

Non-Illuminated Pushbuttons (Sub-Assembled)





Switches & Pilot Devices

Part Numbers: Operators

Style	Part Number	
	Momentary	Maintained
Round	 LW1B-M0	LW1B-A0
Square	 LW2B-M0	LW2B-A0
Mushroom	 LW1B-M0L	LW1B-A0L

Part Numbers: Buttons

Type	Part Number	
	Flush	Extended
Round	 LW1A-B1-①	LW1A-B2-①
Square	 LW2A-B1-①	LW2A-B2-①
Mushroom	—	LW1A-B3-①


① Button Color Code

Color	Code
Black	B
Green	G
Red	R
Blue	S
White	W
Yellow	Y



In place of ①, specify Button Color Code from table at right.

Part Numbers: Contact Blocks

Appearance	Contact Material	Contact	Part Number		
			Solder/Tab	PC Board	Screw
	Gold	SPDT	LW-C1	LW-C1V	—
		DPDT	LW-C2	LW-C2V	LW-C2M
		3PDT	LW-C3	LW-C3V	—
	Silver	SPDT	LW-C5	—	—
		DPDT	LW-C6	—	LW-C6M
		3PDT	LW-C7	—	—

Pilot Lights (Sub-Assembled)

Terminals + Safety Lever Lock + Lamp Holder + Lamp + Operator + Lens = Completed Unit

Switches & Pilot Devices

A




Part Numbers: Operators



Style	Part Number
Round 	LA1P-0
Square 	LA2P-0
Rectangular 	LA3P-0
Oversize Round 	HA1P-0
Oversize Square 	HA2P-0
Oversize Round Monolithic 	HA1P-00
Oversize Square Monolithic 	HA2P-00


Part Numbers: Lenses

Style	Part Number
Round 	AL6M-LK3-②
Square 	AL6Q-LK3-②
Rectangular 	AL6H-LK3-②
Oversize Round 	HA1A-P1-②
Oversize Square 	HA2A-P1-②

 In place of ② specify lens color code.

Part Numbers: Lamps

Style	Voltage	Part Number
LED 	5V DC 6V AC/DC 12V AC/DC 24V AC/DC 120 V AC	LFTD-5② LFTD-6② LFTD-1② LFTD-2② LFTD-H2②
Incandescent 	6V AC/DC 12V AC/DC 24V AC/DC	LH-06 LH-14 LH-28


 In place of ② specify LED color code from table below.

Part Numbers: Terminals


Appearance	Solder Tab	PCB
	HA-C00	HA-C00V

 Not required for monolithic models

Part Number: Lamp Holder

Appearance	Part Number
	HA9Z-AH

Part Number: Safety Lever Lock





Appearance	Part Number
	HA9Z-LS

② Lens/LED Color Codes

Color	Code
Amber	A
Green	G
Red	R
Blue	S
Yellow	Y

Illuminated Pushbuttons (Assembled)

Part Numbers: Illuminated Pushbuttons

Style	Operation	Lamp Voltage	Contact	Terminal Style	
				Solder Tab	PCB
Round 	Momentary	24V AC/DC LED	SPDT	LA1L-M1C54-②	LA1L-M1C14V-②
		24V AC/DC Incandescent	DPDT	LA1L-M1C64-②	LA1L-M1C24V-②
	Maintained	24V AC/DC LED	SPDT	LA1L-A1C54-②	LA1L-A1C14V-②
		24V AC/DC Incandescent	DPDT	LA1L-A1C64-②	LA1L-A1C24V-②
Square 	Momentary	24V AC/DC LED	SPDT	LA2L-M1C54-②	LA2L-M1C14V-②
		24V AC/DC Incandescent	DPDT	LA2L-M1C64-②	LA2L-M1C24V-②
	Maintained	24V AC/DC LED	SPDT	LA2L-A1C54-②	LA2L-A1C14V-②
		24V AC/DC Incandescent	DPDT	LA2L-A1C64-②	LA2L-A1C24V-②
Rectangular 	Momentary	24V AC/DC LED	SPDT	LA3L-M1C54-②	LA3L-M1C14V-②
		24V AC/DC Incandescent	DPDT	LA3L-M1C64-②	LA3L-M1C24V-②
	Maintained	24V AC/DC LED	SPDT	LA3L-A1C54-②	LA3L-A1C14V-②
		24V AC/DC Incandescent	DPDT	LA3L-A1C64-②	LA3L-A1C24V-②
Oversize Round 	Momentary	24V AC/DC LED	SPDT	HA1L-M1C54-②	HA1L-M1C14V-②
		24V AC/DC Incandescent	DPDT	HA1L-M1C64-②	HA1L-M1C24V-②
	Maintained	24V AC/DC LED	SPDT	HA1L-A1C54-②	HA1L-A1C14V-②
		24V AC/DC Incandescent	DPDT	HA1L-A1C64-②	HA1L-A1C24V-②
Oversize Square 	Momentary	24V AC/DC LED	SPDT	HA2L-M1C54-②	HA2L-M1C14V-②
		24V AC/DC Incandescent	DPDT	HA2L-M1C64-②	HA2L-M1C24V-②
	Maintained	24V AC/DC LED	SPDT	HA2L-A1C54-②	HA2L-A1C14V-②
		24V AC/DC Incandescent	DPDT	HA2L-A1C64-②	HA2L-A1C24V-②
Mushroom 	Momentary	24V AC/DC LED	SPDT	HA1L-M3C54-②	HA1L-M3C14V-②
		24V AC/DC Incandescent	DPDT	HA1L-M3C64-②	HA1L-M3C24V-②
	Maintained	24V AC/DC LED	SPDT	HA1L-A3C54-②	HA1L-A3C14V-②
		24V AC/DC Incandescent	DPDT	HA1L-A3C64-②	HA1L-A3C24V-②

② Lens Color Codes

Color	Code
Amber	A
Green	G
Red	R
Blue	S
Yellow	Y
White	W

Voltage/Lamp Code

Voltage	Code
5V DC LED	1
6V AC/DC LED	2
12V AC/DC LED	3
24V AC/DC LED	4
120V AC LED	8
6V AC/DC Incandescent	5
12V AC/DC Incandescent	6
24V AC/DC Incandescent	7



- In place of ② specify lens color code from table at right.
- Lamps also available in 5V DC, 6V AC/DC, 12V AC/DC or 120V AC, change “4” or “7” using voltage/lamp codes (ie LA1P-1C03-② uses 12V AC/DC LED).
- PCB terminal models also available with silver contacts (change “1” or “2” to “5” or “6” respectively, ie LA1L-M1C14V-① becomes LA1L-M1C54V-①).

Illuminated Pushbuttons (Sub-Assembled)

Contacts + Safety Lever Lock + Lamp Holder + Lamp + Operator + Lens = Completed Unit

Switches & Pilot Devices

A




Part Numbers: Operators



Style	Momentary	Maintained
Round 	LA1L-M0	LA1L-A0
Square 	LA2L-M0	LA2L-A0
Rectangular 	LA3L-M0	LA3L-A0
Oversize Round 	HA1L-M0	HA1L-A0
Oversize Square 	HA2L-M0	HA2L-A0
Mushroom 	HA1B-M0L	HA1B-A0L

Part Numbers: Lenses

Style	Part Number
Round 	AL6M-LK2-②
Square 	AL6Q-LK2-②
Rectangular 	AL6H-LK2-②
Oversize Round 	HA1A-L1-②
Oversize Square 	HA2A-L1-②
Mushroom 	HA1A-L3-②

 In place of ② specify Lens Color Code from table.


Part Numbers: Lamps

Appearance	Voltage	Part Number
LED 	5V DC 6V AC/DC 12V AC/DC 24V AC/DC 120V AC	LFTD-5② LFTD-6② LFTD-1② LFTD-2② LFTD-H2②
Incandescent 	6V AC/DC 12V AC/DC 24V AC/DC	LH-06 LH-14 LH-28




In place of ② specify LED color code from table below.


Part Numbers: Contacts

Appearance	Contacts	Terminal Style	
		Solder Tab	PCB
	Gold SPDT DPDT	HA-C10 HA-C20	HA-C10V HA-C20V
		Silver SPDT DPDT	HA-C50 HA-C60

Part Number: Lamp Holder

Appearance	Part Number
	HA9Z-AH

Part Number: Safety Lever Lock

Appearance	Part Number
	HA9Z-LS

② Lens/LED Color Codes






Color	Code
Amber	A
Green	G
Red	R
Blue	S
Yellow	Y
White	W

Selector Switches (Assembled)

Part Numbers: Selector Switches

Style	Position	Position Diagram	Contact	Terminal Style	
				Solder Tab	PCB
Round 	90° 2-Position	Maintained		DPDT	LA1S-2C6 / LA1S-2C2V
		Spring return from right		DPDT	LA1S-21C6 / LA1S-21C2V
	45° 3-Position	Maintained		DPDT	LA1S-3C6 / LA1S-3C2V
		Spring return from right		DPDT	LA1S-31C6 / LA1S-31C2V
		Spring return from left		DPDT	LA1S-32C6 / LA1S-32C2V
		2-Way spring return		DPDT	LA1S-33C6 / LA1S-33C2V
Square 	90° 2-Position	Maintained		DPDT	LA2S-2C6 / LA2S-2C2V
		Spring return from right		DPDT	LA2S-21C6 / LA2S-21C2V
	45° 3-Position	Maintained		DPDT	LA2S-3C6 / LA2S-3C2V
		Spring return from right		DPDT	LA2S-31C6 / LA2S-31C2V
		Spring return from left		DPDT	LA2S-32C6 / LA2S-32C2V
		2-Way spring Return		DPDT	LA2S-33C6 / LA2S-33C2V
Rectangular 	90° 2-Position	Maintained		DPDT	LA3S-2C6 / LA3S-2C2V
		Spring return from right		DPDT	LA3S-21C6 / LA3S-21C2V
	45° 3-Position	Maintained		DPDT	LA3S-3C6 / LA3S-3C2V
		Spring return from right		DPDT	LA3S-31C6 / LA3S-31C2V
		Spring return from left		DPDT	LA3S-32C6 / LA3S-32C2V
		2-Way spring Return		DPDT	LA3S-33C6 / LA3S-33C2V
Oversize Round 	90° 2-Position	Maintained		DPDT	HA1S-2C6 / HA1S-2C2V
		Spring return from right		DPDT	HA1S-21C6 / HA1S-21C2V
	45° 3-Position	Maintained		DPDT	HA1S-3C6 / HA1S-3C2V
		Spring return from right		DPDT	HA1S-31C6 / HA1S-31C2V
		Spring return from left		DPDT	HA1S-32C6 / HA1S-32C2V
		2-Way spring Return		DPDT	HA1S-33C6 / HA1S-33C2V

Contact Operations (for all selectors)

Contacts	Operator Position and Contact Operation	
2-pos. (DPDT)	Left	
	Right	
3-pos. (DPDT)	Left	
	Center	
	Right	



As viewed from front of switch.



1. All assembled selector switches use DPDT contacts.
2. For SPDT contacts see sub-components on next page.
3. PCB terminal models also available with silver contacts (change "1" or "2" to "5" or "6" respectively, ie LA1S-21C2V becomes LA1S-21C6V).

Selector Switches (Sub-Assembled)

Contacts + Safety Lever Lock + Operator = Complete Part





Switches & Pilot Devices

Part Numbers: Operators

Style	Position	Function	Part Number
 Round	2	Maintained Spring from right	LA1S-2Y LA1S-21Y
	3	Maintained Spring from right Spring from left Spring from both	LA1S-3Y LA1S-31Y LA1S-32Y LA1S-33Y
	Square	2	Maintained Spring from right
 Square	3	Maintained Spring from right Spring from left Spring from both	LA2S-3Y LA2S-31Y LA2S-32Y LA2S-33Y
	 Rectangular	2	Maintained Spring from right
3		Maintained Spring from right Spring from left Spring from both	LA3S-3Y LA3S-31Y LA3S-32Y LA3S-33Y
 Oversize Round		2	Maintained Spring from right
	3	Maintained Spring from right Spring from left Spring from both	HA1S-3Y HA1S-31Y HA1S-32Y HA1S-33Y

Part Numbers: Contacts

Appearance		Contacts	Terminal Style	
			Solder Tab	PCB
 	Gold	SPDT DPDT	HA-C1 HA-C2	HA-C1V HA-C2V
	Silver	SPDT DPDT	HA-C5 HA-C6	HA-C5V HA-C6V































1. All assembled switches listed on previous page use DPDT contacts.
2. SPDT Contacts for use on 2 position selector switch only

Part Number: Safety Lever Lock






Appearance	Part Number
	HA9Z-LS

Key Switches (Assembled)

Part Numbers: Key Switches

Style	Operation	Contacts	Terminal Type			
			Solder Tab	PCB		
Round 	90° 2-Position	Maintained		DPDT	LA1K-2C6 [ⓐ]	LA1K-2C2V [ⓐ]
		Spring return from right		DPDT	LA1K-21C6B	LA1K-21C2VB
	45° 3-Position	Maintained		DPDT	LA1K-3C6 [ⓐ]	LA1K-3C2V [ⓐ]
		Spring return from right		DPDT	LA1K-31C6 [ⓐ]	LA1K-31C2V [ⓐ]
		Spring return from left		DPDT	LA1K-32C6 [ⓐ]	LA1K-32C2V [ⓐ]
		2-Way spring return		DPDT	LA1K-33C6D	LA1K-33C2VD
Square 	90° 2-Position	Maintained		DPDT	LA2K-2C6 [ⓐ]	LA2K-2C2V [ⓐ]
		Spring return from right		DPDT	LA2K-21C6B	LA2K-21C2VB
	45° 3-Position	Maintained		DPDT	LA2K-3C6 [ⓐ]	LA2K-3C2V [ⓐ]
		Spring return from right		DPDT	LA2K-31C6 [ⓐ]	LA2K-31C2V [ⓐ]
		Spring return from left		DPDT	LA2K-32C6 [ⓐ]	LA2K-32C2V [ⓐ]
		2-Way spring return		DPDT	LA2K-33C6D	LA2K-33C2VD
Rectangular 	90° 2-Position	Maintained		DPDT	LA3K-2C6 [ⓐ]	LA3K-2C2V [ⓐ]
		Spring return from right		DPDT	LA3K-21C6B	LA3K-21C2VB
	45° 3-Position	Maintained		DPDT	LA3K-3C6 [ⓐ]	LA3K-3C2V [ⓐ]
		Spring return from right		DPDT	LA3K-31C6 [ⓐ]	LA3K-31C2V [ⓐ]
		Spring return from left		DPDT	LA3K-32C6 [ⓐ]	LA3K-32C2V [ⓐ]
		2-Way spring return		DPDT	LA3K-33C6D	LA3K-33C2VD
Oversize Round 	90° 2-Position	Maintained		DPDT	HA1K-2C6 [ⓐ]	HA1K-2C2V [ⓐ]
		Spring return from right		DPDT	HA1K-21C6B	HA1K-21C2VB
	45° 3-Position	Maintained		DPDT	HA1K-3C6 [ⓐ]	HA1K-3C2V [ⓐ]
		Spring return from right		DPDT	HA1K-31C6 [ⓐ]	HA1K-31C2V [ⓐ]
		Spring return from left		DPDT	HA1K-32C6 [ⓐ]	HA1K-32C2V [ⓐ]
		2-Way spring return		DPDT	HA1K-33C6D	HA1K-33C2VD

Contact Operations (for all selectors)

Contacts	Operator Position and Contact Operation	
	Left	Right
2-pos. (DPDT)	Left	
	Right	
3-pos. (DPDT)	Left	
	Center	
	Right	

 As viewed from front of switch.

ⓐ Key Retention Option Codes

Code	Description
A	Key not retained in any position (removable in all positions)
B	Key retained in right position only
C	Key retained in left position only
D	Key retained in left and right (3 position only)
E	Key retained in center only (3 position only)
G	Key retained in right and center (3 position only)
H	Key retained left and center (3 position only)



- In place of ⓐ specify Key Retention Code from next page.
- All assembled key switches have DPDT contacts. For SPDT see sub-assembled on next page.
- PCB terminal models also available with silver contacts (change "1" or "2" to "5" or "6" respectively, ie LA1K-2C2V[ⓐ] becomes LA1K-2C6V[ⓐ]).

A
Switches & Pilot Devices

Key Switches (Sub-Assembled)





Contacts + Safety lever lock + Operator = Complete Part



A

Switches & Pilot Devices



Part Numbers: Operators

Style	Positions	Operation	Part Number
 Round	2	Maintained Spring from right	LA1K-2 ^③ LA1K-21B
	3	Maintained Spring from right Spring from left Spring from both	LA1K-3 ^③ LA1K-31 ^③ LA1K-32 ^③ LA1K-33D
 Square	2	Maintained Spring from right	LA2K-2 ^③ LA2K-21B
	3	Maintained Spring from right Spring from left Spring from both	LA2K-3 ^③ LA2K-31 ^③ LA2K-32 ^③ LA2K-33D
 Rectangular	2	Maintained Spring from right	LA3K-2 ^③ LA3K-21B
	3	Maintained Spring from right Spring from left Spring from both	LA3K-3 ^③ LA3K-31 ^③ LA3K-32 ^③ LA3K-33D
 Oversize Round	2	Maintained Spring from right	HA1K-2 ^③ HA1K-21B
	3	Maintained Spring from right Spring from left Spring from both	HA1K-3 ^③ HA1K-31 ^③ HA1K-32 ^③ HA1K-33D



- In place of ^③ specify key removable code from table on right.
- Operator includes two keys.

Part Numbers: Contacts

Appearance	Contacts	Terminal Style	
		Solder Tab	PCB
	Gold	SPDT DPDT	HA-C1 HA-C2
		SPDT DPDT	HA-C5 HA-C6
	Silver	SPDT DPDT	HA-C5V HA-C6V
		SPDT DPDT	HA-C5V HA-C6V



- All assembled selectors listed on previous page use DPDT contacts.
- SPDT contacts are for use on 2 position key switches only.

Part Number: Safety Lever Lock





























Appearance	Part Number
	HA9Z-LS

③ Key Retention Option Codes











Code	Description
A	Key not retained in any position (removable in all positions)
B	Key retained in right position only
C	Key retained in left position only
D	Key retained in left and right (3 position only)
E	Key retained in center only (3 position only)
G	Key retained right and center (3 position only)
H	Key retained left and center (3 position only)

Illuminated Selector Switches

Part Numbers: Illuminated Selectors Switches

Style			Contact	Voltage	Terminal Style		
					Solder Tab	PCB	
Round 	90° 2-Position	Maintained		DPDT	24V LED 24V Incand.	LA1F-2C64-② LA1F-2C67-②	LA1F-2C24V-② LA1F-2C27V-②
		Spring return from right		DPDT	24V LED 24V Incand.	LA1F-21C64-② LA1F-21C67-②	LA1F-21C24V-② LA1F-21C27V-②
	45° 3-Position	Maintained		DPDT	24V LED 24V Incand.	LA1F-3C64-② LA1F-3C67-②	LA1F-3C24V-② LA1F-3C27V-②
		Spring return from right		DPDT	24V LED 24V Incand.	LA1F-31C64-② LA1F-31C67-②	LA1F-31C24V-② LA1F-31C27V-②
		Spring return from left		DPDT	24V LED 24V Incand.	LA1F-32C64-② LA1F-32C67-②	LA1F-32C24V-② LA1F-32C27V-②
		2-Way spring return		DPDT	24V LED 24V Incand.	LA1F-33C64-② LA1F-33C67-②	LA1F-33C24V-② LA1F-33C27V-②
Square 	90° 2-Position	Maintained		DPDT	24V LED 24V Incand.	LA2F-2C64-② LA2F-2C67-②	LA2F-2C24V-② LA2F-2C27V-②
		Spring return from right		DPDT	24V LED 24V Incand.	LA2F-21C64-② LA2F-21C67-②	LA2F-21C24V-② LA2F-21C27V-②
	45° 3-Position	Maintained		DPDT	24V LED 24V Incand.	LA2F-3C64-② LA2F-3C67-②	LA2F-3C24V-② LA2F-3C27V-②
		Spring return from right		DPDT	24V LED 24V Incand.	LA2F-31C64-② LA2F-31C67-②	LA2F-31C24V-② LA2F-31C27V-②
		Spring return from left		DPDT	24V LED 24V Incand.	LA2F-32C64-② LA2F-32C67-②	LA2F-32C24V-② LA2F-32C27V-②
		2-Way spring return		DPDT	24V LED 24V Incand.	LA2F-33C64-② LA2F-33C67-②	LA2F-33C24V-② LA2F-33C27V-②
Rectangular 	90° 2-Position	Maintained		DPDT	24V LED 24V Incand.	LA3F-2C64-② LA3F-2C67-②	LA3F-2C24V-② LA3F-2C27V-②
		Spring return from right		DPDT	24V LED 24V Incand.	LA3F-21C64-② LA3F-21C67-②	LA3F-21C24V-② LA3F-21C27V-②
	45° 3-Position	Maintained		DPDT	24V LED 24V Incand.	LA3F-3C64-② LA3F-3C67-②	LA3F-3C24V-② LA3F-3C27V-②
		Spring return from right		DPDT	24V LED 24V Incand.	LA3F-31C64-② LA3F-31C67-②	LA3F-31C24V-② LA3F-31C27V-②
		Spring return from left		DPDT	24V LED 24V Incand.	LA3F-32C64-② LA3F-32C67-②	LA3F-32C24V-② LA3F-32C27V-②
		2-Way spring return		DPDT	24V LED 24V Incand.	LA3F-33C64-② LA3F-33C67-②	LA3F-33C24V-② LA3F-33C27V-②
Oversize Round 	90° 2-Position	Maintained		DPDT	24V LED 24V Incand.	HA1F-2C64-② HA1F-2C67-②	HA1F-2C24V-② HA1F-2C27V-②
		Spring return from right		DPDT	24V LED 24V Incand.	HA1F-21C64-② HA1F-21C67-②	HA1F-21C24V-② HA1F-21C27V-②
	45° 3-Position	Maintained		DPDT	24V LED 24V Incand.	HA1F-3C64-② HA1F-3C67-②	HA1F-3C24V-② HA1F-3C27V-②
		Spring return from right		DPDT	24V LED 24V Incand.	HA1F-31C64-② HA1F-31C67-②	HA1F-31C24V-② HA1F-31C27V-②
		Spring return from left		DPDT	24V LED 24V Incand.	HA1F-32C64-② HA1F-32C67-②	HA1F-32C24V-② HA1F-32C27V-②
		2-Way spring return		DPDT	24V LED 24V Incand.	HA1F-33C64-② HA1F-33C67-②	HA1F-33C24V-② HA1F-33C27V-②

Contact Operations (for all selectors)

Contacts	Operator Position and Contact Operation	
	Left	Right
2-pos. (DPDT)		
		
3-pos. (DPDT)		
		
		



As viewed from front of switch.

② Lens/LED Color Code

Color	Code
Amber	A
Green	G
Red	R
Blue	S
Yellow	Y
White	W

Voltage/Lamp Code

Voltage	Code
5V DC LED	1
6V AC/DC LED	2
12V AC/DC LED	3
24V AC/DC LED	4
120V AC LED	8
6V AC/DC Incandescent	5
12V AC/DC Incandescent	6
24V AC/DC Incandescent	7



- In place of ② specify Lens/LED Color Code from table above.
- Lamps also available in 5V DC, 6V AC/DC or 12V AC/DC, change "4" or "7" using voltage/lamp codes (ie LA1F-2C63-② uses 12V AC/DC LED).
- All switches listed have DPDT contacts. For SPDT see sub-assembled on next page.
- PCB terminal models also available with silver contacts (change "1" or "2" to "5" or "6" respectively, ie LA1F-2C24V-② becomes LA1F-2C64V-②).

Illuminated Selector Switches (Sub-Assembled)





Contacts + Safety lever lock + Lamp Holder + Lamp + Operator + Lens/Handle = Completed Unit

Switches & Pilot Devices



A




Part Numbers: Operators


Style	Positions	Function	Part Number
 Round	2	Maintained Spring from right	LA1F-20 LA1F-210
	3	Maintained Spring from right Spring from left Spring from both	LA1F-30 LA1F-310 LA1F-320 LA1F-330
	2	Maintained Spring from right	LA2F-20 LA2F-210
 Square	3	Maintained Spring from right Spring from left Spring from both	LA2F-30 LA2F-310 LA2F-320 LA2F-330
	2	Maintained Spring from right	LA3F-20 LA3F-210
	3	Maintained Spring from right Spring from left Spring from both	LA3F-30 LA3F-310 LA3F-320 LA3F-330
 Rectangular	2	Maintained Spring from right	HA1F-20 HA1F-210
	3	Maintained Spring from right Spring from left Spring from both	HA1F-30 HA1F-310 HA1F-320 HA1F-330
 Oversize Round	2	Maintained Spring from right	HA1F-20 HA1F-210
	3	Maintained Spring from right Spring from left Spring from both	HA1F-30 HA1F-310 HA1F-320 HA1F-330

Part Numbers: Lenses/Handles


Appearance	Part Number
 Standard	LA1A-F-②
 Oversize	HA1A-F-②


 In place of ② specify Lens Color Code from table.

Part Number: Safety Lever Lock

Appearance	Part Number
	HA9Z-LS

Part Numbers: Contacts


Appearance	Terminal Style		
	Contacts	Solder Tab	PCB
	Gold	SPDT DPDT	HA-C1 HA-C2 HA-C10V HA-C20V
	Silver	SPDT DPDT	HA-C50 HA-C60 HA-C50V HA-C60V

 1. All assembled selectors on previous pages use DPDT contacts. SPDT contacts are for use only on two position selectors.



② LED/Lens Color Code


Color	Code
Amber	A
Green	G
Red	R
Blue	S
Yellow	Y
White	W

Part Number: Lamp Holder

Appearance	Part Number
	HA9Z-AH


Part Numbers: Lamps

Appearance	Voltage	Part Numbers
 LED	5V DC	LFTD-5②
	6V AC/DC	LFTD-6②
	12V AC/DC	LFTD-1②
	24V AC/DC	LFTD-2②
	120V AC	LFTD-H2②
 Incandescent	6V AC/DC	LH-06
	12V AC/DC	LH-14
	24V AC/DC	LH-28

 In place of ② specify LED Color Code from table.

Pushbutton Selectors (Assembled)

Part Numbers: Pushbutton Selectors

Style	Terminal Style	
	Solder Tab	PCB
 2 Position	HA1R-2C6-①	HA1R-2C2V-①
	HA1R-3C6-①	HA1R-3C2V-①

① Button Color Code

Color	Code
Black	B
Green	G
Red	R
Blue	S
Yellow	Y




- In place of ① specify Button Color Code.
- PCB terminal models also available with silver contacts (change "1" or "2" to "5" or "6" respectively, ie HA1R-2C2V-① becomes HA1R-2C6V-①).

Contact Operation

Style	Operator Position					
	Left		Center		Right	
	Normal	Depressed	Normal	Depressed	Normal	Depressed
2 Position			—	—		
3 Position				Blocked		

Lever Switch (Assembled)

Part Numbers: Lever Switches

Style	Operation	Contacts	Terminal Type		
			Solder Tab	PCB	
 2-Position	Maintained		DPDT	LA1T-2C6	LA1T-2C2V
	Spring return from top		DPDT	LA1T-21C6	LA1T-21C2V
	Spring Return from bottom		DPDT	LA1T-22C6	LA1T-22C2V
3-Position	Maintained		DPDT	LA1T-3C6	LA1T-3C2V
	Spring return from top		DPDT	LA1T-31C6	LA1T-31C2V
	Spring return from bottom		DPDT	LA1T-32C6	LA1T-32C2V
	Spring return from both		DPDT	LA1T-33C6	LA1T-33C2V



PCB terminal models also available with silver contacts (change "1" or "2" to "5" or "6" respectively, ie LA1T-2C2V becomes LA1T-2C6V).
















Contact Operation

Contacts	Operator Position & Contact Operation	Operator Position & Contact Operation		
		Down	Center	Up
2-pos. (DPDT)	Maintained Spring from Up			
2-pos (DPDT)	Spring Return from Down			
3-pos. (DPDT)	All models			






As viewed from front of switch.

Accessories

Part		Specifications	Part Number	Notes	
Ring Wrench		Made of metal	MT-001	Used for tightening the plastic locking ring when installing the L6 series unit on a panel. Tightening torque should not exceed 9kgf cm when tightening a locking ring.	
Lamp Holder Tool (Made of Rubber)		Made of rubber. Used for removing and replacing LED and incandescent lamps in illuminated units.	OR-44	Rubber tool used for replacing LED and incandescent lamps.	
Lens Removal Tool		For illuminated pushbuttons and pilot lights.	MT-101	Used for removing the lens or button from the housing.	
LED Lamp		5V DC 6V AC/DC 12V AC/DC 24V AC/DC 120V AC	LFTD-5② LFTD-6② LFTD-1② LFTD-2② LFTD-H2②	T 1-3/4 miniature flange base. In place of ② specify LED Color Code (see page A-48).	
Incandescent Lamp		6V AC/DC 12V AC/DC 24V AC/DC	LH-06 LH-14 LH-28	0.5W, T 1-3/4 miniature flange base	
Switch Guard		90 degrees opening maintained	Round/Square	AL-K6	Prevents inadvertent switch operation. IP40 dust-tight rated.
			Rectangular	AL-KH6	
		180 degrees opening, spring return	Round/Square	AL-K6SP	Prevents inadvertent switch operation. IP65 oiltight rated.
			Rectangular	AL-KH6SP	
			Oversize Round/Sq	HA9Z-K1	
Oversize Round/Sq	HA9Z-KW1				
Dust-proof Cover		For round units	AL-D6	Provides extra level of sealing for "front-panel" portion of switches. (Not applicable for units with oversize lenses or buttons).	
		For square units	AL-DQ6		
		For rectangular units	AL-DH6		
Terminal Cover		Made of white nylon	All removable contacts	H6-VL2	Covers terminals to prevent possible electric shock.
			Monolithic Pilot Lights	H6-PVL	
Mounting Hole Plug		Rubber	AL-B6	Fills unused panel cutouts. Made of nitrile rubber. Push-in installation from front of panel. IP65 (oiltight) rated.	
		Aluminum	AL-BM6	Fills unused panel cutouts. Made of aluminum. Screw-on locking ring from inside of panel. IP65 (oiltight) rated.	
Replacement Keys		for LA1K (#132)	AS6-SK-132PN02	Pair of keys.	
		for HA1K (#231)	KG9Z-SK-231PN02		
Replacement Engraving Inserts			Round Square Rectangle Oversize Round Oversize Square Mushroom	AL6M-W AL6Q-W AL6H-W HA9Z-P1-W HA9Z-P2-W HA9Z-P13-W	
Replacement Locking Ring		All models		HA9Z-LN	Prevents rotation of switches in panel. (included with all assembled switches)
Replacement Anti-Rotation Ring			L6 standard	AL6-LP	
			L6 oversize	HA9Z-LP	
Replacement Selector Inserts				HA9Z-HC1-①	Applicable to round oversize selectors only ① = (G, R, S, W, Y)
Replacement Safety Lever Lock				HA9Z-LS	

LED and Incandescent Illuminated Pushbuttons (Assembled)



Part Numbers: LW1L/LW2L Illuminated Pushbuttons (LED and Incandescent)

Style	Contact Material	Contact	Part Number					
			Momentary			Maintained (Latching)		
			Solder/Tab	PC Board	Screw	Solder/Tab	PC Board	Screw
 Round	Gold	SPDT	LW1L-M1C10-②	LW1L-M1C10V-②	—	LW1L-A1C10-②	LW1L-A1C10V-②	—
		DPDT	LW1L-M1C20-②	LW1L-M1C20V-②	LW1L-M1C20M-②	LW1L-A1C20-②	LW1L-A1C20V-②	LW1L-A1C20M-②
		3PDT	LW1L-M1C30-②	LW1L-M1C30V-②	—	LW1L-A1C30-②	LW1L-A1C30V-②	—
	Silver	SPDT	LW1L-M1C50-②	—	—	LW1L-A1C50-②	—	—
		DPDT	LW1L-M1C60-②	—	LW1L-M1C60M-②	LW1L-A1C60-②	—	LW1L-A1C60M-②
		3PDT	LW1L-M1C70-②	—	—	LW1L-A1C70-②	—	—
 Square	Gold	SPDT	LW2L-M1C10-②	LW2L-M1C10V-②	—	LW2L-A1C10-②	LW2L-A1C10V-②	—
		DPDT	LW2L-M1C20-②	LW2L-M1C20V-②	LW2L-M1C20M-②	LW2L-A1C20-②	LW2L-A1C20V-②	LW2L-A1C20M-②
		3PDT	LW2L-M1C30-②	LW2L-M1C30V-②	—	LW2L-A1C30-②	LW2L-A1C30V-②	—
	Silver	SPDT	LW2L-M1C50-②	—	—	LW2L-A1C50-②	—	—
		DPDT	LW2L-M1C60-②	—	LW2L-M1C60M-②	LW2L-A1C60-②	—	LW2L-A1C60M-②
		3PDT	LW2L-M1C70-②	—	—	LW2L-A1C70-②	—	—
 Mushroom	Gold	SPDT	LW1L-M3C10-②	LW1L-M3C10V-②	—	LW1L-A3C10-②	LW1L-A3C10V-②	—
		DPDT	LW1L-M3C20-②	LW1L-M3C20V-②	LW1L-M3C20M-②	LW1L-A3C20-②	LW1L-A3C20V-②	LW1L-A3C20M-②
		3PDT	LW1L-M3C30-②	LW1L-M3C30V-②	—	LW1L-A3C30-②	LW1L-A3C30V-②	—
	Silver	SPDT	LW1L-M3C50-②	—	—	LW1L-A3C50-②	—	—
		DPDT	LW1L-M3C60-②	—	LW1L-M3C60M-②	LW1L-A3C60-②	—	LW1L-A3C60M-②
		3PDT	LW1L-M3C70-②	—	—	LW1L-A3C70-②	—	—

A
Switches & Pilot Devices


1. In place of ②, specify the Lens Color Code from table below.
2. Lamps must be ordered separately for all illuminated pushbuttons.
3. For marking plate size and engraving area, see page A-73.
4. For sub-assembly part numbers, see page A-62.
5. For dimensions, see page A-69.
5. For accessories, see page A-68.

Part Numbers: Lamps (not included in assemblies)

Type	Voltage	Part Number
 LED	6V AC/DC±10%	LSTD-6②
	12V AC/DC±10%	LSTD-1②
	24V AC/DC±10%	LSTD-2②
	120V AC±10%	LSTD-H2②
	240V AC ±10%	LSTD-M4②
 Incandescent	6.3V AC/DC	IS-6
	12V AC/DC	IS-12
	24V AC/DC	IS-24



1. In place of ②, specify the LED Color Code.
2. The LED contains a current-limiting resistor and reverse polarity protection diode.

② Lens/LED Color Code

Color	Code
Amber	A
Green	G
Red	R
Blue	S
White	W
Yellow	Y

LED and Incandescent Illuminated Pushbuttons (Sub-Assembled)

Contact Block + Operator + Lamp + Lens = Completed Unit






Switches & Pilot Devices

Part Numbers: Operators

Style	Part Number	
	Momentary	Maintained
Round	 LW1L-M0	LW1L-A0
Square	 LW2L-M0	LW2L-A0
Mushroom	 LW1B-M0L	LW1B-A0L


Part Numbers: Lenses

Type	Part Number	
	Flush	
Round		LW1A-L1-②
Square		LW2A-L1-②
Mushroom		LW1A-L3-②





In place of ②, specify Lens Color Code from table below.

Part Numbers: Contact Blocks

Appearance	Contact Material	Contact	Part Number		
			Solder/Tab	PC Board	Screw
	Gold	SPDT	LW-C10	LW-C10V	—
		DPDT	LW-C20	LW-C20V	LW-C20M
		3PDT	LW-C30	LW-C30V	—
Silver	SPDT	LW-C50	—	—	
	DPDT	LW-C60	—	LW-C60M	
	3PDT	LW-C70	—	—	

Part Numbers: Lamps (not included in assemblies)

Type	Voltage	Part Number
	6V AC/DC±10%	LSTD-6②
	12V AC/DC±10%	LSTD-1②
	24V AC/DC±10%	LSTD-2②
	120V AC±10%	LSTD-H2②
	240V AC ±10%	LSTD-M4②
	6.3V AC/DC	IS-6
	12V AC/DC	IS-12
	24V AC/DC	IS-24

② LED/Lens Color Code




Color	Code
Amber	A
Green	G
Red	R
Blue	S
White	W
Yellow	Y



- In place of ②, specify the LED Color Code.
- The LED contains a current-limiting resistor and reverse polarity protection diode.

LED and Incandescent Pilot Lights (Assembled)



Part Numbers: LW1P/LW2P Pilot Lights

Type	Style	Part Number		
		Solder/Tab	PC Board	Screw
Removable Terminal Pilot Light	Round 	—	LW1P-1C00V-②	—
	Square 	—	LW2P-1C00V-②	—
Monolithic Pilot Light	Round 	LW1P-10-②	—	LW1P-10M-②
	Square 	LW2P-10-②	—	LW2P-10M-②



1. In place of ②, specify the Lens Color Code from table below.
2. For marking plate size and engraving area, see page A-73.
3. Lamps must be ordered separately, see table below.
4. For sub-assembly part numbers, see page A-64.
5. For dimensions, see page A-69.
6. For accessories, see page A-68.

Part Numbers: Lamps (not included in assemblies)

Type	Voltage	Part Number
LED 	6V AC/DC±10%	LSTD-6②
	12V AC/DC±10%	LSTD-1②
	24V AC/DC±10%	LSTD-2②
	120V AC±10%	LSTD-H2②
	240V AC ±10%	LSTD-M4②
Incandescent 	6.3V AC/DC	IS-6
	12V AC/DC	IS-12
	24V AC/DC	IS-24



1. In place of ②, specify the LED Color Code.
2. The LED contains a current-limiting resistor and reverse polarity protection diode.

② Lens/LED Color Code

Color	Code
Amber	A
Green	G
Red	R
Blue	S
White	W
Yellow	Y

LED and Incandescent Pilot Lights (Sub-Assembled)

Removable Terminal* + Operator + Lamp + Lens = Completed Unit



* Removable terminals are applicable for PCB terminated types only.

Part Numbers: Pilot Light Operators

Style	Termination		
	Solder	PC Board	Screw
Round	LW1P-00	LW1P-0 †	LW1P-00M
Square	LW2P-00	LW2P-0 †	LW2P-00M

1. † Requires LW-C00V removable terminals in addition to operator.
 2. Solder and screw terminals are monolithic (they do not use a removable terminal block).

Part Numbers: Lenses

Type	Part Number
Round	LW1A-P1-②
Square	LW2A-P1-②

- In place of ②, specify Lens Color Code.

Part Numbers: Lamps (not included in assemblies)

Type	Voltage	Part Number
	6V AC/DC±10%	LSTD-6②
	12V AC/DC±10%	LSTD-1②
	24V AC/DC±10%	LSTD-2②
	120V AC±10%	LSTD-H2②
	240V AC ±10%	LSTD-M4②
	6.3V AC/DC	IS-6
	12V AC/DC	IS-12
	24V AC/DC	IS-24



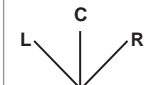
1. In place of ②, specify the LED Color Code.
 2. The LED contains a current-limiting resistor and reverse polarity protection diode.

② LED/Lens Color Code

Color	Code
Amber	A
Green	G
Red	R
Blue	S
White	W
Yellow	Y

Selector and Keylock Switches (Assembled)



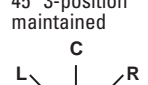
Part Numbers: LW1S Selector Switches

Style	Position	Contact Material	Contact	Part Number		
				Solder/Tab	PC Board	Screw
Round 	90° 2-position maintained 	Gold	SPDT	LW1S-2C1	LW1S-2C1V	—
			DPDT	LW1S-2C2	LW1S-2C2V	LW1S-2C2M
			3PDT	LW1S-2C3	LW1S-2C3V	—
		Silver	SPDT	LW1S-2C5	—	—
			DPDT	LW1S-2C6	—	LW1S-2C6M
			3PDT	LW1S-2C7	—	—
	45° 3-position maintained 	Gold	DPDT	LW1S-3C2	LW1S-3C2V	LW1S-3C2M
			3PDT	LW1S-3C3	LW1S-3C3V	—
		Silver	DPDT	LW1S-3C6	—	LW1S-3C6M
			3PDT	LW1S-3C7	—	—



1. Knob color: Black; Directional Indication Color: White
2. For contact operation, see next page.
3. For sub-assembly part numbers, see page A-67.




Part Numbers: LW1K Keylock Selector Switches

Style	Position	Contact Material	Contact	Part Number		
				Solder/Tab	PC Board	Screw
Round 	90° 2-position maintained 	Gold	SPDT	LW1K-2C1A	LW1K-2C1VA	—
			DPDT	LW1K-2C2A	LW1K-2C2VA	LW1K-2C2MA
			3PDT	LW1K-2C3A	LW1K-2C3VA	—
		Silver	SPDT	LW1K-2C5A	—	—
			DPDT	LW1K-2C6A	—	LW1K-2C6MA
			3PDT	LW1K-2C7A	—	—
	45° 3-position maintained 	Gold	DPDT	LW1K-3C2A	LW1K-3C2VA	LW1K-3C2MA
			3PDT	LW1K-3C3A	LW1K-3C3VA	—
		Silver	DPDT	LW1K-3C6A	—	LW1K-3C6MA
			3PDT	LW1K-3C7A	—	—



1. Every key selector uses an identical key.
2. The key is removable in all positions.
3. If a different configuration is required, contact an IDEC representative for more information.
4. For contact operation, see next page.
5. For sub-assembly part numbers, see page A-67.

Part Numbers: LW1F LED and Incandescent Illuminated Selector Switches

Style	Position	Contact Material	Contact	Part Numbers		
				Solder/Tab	PC Board	Screw
Round 	90° 2-position maintained 	Gold	SPDT	LW1F-2C10-②	LW1F-2C10V-②	—
			DPDT	LW1F-2C20-②	LW1F-2C20V-②	LW1F-2C20M-②
			3PDT	LW1F-2C30-②	LW1F-2C30V-②	—
		Silver	SPDT	LW1F-2C50-②	—	—
			DPDT	LW1F-2C60-②	—	LW1F-2C60M-②
			3PDT	LW1F-2C70-②	—	—
	45° 3-position maintained 	Gold	DPDT	LW1F-3C20-②	LW1F-3C20V-②	LW1F-3C20M-②
			3PDT	LW1F-3C30-②	LW1F-3C30V-②	—
		Silver	DPDT	LW1F-3C60-②	—	LW1F-3C60M-②
			3PDT	LW1F-3C70-②	—	—



1. In place of ②, specify color code. See previous page for color codes.
2. Lamps must be ordered separately for all illuminated pushbuttons. See previous page.
3. For contact operation, see next page.
4. For sub-assembly part numbers, see page A-67.

Contact Operations

Contact Operation: Selector and Keylock Switches

Switches & Pilot Devices

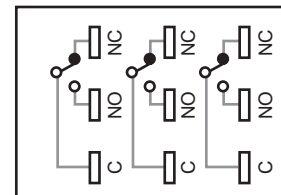
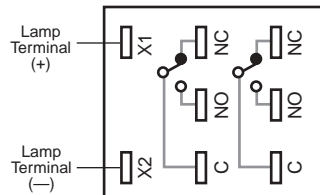
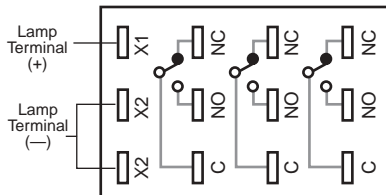
Position	Contact	Operator Position and Contact Position (Top View)		
		Left	Center	Right
<p>90° 2-Position Maintained</p>	SPDT		-	
	DPDT		-	
	3PDT		-	
<p>45° 3-Position Maintained</p>	DPDT			
	3PDT			

Terminal Arrangements (Bottom View): LW□L and LW□B Pushbuttons

3 pole illuminated

2 pole illuminated

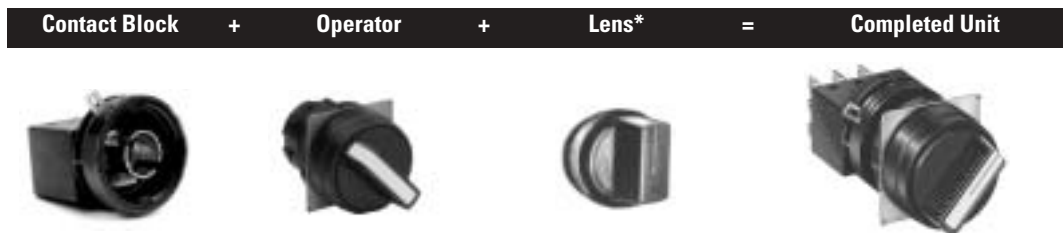
3 pole non-illuminated



SPDT has C, NO and NC only on the center. DPDT has C, NO, and NC only on the right and left.

SPDT has C, NO and NC only on the right. DPDT has C, NO, and NC only on the right and center.

Selectors and Key Switches (Sub-Assembled)



*Lens for illuminated units only

Part Numbers: Operators

Unit	Position	Part Number
Non-Illuminated Selector Switch	2-position	LW1S-2Y
	3-position	LW1S-3Y
Key Switch	2-position	LW1K-2A
	3-position	LW1K-3A
Illuminated Selector Switch	2-position	LW1F-20*
	3-position	LW1F-30*

* Lens must be purchased separately for illuminated units.

Part Numbers: Knob (Lens)

Style	Part Number
Illuminated Selector Switches	LW1A-F-②



In place of ②, specify LED/Lens Color Code from table below.

Part Numbers: Contact Blocks

Appearance	Style	Contact Material	Contact	Part Number		
				Solder/Tab	PC Board	Screw
	Illuminated Selector Switches	Gold	SPDT	LW-C10	LW-C10V	—
			DPDT	LW-C20	LW-C20V	LW-C20M
			3PDT	LW-C30	LW-C30V	—
		Silver	SPDT	LW-C50	—	—
			DPDT	LW-C60	—	LW-C60M
			3PDT	LW-C70	—	—
	Non-Illuminated Selector Switches	Gold	SPDT	LW-C1	LW-C1V	—
			DPDT	LW-C2	LW-C2V	LW-C2M
			3PDT	LW-C3	LW-C3V	—
		Silver	SPDT	LW-C5	—	—
			DPDT	LW-C6	—	LW-C6M
			3PDT	LW-C7	—	—

Part Numbers: Lamps (not included in assemblies)

Type	Voltage	Part Number
LED	6V AC/DC±10%	LSTD-6②
	12V AC/DC±10%	LSTD-1②
	24V AC/DC±10%	LSTD-2②
	120V AC±10%	LSTD-H2②
	240V AC ±10%	LSTD-M4②
Incandescent	6.3V AC/DC	IS-6
	12V AC/DC	IS-12
	24V AC/DC	IS-24



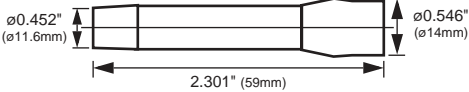





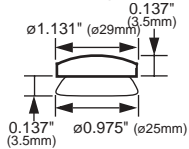

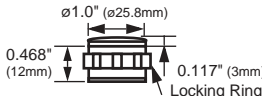




② LED/Lens Color Code


Color	Code
Amber	A
Green	G
Red	R
Blue	S
White	W
Yellow	Y



- In place of ②, specify the LED Color Code.
- The LED contains a current-limiting resistor and reverse polarity protection diode.

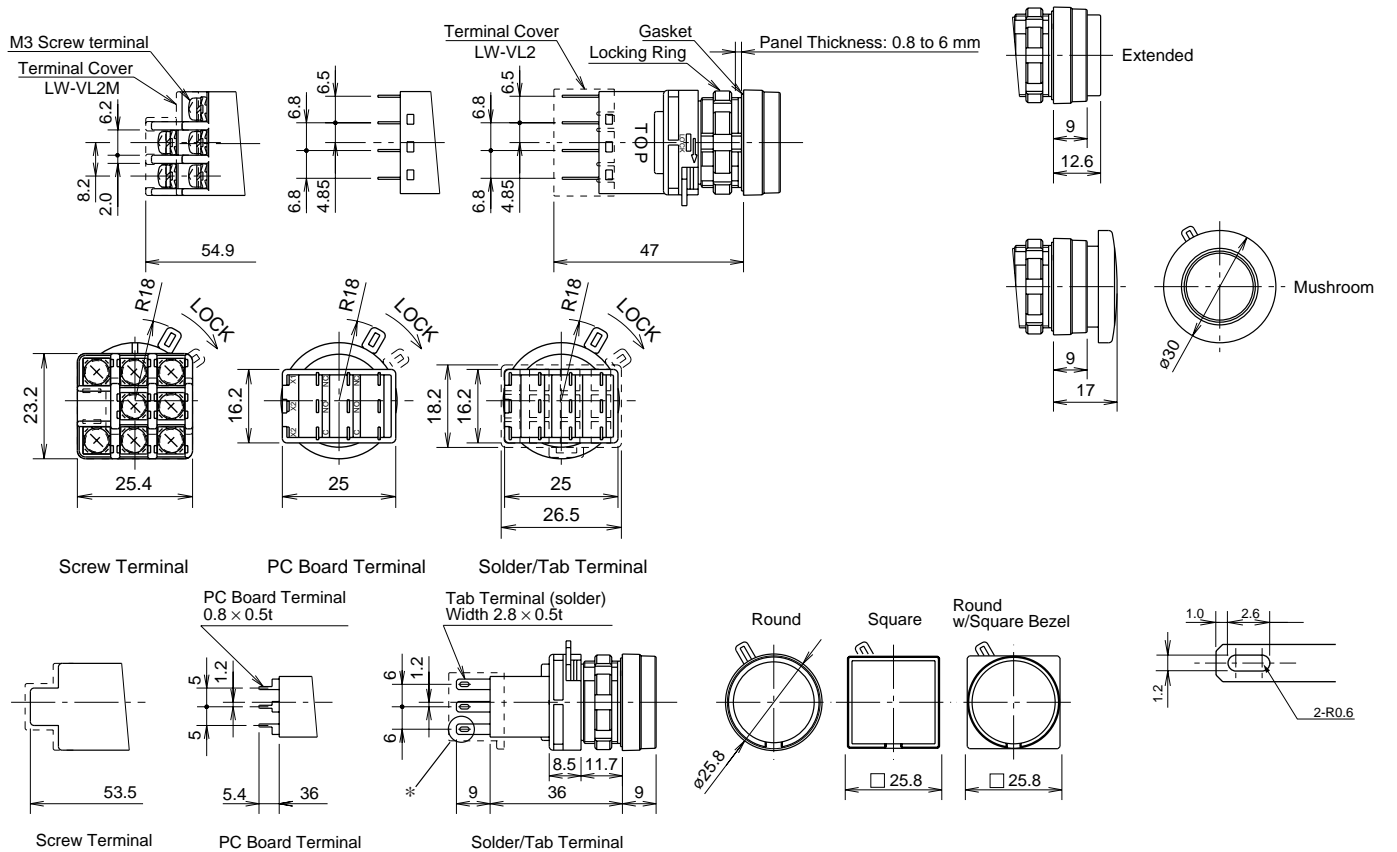
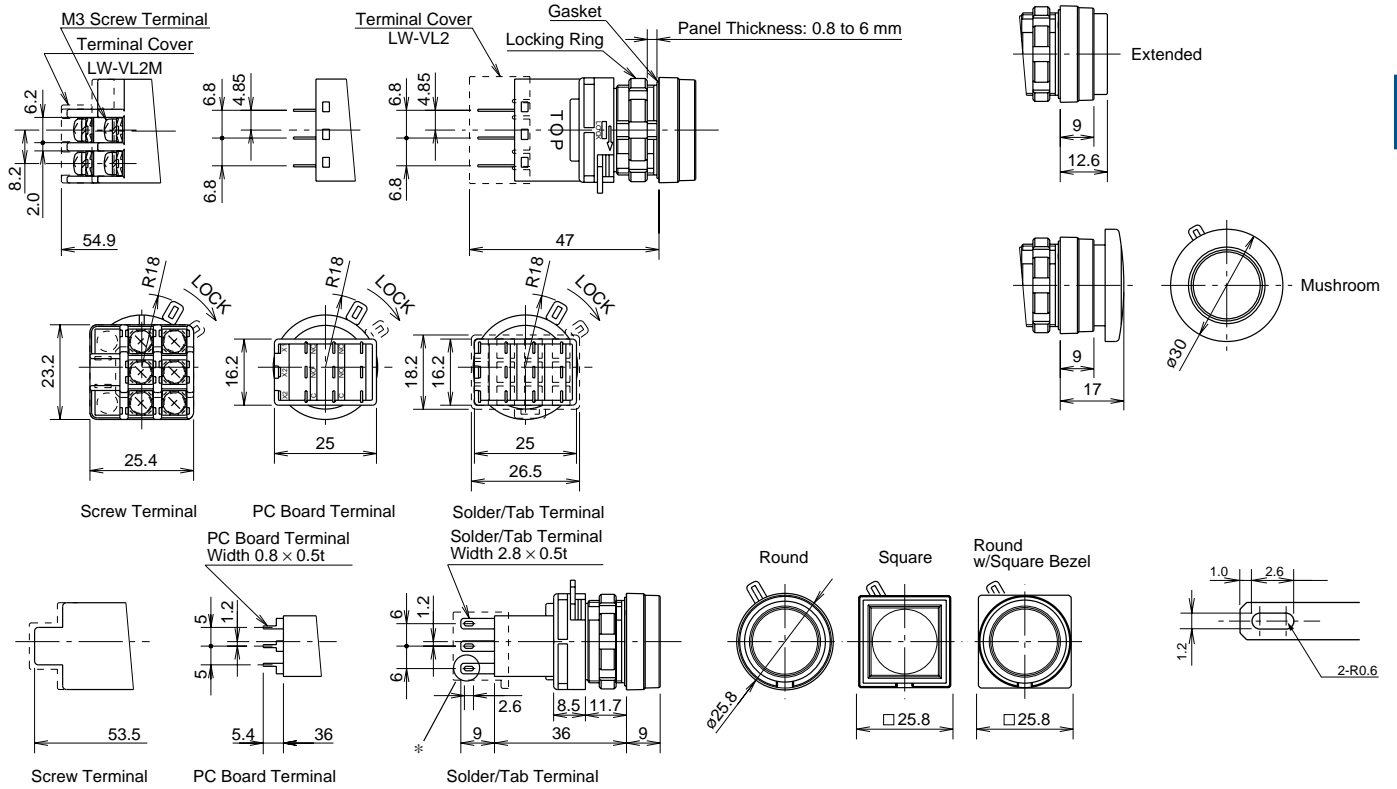
Accessories — LW Series

Style	Description/Usage	Part Number
A Ring Wrench (optional) 	1. Metallic tool used for tightening the plastic locking ring when installing the LW series on a panel. 2. Tightening torque should not exceed 1.2N-m (12 kgf-cm) when tightening a locking ring.	LW9Z-T1
Lamp Holder Tool (optional) 	Rubber tool used for replacing incandescent or LED lamps installed in illuminated switches and pilot lights and pilot lights 	OR-55
Terminal Cover (for solder tab terminal) 	Nylon cover for pushbuttons and selectors with solder terminals snaps onto contact block. (Insert the lead wires through terminal cover holes before wiring.)	LW-VL2
Terminal Cover (for screw terminal) 	Nylon cover for pushbuttons and selectors for screw terminals snaps onto contact block. (Insert the lead wires through terminal cover holes before wiring.)	LW-VL2M
Terminal Cover (for short body pilot light with solder tab terminal) 	Nylon cover for short body pilot lights with solder terminals.	LW-PVL
Terminal Cover (for short body pilot light with screw terminal) 	Nylon cover for short body pilot lights with screw terminals.	LW-PVLM
Rubber Mounting Hole Plug 	Black rubber plug fills unused 22mm panel cutouts. 	OB-31
Metallic Mounting Hole Plug 	1. Used for plugging unnecessary mounting holes in the panel. Tighten the attached locking ring to a torque of 1.2N-m (12kgf-cm) maximum 2. Degree of Protection: IP66 	LW9Z-BM
Replacement Marking Plates 	White plastic engraving plate for use on all illuminated units (included in each lens). May be used to capture printed mylar insert (not supplied by IDEC) under lens face.	LW9Z-P1-W (round) LW9Z-P2-W (square) ALW3B (mushroom)
Anti-Rotation Ring 	Prevents rotation of switches in panel. (included with all selector and key switches only)	LW9Z-L
Replacement Keys 	One pair of keys. (#231)	KG9Z-SK-231PN02
Replacement Locking Ring 	Use to secure operator to panel. (included with all assembled switches and operators)	LW9Z-LN

 For replacement lamps, see previous page.

Dimensions: Pushbuttons

LW□L & LW□B: Illuminated & Non-Illuminated Pushbuttons



Dimensions: Pilot Lights

LW1P/LW2P Pilot Lights



Switches & Pilot Devices

