXCB10	Screw
1NC	LPXCB01	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 1NO	LPXC01SM	Screw (2 stacked in the middle - LPXAU120 pos.1/3-4/6)
1NO	LPXC10	Screw (2 stacked on the right)
	LPXCF10	Faston (2 stacked on the right)
	LPXCS10	Spring clamp (2 stacked on the right)
1NC	LPXC01	Screw (2 stacked on the right)
	LPXCF01	Faston (2 stacked on the right)
	LPXCS01	Spring clamp (2 stacked on the right)
Auto-monitor 2NC	LPXC02SM	Screw (2 stacked)

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, RINA.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Double-touch actuators, spring return

LPCB71...

LPCB72...

Order code	Colour	Symbols	Qty per pkg	Wt
			n°	[kg]
Two flush pushbuttons (without mounting adapter). Both spring return.				
LPCB7112	Black/Red	—	5	0.030
LPCB7113	Green/Red	—	5	0.030
LPCB7114	White/Black	—	5	0.030
LPCB7122	Black/Red	I-O	5	0.030
LPCB7123	Green/Red	I-O	5	0.030
LPCB7124	White/Black	I-O	5	0.030
LPCB7133	Green/Red	Start/Stop	5	0.030
LPCB7191	Black/Black	↑ ↓	5	0.030
One extended and one flush pushbuttons (without mounting adapter). Both spring return.				
LPCB7212	Black/Red	—	1	0.030
LPCB7213	Green/Red	—	5	0.030
LPCB7214	White/Black	—	1	0.030
LPCB7222	Black/Red	I-O	5	0.030
LPCB7223	Green/Red	I-O	5	0.030
LPCB7224	White/Black	I-O	1	0.030
LPCB7233	Green/Red	Start/Stop	5	0.030

new

Triple-touch actuators, spring return

LPCB73...

Order code	Symbols	Qty per pkg	Wt
		n°	[kg]
One middle extended buttons (without mounting adapter). Spring return.			
LPCB7345		5	0.030
LPCB7355		5	0.030
LPCB7365		5	0.030
LPCB7375		5	0.030

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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
Polyamide.

Mechanical endurance
Operating force: <0.5kg/1.1lb (actuator).
Mechanical life: 1,000,000 cycles.

Mounting adapter
See page 7-36.
Type: LPXAU120.
Actuators are installed through a Ø22mm/Ø0.87" drilling with a threaded fixing ring (Tmax = 2.3Nm/1.69lb.ft) also on the cover of LPZ... control stations.
The mounting adapter directly snaps onto the actuator.

Contact elements
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120 mounting adapter (to purchase separately). For DOUBLE-TOUCH actuators, up to 6 contacts can be fitted: 3 on the left, 3 on the right. For TRIPLE-TOUCH actuators, up to 9 contacts can be fitted: 3 each on the left, middle and right, one behind the other. The LPXAU120 mounting adapter can also be fitted internally to the cover of the LPZ... control station with up to 2 elements for double-touch and 3 elements for triple-touch actuators.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw

Base mount types snap into LPZP... control station base.
See example on page 7-38.
For DOUBLE-TOUCH actuators, 2 contacts need to be fitted, one on the left and one on the right.
For TRIPLE-TOUCH actuators, 3 contacts need to be fitted: one each on the left, middle and right.

1NO	LPXCB10	Screw
1NC	LPXCB01	Screw

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

Selector switch actuators lever

LPCS1...

Order code	Type of positions	Qty per pkg	Wt
		n°	[kg]
2 positions (without mounting adapter).			
LPCS120		10	0.037
LPCS121		10	0.037
3 positions (without mounting adapter).			
LPCS130		10	0.037
LPCS131		10	0.037
LPCS132		10	0.037
LPCS133		10	0.037

Selector switch actuators long lever

LPCS2...

Order code	Type of positions	Qty per pkg	Wt
		n°	[kg]
2 positions (without mounting adapter).			
LPCS220		10	0.040
LPCS221		10	0.040
3 positions (without mounting adapter).			
LPCS230		10	0.040
LPCS231		10	0.040
LPCS232		10	0.040
LPCS233		10	0.040

Selector switch actuators key (Ronis)

LPCS3...

Order code	Type of positions	Qty per pkg	Wt
		n°	[kg]
2 positions (without mounting adapter).			
LPCS320		10	0.060
LPCS320R❶		1	0.060
LPCS321		10	0.060
LPCS321R❶		1	0.060
LPCS340		10	0.060
LPCS340R❶		1	0.060
3 positions (without mounting adapter).			
LPCS330		10	0.060
LPCS330R❶		1	0.060
LPCS331		10	0.060
LPCS331R❶		1	0.060
LPCS332❷		10	0.060
LPCS332R❶❷		1	0.060
LPCS333❷		10	0.060
LPCS333R❶❷		1	0.060
LPCS350		10	0.060
LPCS350R❶		1	0.060
LPCS360		10	0.060
LPCS360R❶		1	0.060
LPCS370❷		10	0.060
LPCS370R❶❷		1	0.060
LPCS380❷		10	0.060
LPCS380R❶❷		1	0.060
LPCS390❷		10	0.060
LPCS390R❶❷		1	0.060

❶ 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 S320 R421E.
❷ Available only on specific request.

Operational characteristics
- Any mounting position allowed
- Standard key types supplied with Ronis key code n° 455
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection:
  - Per IEC/EN: IP66, IP67 and IP69K
  - Per UL: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
Polyamide.

Mechanical endurance
Mechanical life: 1,000,000 cycles.

Mounting adapter
See page 7-36.
Type: LPXAU120.
Actuators are installed through a Ø22mm/Ø0.87" drilling with a threaded fixing ring (Tmax = 2.3Nm/1.69lb.ft) also on the cover of LPZ... control stations.
The mounting adapter directly snaps onto the actuator.

Contact elements
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120 mounting adapter (to purchase separately). Up to 6 contacts can be fitted: 2 each on the left, middle and right or 3 each on the left and right, one behind the other. The LPXAU120 mounting adapter can also be fitted internally to the cover of the LPZ... control station with up to 3 elements per actuator		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw
Base mount types snap into LPZP... control station base. See example on page 7-38. Up to 3 contacts can be fitted per LPZ... control station actuator.		
1NO	LPXCB10	Screw
1NC	LPXCB01	Screw

Activation of the middle contacts is coupled to the side contacts; the relative mechanism pins are standard supplied.

The middle contact activation, with respect to the right and left side contact, can be changed by the user, if required, by removing one or both mechanism pins. Consult the relative instructions available online in the Downloads section at www.LovatoElectric.com.

Type of position
- Maintained position.
- Spring return position.
- • Key extraction position.

Rotation angles
2 positions

3 positions

Special versions
Versions with coloured keys are available upon request. Consult Technical support; see contact details on inside front cover.

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

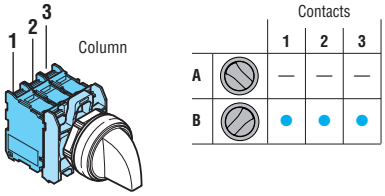
Selector switch actuators knob

LPCS4...

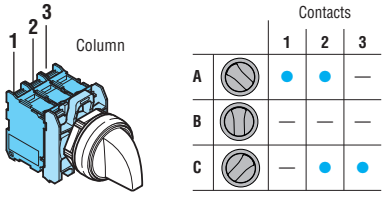
Order code	Type of positions	Qty per pkg	Wt
		n°	[kg]
2 positions (without mounting adapter).			
LPCS420		10	0.037
LPCS421		10	0.037
3 positions (without mounting adapter).			
LPCS430		10	0.037
LPCS431		10	0.037
LPCS432		10	0.037
LPCS433		10	0.037

Contact activation

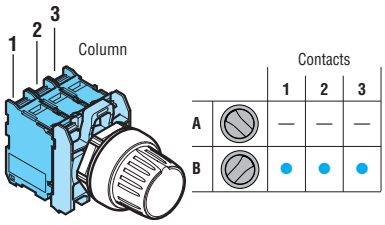
2-position selector switch



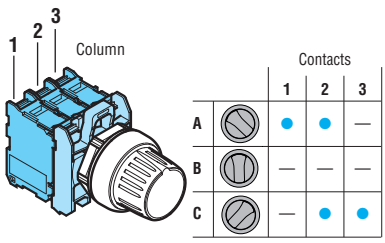
3-position selector switch



2-position knob selector switch



3-position knob selector switch



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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
Polyamide.

Mechanical endurance
Mechanical life: 1,000,000 cycles.

Mounting adapter
See page 7-36.
Type: LPXAU120.
Actuators are installed through a Ø22mm/Ø0.87" drilling with a threaded fixing ring (Tmax = 2.3Nm/1.69lb.ft) also on the cover of LPZ... control stations.
The mounting adapter directly snaps onto the actuator.

Contact elements
See page 7-37 and 7-38.

Type		Termination

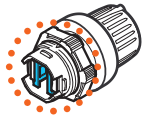
Front-mount types snap onto LPXAU120 mounting adapter (to purchase separately). Up to 6 contacts can be fitted: 2 each on the left, middle and right or 3 each on the left and right, one behind the other.
The LPXAU120 mounting adapter can also be fitted internally to the cover of the LPZ... control station with up to 3 elements per actuator.

1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw

Base mount types snap into LPZP... control station base.
See example on page 7-38.
Up to 3 contacts can be fitted per LPZ... control station actuator.

1NO	LPXCB10	Screw
1NC	LPXCB01	Screw

Activation of the middle contacts is coupled to the side contacts; the relative mechanism pins are standard supplied.



The middle contact activation, with respect to the right and left side contact, can be changed by the user, if required, by removing one or both mechanism pins. Consult the relative instructions available online in the Downloads section at www.LovatoElectric.com.

Type of position
Maintained position.
Spring return position.

Rotation angles
2 positions

3 positions

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

Illuminated button actuators, spring return

LPCBL10...

LPCBL20...

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
Flush (without mounting adapter). Spring return.			
LPCBL103	Green	10	0.025
LPCBL104	Red	10	0.025
LPCBL105	Yellow	10	0.025
LPCBL106	Blue	10	0.025
LPCBL107	Transparent	10	0.025
Extended (without mounting adapter). Spring return.			
LPCBL203	Green	10	0.027
LPCBL204	Red	10	0.027
LPCBL205	Yellow	10	0.027
LPCBL206	Blue	10	0.027
LPCBL207	Transparent	10	0.027

Illuminated push-push button actuators

LPCQL10...

LPCQL20...

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
Flush (without mounting adapter). Push on-push off.			
LPCQL103❶	Green	10	0.025
LPCQL104❶	Red	10	0.025
LPCQL105❶	Yellow	10	0.025
LPCQL106❶	Blue	10	0.025
LPCQL107❶	Transparent	10	0.025
Extended (without mounting adapter). Push on-push off.			
LPCQL203❶	Green	10	0.027
LPCQL204❶	Red	10	0.027
LPCQL205❶	Yellow	10	0.027
LPCQL206❶	Blue	10	0.027
LPCQL207❶	Transparent	10	0.027

❶ **Use contact elements LPXC10A (EM) and LPXC01 (NC) only.**
Contact elements LPXC10 (NO) and LPXC01D (LB) cannot be fitted on these actuators.

Illuminated mushroom head button actuators

LPCBL614...

LPCBL664...

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
SPRING RETURN. Ø40mm/1.6" (without mounting adapter).			
LPCBL6143	Green	10	0.035
LPCBL6144	Red	10	0.035
LPCBL6145	Yellow	10	0.035
LPCBL6146	Blue	10	0.035
LPCBL6148	White	1	0.035
LATCH, TURN TO RELEASE. Ø40mm/1.6" (without mounting adapter). For normal stopping.			
LPCBL6643	Green	1	0.040
LPCBL6645	Yellow	1	0.040
LPCBL6646	Blue	1	0.040
For emergency stopping, ISO 13850 compliant.			
LPCBL6644	Red	10	0.040

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: 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
- Spring return mushroom-head actuators: 5,000,000 cycles
- Latch mushroom-head actuators: 300,000 cycles.

Mounting adapter
See page 7-36.
Type: LPXAU120.
Actuators are installed through a Ø22mm/Ø0.87" drilling with a threaded fixing ring (Tmax = 2.3Nm/1.69lb.ft) also on the cover of LPZ... control stations.
The mounting adapter directly snaps onto the actuator.

Contact elements for illuminated spring return and mushroom-head latch actuators
See page 7-37 and 7-38.

Type	Termination

Front-mount types snap onto LPXAU120 mounting adapter (to purchase separately).
For TYPES LPCBL1/BL2/BL61... up to 6 contacts can be fitted: 3 each on the left and right, one behind the other.
For TYPES LPCBL66... up to 4 contacts can be fitted: 2 each on the left and right, one behind the other.
The LPXAU120 mounting adapter can also be fitted internally to the cover of the LPZ... control station with up to 2 elements per actuator in addition to the LED element in the middle position.

1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw

Base mount types snap into LPZP... control station base.
See example on page 7-38.
Up to 2 contacts can be fitted per LPZ... control station actuator in addition to the LED element in the middle position.

1NO	LPXCB10	Screw
1NC	LPXCB01	Screw

Contact elements for illuminated push-push button actuators
See page 7-37.
Type: LPXC10A (1EM)
LPXC01 (1NC)
Contacts snap onto mounting adapter and also internally on the cover surface of LPZ... control stations.
Up to 4 contacts can be fitted: 2 each on the left and right, one behind the other; up to 2 elements per control station actuator in addition to the LED element in the middle position.

LED light elements
See pages 7-39 to 42.

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

Double-touch actuators, spring return, white indicator

LPCBL71...

LPCBL72...

new

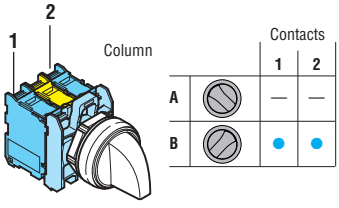
Order code	Colour	Symbol	Qty per pkg	Wt
			n°	[kg]
Two flush pushbuttons (without mounting adapter). Both spring return.				
LPCBL7112	Black/Red	—	5	0.030
LPCBL7113	Green/Red	—	5	0.030
LPCBL7114	White/Black	—	1	0.030
LPCBL7122	Black/Red	I-O	5	0.030
LPCBL7123	Green/Red	I-O	5	0.030
LPCBL7124	White/Black	I-O	5	0.030
LPCBL7133	Green/Red	Start/Stop	5	0.030
LPCBL7191	Black/Black	↑ ↓	5	0.030
One extended and one flush pushbuttons (without mounting adapter). Both spring return.				
LPCBL7212	Black/Red	—	1	0.030
LPCBL7213	Green/Red	—	5	0.030
LPCBL7214	White/Black	—	1	0.030
LPCBL7222	Black/Red	I-O	1	0.030
LPCBL7223	Green/Red	I-O	5	0.030
LPCBL7224	White/Black	I-O	5	0.030
LPCBL7233	Green/Red	Start/Stop	5	0.030

Illuminated selector switch actuators

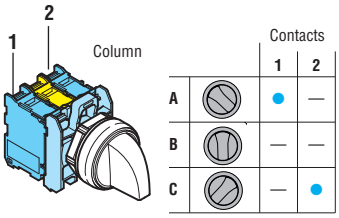
LPCSL1...

Order code	Colour	Type of positions	Qty per pkg	Wt
			n°	[kg]
2 positions (without mounting adapter).				
LPCSL1203	Green	∨	10	0.025
LPCSL1204	Red		10	0.025
LPCSL1205	Yellow		10	0.025
LPCSL1206	Blue		10	0.025
LPCSL1208	White		10	0.025
LPCSL1213	Green	∨ spring	10	0.025
LPCSL1214	Red		1	0.025
LPCSL1215	Yellow		1	0.025
LPCSL1216	Blue		1	0.025
LPCSL1218	White		10	0.025
3 positions (without mounting adapter).				
LPCSL1303	Green	∨ ∨	10	0.025
LPCSL1304	Red		10	0.025
LPCSL1305	Yellow		10	0.025
LPCSL1306	Blue		10	0.025
LPCSL1308	White		10	0.025
LPCSL1313	Green	∨ spring ∨	10	0.025
LPCSL1314	Red		1	0.025
LPCSL1315	Yellow		1	0.025
LPCSL1316	Blue		1	0.025
LPCSL1318	White		10	0.025
LPCSL1323	Green	∨ ∨ spring	10	0.025
LPCSL1324	Red		1	0.025
LPCSL1325	Yellow		1	0.025
LPCSL1326	Blue		1	0.025
LPCSL1328	White		10	0.025
LPCSL1333	Green	∨ spring ∨ spring	10	0.025
LPCSL1334	Red		1	0.025
LPCSL1335	Yellow		1	0.025
LPCSL1336	Blue		1	0.025
LPCSL1338	White		10	0.025

Contact activation of 2-position selector switch



Contact activation of 3-position selector switch



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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
Polyamide.

Mechanical endurance
Operating force: <0.5kg/1.1lb (actuator).
Mechanical life:
- Double-touch: 1,000,000 cycles.
- Selector switches: 1,000,000 cycles.

Mounting adapter
See page 7-36.
Type: LPXAU120.
Actuators are installed through a Ø22mm/Ø0.87" drilling with a threaded fixing ring (Tmax = 2.3Nm/1.69lb.ft) also on the cover of LPZ... control stations.
The mounting adapter directly snaps onto the actuator.

Contact elements
See page 7-37 and 7-38.

Type		Termination
Front-mount types snap onto LPXAU120 mounting adapter (to purchase separately). For DOUBLE-TOUCH TYPES, up to 6 contacts can be fitted: 3 each on the left and right, one behind the other. For SELECTOR SWITCHES, up to 4 contacts can be fitted: 2 each on the left and right, one behind the other. The LPXAU120 mounting adapter can also be fitted internally to the cover of the LPZ... control station with up to 2 elements per actuator in addition to the LED element in the middle position.		
1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw
Base-mount types snap into LPZP... control station base. See example on page 7-38. Up to 2 contacts can be fitted per LPZ... control station actuator in addition to the LED element in the middle position.		
1NO	LPXCB10	Screw
1NC	LPXCB01	Screw

Selector switch type of positions
∨ Maintained position.
∨ spring Spring return position.

Selector switch rotation angles
2 positions

3 positions

LED light elements
See pages 7-39 to 42.

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

Pilot light heads

LPL...

Order code	Colour	Qty per pkg	Wt
		n°	[kg]
Without mounting adapter.			
LPL3	Green	10	0.024
LPL4	Red	10	0.024
LPL5	Yellow	10	0.024
LPL6	Blue	10	0.024
LPL7	Transparent	10	0.024
LPL1187	Transparent ϟ ❶	10	0.024

❶ With symbol indicating dangerous voltage (IEC/EN/BS 60417 5036-a).

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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
Polyamide.

Mounting adapter
See page 7-36.
Type: LPXAU120.
Pilot light heads are installed through a Ø22mm/Ø0.87" drilling with a threaded fixing ring (Tmax = 2.3Nm/1.69lb.ft) also on the cover of LPZ... control stations, with LED element in central position. The mounting adapter directly snaps onto the actuator.

LED light elements
See pages 7-39 to 42.

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

USB and RJ45 communication interfaces

LPCD01

LPCD05

LPCD01L...

Order code	Description	Qty per pkg	Wt
		n°	[kg]
LPCD01	USB interface, A/A female type connection	1	0.018
LPCD01L050	new USB interface, A/A female connection with 0.5m long cable	1	0.050
LPCD01L100	USB interface, A/A female connection with 1m long cable	1	0.080
LPCD03	USB interface, A/B female type connection	1	0.018
LPCD05	USB interface, B/A female type connection	1	0.018
LPCD06	RJ45 interface, Ethernet connection type	1	0.026
LPCD06L100	new RJ45 interface, Ethernet connection with 1m long cable	1	0.090

General characteristics
USB and RJ45 communication interface connectors are used in industrial environments, which in recent years have seen an increase in the number of connections between machines, production lines, equipment and measuring instruments. These interfaces provide the transmission of data in both directions between the various devices.

Operational characteristics
- Rated insulation voltage for LPCD01, LPCD03, LPCD05: 5VAC/DC
- Rated insulation voltage for LPCD06: 24VAC
- Installed through a Ø22mm/Ø0.87" drilling with a threaded fixing ring (Tmax = 2.3Nm/1.69lb.ft) also on the cover of LPZ... control stations
- Transmission characteristics for LPCD01, LPCD03, LPCD05: 5Gbps (625MB/sec)
- Transmission characteristics for LPCD06: Cat.5E
- Rated current for LPCD01, LPCD03, LPCD05: 1.8A
- Rated current for LPCD06: 1.5A
- Insulation resistance: ≥100MOhm
- Contact resistance for LPCD01, LPCD03, LPCD05: ≤30mOhm
- Contact resistance for LPCD06: ≤40mOhm
- USB connector class: 3.0 (backward compatible with USB class 2.0)
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection:
  - Per IEC/EN: IP65 on front (with cap mounted)
  - Per IEC/EN: IP20 at rear
  - Per UL: Type 1, 2, 3R, 4, 4X, 12, 12K on front (with cap mounted)

Materials
Polyamide.

Certifications and compliance
Certifications: cULus, EAC, CCC.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

LED integrated monoblock pilot lights steady light

LPM...

Order code	Rated auxiliary supply voltage	LED colour	Qty per pkg	Wt
			n°	[kg]
LPMLA1	12VAC/DC	Orange	10	0.021
LPMLA3		Green	10	0.021
LPMLA4		Red	10	0.021
LPMLA5		Yellow	10	0.021
LPMLA6		Blue	10	0.021
LPMLA7		Transparent	10	0.021
LPMLB1	24VAC/DC	Orange	10	0.021
LPMLB3		Green	10	0.021
LPMLB4		Red	10	0.021
LPMLB5		Yellow	10	0.021
LPMLB6		Blue	10	0.021
LPMLB7		Transparent	10	0.021
LPMLD1	48VAC/DC	Orange	10	0.021
LPMLD3		Green	10	0.021
LPMLD4		Red	10	0.021
LPMLD5		Yellow	10	0.021
LPMLD6		Blue	10	0.021
LPMLD7		Transparent	10	0.021
LPMLE1	110...120VAC	Orange	10	0.024
LPMLE3		Green	10	0.024
LPMLE4		Red	10	0.024
LPMLE5		Yellow	10	0.024
LPMLE6		Blue	10	0.024
LPMLE7		Transparent	10	0.024
LPMLM1	230VAC	Orange	10	0.024
LPMLM3		Green	10	0.024
LPMLM4		Red	10	0.024
LPMLM5		Yellow	10	0.024
LPMLM6		Blue	10	0.024
LPMLM7		Transparent	10	0.024
LPMLP1	380...415VAC	Orange	10	0.024
LPMLP3		Green	10	0.024
LPMLP4		Red	10	0.024
LPMLP5		Yellow	10	0.024
LPMLP6		Blue	10	0.024
LPMLP7		Transparent	10	0.024
LPMLF1	110...125VDC	Orange	10	0.024
LPMLF3		Green	10	0.024
LPMLF4		Red	10	0.024
LPMLF5		Yellow	10	0.024
LPMLF6		Blue	10	0.024
LPMLF7		Transparent	10	0.024
LPMLN1	220VDC	Orange	10	0.024
LPMLN3		Green	10	0.024
LPMLN4		Red	10	0.024
LPMLN5		Yellow	10	0.024
LPMLN6		Blue	10	0.024
LPMLN7		Transparent	10	0.024

new

new

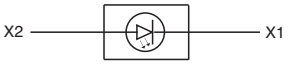
new

Operational characteristics
- Rated frequency: 50-60Hz
- Auxiliary supply voltage:
  - 110...125VDC, 220VDC (-15%...+10% Ue)
  - 12VAC/DC, 24VAC/DC, 48VAC/DC (-15%...+10% Ue)
  - 110...120VAC, 230VAC, 380...415VAC (-15%...+10% Ue)
- Consumption: ≤20mA
- Installed through a Ø22mm/Ø0.87" drilling with a threaded fixing ring (Tmax = 2.3Nm/1.69lb.ft) also on cover of LPZ... control stations
- Electrical life: >30,000 hours
- Screw termination
- Side cable entry
- Maximum tightening torque: 0.8Nm/0.59lb.ft
- Ambient conditions:
  - Operating temperature: -25...+70°C
- Degree of protection:
  - per IEC/EN: IP66, IP67 and IP69K on front; IP20 at rear
  - per UL: Type 1, 2, 3R, 4, 4X, 12, 12K on front.

Materials
Polyamide.

Maximum conductor cross section
1 or 21.5mm² or AWG16 cables.

Wiring diagram



Certifications and compliance
Certifications: cULus, EAC, CCC (only for LPMLD..., LPMLE... and LPMLM...).
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Monoblock potentiometers

LPCPA...

Order code	Resistance value	Qty per pkg	Wt
		n°	[kg]
LPCPA001	1kΩ	1	0.040
LPCPA002	2.5kΩ	1	0.040
LPCPA005	5kΩ	1	0.040
LPCPA010	10kΩ	1	0.040
LPCPA050	50kΩ	1	0.040
LPCPA100	100kΩ	1	0.040
LPCPA500	500kΩ	1	0.040

General characteristics for monoblock potentiometers
Monoblock potentiometers are typically used for regulating the parameters of many devices (e.g. the speed of the electric motors through static converters).
The monoblock body design permits direct use of the potentiometer by panel fitting with fixing ring and subsequent tightening of cables into the built-in terminal block.
The potentiometer is made with Cermet technology, which ensures stable, constant resistance values over time. The, UL-certified, range is made for resistance values from 1 to 500kΩ. All potentiometers are IP66, IP67, IP69K and UL Type 4X, which means that they can be used in demanding ambient conditions.

Operational characteristics for monoblock potentiometers
- Rated insulation voltage Ui: 250VAC
- Impulse withstand voltage Uimp: 4kV
- Potentiometer included in the product
- Monoblock body with 1-turn graduated scale
- Any fitting position permitted
- Installed through a Ø22mm/Ø0.87" drilling with a threaded fixing ring (Tmax = 2.3Nm/1.69lb.ft) also on the cover of LPZ... control stations
- Resistive material: cermet
- Operation: linear
- Resistance tolerance: ±10%
- Max. power: 0.5W (70°C)
- Mechanical endurance: 25,000 operations
- Mechanical travel: 290°
- Side cable entry
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection:
  - Per IEC/EN: IP66, IP67 and IP69K on front
  - Per IEC/EN: IP20 at rear
  - Per UL: Type 1, 2, 3R, 4, 4X, 12, 12K on front.

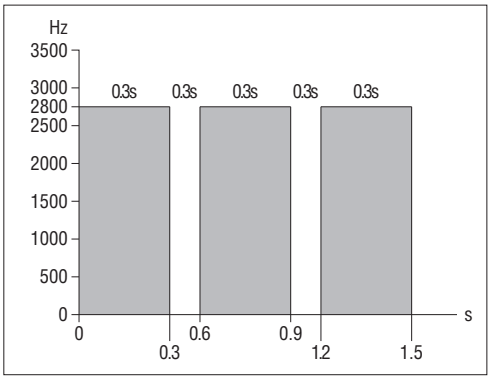
Monoblock buzzers

LPCZS...

LPCZS...IP

Order code	Voltage	Sound intensity at 2800Hz	Qty per pkg.	Wt
	[V]	[dB/10cm]	n°	[kg]
Continuous or pulse tone, IP40 version.				
LPCZSA	9...15VAC/DC	90	1	0.020
LPCZSB	18...30VAC/DC	90	1	0.020
LPCZSE	85...140VAC/DC	90	1	0.020
LPCZSM	185...265VAC/DC	90	1	0.020
Continuous or pulse tone, IP66, IP67, IP69K and UL Type 4X version.				
LPCZSAIP	9...15VAC/DC	80	1	0.020
LPCZSBIP	18...30VAC/DC	80	1	0.020
LPCZSEIP	85...140VAC/DC	80	1	0.020
LPCZSMIP	185...265VAC/DC	80	1	0.020

Pulse-tone sound graph



General characteristics for monoblock buzzers
Monoblock buzzers are used as sound indicators in automation systems and on-board machinery in the production processes. Long life, low consumption values, compact size and the use of materials, in accordance with the North American market, are the main features of this product.

Operational characteristics for monoblock buzzers
- Rated frequency: 50...60Hz
- Auxiliary supply voltage: 9...15VAC/DC, 18...30VAC/DC, 85...140VAC/DC, 185...265VAC/DC
- Maximum consumption: 20mA-0.30W (type 9..15VAC/DC), 15mA-0.40W (type 18..30VAC/DC), 5,5mA-0.80W (type 85..140VAC/DC), 3,5mA-0.95W (type 185...265VAC/DC)
- Minimum activation voltage: >4V (type 9...15VAC/DC), >8V (type 18..30VAC/DC), >15V (type 85..140VAC/DC), >25V (type 185..265VAC/DC)
- Impulse withstand voltage Uimp: 4kV
- Installed through a Ø22mm/Ø0.87" drilling with a threaded fixing ring (Tmax = 2.3Nm/1.69lb.ft) also on the cover of LPZ... control stations
- Service life: 30,000 hours (permanently powered)
- Side cable entry
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection (type LPCZS...):
  - Per IEC/EN: IP40 on front and IP20 at rear
- Degree of protection (type LPCZS...IP):
  - Per IEC/EN: IP66, IP67, IP69K on front and IP20 at rear
  - Per UL: Type 1, 2, 3R, 4, 4X, 12, 12K on front.

Materials
Polyamide.

Maximum conductor cross section
Screw terminal connections with three separate connections:
- Min. cable 0.5mm² / AWG24
- Max. cable 2.5mm² / AWG14
- Maximum tightening torque: 0.5Nm/0.37lb.ft
- Flat-head screwdriver: 0.6x3.5mm/0.02x0.14".

Certifications and compliance
Certifications: cULus, EAC, CCC.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Pushbutton actuators, spring return, with special symbols

LPSB1253

LPFB1253

LPCB1253

Order code ❺❻	Symbol	Colour	Qty per pkg	Wt
			n°	[kg]
Spring return (without mounting adapter).				
LP❶B❷❸25❹	+	❹	50	0.027
LP❶B❷❸26❹	–	❹	50	0.027
LP❶B❷❸27❹		❹	50	0.027
LP❶B❷❸28❹		❹	50	0.027
LP❶B❷❸29❹		❹	50	0.027
LP❶B❷❸30❹	ALTO	❹	50	0.027
LP❶B❷❸31❹	BASSO	❹	50	0.027
LP❶B❷❸32❹	SX	❹	50	0.027
LP❶B❷❸33❹	DX	❹	50	0.027
LP❶B❷❸34❹	MAN	❹	50	0.027
LP❶B❷❸35❹	AUTO	❹	50	0.027
LP❶B❷❸38❹	TRIP	❹	50	0.027
LP❶B❷❸39❹	TEST	❹	50	0.027
LP❶B❷❸40❹		❹	50	0.027
LP❶B❷❸41❹		❹	50	0.027
LP❶B❷❸42❹		❹	50	0.027
LP❶B❷❸43❹		❹	50	0.027
LP❶B❷❸44❹		❹	50	0.027
LP❶B❷❸45❹		❹	50	0.027
LP❶B❷❸46❹		❹	50	0.027
LP❶B❷❸47❹		❹	50	0.027
LP❶B❷❸48❹		❹	50	0.027
LP❶B❷❸49❹		❹	50	0.027
LP❶B❷❸52❹		❹	50	0.027
LP❶B❷❸53❹		❹	50	0.027
LP❶B❷❸54❹		❹	50	0.027
LP❶B❷❸55❹		❹	50	0.027
LP❶B❷❸56❹	START STOP	❹	50	0.027
LP❶B❷❸57❹	III	❹	50	0.027
LP❶B❷❸58❹	IV	❹	50	0.027
LP❶B❷❸59❹		❹	50	0.027
LP❶B❷❸60❹		❹	50	0.027
LP❶B❷❸61❹		❹	50	0.027
LP❶B❷❸62❹		❹	50	0.027
LP❶B❷❸63❹		❹	50	0.027
LP❶B❷❸64❹		❹	50	0.027
LP❶B❷❸65❹		❹	50	0.027
LP❶B❷❸66❹		❹	50	0.027
LP❶B❷❸67❹		❹	50	0.027
LP❶B❷❸68❹		❹	50	0.027
LP❶B❷❸69❹		❹	50	0.027

❶ Add letter "S" if Ø22mm metal type is required; "F" if Ø30mm flat metal type is required; "C" if Ø22mm chromed plastic type is required.
❷ Add letter "L" if illuminated type is required.
❸ or the type of actuator, add: 1 for flush or 2 for extended.
❹ Add the actuator colour: 2 black only for non-illuminated type; 3 green, 4 red, 5 yellow, 6 blue, 8 white or 7 transparent for illuminated version.
❺ Products available on specific request for a minimum multiple quantity of 50 pieces per type.
❻ Consult Technical support for assistance; see contact details or inside front cover.
❼ Symbol indicating dangerous voltage (IEC 60417 5036-a).

Examples of complete order codes:
LPSB2258 – Ø22mm metal white extended pushbutton with + symbol;
LPFBL1685 – Ø30mm illuminated flat metal yellow flush pushbutton with ⚠ symbol;
LPCB1344 – Ø22mm chromed plastic green flush pushbutton with "AUTO" symbol.

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: Type 1, 2, 3R, 4, 4X, 12, 12K.

Materials
Polyamide.

Mechanical endurance
Operating force: <0.5kg/1.1lb (actuator).
Mechanical life: 5,000,000 cycles.

Mounting adapter
See page 7-36.
Type: LPXAU120...

Contact elements
See page 7-37 and 7-38.

Type	Termination

The mounting adapter directly snaps onto the actuator (to purchase separately).
Up to 9 contacts can be fitted: 3 each on the left, middle and right, one behind the other.
The LPXAU120... mounting adapter can also be fitted internally to the cover of the LPZ... control station with up to 3 elements per actuator.

1NO	LPXC10	Screw
	LPXCF10	Faston
	LPXCS10	Spring clamp
1EM	LPXC10A	Screw
1NC	LPXC01	Screw
	LPXCF01	Faston
	LPXCS01	Spring clamp
1LB	LPXC01D	Screw

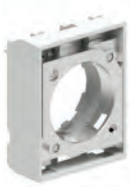
Base mount types snap into LPZP... control station base.
See example on page 7-38.
Up to 3 elements can be fitted to the adapter when used with the LPZ... control station.

1NO	LPXCB10	Screw
1NC	LPXCB01	Screw

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

Certifications and compliance
Certifications obtained: cULus, EAC, CCC, RINA.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Mounting adapters



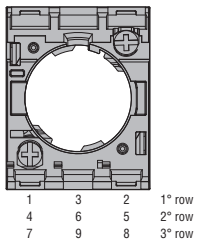
LPXAU120M

LPXAU120

new

Order code	Description	Qty per pkg	Wt
		n°	[kg]
LPXAU120M	Mounting adapter for metal actuators (LPS... and LPF...)	10	0.019
LPXAU120	Mounting adapter for chromed plastic actuators (LPC...)	10	0.004

Rear view
(reference for element installation)



Mounting adapters with contact elements

LPXE...M

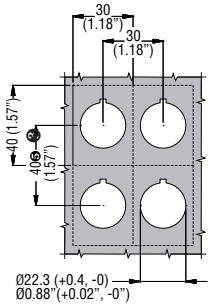
LPXE...

new

Order code	Funzione	Qty per pkg	Wt
		n°	[kg]
Screw termination contact elements. For metal actuators LPS... and LPF... With LPXAU120M mounting adapter.			
LPXE10M❶	.3 .4 NO❶	5	0.030
LPXE01M ⊖	.1 .2 ⊖ NC❷	5	0.030
Screw termination contact elements. For chromed plastic actuators LPC... With LPXAU120 mounting adapter.			
LPXE10❶	.3 .4 NO❶	10	0.015
LPXE01 ⊖	.1 .2 ⊖ NC❷	10	0.015

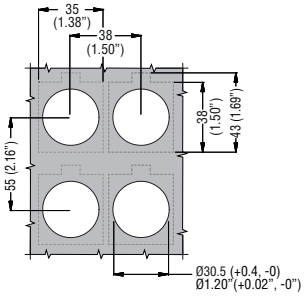
❶ **Use LPXC10A (EM) or LPXC01 (NC) type only with push-push actuators.** Not suitable for push-push actuators.
❷ Direct (positive) opening action ⊖ in accordance with IEC/EN/BS 60947-5-1.

Drillings
Minimum recommended distances for Ø22mm/0.87" actuators.



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

Minimum recommended distances for Ø30mm/1.18" actuators.



Operational characteristics
- Any mounting position allowed
- for LPXAU120M: the base is fixed to the mounting surface by 2 screws incorporated in the base (Tmax = 0.8Nm/1.69lb.ft)
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection:
  - 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/BS 60947-5-1 designation: A600 Q600.

IEC/EN operational characteristics in AC15 category:

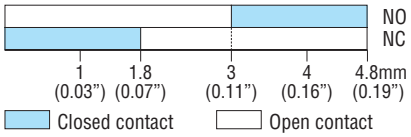
[V]	12	24	48	120	240	400	480	500	600
[A]	6	6	6	6	6	3	1.5	1.4	1.2

IEC/EN operational characteristics in DC13 category:

[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.

Stroke of contact elements

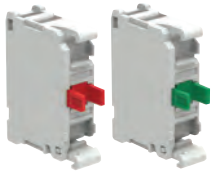


Maximum conductor cross section for screw terminals
1 or 2 2.5mm² or AWG14 cables.

Mechanical and electrical endurance
Operating force: ≤0.5kg/1.1lb (auxiliary contacts).
Electrical life: 1,000,000 cycles.

Certifications and compliance
Certifications: EAC, cULus, CCC, RINA.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

Contact elements with screw terminals

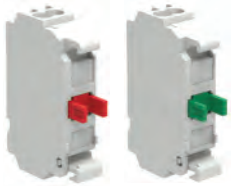


LPXC...

Order code	Function	Qty per pkg	Wt
		n°	[kg]
Screw termination. Without mounting adapter.			
LPXC10❶	.3 .4 NO❶	10	0.011
LPXC10A	.7 .8 EM❷	10	0.011
LPXC01 ⊖	.1 .2 ⊖ NC❸	10	0.011
LPXC01D❶ ⊖	.5 .6 ⊖ LB❶❸❹	10	0.011

❶ **Use LPXC10A (EM) or LPXC01 (NC) type only with push-push actuators.** Not suitable for push-push actuators.
❷ **Normally open contact with early-make operation and suitable for push-push actuators.**
❸ Direct (positive) opening action ⊖ in accordance with IEC/EN/BS 60947-5-1.
❹ Normally closed contact with late break operation.

Contact elements with spring-clamp terminals



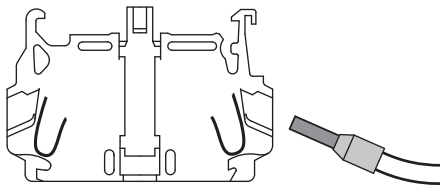
LPXCS01 LPXCS10

Order code	Function	Qty per pkg	Wt
		n°	[kg]
Spring-clamp termination. Without mounting adapter.			
LPXCS10❶	.3 .4 NO❶	10	0.010
LPXCS01 ⊖	.1 .2 ⊖ NC❷	10	0.010

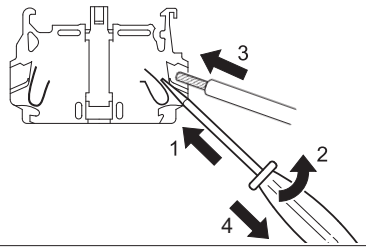
❶ **Not suitable for push-push actuators.**
❷ Direct (positive) opening action ⊖ in accordance with IEC/EN/BS 60947-5-1.

Push-in wiring technology for rigid cables or with ferrules only - no screwdriver needed
Cable retaining force guaranteed over time even in presence of vibrations and/or impacts

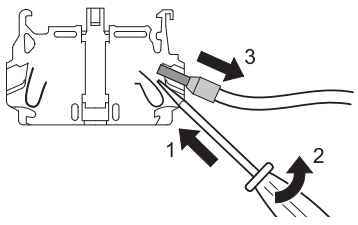
Push-in technology



Wiring with flat-blade screwdriver
(for flexible bare cable without terminal)



Cable removal
(always using flat-blade screwdriver)



Operational characteristics for screw termination
- Any mounting position allowed
- Snap onto LPXAU120M or LPXAU120 mounting adapters:
  - See the combinations given under "Contact elements" in the right-hand column for each type of pushbutton and selector switch.
  - A maximum of 3 LPXCF... contacts or 2 contacts and 1 LED element (LPXL... mounted in the middle position) can be fixed internally on the cover surface of LPZ... control stations for each actuator
- Max. tightening torque for screw terminals: 1Nm/0.74lb.ft
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection:
  - IP20 for screw termination
  - IP00 for Faston termination.

Operational characteristics for spring-clamp termination
- Any mounting position allowed
- Elements snap onto mounting adapter, also internally on LPZ... control station cover with maximum of 3 LPXCS... contact or 2 LPXCS... contact and 1 LPXLPS... LED elements (in middle position) per actuator
- No other element can be stacked behind LED elements
- See the combinations given under "Contact elements" in the right-hand column for each type of pushbutton and selector switch
- Suitable for applications with vibration and/or impact work conditions; cable retaining force guaranteed over time in these conditions
- For use with the test elements, see page 7-37
- Wiring also possible after installation with stacked contacts
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection: IP20.

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

IEC/EN operational characteristics in AC15 category:

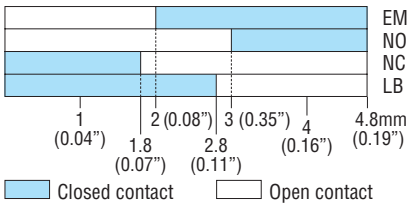
[V]	12	24	48	120	240	400	480	500	600
[A]	6	6	6	6	6	3	1.5	1.4	1.2

IEC/EN operational characteristics in DC13 category:

[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 1x6.35mm(0.25") or 2x2.8mm(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/E01/10, LPXC01SM/02SM, 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, RINA.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n° 14.

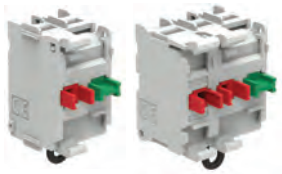
Contact elements with Faston terminals

LPXCF01 LPXCF10

Order code	Function	Qty per pkg	Wt
		n°	[kg]
Faston termination. Without mounting adapter.			
LPXCF10❶	.3 .4 NO❶	10	0.012
LPXCF01 ⊖	.1 .2 ⊖ NC❷	10	0.012

❶ **Use LPXC10A (EM) or LPXC01 (NC) type only with push-push actuators.** Not suitable for push-push actuators.
❷ Direct opening operation ⊖ in accordance with IEC/EN/BS 60947-5-1.

Auto-monitoring contact elements with screw terminals



LPXC01SM LPXC02SM

Order code	Function	Qty per pkg	Wt
		n°	[kg]
Screw termination. Without mounting adapter. Auto-monitor contact elements for non-illuminated latch mushroom-head pushbuttons.			
LPXC01SM❶ ⊖	⊖ .3 .1 .4 .2 1NC❶❷	1	0.022
LPXC02SM❶ ⊖	⊖ .3 .1 .1 .4 .2 .2 2NC❶❷	1	0.033

❶ **Use LPXC10A (EM) or LPXC01 (NC) type only with push-push actuators.** Not suitable for push-push actuators.
❷ Direct opening operation ⊖ in accordance with IEC/EN/BS 60947-5-1.

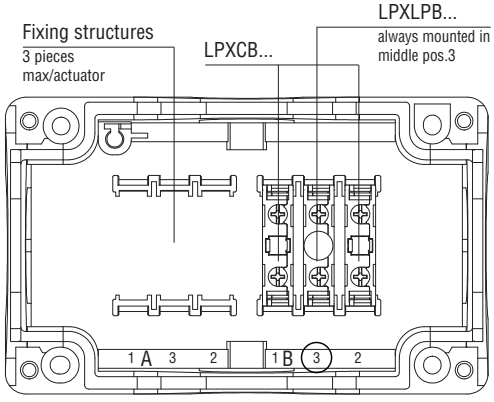
Contact elements, base mount on LPZP... control stations with screw terminals

LPXCB...

Order code	Function	Qty per pkg	Wt
		n°	[kg]
Screw termination. Direct snap-on mounting on LPZP... control station base.			
LPXCB10❶	.3 .4 NO❶	10	0.012
LPXCB01 ⊖	.1 .2 ⊖ NC❷	10	0.012

❶ **Not suitable for push-push actuators.**
❷ Direct opening operation ⊖ in accordance with IEC/EN/BS 60947-5-1.

Mounting position on the LPZ... control station base



General characteristics
- Any mounting position allowed
- Max. tightening torque for screw terminals: 1Nm/0.74lb.ft
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection: IP20 for screw termination, IP00 for Faston termination.

Operational characteristics for Faston termination and auto-monitoring contact elements
- Snap onto LPXAU120M or LPXAU120 mounting adapters:
  - A maximum of 3 LPXCF... contacts or 2 contacts and 1 LED element (LPXL... mounted in the middle position) can be fixed internally on the cover surface of LPZ... control stations for each actuator
- A maximum of 2 LPXC...SM contacts can be installed on adapters exclusively on non-illuminated mushroom-head latch actuators:
  - In pos. 1-3 (on the left side only of the mounting adapters; refer to REAR VIEW drawing), one only LPXC01SM or LPXC02SM element can be fitted
  - One extra LPX...SM can be installed in pos. 4-6 (stacked behind the LPX...SM on the mounting adapters)
  - With LPXC01SM, a maximum of two contacts LPXC0... or LPXC1... can be fitted on the right side of the mounting adapters in pos. 2 and 5, one behind the other
  - On the internal surface of LPZ... control station covers, one only LPXC01SM or LPXC02SM contact can be mounted on the mounting adapters in pos. 1 (on the left). With LPXC01SM, one extra element LPXC0... or LPXC1... can be fitted on the right (on the mounting adapters in pos. 2).
  - No LED element can be used with LPXC...SM types.

Operational characteristics for base mount on LPZP... control stations contact elements
- Snap-on mounting into fixing structures of LPZP... control station base
- Maximum of 3 LPXCB... contact or 2 LPXCB... contact and 1 LPXLPB... LED elements (in middle pos. 3) for each actuator of LPZP... control stations
- For use with test elements, consult Technical support; see contact details on inside front cover

Mounting adapter
See page 7-36.

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

IEC/EN operational characteristics in AC15 category:

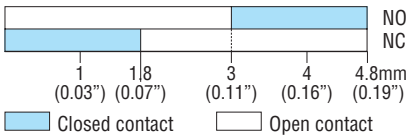
[V]	12	24	48	120	240	400	480	500	600
[A]	6	6	6	6	6	3	1.5	1.4	1.2

IEC/EN operational characteristics in AC15 category:

[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 1x6.35mm(0.25") or 2x2.8mm(0.11").

Stroke of contact elements



Mechanical and electrical endurance of contact elements
Opening force: ≤0,5kg/1.1lb
Electrical life: 1,000,000 cycles for LPXCS10 and LPXCS01.

Maximum conductor cross section
1 or 2 2.5mm² or AWG14 cables. For 2.5mm² section, use rounded cable terminal with metal end at least 10mm.

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

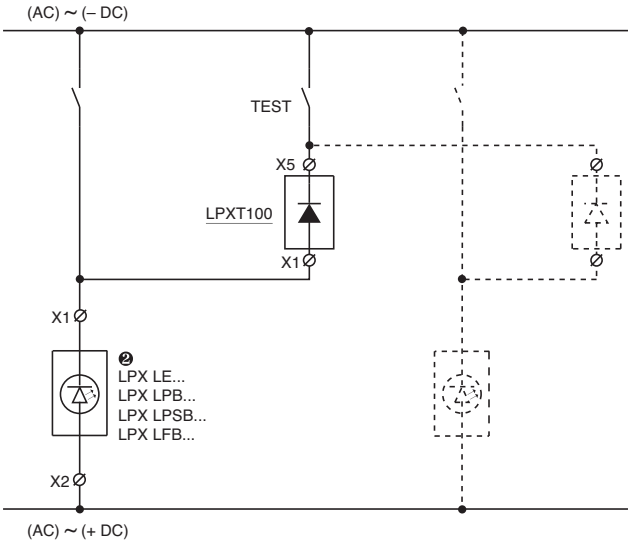
Test elements for steady light LED elements with screw terminals

LPXT...

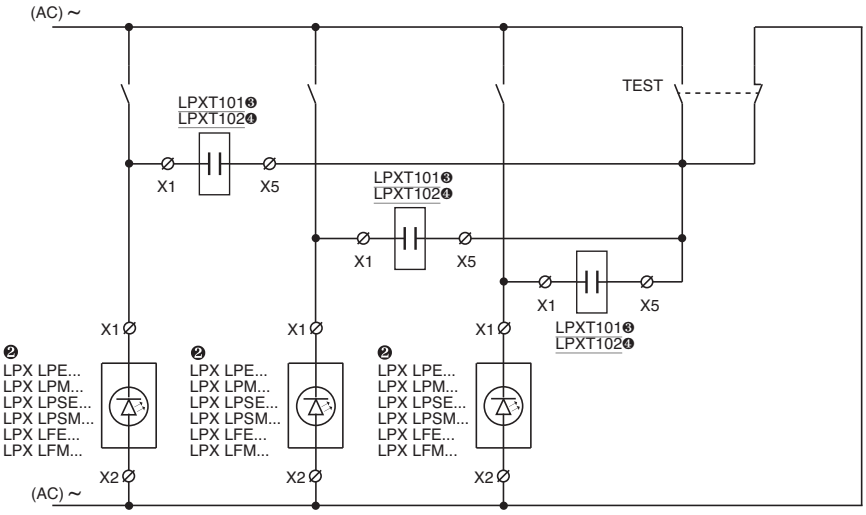
Order code	Description	Qty per pkg	Wt
		n°	[kg]
Screw termination. Without mounting adapter.			
LPX T100❶❷	Use with LED elements in AC/DC, types LPXLE... (all), LPXLFB..., LPXLPB and LPXLPSB...	10	0.011
LPX T101❷	Use with LED elements at 85-140VAC for types LPXLFE... LPXLPE... and LPXLPSE...	10	0.011
LPX T102❷	Use with LED elements at 185-265VAC for types LPXLFM..., LPXLPM... and LPXLPSM...	10	0.011

❶ Whenever test circuits include illuminated actuators connected with paralleled load, use two LPXT100 for each LED element.
Refer to the wiring diagram below or online in the Downloads section at www.LovatoElectric.com
❷ With DC supply only for LPXT100 type, the LED element works at full voltage and brightness while with AC supply for all LPXT... types, the LED element works at half voltage with reduced brightness level.

For LPXT100 test element



For LPXT101 and LPXT102 test elements



❸ Use with LPXLFE..., LPXLPE... or LPXLPSE... type.
❹ Use with LPXLFM..., LPXLPM... or LPXLPSM... type.

Operational characteristics

- Auxiliary supply voltage:
  - LPXT100 test element:
    - 12...30VAC/DC for LPXLEB/LFB/LPB/LPSB...
    - 85...140VAC/DC for LPXLEE...
    - 185...265VAC/DC for LPXLEM...
  - LPXT101 test element: 85...140VAC
  - LPXT102 test element: 185...265VAC
- For use with LED elements LPXLPBB/LPBE/LPBM... types, consult Technical support; see contact details on inside front cover
- Electrical life: 100,000 hours
- Any mounting position allowed
- Snap onto mounting adapter beside the LED element or stacked behind contact elements; also internally on the LPZ... control station cover
- Maximum tightening torque: 1Nm/0.74lb.ft
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection: IP20.

Mounting adapter

See page 7-36.
The mounting adapter directly snaps onto the actuator fixed to the mounting surface.

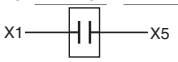
Maximum conductor cross section

1 or 2 2.5mm² or AWG 12 cables.

Wiring diagram

For LPXT100

For LPXT101 - LPXT102



Certifications and compliance

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

LED elements steady light with screw terminals

LPXLP...

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

Order code	Rated supply voltage	LED colour	Qty per pkg.	Wt
	[V]		n°	[kg]
Steady light, screw termination. Without mounting adapter.				
LPXLPB3	12...30V AC/DC	Green	10	0.016
LPXLPB4		Red	10	0.016
LPXLPB5		Yellow	10	0.016
LPXLPB6		Blue	10	0.016
LPXLPB8		White	10	0.016
LPXLPE3	85...140V AC	Green	10	0.016
LPXLPE4		Red	10	0.016
LPXLPE5		Yellow	10	0.016
LPXLPE6		Blue	10	0.016
LPXLPE8		White	10	0.016
LPXLPM3	185...265V AC	Green	10	0.016
LPXLPM4		Red	10	0.016
LPXLPM5		Yellow	10	0.016
LPXLPM6		Blue	10	0.016
LPXLPM8		White	10	0.016

LPXLE...

Simple protection against overvoltages and to withstand vibrations.

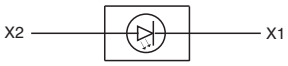
Order code	Rated supply voltage	LED colour	Qty per pkg.	Wt
	[V]		n°	[kg]
Steady light, screw termination. Without mounting adapter.				
LPXLEB3	12...30V AC/DC	Green	10	0.016
LPXLEB4		Red	10	0.016
LPXLEB5		Yellow	10	0.016
LPXLEB6		Blue	10	0.016
LPXLEB8		White	10	0.016
LPXLED3	48VAC/DC	Green	10	0.016
LPXLED4		Red	10	0.016
LPXLED5		Yellow	10	0.016
LPXLED6		Blue	10	0.016
LPXLED8		White	10	0.016
LPXLEE3	85...140V AC/DC	Green	10	0.016
LPXLEE4		Red	10	0.016
LPXLEE5		Yellow	10	0.016
LPXLEE6		Blue	10	0.016
LPXLEE8		White	10	0.016
LPXLEM3	185...265V AC/DC	Green	10	0.016
LPXLEM4		Red	10	0.016
LPXLEM5		Yellow	10	0.016
LPXLEM6		Blue	10	0.016
LPXLEM8		White	10	0.016

Operational characteristics
- Rated frequency: 50-60Hz
- Auxiliary supply voltage:
  - LPXLP...: 12...30VAC/DC; 85...140VAC; 185...265VAC
  - LPXLE...: 12...30VAC/DC; 85...140VAC/DC; 185...265VAC/DC
- Maximum consumption:
  - LPXLP...: 17mA-0.50W (12...30VAC/DC); 20mA-0.40W (85...140VAC); 18mA-0.55W (185...265VAC)
  - LPXLE...: 11mA-0.33W (12...30VAC/DC); 5mA-0.72W (85...140VAC/DC); 3mA-0.67W (185...265VAC/DC)
- Total protection for LPXLP... types:
  - Against overvoltages
  - Against stray currents in wiring
  - To reduce flickering phenomenon
  - To withstand vibrations
- Simple protection for LPXLE... types:
  - Against overvoltages
  - To withstand vibrations
- Minimum activation voltage:
  - LPXLP...: 4V-1mA (12...30VAC/DC); 30V-4mA (85...140VAC); 55V-4mA (185...265VAC)
  - LPXLE...: 4V-0.5mA (12...30VAC/DC); 15V-0.4mA (85...140VAC/DC); 35V-0.3mA (185...265VAC/DC)
- Electrical life: 100,000 hours
- Snap onto mounting adapter in the middle position for each illuminated actuator, also internally on the LPZ... control station cover
- No other element can be stacked behind LED elements
- Any mounting position allowed
- Maximum tightening torque: 1Nm/0.74lb.ft
- Ambient conditions:
  - Operating temperature: -25...+70°C (-25...+60°C for LPXLE...)
  - Storage temperature: -40...+85°C
- Degree of protection: IP20.

Mounting adapter
See page 7-36.
The mounting adapter directly snaps onto the actuator fixed to the mounting surface.

Maximum conductor cross section
1 or 2 2.5mm² or AWG12 cables.

Wiring diagram



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

LED elements flashing light with screw terminals

LPXLF...

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

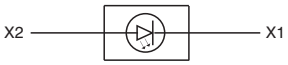
Order code	Rated supply voltage	LED colour	Qty per pkg.	Wt
	[V]		n°	[kg]
Flashing light, screw termination. Without mounting adapter.				
LPXLFB3	18...30V AC/DC	Green	10	0.016
LPXLFB4		Red	10	0.016
LPXLFB5		Yellow	10	0.016
LPXLFB6		Blue	10	0.016
LPXLFB8		White	10	0.016
LPXLFE3	85...140V AC	Green	10	0.016
LPXLFE4		Red	10	0.016
LPXLFE5		Yellow	10	0.016
LPXLFE6		Blue	10	0.016
LPXLFE8		White	10	0.016
LPXLFM3	185...265V AC	Green	10	0.016
LPXLFM4		Red	10	0.016
LPXLFM5		Yellow	10	0.016
LPXLFM6		Blue	10	0.016
LPXLFM8		White	10	0.016

Operational characteristics
- Rated frequency: 50-60Hz
- Auxiliary supply voltage:
  - LPXLF...: 18...30VAC/DC; 85...140VAC, 185...265VAC
- Maximum consumption:
  - 17mA-0.50W (12...30VAC/DC); 20mA-0.40W (85...140VAC); 18mA-0.55W (185...265VAC)
- Total protection:
  - Against overvoltages
  - Against stray currents in wiring
  - To reduce flickering phenomenon
  - To withstand vibrations
- Minimum activation voltage:
  - 5V-1.5mA (18...30VAC/DC); 13V-1.5mA (85...140VAC); 25V-1.5mA (185...265VAC)
- Electrical life: 100,000 hours
- Snap onto mounting adapter in the middle position for each illuminated actuator, also internally on the LPZ... control station cover
- No other element can be stacked behind LED elements
- Any mounting position allowed
- Maximum tightening torque: 1Nm/0.74lb.ft
- Ambient conditions:
  - Operating temperature: -25...+70°C (-25...+60°C for LPX LE...)
  - Storage temperature: -40...+85°C
- Degree of protection: IP20.

Mounting adapter
See page 7-36.
The mounting adapter directly snaps onto the actuator fixed to the mounting surface.

Maximum conductor cross section
1 or 2 2.5mm^2 or AWG12 cables.

Wiring diagram



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

LED elements steady light with spring-clamp terminals

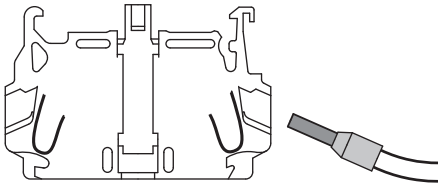
LPXLPS...

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

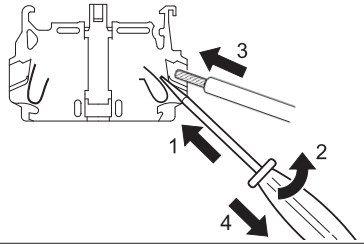
Order code	Rated supply voltage	LED colour	Qty per pkg	Wt
	[V]		n°	[kg]
Steady light, with spring-clamp termination. Without mounting adapter.				
LPXLPSB3	12...30VAC/DC	Green	10	0.015
LPXLPSB4		Red	10	0.015
LPXLPSB5		Yellow	10	0.015
LPXLPSB6		Blue	10	0.015
LPXLPSB8		White	10	0.015
LPXLPSE3	85...140VAC	Green	10	0.015
LPXLPSE4		Red	10	0.015
LPXLPSE5		Yellow	10	0.015
LPXLPSE6		Blue	10	0.015
LPXLPSE8		White	10	0.015
LPXLPSM3	185...265VAC	Green	10	0.015
LPXLPSM4		Red	10	0.015
LPXLPSM5		Yellow	10	0.015
LPXLPSM6		Blue	10	0.015
LPXLPSM8		White	10	0.015

Push-in wiring technology for rigid cables or with ferrules only - no screwdriver needed
Cable retaining force guaranteed over time even in presence of vibrations and/or impacts

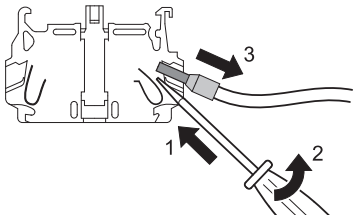
Push-in technology



Wiring with flat-blade screwdriver
(for flexible bare cable without terminal)



Cable removal
(always using flat-blade screwdriver)

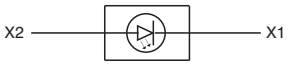


Operational characteristics
- Any mounting position allowed
- Elements snap onto adapter, also internally on LPZ... control station cover (in middle position) per actuator
- No other element can be stacked behind LED elements
- See the combinations given under “Contact elements” in the right-hand column for each type of pushbutton and selector switch
- Suitable for applications with vibration and/or impact work conditions; cable retaining force guaranteed over time in these conditions
- For use with the test elements, see page 7-37
- Wiring also possible after installation with stacked contacts
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection: IP20.

Mounting adapter
See page 7-36.
The mounting adapter directly snaps onto the actuator fixed to the mounting surface.

General characteristics
- Rated frequency: 50-60Hz
- Auxiliary supply voltage: 12...30VAC/DC; 85...140VAC; 185...265VAC
- Maximum consumption: 17mA-0.50W (12...30VAC/DC); 20mA-0.40W (85...140VAC); 18mA-0.55W (185...265VAC)
- Total protection:
  - Against overvoltages
  - Against stray currents in wiring
  - To reduce flickering phenomenon
  - To withstand vibrations
- Minimum activation voltage: 4V-1mA (12...30VAC/DC); 30V-4mA (85...140VAC); 55V-4mA (185...265VAC)
- Electrical life: 100,000 hours.

Wiring diagram for LED elements



Maximum conductor cross section
1 or 2 2.5mm² or AWG14 cables. For 2.5mm² section, use rounded cable terminal with metal end at least 10mm.

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

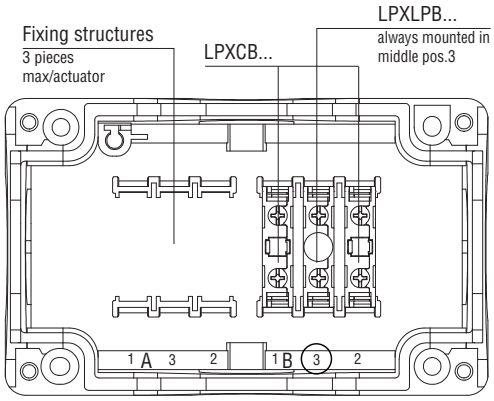
LED elements, steady light base mount on LPZP... control stations with screw terminals

LPXLPB...

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

Order code	Rated supply voltage	LED color	Qty per pkg.	Wt
	[V]		n°	[kg]
Screw termination. Steady light. Direct snap-on mounting on LPZ... control station base.				
LPXLPBB3	12...30V AC/DC	Green	10	0.016
LPXLPBB4		Red	10	0.016
LPXLPBB5		Yellow	10	0.016
LPXLPBB6		Blue	10	0.016
LPXLPBB8		White	10	0.016
LPXLPBE3	85...140V AC	Green	10	0.016
LPXLPBE4		Red	10	0.016
LPXLPBE5		Yellow	10	0.016
LPXLPBE6		Blue	10	0.016
LPXLPBE8		White	10	0.016
LPXLPBM3	185...265V AC	Green	10	0.016
LPXLPBM4		Red	10	0.016
LPXLPBM5		Yellow	10	0.016
LPXLPBM6		Blue	10	0.016
LPXLPBM8		White	10	0.016

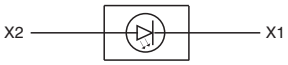
Mounting position on the LPZ... control station base



Operational characteristics
- Any mounting position allowed
- Snap-on mounting into fixing structures of LPZ... control station base (in middle pos. 3) for each actuator
- See the combinations given under “Contact elements” in the right-hand column for each type of pushbutton and selector switch
- For use with test elements, consult Technical support; see contact details on inside front cover
- Maximum tightening torque for screw terminals: 1Nm/0.74lb.ft
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection: IP20.

General characteristics
- Rated frequency: 50...60Hz
- Auxiliary supply voltage: 12...30VAC/DC; 85...140VAC; 185...265VAC
- Maximum consumption: 17mA-0.50W (12...30VAC/DC); 20mA-0.40W (85...140VAC); 18mA-0.55W (185...265VAC)
- Total protection:
  - Against overvoltages
  - Against stray currents in wiring
  - To reduce flickering phenomenon
  - To withstand vibrations
- Minimum activation voltage:
  - steady light LPXLPB.....: 4V-1mA (12...30VAC/DC); 30V-4mA (85...140VAC); 55V-4mA (185...265VAC)
- Electrical life: 100,000 hours.

Wiring diagram for LED elements



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

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

Accessories and spare parts for Ø22mm metal LPS... actuators

LPSXB0

new

LPXA162M

LPXA130

LPXDIN

LPXAU138

LPXAU158

LPXAU159

new

LPXA185

LPXAU170

LPXAU100 LPXAU105

LPXAU108 LPXAU109

Order code	Description	Qty pkg	Wt
		n°	[kg]
LPSXB0❶	Flush or extended spring return actuator with no cap	5	0.013
LPSXB3❶	Shrouded spring return actuator with no cap	5	0.014
LPSXQ0❶	Flush or extended push-push actuator with no cap	5	0.013
LPSXQL0❶	Illuminated flush or extended push-push actuator with no lens	5	0.013
LPXA161M	Adapter for Ø30mm/1.18" holes to Ø22mm/0.87" for mushroom operators	5	0.030
LPXA162M	Adapter for Ø30mm/1.18" holes to Ø22mm/0.87" for pushbuttons and selector switches	5	0.032
LPSXA127	Transparent diffuser for double-touch buttons	5	0.001
LPXA130	Threaded plug for unused drilled holes (grey)	10	0.007
LPXA130B	Threaded plug for unused drilled holes (black)	10	0.007
LPXDIN	Adapter for mounting buttons on DIN rail 35mm/ 1.38" wide (2 modules)	10	0.008
LPXA150	Rod for mechanical reset button (l=150mm/5.90")	10	0.006
Protections.			
LPXAU13❸❹	Rubber boot for flush buttons	10	0.006
LPXAU14❸❹	Rubber boot for extended buttons	10	0.009
LPXAU157	Rubber boot for double and triple-touch buttons (transpar.)	10	0.007
LPXAU167❹❺	Rubber boot for mushroom head buttons, LPSB63/B66/ B67/BL66... (transparent)	10	0.012
LPXAU158❹❻	Padlockable protection, Ø5-8mm/0.2-0.31" locks for buttons LPSB66/B67/B68/ BL664...; for LSCB634... Ø5-6mm/0.2-0.24" locks only	10	0.005
LPXAU159❹❻	Shroud for buttons LPB63/66/67/68/BL666...	10	0.010
LPXAU170	Protection cover for Ø22mm metal buttons	5	0.015
LPXA185	Yellow shroud for selectors	10	0.004
Label holders and labels. ❼			
LPXAU100	Label holder for LPXAU109 and LPXAU203 labels	50	0.001
LPXAU203	Blank label for writing	50	0.001
LPXAU109	Engravable silver plastic label to use with LPXAU100 holder	50	0.002
LPXAU105	Label holder for LPXAU108 plastic labels	50	0.003
LPXAU108	Engravable silver plastic label to use with LPXAU105 holder	50	0.002
LPXAU102❷	Legend holder for LPXAU202 paper or LPXAU201 plastic labels	50	0.003
LPXAU202	Blank paper label for writing for LPXAU102	50	0.002
LPXAU200	Transparent protection for LPXAU202 label	50	0.001
LPXAU201	Blank plastic label for engraving for LPXAU102	50	0.002

General characteristics
LABEL DIMENSIONS
- LPXAU108: 26.5x15mm/1.04x0.59"
- LPXAU109: 27.5x12.1mm/1.08x0.48"
- LPXAU202: 27.5x15.1mm/1.08x0.59"
- LPXAU201: 27.5x15.1mm/1.08x0.59"
- LPXAU203: 27.5x12.1mm/1.08x0.48"

❶ For actuators caps and lenses see page 7-47.
❷ The use of the LPXAU102 label holder with LPC... actuators does not guarantee the IP65 degree of protection.
❸ 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).
❹ Cannot be used when LPXAU100, LPXAU105 or LPXAU102 is fitted.
❺ Cannot be used when LPXAU158 is fitted.
❻ Cannot be used when LPXAU167 is fitted.
❼ For labels with text see page 7-48.

Accessories and spare parts for Ø30mm flat metal LPF... actuators

LPFXB0

new

LPXAU00

LPFXAU100

LPFXAU105

LPFXAU100G

LPFXAU105G

Order code	Description	Qty pkg	Wt
		n°	[kg]
LPFXB0❶	Flush or extended spring return actuator with no cap	5	0.013
LPFXQ0❶	Flush or extended push-push actuator with no cap	5	0.013
LPFXQL0❶	Illuminated flush or extended push-push actuator with no cap	5	0.013
LPFXAU00	Plastic threaded ring for actuator fixing	5	0.002
LPFXA130	Threaded plug for unused drilled holes (grey)	5	0.007
Label holders and labels. ❷			
LPFXAU100	Label holder for LPXAU109 and LPXAU203 labels (black)	5	0.004
LPFXAU100G	Label holder for LPXAU109 and LPXAU203 labels (grey)	5	0.004
LPXAU203	Blank label for writing	50	0.001
LPFXAU105	Label holder for LPXAU108 plastic labels (black)	5	0.005
LPFXAU105G	Label holder for LPXAU108 plastic labels (grey)	5	0.005
LPXAU109	Engravable silver plastic label to use with LPXAU100 holder	50	0.002
LPXAU108	Engravable silver plastic label to use with LPXAU105 holder	50	0.002

General characteristics
LABEL DIMENSIONS
- LPXAU108: 26.5x15mm/1.04x0.59”
- LPXAU109: 27.5x12.1mm/1.08x0.48”
- LPXAU202: 27.5x15.1mm/1.08x0.59”
- LPXAU201: 27.5x15.1mm/1.08x0.59”
- LPXAU203: 27.5x12.1mm/1.08x0.48”

❶ For actuators caps and lenses see page 7-47.
❷ For labels with text see page 7-48.

Accessories and spare parts for Ø22mm chromed plastic LPC... actuators

LPXB0

LPXA162

LPXA200

new

LPXAU00

LPXAU01

LPXA130

LPXDIN

LPXAU138

LPXAU158

LPXAU159

LPXA185

new

LPXAU170

LPXAU171

LPXAU100 LPXAU105

LPXAU108 LPXAU109

Order code	Description	Qty pkg	Wt
		n°	[kg]
LPXB0❶	Flush or extended spring return actuator with no cap	10	0.013
LPXB3❶	Shrouded spring return actuator with no cap	10	0.014
LPXQ0❶	Flush or extended push-push actuator with no cap	10	0.013
LPXQL0❶	Illuminated flush or extended push-push actuator with no lens	10	0.013
LPXA161	Adapter for Ø30mm/1.18" holes to Ø22mm/0.87" for mushroom operators	5	0.018
LPXA162	Adapter for Ø30mm/1.18" holes to Ø22mm/0.87" for push-buttons and selector switches	5	0.018
LPXA200	Socket spanner/wrench for fixing ring fitting	1	0.003
LPXA127	Transparent diffuser for double-touch buttons	10	0.001
LPXAU00	Plastic threaded ring for actuator fixing	20	0.002
LPXAU01	Metallic threaded ring for actuator fixing	20	0.015
LPXA130	Threaded plug for unused drilled holes (grey)	10	0.007
LPXA130B	Threaded plug for unused drilled holes (black)	10	0.007
LPXDIN	Adapter for mounting buttons on DIN rail 35mm/ 1.38" wide (2 modules)	10	0.008
LPXA150	Rod for mechanical reset button (l=150mm/5.90")	10	0.006
Protections.			
LPXAU13❸❹	Rubber boot for flush buttons	10	0.006
LPXAU14❸❹	Rubber boot for extended buttons	10	0.009
LPXAU157	Rubber boot for double and triple-touch buttons (transpar.)	10	0.007
LPXAU167❺❻	Rubber boot for mushroom head buttons, LPCB63/B66/ B67/BL66... (transparent)	10	0.012
LPXAU158❹❻	Padlockable protection, Ø5-8mm/0.2-0.31" locks for buttons LPCB66/B67/B68/ BL664...; for LPCB634... Ø5-6mm/0.2-0.24" locks only	10	0.005
LPXAU159❹❻	Shroud for buttons LPCB63/66/67/68/BL666...	10	0.010
LPXA185	Yellow shroud for selectors	10	0.004
LPXAU170	Protection cover for Ø22mm/ 0.87" plastic buttons	5	0.015
LPXAU171	Protection cover for Ø22mm/ 0.87"communication interfaces	5	0.018
Label holders and labels. ❼			
LPXAU100	Label holder for LPXAU109 and LPXAU203 labels	50	0.001
LPXAU203	Blank label for writing	50	0.001
LPXAU109	Engravable silver plastic label to use with LPXAU100 holder	50	0.002
LPXAU105	Label holder for LPXAU108 plastic labels	50	0.003
LPXAU108	Engravable silver plastic label to use with LPXAU105 holder	50	0.002
LPXAU102❷	Legend holder for LPXAU202 paper or LPXAU201 plastic labels	50	0.003
LPXAU202	Blank paper label for writing for LPXAU102	50	0.002
LPXAU200	Transparent protection for LPXAU202 label	50	0.001
LPXAU201	Blank plastic label for engraving for LPXAU102	50	0.002

General characteristics
LABEL DIMENSIONS
- LPXAU108: 26.5x15mm/1.04x0.59"
- LPXAU109: 27.5x12.1mm/1.08x0.48"
- LPXAU202: 27.5x15.1mm/1.08x0.59"
- LPXAU201: 27.5x15.1mm/1.08x0.59"
- LPXAU203: 27.5x12.1mm/1.08x0.48".

❶ For actuators caps and lenses see page 7-47.
❷ The use of the LPXAU102 label holder with LPC... actuators does not guarantee the IP65 degree of protection.
❸ 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).
❹ Cannot be used when LPXAU100, LPXAU105 or LPXAU102 is fitted.
❺ Cannot be used when LPXAU158 is fitted.
❻ Cannot be used when LPXAU167 is fitted.
❼ For labels with text see page 7-48.

Accessories and spare parts for Ø30mm flat metal actuators, Ø22mm metal and chromed plastic actuators

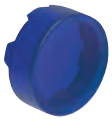
LPXA140

LPXA170...

LPXB104

LPXBL105

LPXB203



LPXBL206

Order code	Description	Qty per pkg	Wt
		n°	[kg]
LPXA140	Action plug for centre contact	50	0.001
LPXA170	Spare standard key set for selector switches or mushroom-head buttons, key code n° 455	10	0.008
LPX A170R❶	Spare key set for selector switches or mushroom head buttons	1	0.008
Flush cap for spring return and push-push actuators.			
LPXB102	Black	10	0.002
LPXB103	Green	10	0.002
LPXB104	Red	10	0.002
LPXB105	Yellow	10	0.002
LPXB106	Blue	10	0.002
LPXB108	White	10	0.002
Extended cap for spring return and push-push actuators.			
LPXB202	Black	10	0.003
LPXB203	Green	10	0.003
LPXB204	Red	10	0.003
LPXB205	Yellow	10	0.003
LPXB206	Blue	10	0.003
LPXB208	White	10	0.003
Flush lens for illuminated spring return and push-push actuators.			
LPXBL103	Green	10	0.002
LPXBL104	Red	10	0.002
LPXBL105	Yellow	10	0.002
LPXBL106	Blue	10	0.002
LPXBL107	Transparent	10	0.002
Extended lens for illuminated spring return and push-push actuators.			
LPXBL203	Green	10	0.003
LPXBL204	Red	10	0.003
LPXBL205	Yellow	10	0.003
LPXBL206	Blue	10	0.003
LPXBL207	Transparent	10	0.003

❶ 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: LPXA170R421E.

Labels with text for LPXAU100 and LPFXAU100... legend holders

LPXAGB220

LPXAGB221

LPXAGB212

LPXAGB211

LPXAGB204

Order code	Text	Qty per pkg	Wt
		n°	[kg]
International labels for pushbuttons and selector switches.			
LPXAGB200	0	50	0.001
LPXAGB201	I	50	0.001
LPXAGB202	II	50	0.001
LPXAGB203	O-I	50	0.001
LPXAGB204	I-II	50	0.001
LPXAGB205	I-O-II	50	0.001
Labels for selector switches.			
LPXAGB210	OFF-ON	50	0.001
LPXAGB211	STOP-START	50	0.001
LPXAE211	PAR-MAR	50	0.001
LPXAGB212	AUTO-MAN	50	0.001
LPXAGB213	MAN-AUTO	50	0.001
LPXAGB214	AUTO-O-MAN	50	0.001
LPXAGB215	MAN-O-AUTO	50	0.001
LPXAGB216	FWD-O-REV	50	0.001
LPXAI216	AV.-O-IND.	50	0.001
Labels for general use.			
LPXAGB220	START	50	0.001
LPXAI220	MARCIA	50	0.001
LPXAE220	MARCHA	50	0.001
LPXAGB221	STOP	50	0.001
LPXAI221	ARRESTO	50	0.001
LPXAE221	PARADA	50	0.001
LPXAGB222	RESET	50	0.001
LPXAE222	REARME	50	0.001
LPXAGB223	EMERGENCY	50	0.001
LPXAI223	EMERGENZA	50	0.001
LPXAE223	EMERGENCIA	50	0.001
LPXAGB224	ON	50	0.001
LPXAI224	IN SERVIZIO	50	0.001
LPXAE224	EN SERVICIO	50	0.001
LPXAGB225	POWER ON	50	0.001
LPXAI225	PRESENZA TENSIONE	50	0.001
LPXAGB226	OFF	50	0.001
LPXAGB227	FORWARD	50	0.001
LPXAI227	AVANTI	50	0.001
LPXAGB228	REVERSE	50	0.001
LPXAI228	INDIETRO	50	0.001
LPXAGB229	OPEN	50	0.001
LPXAI229	APERTURA	50	0.001
LPXAGB230	CLOSE	50	0.001
LPXAI230	CHIUSURA	50	0.001
LPXAGB231	RAISE	50	0.001
LPXAI231	SALITA	50	0.001
LPXAE231	SUBIDA	50	0.001
LPXAGB232	LOWER	50	0.001
LPXAI232	DISCESA	50	0.001
LPXAE232	BAJADA	50	0.001
LPXAI233	INTERVENTO TERMICO	50	0.001
LPXAGB234	FAULT	50	0.001
LPXAI235	DISINSERITO	50	0.001
LPXAGB236	LOCK	50	0.001
LPXAGB237	LEFT	50	0.001
LPXAGB238	MAN-AUTO	50	0.001

General characteristics
The labels have indelible scratch-proof black lettering on metalised grey polycarbonate background (adhesive).
All LPXA...2... labels have the following dimensions: 27.5x12.1mm/1.08x0.48".

Special versions
Labels in different languages are available.
Consult Technical support; see contact details on inside front cover.

Plastic disk for Ø22mm mushroom head pushbuttons

LPXAU113

new

LPXAU114

LPXAU124

LPXAU110

Order code	Text	Qty per pkg	Wt
		n°	[kg]
LPXAU112	EMERGENZA ARRESTO Ø90mm/3.5”	10	0.005
LPXAU114	EMERGENZA ARRESTO Ø60mm/2.4”	10	0.003
LPXAU113	EMERGENCY STOP Ø90mm/3.5”	10	0.005
LPXAU115	EMERGENCY STOP Ø60mm/2.4”	10	0.003
LPXAU124	IEC60417-5638 symbol according to ISO 13850 Ø90mm/3.5”	10	0.005
LPXAU123	IEC60417-5638 symbol according to ISO 13850 Ø60mm/2.4”	10	0.005
LPXAU110	Adhesive label EMERGENCY STOP (34.5x65mm/1.36x2.56”) for LP...B63/663/664/ 67/68/BL66... buttons	10	0.001
LPXAU118	ARRET D’URGENCE / NOT-AUS/ PARO EMERGENCIA Ø60mm/2.4”	10	0.003

General characteristics
The disks are made of non-adhesive plastic.
Plastic disks cannot be used with LPXAU158 and LPXAU159 protection.

Ø60mm illuminated plastic disk for Ø22mm mushroom head pushbuttons

LPXDAU1140...

new

Order code	Text	Qty per pkg	Wt
		n°	[kg]
24VAC/DC auxiliary supply.			
LPXDAU114024	EMERGENZA ARRESTO	1	0.100
LPXDAU115024	EMERGENCY STOP	1	0.100
LPXDAU118024	ARRET D’URGENCE / NOT AUS / PARO EMERGENCIA	1	0.100
LPXDAU123024	IEC60417-5638 symbol according to ISO 13850	1	0.100
110...120VAC auxiliary supply.			
LPXDAU114110	EMERGENZA ARRESTO	1	0.100
LPXDAU115110	EMERGENCY STOP	1	0.100
LPXDAU118110	ARRET D’URGENCE / NOT AUS / PARO EMERGENCIA	1	0.100
LPXDAU123110	IEC60417-5638 symbol according to ISO 13850	1	0.100
220...240VAC auxiliary supply.			
LPXDAU114230	EMERGENZA ARRESTO	1	0.100
LPXDAU115230	EMERGENCY STOP	1	0.100
LPXDAU118230	ARRET D’URGENCE / NOT AUS / PARO EMERGENCIA	1	0.100
LPXDAU123230	IEC60417-5638 symbol according to ISO 13850	1	0.100

General characteristics
The main function of the illuminated plastic disk is to make the emergency button more identifiable by ensuring its operation in conditions of low visibility.
The illuminated plastic disks integrate two light functions: steady or flashing. The function choice depends on the wiring.

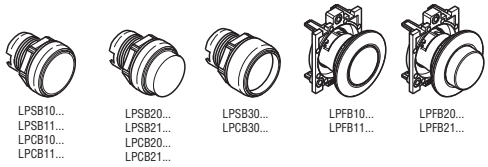
Operational characteristics
- Auxiliary supply voltage: 24VAC/DC, 110...120VAC or 220...240VAC
- Rated frequency: 50/60Hz
- Electrical life: >30,000 hours
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection:
  - Per IEC/EN: IP66, IP67 and IP69K
  - Per UL: Type 1, 2, 3R, 4, 4X, 12, 12K.

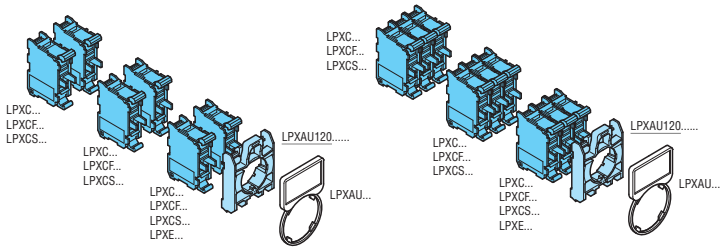
Certifications and compliance
Certifications: cULus
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508, CSA C22.2 n°14

Dimensions
page 7-65

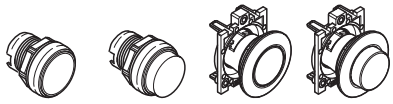
COMBINATIONS FOR PUSHBUTTONS AND SELECTOR SWITCHES

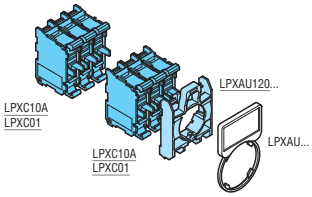
SPRING RETURN BUTTONS



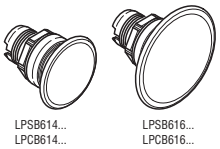


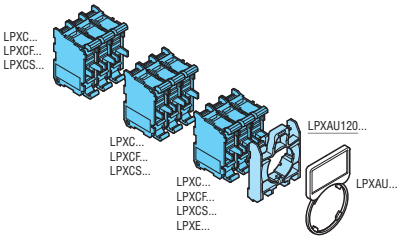
PUSH-PUSH BUTTONS



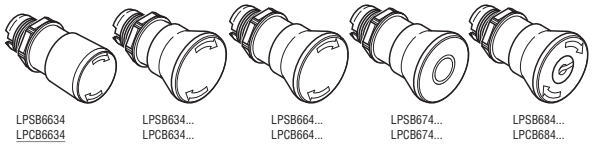


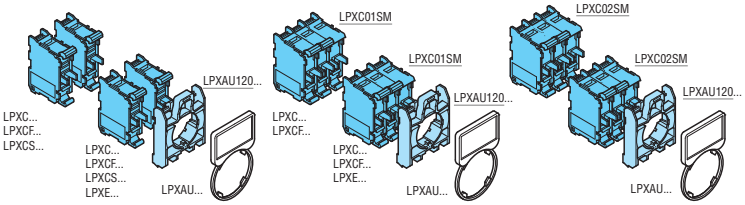
MUSHROOM-HEAD SPRING RETURN BUTTONS



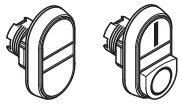


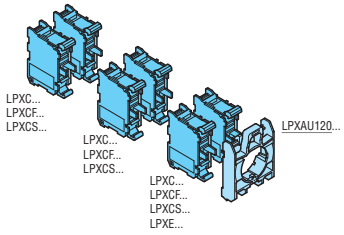
MUSHROOM-HEAD LATCH BUTTONS



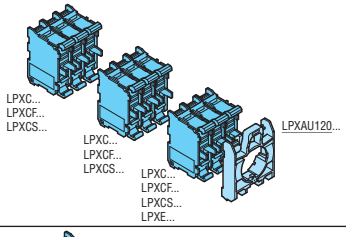


DOUBLE-TOUCH BUTTONS LPC... CHROMED PLASTIC TYPES

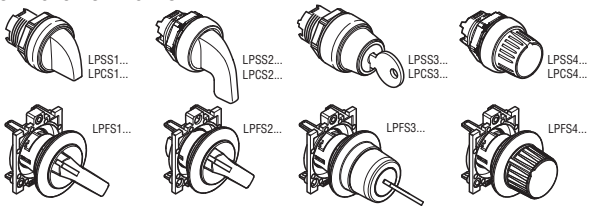


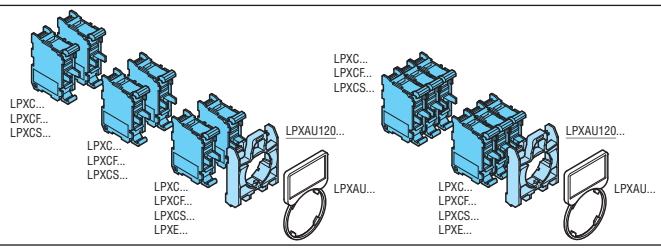


DOUBLE-TOUCH LPS... METAL TYPES AND TRIPLE-TOUCH BUTTONS

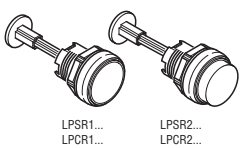


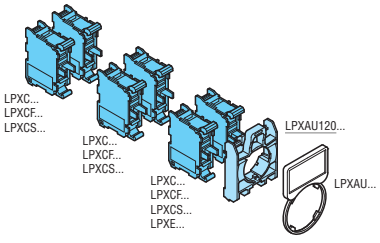
SELECTOR SWITCHES





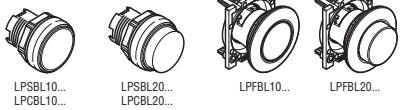
MECHANICAL SPRING RETURN RESET BUTTONS

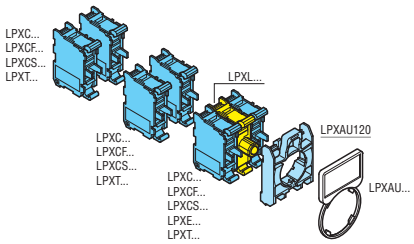




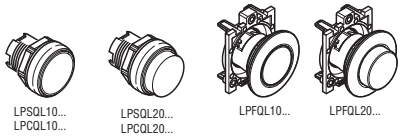
COMBINATIONS FOR ILLUMINATED PUSHBUTTONS AND SELECTOR SWITCHES

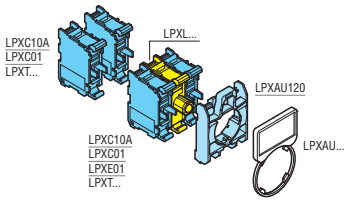
SPRING RETURN BUTTONS



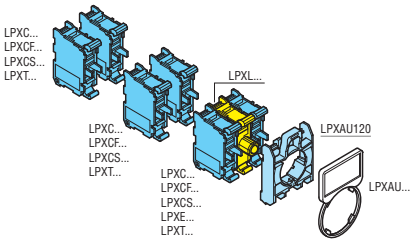


PUSH-PUSH BUTTONS

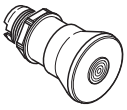


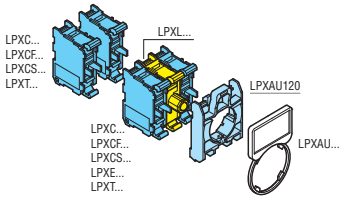


MUSHROOM-HEAD SPRING RETURN BUTTON

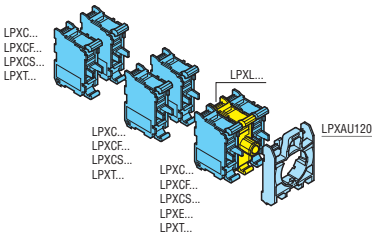


MUSHROOM-HEAD LATCH BUTTON

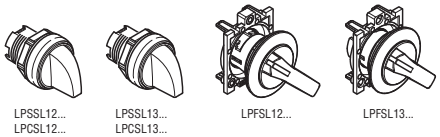


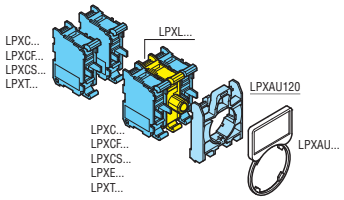


DOUBLE-TOUCH BUTTONS



2 AND 3 POSITION SELECTOR SWITCHES





Without actuators

LPZP1A5

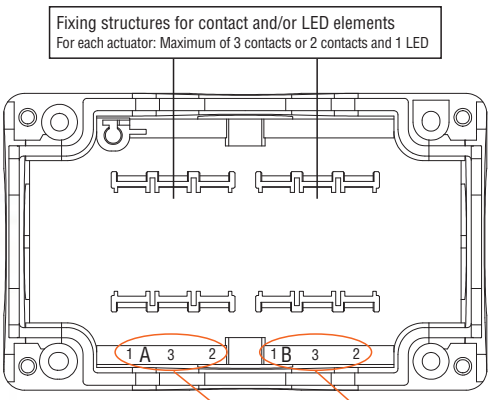
LPZP1A5P

LPZP1A8P

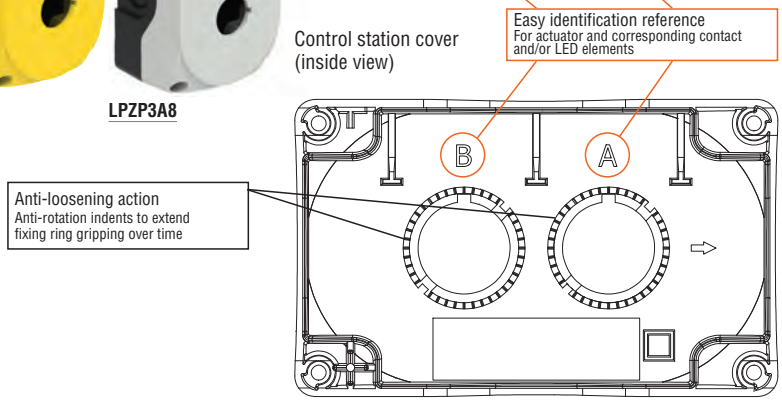
LPZP2A5 LPZP3A8

Order code	Description	Cover colour	Qty per pkg	Wt
			n°	[kg]
LPZP1A5	For 1 actuator	Yellow	1	0.107
LPZP1A5P	For 1 actuator with shroud	Yellow	1	0.127
LPZP1A8	For 1 actuator	Grey	1	0.107
LPZP1A8P	For 1 actuator with shroud	Grey	1	0.127
LPZP2A5	For 2 actuators	Yellow	1	0.152
LPZP2A8	For 2 actuators	Grey	1	0.152
LPZP3A8	For 3 actuators	Grey	1	0.187
LPZP4A8	For 4 actuators	Grey	1	0.200
LPZP5A8	For 5 actuators	Grey	1	0.240
LPZP6A8	For 6 actuators	Grey	1	0.290

Control station base



Control station cover (inside view)



Accessories

LPZXP5

LPZXP8

LPXP01

Order code	Description	Qty per pkg	Wt
		n°	[kg]
LPZXP5	4-piece set yellow screw protection caps	1	0.004
LPZXP8	4-piece set grey screw protection caps	1	0.004
LPXP01	M20 cable gland for LPZP... control stations	50	0.012

General characteristics

CONTROL STATIONS WITHOUT ACTUATOR
- 1 to 6 holes
- Compact dimensions
- Easy wiring for base-mount contact and LED elements; possible use of screw and spring-clamp terminal contact or LED elements on the inside surface of the cover using mounting adapter
- Numerous cable entries.

Operational characteristics

- Cable entry:
  - LPZP1... knockouts:
    - M16/PG11 (1 at rear and 1 on left side)
    - M20/M25/PG13.5/PG16 (1 each on top and bottom)
  - LPZP2... knockouts:
    - M16/PG11 (2 at rear)
    - M20/PG13.5 (1 on each side)
    - M20/M25/PG13.5/PG16 (1 each on top and bottom)
  - LPZP3/P4/P5/P6 A8 knockouts:
    - M16/PG11 (2 at rear)
    - M20/PG13.5 (2 on each side)
    - M20/M25/PG13.5/PG16 (1 each on top and bottom)
- Any mounting position allowed
- Tightening torque of cover screws Tmax: 1.8Nm/16lb.in
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection:
  - Per IEC/EN: IP66, IP67 and IP69K
  - Per UL: Type 1, 2, 3R, 4,4X, 12K.

Materials

Polycarbonate.

Certifications and compliance

Certifications obtained: UL Listed for USA and Canada, (cULus - File E93601), as Auxiliary Devices; EAC, CCC, RINA. Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508A for types without actuators / UL508 for types complete with actuator, CSA C22.2 n° 14.

With 1 actuator

new

LPZP1B8100

LPZP1B8101

LPZP1B8102

LPZP1B8103

LPZP1B8104

LPZP1B8105

Order code	Description	Contacts config.	Qty per pkg	Wt
			n°	[kg]
Grey control station.				
LPZP1B8100	Green spring return flush pushbutton with "I" symbol	1NO	1	0.145
LPZP1B8101	Green spring return flush pushbutton with "START" symbol	1NO	1	0.145
LPZP1B8102	Red spring return flush pushbutton with "0" symbol	1NC	1	0.145
LPZP1B8103	Red spring return flush pushbutton with "STOP" symbol	1NC	1	0.145
LPZP1B8104	Red spring return extended pushbutton with "0" symbol	1NC	1	0.146
LPZP1B8105	Red spring return extended pushbutton with "STOP" symbol	1NC	1	0.147

new

LPZP1B8300

LPZP1B8301

LPZP1B8302

LPZP1B8303

Order code	Description	Contacts config.	Qty per pkg	Wt
			n°	[kg]
Grey control station.				
LPZP1B8300	Selector switch lever, 2 position with label "0-I"	1NO	1	0.150
LPZP1B8301	Selector switch key, 2 position with label "0-I"	1NO	1	0.179
LPZP1B8302	Selector switch key, 2 position with label "0-I"	1NO+ 1NC	1	0.189
LPZP1B8303	Selector switch lever, 3 position with label "I-0-II"	2NO	1	0.160

General characteristics
- Compact dimensions
- Easy wiring
- Numerous cable entries
- Contact elements base-mount on control station.

Operational characteristics
- Cable entry knockouts:
  - M16/PG11 (1 at rear and 1 on left side)
  - M20/M25/PG13.5/PG16 (1 each on top and bottom)
- Any mounting position allowed
- Tightening torque of cover screws Tmax: 1.8Nm/16lb.in
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection:
  - Per IEC/EN: IP66, IP67 and IP69K
  - Per UL: Type 1, 2, 3R, 4, 4X, 12K.

Materials
Polycarbonate.

Certifications and compliance
Certifications obtained: cULus, EAC, CCC, RINA.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508A, CSA C22.2 n° 14.

With 1 actuator

new

LPZP1B5600

LPZP1B5601

LPZP1B5602

LPZP1B5603

LPZP1B5604

LPZP1B5605

LPZP1B5606

LPZP1B5607

Order code	Description	Contacts config.	Qty per pkg	Wt
			n°	[kg]
Yellow control station.				
LPZP1B5600	Mushroom head pushbutton, latch, turn to release for emergency stopping, ISO 13850 with plastic disk EMERGENCY/STOP	1NC	1	0.176
LPZP1B5601	Mushroom head pushbutton, latch, turn to release for emergency stopping, ISO 13850	2NC	1	0.183
LPZP1B5602 ❶	Mushroom head pushbutton, latch, turn to release for normal stopping	1NC	1	0.179
LPZP1B5603	Mushroom head pushbutton, latch, turn to release for emergency stopping, ISO 13850	1NC	1	0.173
LPZP1B5604	Mushroom head pushbutton, latch, turn to release for emergency stopping, ISO 13850	1NO+ 1NC	1	0.183
LPZP1B5605	Mushroom head pushbutton, latch, turn key to release for emergency stopping, ISO 13850 with plastic disk EMERGENCY/STOP	1NC	1	0.198
LPZP1B5606	Mushroom head pushbutton, latch, turn key to release for emergency stopping, ISO 13850	2NC	1	0.205
LPZP1B5607	Mushroom head pushbutton, latch, turn key to release for emergency stopping, ISO 13850	1NO+ 1NC	1	0.205

❶ Not included in cULus homologation.

General characteristics
- Compact dimensions
- Easy wiring
- Numerous cable entries
- Contact elements base-mount on control station.

Operational characteristics
- Cable entry knockouts:
  - M16/PG11 (1 at rear and 1 on left side)
  - M20/M25/PG13.5/PG16 (1 each on top and bottom)
- Any mounting position allowed
- Tightening torque of cover screws Tmax: 1.8Nm/16lb.in
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection:
  - Per IEC/EN: IP66, IP67 and IP69K
  - Per UL: Type 1, 2, 3R, 4, 4X, 12K.

Materials
Polycarbonate.

Certifications and compliance
Certifications obtained: cULus, EAC, CCC, RINA.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508A, CSA C22.2 n° 14.

new

LPZP1B5608

LPZP1B5609

LPZP1B5610

LPZP1B5612

LPZP1B5P603

new

LPZP1B5611

Order code	Description	Contacts config.	Qty per pkg	Wt
			n°	[kg]
Yellow control station.				
LPZP1B5608 ❶	Mushroom head pushbutton, latch, pull to release for emergency stopping, ISO 13850 with plastic disk EMERGENCY/STOP	1NC	1	0.176
LPZP1B5609 ❶	Mushroom head pushbutton, latch, pull to release for emergency stopping, ISO 13850	2NC	1	0.183
LPZP1B5610 ❶	Mushroom head pushbutton, latch, pull to release for emergency stopping, ISO 13850	1NO+ 1NC	1	0.183
LPZP1B5612	Mushroom head pushbutton, latch, turn to release for normal stopping with label "STOP"	1NC	1	0.180
Yellow control station with protection.				
LPZP1B5P603	Mushroom head pushbutton, latch, turn to release for emergency stopping, ISO 13850	1NC	1	0.176
LPZP1B5611 ❶	Mushroom head pushbutton, latch, pull to release for emergency stopping, ISO 13850 with padlockable protection	1NC	1	0.178

❶ Not included in cULus homologation.

General characteristics
- Compact dimensions
- Easy wiring
- Numerous cable entries
- Contact elements base-mount on control station.

Operational characteristics
- Cable entry knockouts:
  - M16/PG11 (1 at rear and 1 on left side)
  - M20/M25/PG13.5/PG16 (1 each on top and bottom)
- Any mounting position allowed
- Tightening torque of cover screws Tmax: 1.8Nm/16lb.in
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection:
  - Per IEC/EN: IP66, IP67 and IP69K
  - Per UL: Type 1, 2, 3R, 4, 4X, 12K.

Materials
Polycarbonate.

Certifications and compliance
Certifications obtained: cULus, EAC, CCC, RINA.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508A, CSA C22.2 n° 14.

With 2 actuators

new

LPZP2B8900

LPZP2B8901

LPZP2B8902

LPZP2B8903

LPZP2B8904

LPZP2B5905

Order code	Description	Contacts config.	Qty per pkg	Wt
			n°	[kg]
Grey control station.				
LPZP2B8900	Green spring return flush pushbutton with "I" symbol	1NO	1	0.213
	Red spring return flush pushbutton with "0" symbol	1NC	1	
LPZP2B8901	Green spring return flush pushbutton with "I" symbol	1NO	1	0.214
	Red spring return extended pushbutton with "0" symbol	1NC	1	
LPZP2B8902	White spring return flush pushbutton with "up arrow" symbol	1NO	1	0.213
	Black spring return flush pushbutton with "down arrow" symbol	1NO	1	
LPZP2B8903	White spring return flush pushbutton with "right arrow" symbol	1NO	1	0.214
	Black spring return flush pushbutton with "left arrow" symbol	1NO	1	
LPZP2B8904	Green spring return flush pushbutton with "I" symbol	1NO	1	0.240
	Mushroom head pushbutton, latch, turn to release for emergency stopping, ISO 13850	1NC	1	
Yellow control station.				
LPZP2B5905	Mushroom head pushbutton, latch, turn key to release for emergency stopping, ISO 13850	1NO+ 1NC	1	0.272
	Red steady pilot light 12...30VAC/DC	–	1	

General characteristics
- Compact dimensions
- Easy wiring
- Numerous cable entries
- Contact elements and LED elements, base-mount on control station.

Operational characteristics
- Cable entry knockouts:
  - M16/PG11 (2 at rear)
  - M20/PG13.5 (1 on each side)
  - M20/M25/PG13.5/PG16 (1 each on top and bottom)
- Any mounting position allowed
- Tightening torque of cover screws Tmax: 1.8Nm/16lb.in
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection:
  - Per IEC/EN: IP66, IP67 and IP69K
  - Per UL: Type 1, 2, 3R, 4, 4X, 12K.

Materials
Polycarbonate.

Certifications and compliance
Certifications obtained: cULus, EAC, CCC, RINA.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508A, CSA C22.2 n° 14.

With 3 actuators

new

LPZP3B8900

LPZP3B8901

LPZP3B8902

LPZP3B8903

LPZP3B8904

LPZP3B8905

LPZP3B8906

LPZP3B8907

Order code	Description	Contacts config.	Qty per pkg	Wt
			n°	[kg]
Grey control station.				
LPZP3B8900	Green spring return flush pushbutton with "I" symbol	1NO	1	0.270
	Red spring return flush pushbutton with "0" symbol	1NC	1	
	Red steady pilot light 12...30VAC/DC	–	1	
LPZP3B8901	Green spring return flush pushbutton with "I" symbol	1NO	1	0.271
	Red spring return extended pushbutton with "0" symbol	1NC	1	
	Red steady pilot light 12...30VAC/DC	–	1	
LPZP3B8902	Green spring return flush pushbutton with "I" symbol	1NO	1	0.270
	Red spring return flush pushbutton with "0" symbol	1NC	1	
	Green spring return flush pushbutton with "II" symbol	1NO	1	
LPZP3B8903	Green spring return flush pushbutton with "I" symbol	1NO	1	0.271
	Red spring return extended pushbutton with "0" symbol	1NC	1	
	Green spring return flush pushbutton with "II" symbol	1NO	1	
LPZP3B8904	White spring return flush pushbutton with "I" symbol	1NO	1	0.270
	Red spring return flush pushbutton with "0" symbol	1NC	1	
	White spring return flush pushbutton with "II" symbol	1NO	1	
LPZP3B8905	White spring return flush pushbutton with "I" symbol	1NO	1	0.271
	Red spring return extended pushbutton with "0" symbol	1NC	1	
	White spring return flush pushbutton with "II" symbol	1NO	1	
LPZP3B8906	White spring return flush pushbutton with "up arrow" symbol	1NO	1	0.270
	Red spring return flush pushbutton with "0" symbol	1NC	1	
	Black spring return flush pushbutton with "down arrow" symbol	1NO	1	
LPZP3B8907	White spring return flush pushbutton with "up arrow" symbol	1NO	1	0.271
	Red spring return extended pushbutton with "0" symbol	1NC	1	
	Black spring return flush pushbutton with "down arrow" symbol	1NO	1	

General characteristics
- Compact dimensions
- Easy wiring
- Numerous cable entries
- Contact elements and LED elements, base-mount on control station.

Operational characteristics
- Cable entry knockouts:
  - M16/PG11 (2 at rear)
  - M20/PG13.5 (2 on each side)
  - M20/M25/PG13.5/PG16 (1 each on top and bottom)
- Any mounting position allowed
- Tightening torque of cover screws Tmax: 1.8Nm/16lb.in
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection:
  - Per IEC/EN: IP66, IP67 and IP69K
  - Per UL: Type 1, 2, 3R, 4, 4X, 12K.

Materials
Polycarbonate.

Certifications and compliance
Certifications obtained: cULus, EAC, CCC, RINA.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508A, CSA C22.2 n° 14.

With 3 actuators

LPZP3B8908

LPZP3B8909

LPZP3B8910

LPZP3B8911

LPZP3B8912

new

Order code	Description	Contacts config.	Qty per pkg	Wt
			n°	[kg]
Grey control station.				
LPZP3B8908	White spring return flush pushbutton with "right arrow" symbol	1NO	1	0.271
	Red spring return flush pushbutton with "0" symbol	1NC	1	
	Black spring return flush pushbutton with "left arrow" symbol	1NO	1	
LPZP3B8909	White spring return flush pushbutton with "right arrow" symbol	1NO	1	0.272
	Red spring return extended pushbutton with "0" symbol	1NC	1	
	Black spring return flush pushbutton with "left arrow" symbol	1NO	1	
LPZP3B8910	Green spring return flush pushbutton with "I" symbol	1NO	1	0.270
	Red spring return flush pushbutton with "0" symbol	1NC	1	
	Green steady pilot light 12...30VAC/DC	–		
LPZP3B8911	Green spring return flush pushbutton with "I" symbol	1NO	1	0.271
	Red spring return extended pushbutton with "0" symbol	1NC	1	
	Green steady pilot light 12...30VAC/DC	–		
LPZP3B8912	Green spring return flush pushbutton	1NO	1	0.278
	Red spring return flush pushbutton	1NC	1	
	Mushroom head spring return pushbutton	1NC	1	

General characteristics
- Compact dimensions
- Easy wiring
- Numerous cable entries
- Contact elements and LED elements, base-mount on control station.

Operational characteristics
- Cable entry knockouts:
  - M16/PG11 (2 at rear)
  - M20/PG13.5 (2 on each side)
  - M20/M25/PG13.5/PG16 (1 each on top and bottom)
- Any mounting position allowed
- Tightening torque of cover screws Tmax: 1.8Nm/16lb.in
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C
- Degree of protection:
  - Per IEC/EN: IP66, IP67 and IP69K
  - Per UL: Type 1, 2, 3R, 4, 4X, 12K.

Materials
Polycarbonate.

Certifications and compliance
Certifications obtained: cULus, EAC, CCC, RINA.
Compliant with standards: IEC/EN/BS 60947-1, IEC/EN/BS 60947-5-1, UL508A, CSA C22.2 n° 14.

Type LP9...

LP9S...R

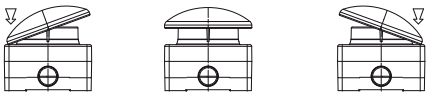
new

LP9S...B

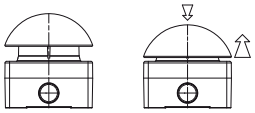
LP9P...R

Order code	Description	Qty per pkg	Wt
		n°	[kg]
LP9S01R	Momentary Ø90mm/3.54" red mushroom. Contacts: 1NC	1	0.210
LP9S11R	Momentary Ø90mm/3.54" red mushroom. Contacts: 1NO+1NC	1	0.220
LP9S10B	Momentary Ø90mm/3.54" black mushroom. Contacts: 1NO	1	0.210
LP9S11B	Momentary Ø90mm/3.54" black mushroom. Contacts: 1NO+1NC	1	0.220
LP9P02R	Emergency Ø90mm/3.54" red mushroom pull-to-release. Contacts: 2NC	1	0.290
LP9P11R	Emergency Ø90mm/3.54" red mushroom pull-to-release. Contacts: 1NO+1NC	1	0.300

Momentary mushroom



Emergency mushroom pull-to-release



Accessories

LP9XC...

Order code	Description	Qty per pkg	Wt
		n°	[kg]
LP9XC10❶	1NO contact	1	0.010
LP9XC01❶	1NC contact	1	0.010

❶ Maximum configuration: n°3 LP9XC... contact elements.

General characteristics
LOVATO Electric palm switches LP9... types are designed for machine stop and immediate service control applications. They are widely used in the most diverse applications, including emergency stop for escalators, gate openers, pedestrian crossing buttons for disabled users, etc...
The ergonomic design and large surface for an easy actuation with the hand, elbow or foot, ensures immediate actuation of machinery and equipment even if the operator has his hands full.
This new range is split into two versions:
– Momentary mushroom (available in grey/black or grey/red);
– Emergency mushroom "pull-to-release" (available in yellow/red only).

Operational characteristics
– Cable entry (knockout version):
  • M20/PG13.5 (1 on each side)
  • M16/PG11 (2 on the cover bttom)
– Any mounting position allowed
– Tightening torque of cover screws Tmax: 0.8Nm/0.59lb.ft
– Ambient conditions:
  • Operating temperature: -25...+75°C
  • Storage temperature: -40...+85°C
– IEC/EN degree of protection: IP65.

CONTACT ELEMENTS
– Rated insulation voltage: 690V
– Rated thermal current Ith: 10A
– Conductivity: 5V 10mA
– Tightening torque of contact screws: 0.5...0.8Nm
– Conductor cross section: 1 or 2 conductors - 0.5...2.5mm²
– IEC/EN 60947-5-1 designation: A600 Q300.

Minimum operational characteristics in AC15:

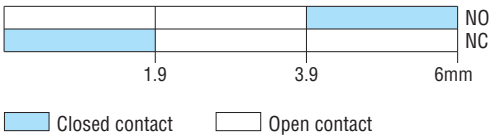
[V]	12	24	48	120	240	400	480	500	600
[A]	6	6	6	6	3	1.9	1.5	1.4	1.2

Minimum operational characteristics 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

Operational characteristics in AC15: 24V 10A and 400V 4A
– Short-circuit protection fuse: max. calibre 10A gG/gL
– Contact resistance:: ≤25mΩ
– Operating force: ≤2.6N
– Mechanical life: 1,000,000 cycles.

Stroke of contact elements



Closed contact Open contact

Material
PC-ABS for button and control station.
PA66 for plastic operator frame (LP9S...).
Chrome-plated aluminium and zinc alloy (zama) for metal operator frame (LP9P...).

Compliance
Compliant with standards: IEC60947-5-1.

Enclosures with cut-outs for Ø22mm units

LPZM1A5

LPZM1A5P

LPZM1A8

LPZM2A5

LPZM2A8

Order code	Description	Cover colour	Qty per pkg	Wt
			n°	[kg]
With holes.				
LPZM1A5	For 1 actuator	Yellow	1	0.343
LPZM1A5P❷	For 1 actuator with shroud	Yellow	1	0.382
LPZM1A8	For 1 actuator	Grey	1	0.349
LPZM2A5	For 2 actuators	Yellow	1	0.456
LPZM2A8	For 2 actuators	Grey	1	0.458
LPZM3A8	For 3 actuators	Grey	1	0.603
LPZM4A8	For 4 actuators	Grey	1	0.581
LPZM5A8	For 5 actuators	Grey	1	0.680
LPZM6A8	For 6 actuators	Grey	1	0.671
With multiholes.				
LPZM4CA8	For 4 actuators	Grey	1	0.570
LPZM6CA8	For 6 actuators	Grey	1	0.660
LPZM8CA8	For 8 actuators	Grey	1	1.060
LPZM12CA8	For 12 actuators	Grey	1	1.360
LPZM16CA8	For 16 actuators	Grey	1	1.650

❷ It is not possible to use plastic disks in combination with enclosure with protection.

LPZM3A8

LPZM4A8

LPZM5A8

LPZM6A8

LPZM4CA8

LPZM6CA8

LPZM8CA8

LPZM12CA8

LPZM16CA8

General characteristics
Enclosures made of aluminium alloy suitable for pushbuttons, selector switches and pilot lights Ø22mm/0.87" Platinum series.
Possible use of contact elements on the inside surface of the cover using the relevant mounting adapter.
The thickness of the enclosure is suitable for drilling.
Up to 6 contacts can be fitted; 2 each on the left, middle and right, one behind the other.
For the possible combinations consult this chapter on the actuator pages.

Operational characteristics
- Cable entry❶: Ø21mm/0.83" (for M20 or PG13.5 cable gland)
- Degree of protection:
  - Per IEC/EN: IP66 and IP67
  - Per UL: Nema 4X
- Earth connection through threaded holes on the base and on the cover (screws supplied)
- Ambient conditions:
  - Operating temperature: -25...+70°C
  - Storage temperature: -40...+85°C.

Certifications and compliance
Certifications obtained: cULus.
Compliant with standards: IEC/EN/BS 60947-5-1.

❶ Not available for multiholes LPZM...C type.

Order codes	Dimensions (X, Y, Z) [mm (in)]	n° of rows vertical	n° of rows horizontal
LPZM1A5/A8	80x80x73 (3.15x3.15x2.87")	1	1
LPZM1A5P	80x80x108 (3.15x3.15x4.25")	1	1
LPZM2A5/A8	80x130x73 (3.15x5.12x2.87")	1	2
LPZM3A8	80x170x73 (3.15x6.69x2.87")	1	3
LPZM4A8	80x170x73 (3.15x6.69x2.87")	1	4
LPZM5A8	80x230x73 (3.15x9.05x2.87")	1	5
LPZM6A8	80x230x73 (3.15x9.05x2.87")	1	6
LPZM4CA8	80x170x73 (3.15x6.69x2.87")	2	2
LPZM6CA8	80x230x73 (3.15x9.05x2.87")	2	3
LPZM8CA8	160x160x90 (6.30x6.30x3.54")	4	2
LPZM12CA8	170x190x90 (6.69x7.48x3.54")	4	3
LPZM16CA8	190x250x90 (7.48x9.84x3.54")	4	4

Enclosures

LPZM1E5

LPZM1E8

LPZM2E8

LPZM3E8

LPZM4E8

LPZM5E8

LPZM6E8

LPZM7E8

Order code	Dimensions (X, Y, Z)	Cover colour	Qty per pkg.	Wt.
	[mm (in)]		n°	[kg]
LPZM1E5	80x80x73 (3.15x3.15x2.87”)	Yellow	1	0.346
LPZM1E8	80x80x73 (3.15x3.15x2.87”)	Grey	1	0.352
LPZM2E8	80x130x73 (3.15x5.12x2.87”)	Grey	1	0.462
LPZM3E8	80x170x73 (3.15x6.69x2.87”)	Grey	1	0.600
LPZM4E8	80x230x73 (3.15x9.05x2.87”)	Grey	1	0.680
LPZM5E8	160x160x90 (6.30x6.30x3.54”)	Grey	1	1.100
LPZM6E8	170x190x90 (6.69x7.48x3.54”)	Grey	1	1.400
LPZM7E8	190x250x90 (7.48x9.84x3.54”)	Grey	1	1.700

General characteristics
Enclosures made of aluminium alloy suitable for pushbuttons, selector switches and pilot lights Ø22mm/0.87” Platinum series.
Possible use of contact elements on the inside surface of the cover using the relevant mounting adapter.
The thickness of the enclosure is suitable for drilling.
Up to 6 contacts can be fitted; 2 each on the left, middle and right, one behind the other.
For the possible combinations consult this chapter on the actuator pages.

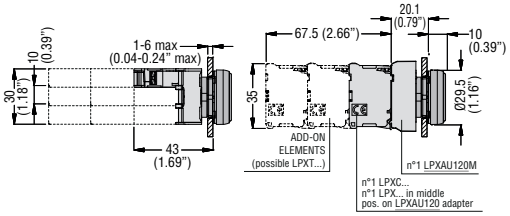
Operational characteristics
– Degree of protection:
  • Per IEC/EN: IP66 and IP67
  • Per UL: Nema 4X
– Earth connection through threaded holes on the base and on the cover (screws supplied)
– Ambient conditions:
  • Operating temperature: -25...+70°C
  • Storage temperature: -40...+85°C.

Certifications and compliance
Certifications obtained: cULus.
Compliant with standards: IEC/EN/BS 60947-5-1.

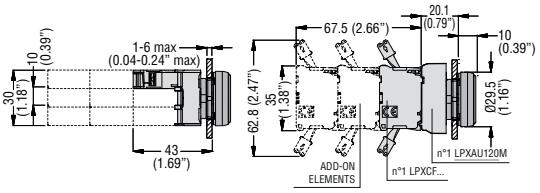
Order code	Max. operator number	n° of rows vertical	n° of rows horizontal
LPZM1E5/E8	1	1	1
LPZM2E8	2	1	2
LPZM3E8	4	1	3
LPZM4E8	6	1	5
LPZM5E8	8	4	2
LPZM6E8	12	4	3
LPZM7E8	16	4	4

LPXAU120M WITH CONTACT ELEMENTS

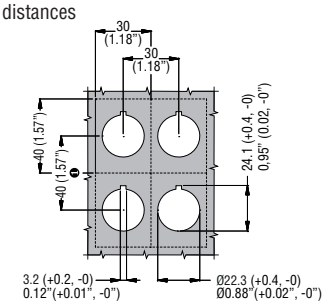
Flush pushbutton with screw terminal contact or LED or test elements



Flush pushbutton with Faston contact elements



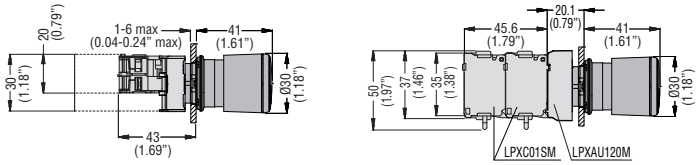
Drillings - Minimum recommended distances



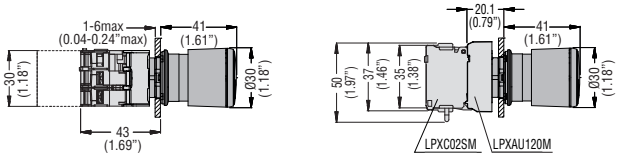
❶ When Faston contacts are used, the vertical pitch must be 85mm minimum.

Mushroom-head pushbutton with auto-monitor contacts

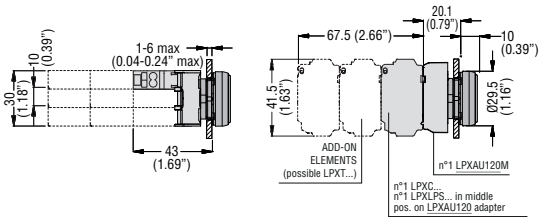
LPXC01SM



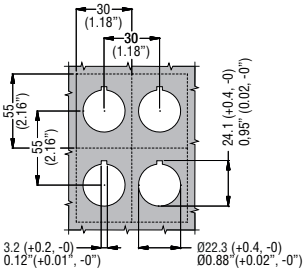
LPXC02SM



Flush pushbutton with test element and spring-clamp terminal contact or LED elements **LPXCS... - LPXLPS...**

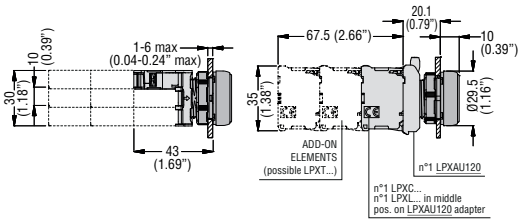


Drillings – Minimum recommended distances with spring-clamp terminal contact or LED elements

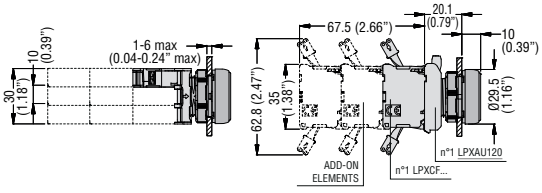


LPXAU120 WITH CONTACT ELEMENTS

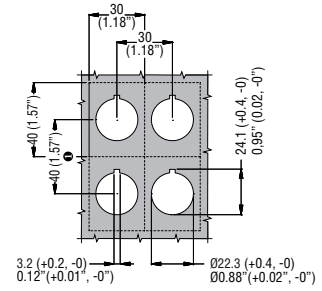
Flush pushbutton with screw terminal contact or LED or test elements



Flush pushbutton with Faston contact elements



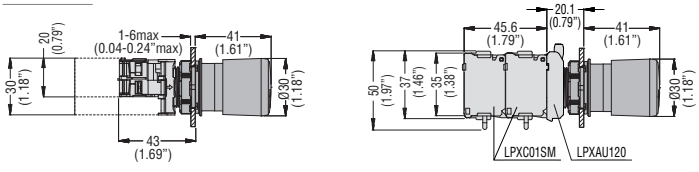
Drillings - Minimum recommended distances



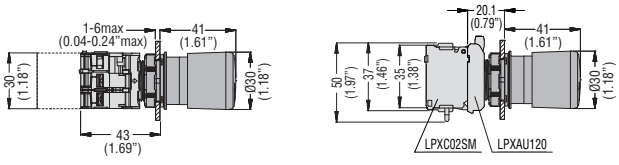
❶ When Faston contacts are used, the vertical pitch must be 85mm minimum.

Mushroom-head pushbutton with auto-monitor contacts

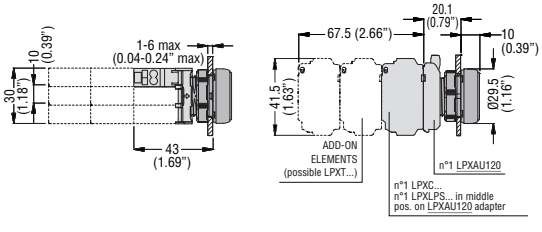
LPXC01SM



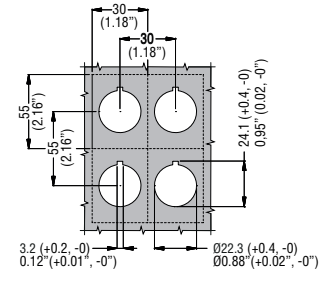
LPXC02SM



Flush pushbutton with test element and spring-clamp terminal contact or LED elements **LPXCS... - LPXLPS...**

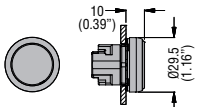


Drillings – Minimum recommended distances with spring-clamp terminal contact or LED elements



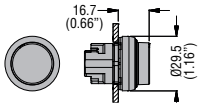
LPS TYPES

Spring-return and push-push buttons



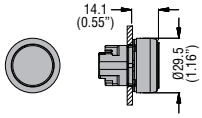
Flush
LPSB1…
Illuminated flush
LPSBL1…
LPSXB0❷

Push-push
LPSQ1…
LPSXQ0❷
Illuminated push-push
LPSQL1…



Extended
LPSB2…
Illuminated extended
LPSBL2…

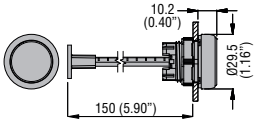
Push-push
LPSQ2…
Illuminated push-push
LPSQL2…
LPSXQL0❷



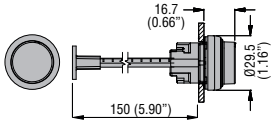
Shrouded
LPSB30…
LPSXB3❷

❷ Complete with cap or lens.

Mechanical buttons

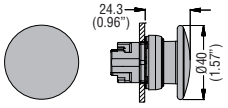


Flush
LPSR1…

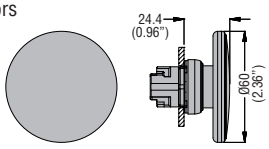


Extended
LPSR2004

Mushroom-head button actuators

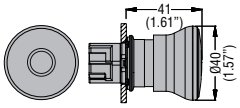


Spring return
LPSB614…
Illuminated spring return
LPSBL614…

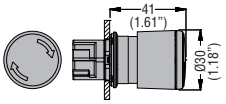


Spring return
LPSB616…

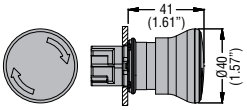
Mushroom-head latch button actuators



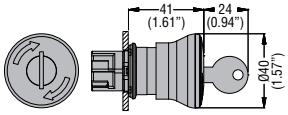
Push-pull
LPSB674…



Turn to release
LPSB6634

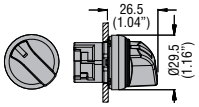


Turn to release
LPSB6644
Illuminated turn to release
LPSBL664…

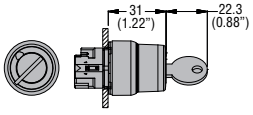


Turn key to release
LPSB684…

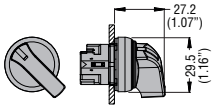
Selector switch actuators



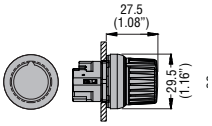
Lever
LPSS1…
Illuminated lever
LPSSL1…



Key
LPSS3…

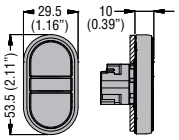


Long lever
LPSS2…



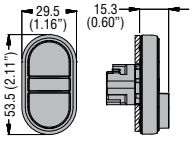
Knob
LPSS4…

Flush double-touch buttons with or without light indicator



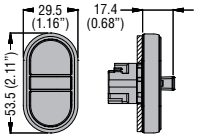
LPSB71… - LPSBL71…

Double-touch buttons with an extended button with or without light indicator



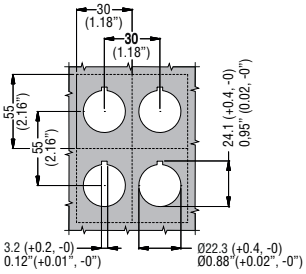
LPSB72… - LPSBL72…

Triple-touch button with middle extended button

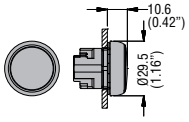


LPSB73…

Drillings - Minimum recommended distances

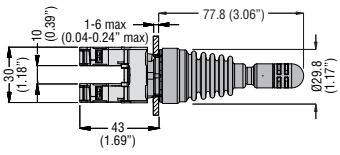


Pilot light head

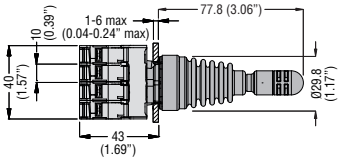


LPSL…

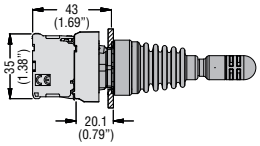
Joystick with free actuation lever



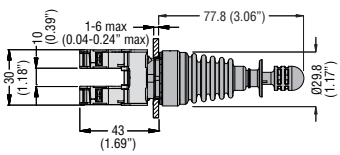
2 positions
LPSJ20…



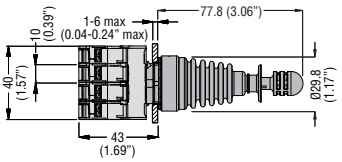
4 positions
LPSJ40…



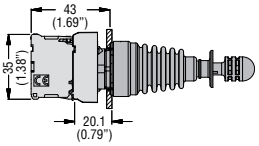
Joystick with mechanical latch lever



2 positions
LPSJ21…

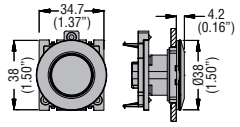


4 positions
LPSJ41…



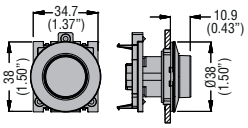
LPF TYPES

Spring-return and push-push buttons



Flush
LPFB1…
Illuminated flush
LPFBL1…
LPFXB0❷

Push-push
LPFQ1…
LPFXQ0❷
Illuminated push-push
LPFQL1…

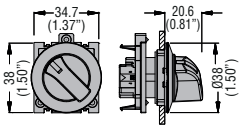


Extended
LPFB2…
Illuminated extended
LPFBL2…

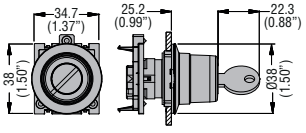
Push-push
LPFQ2…
Illuminated push-push
LPFQL2…
LPFXQL0❷

❷ Complete with cap or lens.

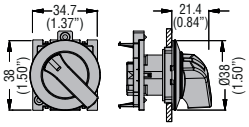
Selector switch actuators



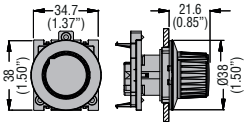
Lever
LPFS1…
Illuminated lever
LPFSL1…



Key
LPFS3…

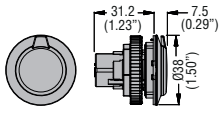


Long lever
LPFS2…

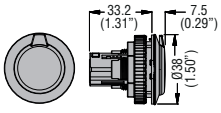


Knob
LPFS4…

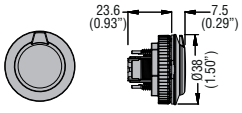
Communication interfaces **LPSD…**



LPFD01

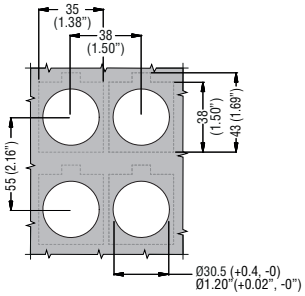


LPFD03 - LPFD05

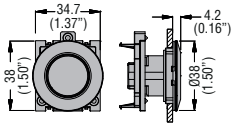


LPFD06

Drillings - Minimum recommended distances



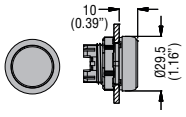
Pilot light head



LPFL…

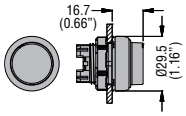
LPC TYPES

Spring-return and push-push buttons



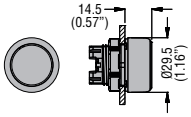
Flush
LPCB1…
Illuminated flush
LPCBL1…
LPXB0❷

Push-push
LPCQ1…
LPXQ0❷
Illuminated push-push
LPCQL1…



Extended
LPCB2…
Illuminated extended
LPCBL2…

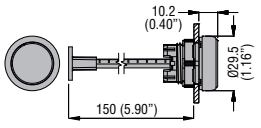
Push-push
LPCQ2…
Illuminated push-push
LPCQL2…
LPXQL0❷



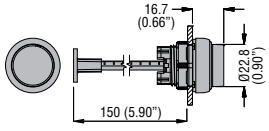
Shrouded
LPCB30…
LPXB3❷

❷ Complete with cap or lens.

Mechanical buttons

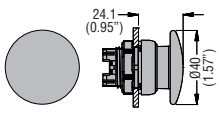


Flush
LPCR1…

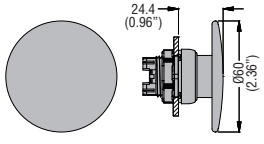


Extended
LPCR2004

Mushroom-head button actuators

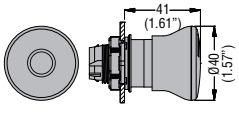


Spring return
LPCB614…
Illuminated spring return
LPCBL614…

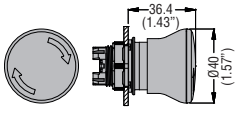


Spring return
LPCB616…

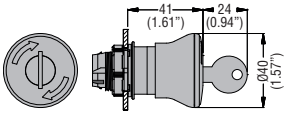
Mushroom-head latch button actuators



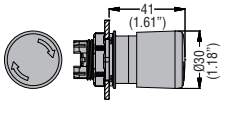
Push-pull
LPCB674…



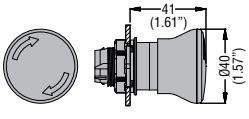
Turn to release
LPCB634…



Turn key to release
LPCB684…

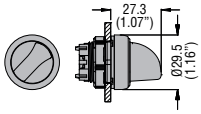


Turn to release
LPCB6634

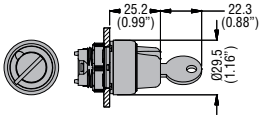


Turn to release
LPCB6644
Illuminated turn to release
LPCBL664…

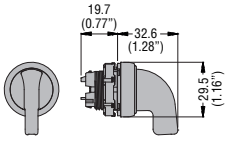
Selector switch actuators



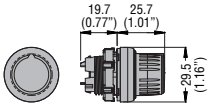
Lever
LPCS1...
Illuminated lever
LPCSL1...



Key
LPCS3...

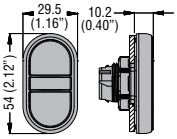


Long lever
LPCS2...



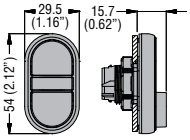
Knob
LPCS4...

Flush double-touch buttons with or without light indicator



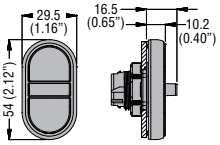
LPCB71... - LPCBL71...

Double-touch buttons with an extended button with or without light indicator



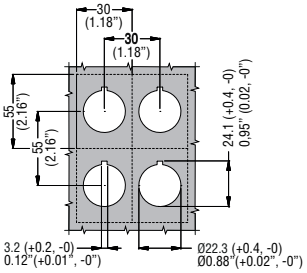
LPCB72... - LPCBL72...

Triple-touch button with middle extended button

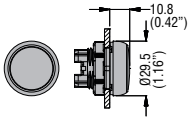


LPCB73...

Drillings - Minimum recommended distances

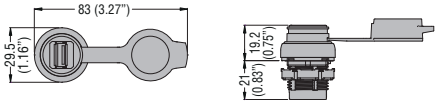


Pilot light head

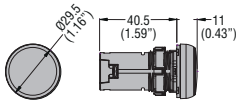


LPL...

Communication interfaces **LPCD...**

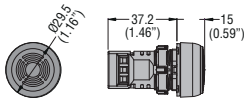


LED-integrated monoblock pilot lights



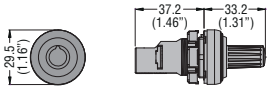
LPM...

Monoblock buzzers



LPCZS...

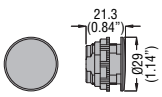
Monoblock potentiometer



LPCPA...

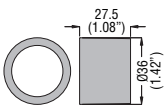
PLATINUM ACCESSORIES

Threaded plug for unused drilled holes



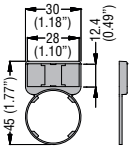
LPXA130

Knob selector switch protection



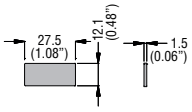
LM2TAU185

Label holder



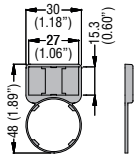
LPXAU100

Label



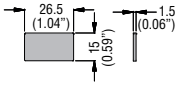
LPXAU109
LM2TA...2...

Label holder



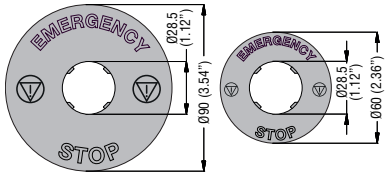
LPXAU105

Label



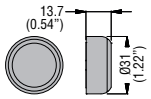
LPXAU108

Plastic disk for mushroom-head pushbuttons



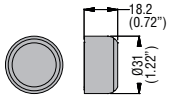
LPXAU112
LPXAU113
LPXAU114
LPXAU115
LPXAU118

Rubber boot for flush buttons



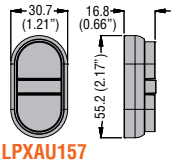
LPXAU13...

Rubber boot for extended buttons



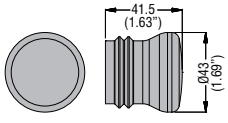
LPXAU14...

Double/triple button boot



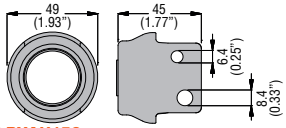
LPXAU157

Rubber boot for mushroom-head buttons



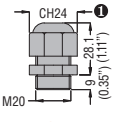
LPXAU167

Padlockable protection for mushroom-head latch buttons



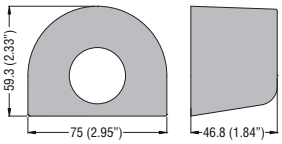
LPXAU158

Cable gland



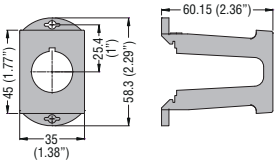
LPXP01

Shroud for mushroom-head latch buttons



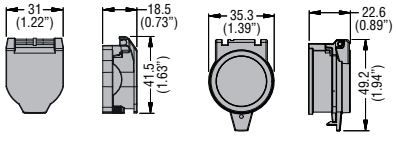
LPXAU159

DIN rail adapter



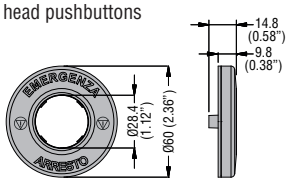
LPXDIN

Protection covers



LPXAU170
LPXAU171

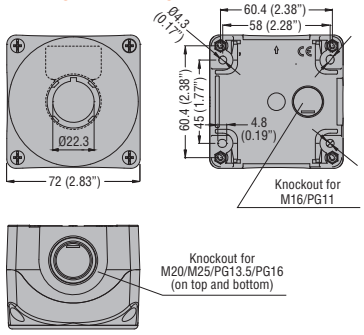
Illuminated disk for mushroom-head pushbuttons



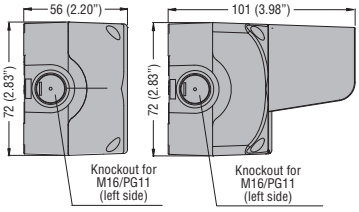
LPXDAU11...

PLASTIC CONTROL STATIONS

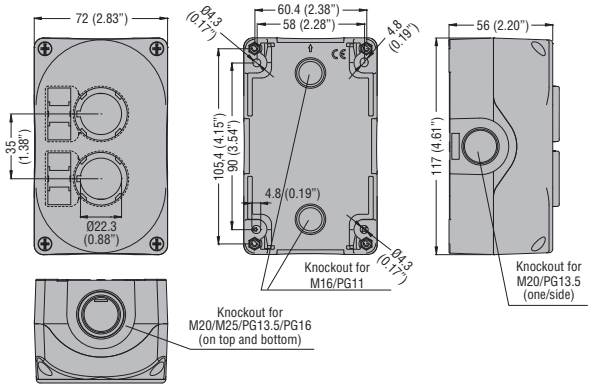
LPZP1A5 - LPZP1A8
LPZP1B5... - LPZP1B8...



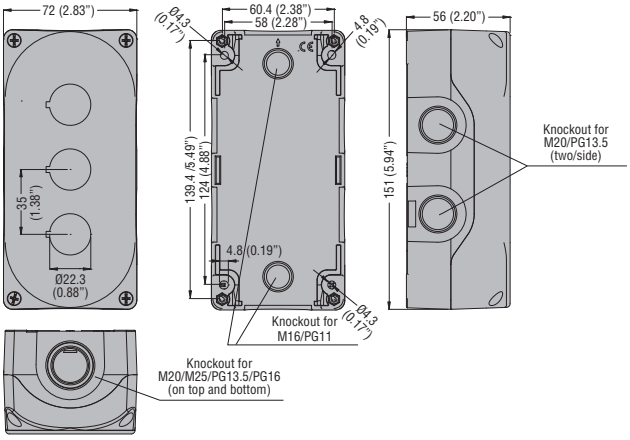
LPZP1A5P
LPZP1A8P



LPZP2A5 - LPZP2A8
LPZP2B5... - LPZP2B8...



LPZP3A8
LPZP3B8...



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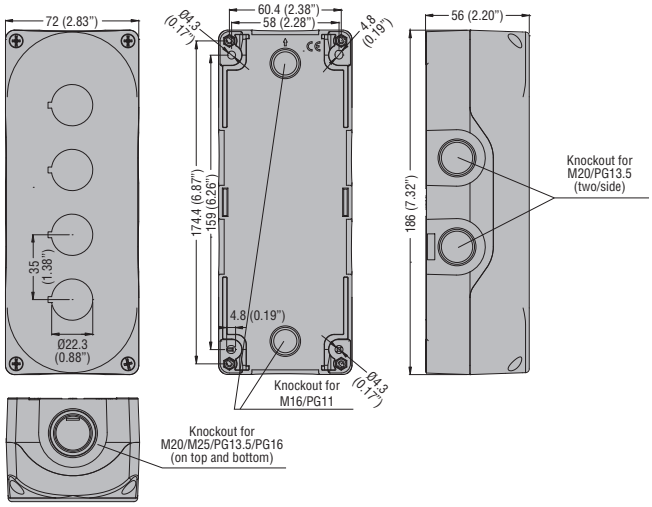
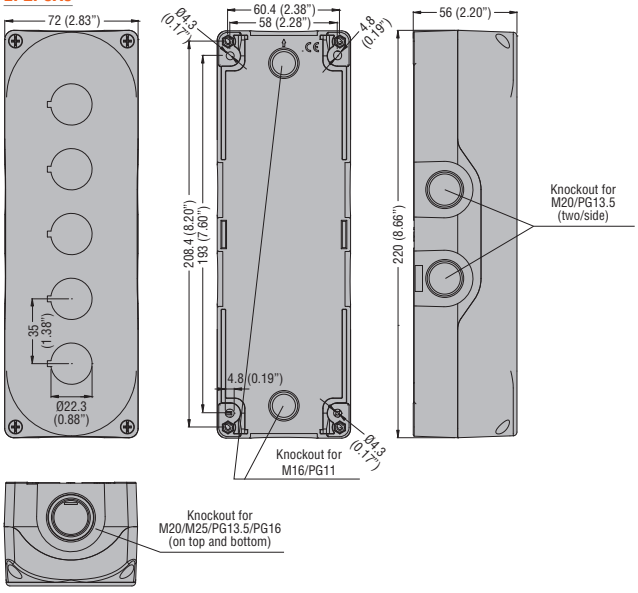
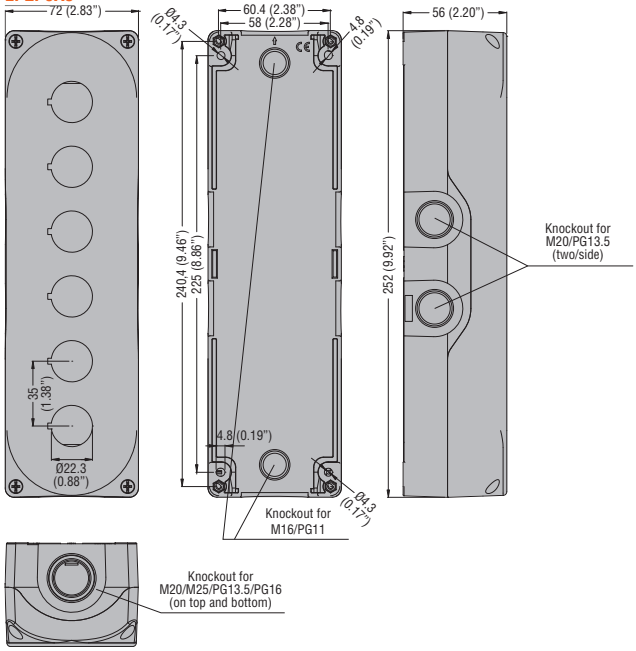


LPZP5A8

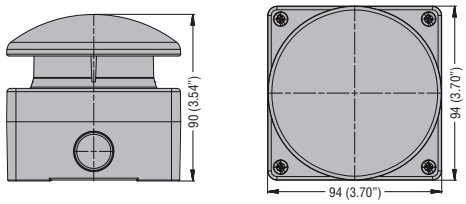


LPZP6A8



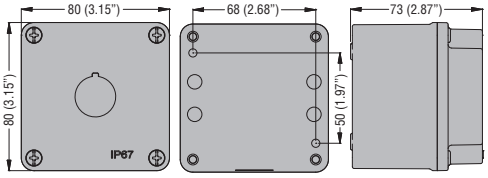
PALM SWITCHES

LP9...

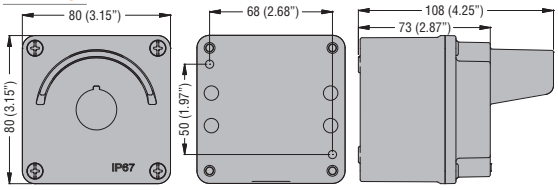


METAL CONTROL STATIONS

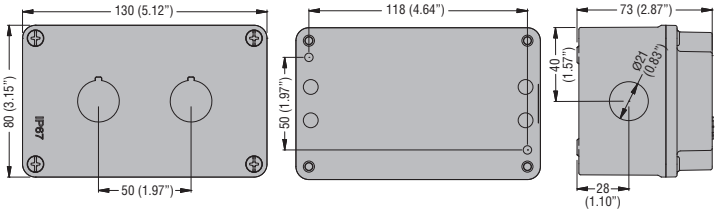
LPZM1A...



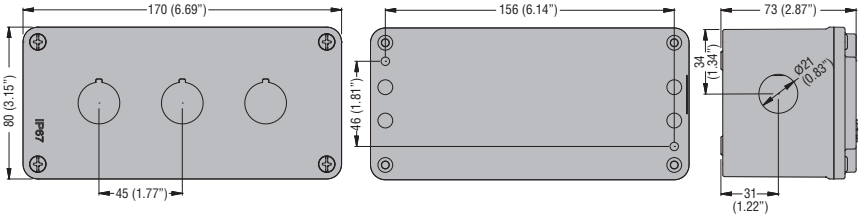
LPZM1A5P



LPZM2A...



LPZM3A8



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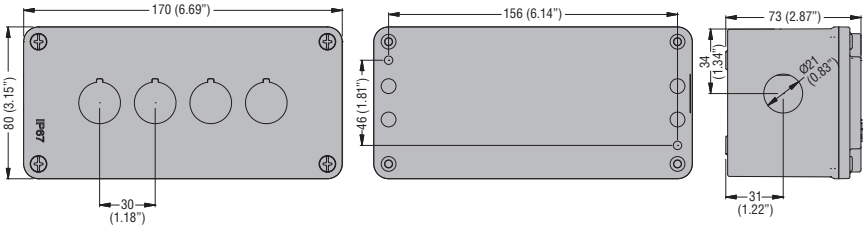

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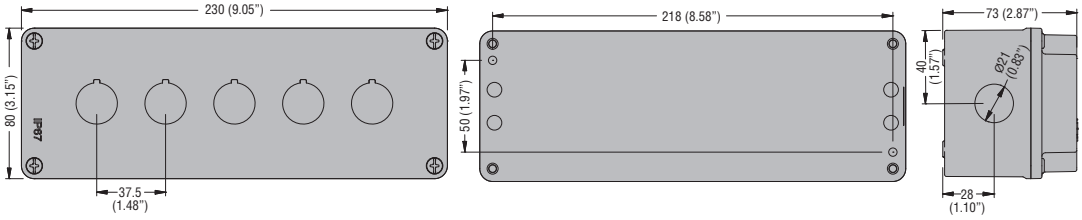
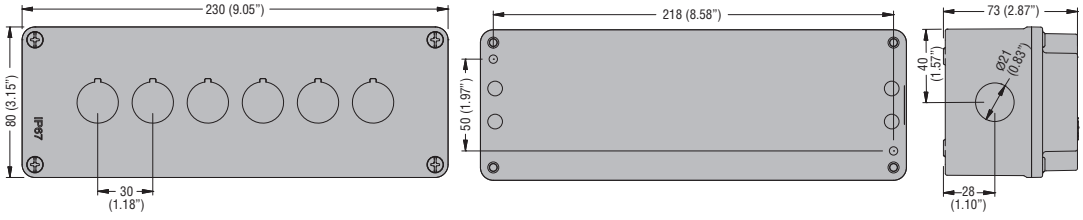
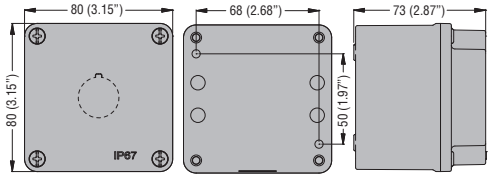


LPZM6A8



LPZM1E...



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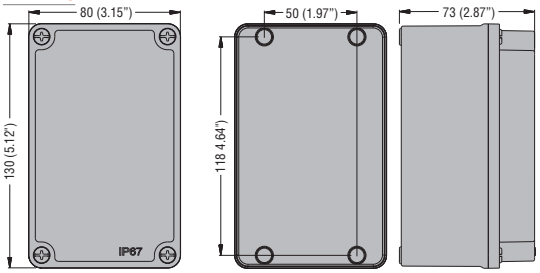
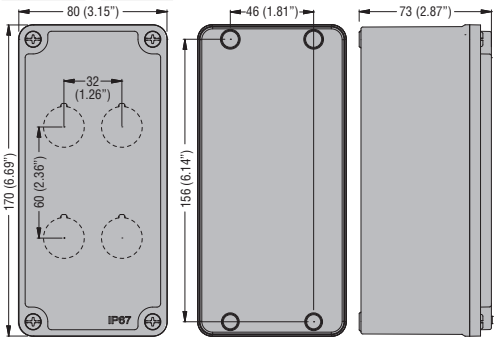
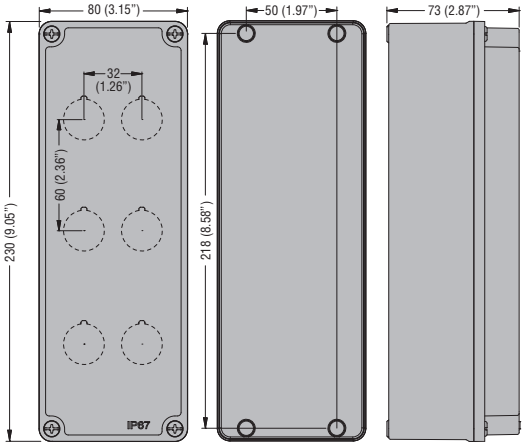


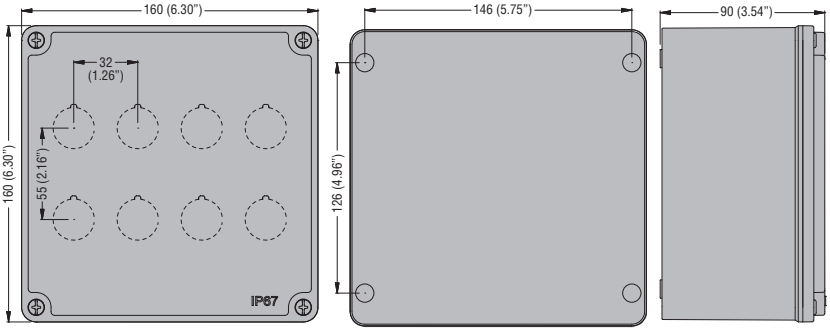
LPZM4CA8 - LPZM3E8



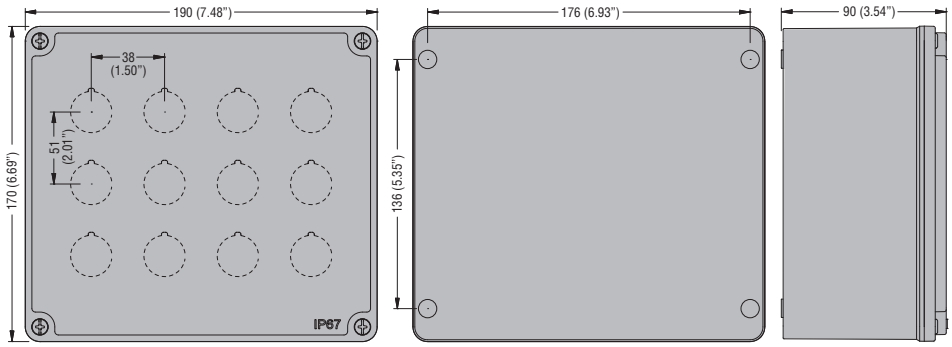
LPZM6CA8 - LPZM4E8



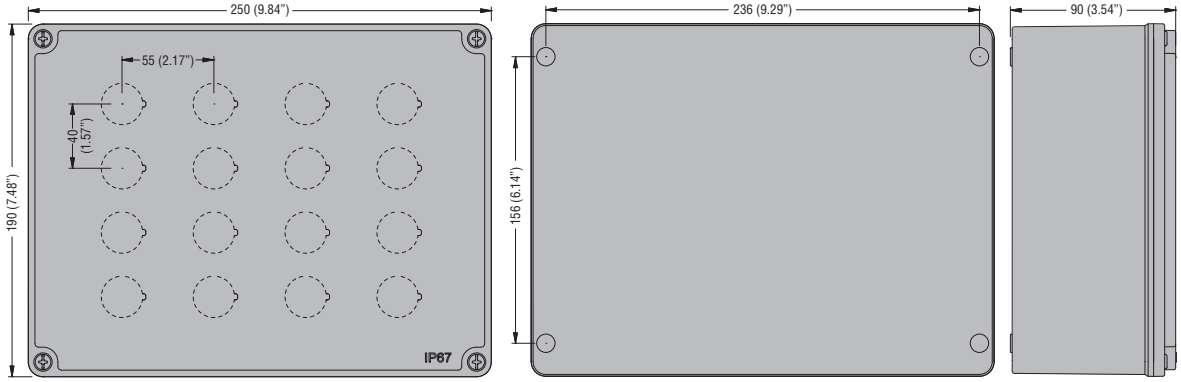
LPZM8CA8 - LPZM5E8



LPZM12CA8 - LPZM6E8



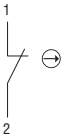
LPZM16CA8 - LPZM7E8



FOR PUSHBUTTONS AND SELECTOR SWITCHES

LPXC10 - LPXE10... - LPXCF10 LPXC10A
LPXCS10 - LPXCB10

LPXC01 - LPXE01... - LPXCF01
LPXCS01 - LPXCB01
LPZP1B...



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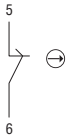

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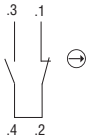

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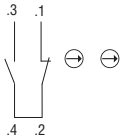
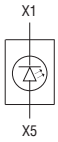
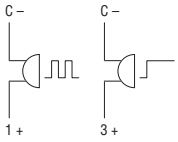


LPM...
LPXL...



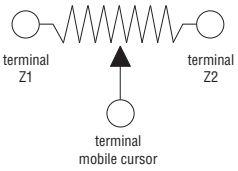
LPCZS...



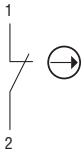
LPXT100

LPXT101
LPXT102

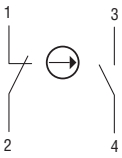
LPCPA...



LP9S01R

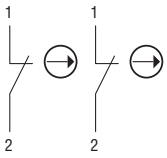


LP9S11B
LP9S11R
LP9P11R

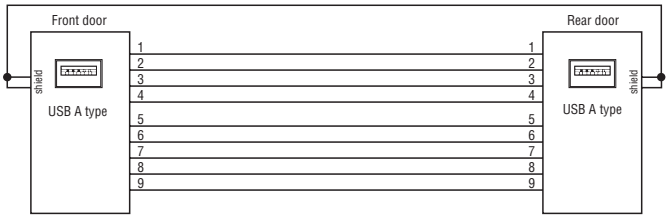


LP9S10B

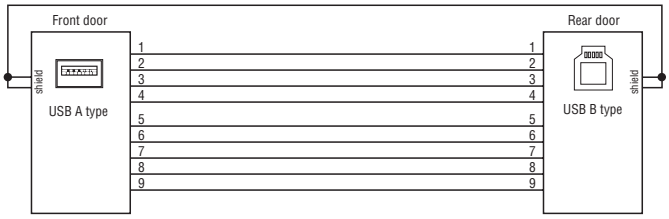
LP9P02R



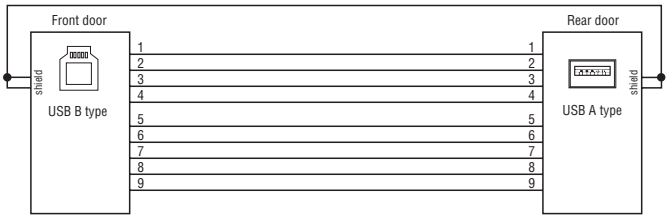
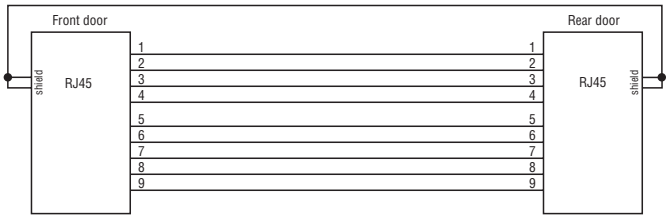
LPFD01 - LPCD01



LPFD03 - LPCD03



LPFD05 - LPCD05



LPFD06 -LPCD06