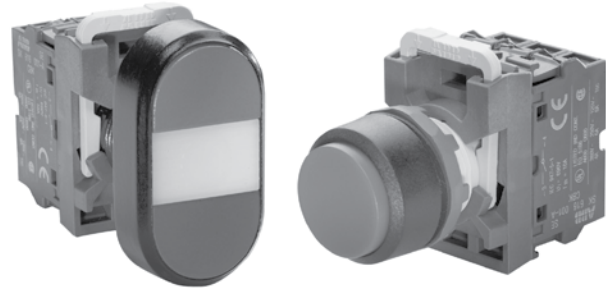


# Assembled Modular range



## Assembled Modular Range 22mm



8

### General construction

- Snap-on feature reduces installation time
- Bezels: black plastic, chrome metal
- Contact block holder features rear mounting with quick-release locking mechanism for high security
- Buttons available in several colors
- Engraved text caps available
- Custom-specific markings on request
- UL File# E76003
- CSA File# LR19700

### Operators

- Pushbuttons, illuminated and non-illuminated
- Double pushbuttons, illuminated and non-illuminated
- Mushroom pushbuttons, illuminated and non-illuminated, 40mm and 60mm diameter
- Emergency stop pushbuttons, illuminated and non-illuminated, twist or pull release
- Selector switches, illuminated and non-illuminated, 2- or 3-position, short or long handle
- Key-operated selector switches, 2- or 3-position
- Toggle switches, 2- or 3-position

### Contact blocks

- Quick-mount, quick release contact block holder for fast and easy assembly/disassembly
- NO & NC contact blocks are color-coded for easy identification: Green = NO; Red = NC
- Silver-tipped contacts
- Wiping action for high reliability
- Low energy gold-plated contact blocks
- Contact block holder for three or five blocks in a single row

### Pilot lights

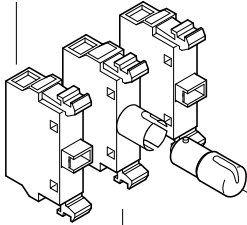
- Full voltage, resistor and transformer
- LED and filament bulbs available

## Mounting

### Exploded view

#### Contact block

Single pole with making or breaking contact

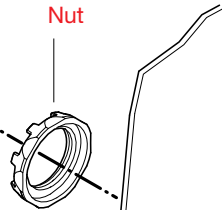


#### Holder

Available either for three or five blocks in one single row. Additional blocks can be stacked on holders for three blocks.

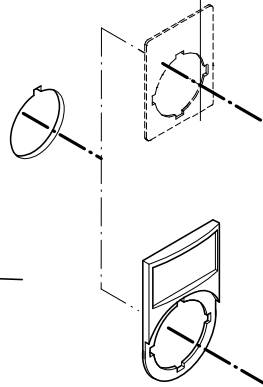


#### Nut



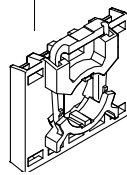
#### Legend plates

Of brushed aluminum with slots that guide the legend plate and the operator into the correct position. See the chapter, "Legend Plates" for more information.



#### Lamp block

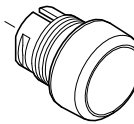
Illuminated pushbuttons, illuminated selector switches and pilot lights have a lamp block in the center position of the holder.



#### Five block holder

#### Operator

Buttons, lenses and handles in several colors. Illuminated or non-illuminated.



#### Legend plate holder

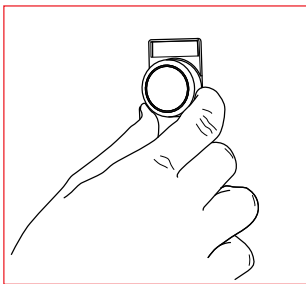
Of black plastic, insert of brushed aluminum. See the chapter, "Legend Plates" for more information.

#### Bezels

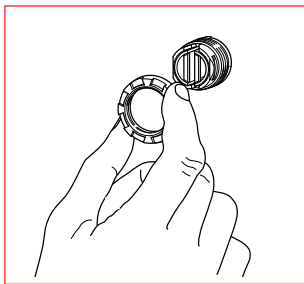
Pushbuttons, selector switches and toggle switches with bezel in black plastic, chrome metal are available.

8

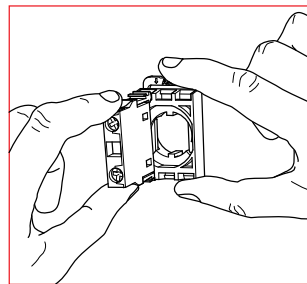
### Easy to mount



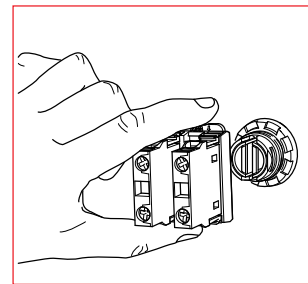
The operator is to be inserted from the front.....



...and secured at the back with a nut.

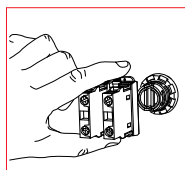
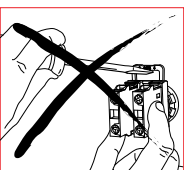


The contact blocks/lamp block are then snapped on to the holder...



...and the holder snaps on to the operator.

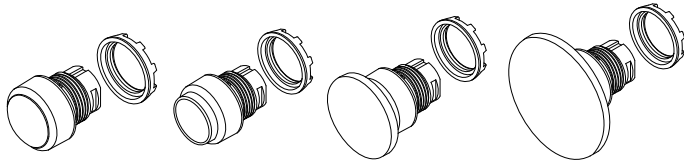
### ...and to remove



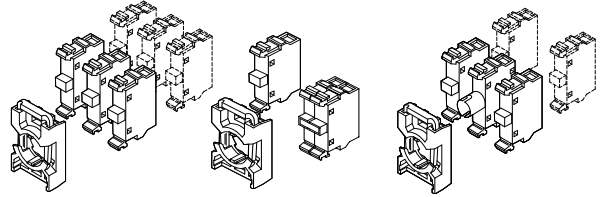
Press down the spring on the holder and pull the holder from the actuator.

# Selection guide

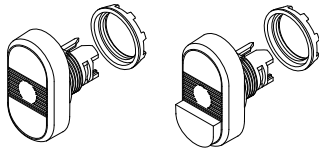
## Pushbuttons and Mushroom pushbuttons



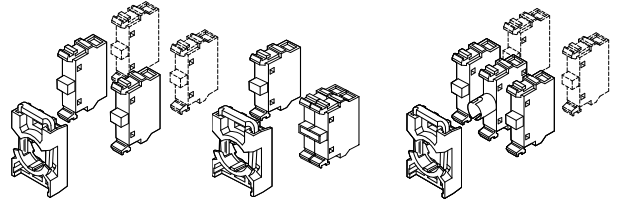
### Contact block/lamp block combinations



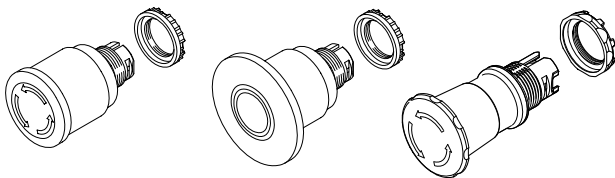
## Double pushbuttons



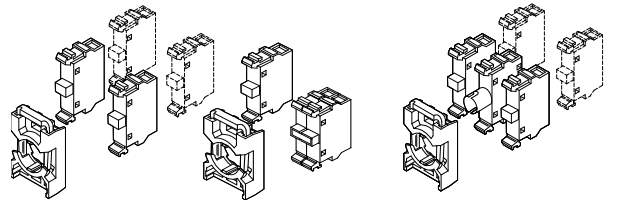
### Contact block/lamp block combinations



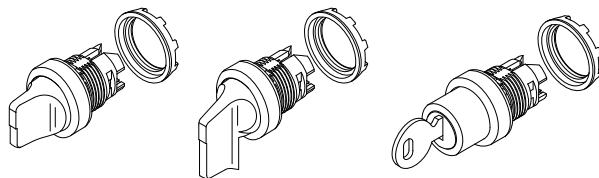
## Emergency stop pushbuttons



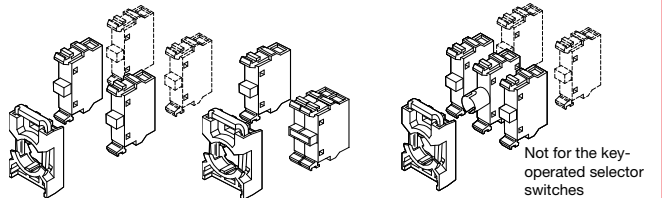
### Contact block/lamp block combinations



## Selector switches

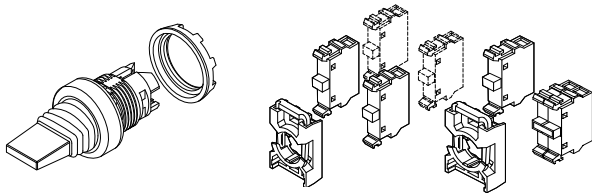


### Contact block/lamp block combinations



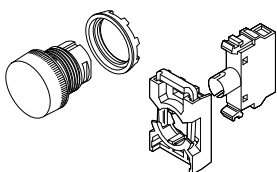
## Toggle switches

### Contact block combinations



## Pilot lights

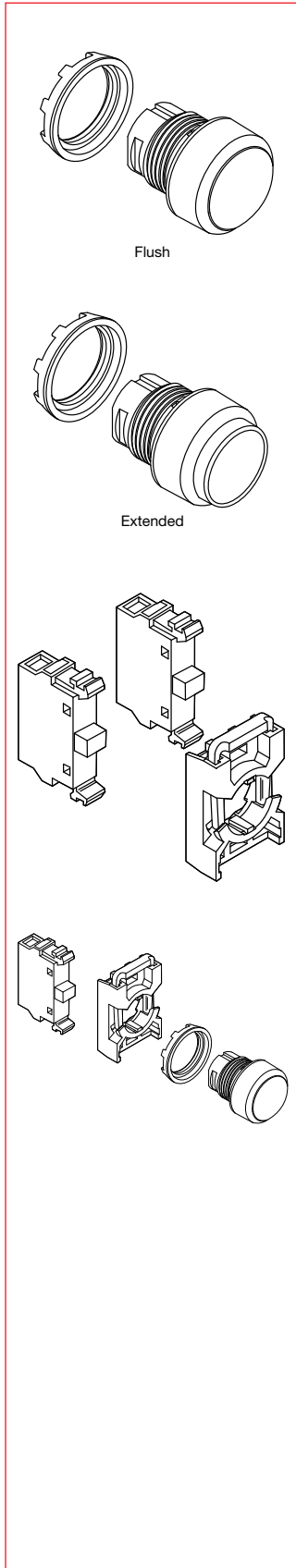
### Lamp block combination





# Pushbuttons Non-illuminated

Pilot Devices  
Modular Range  
Assembled, 22mm



## Pushbuttons, non-illuminated

Options	Catalog number characters										List price	
Momentary Flush			M	P	1	-						<b>\$ 6.10</b>
Maintained Flush ①			M	P	2	-						<b>17.30</b>
Momentary Extended			M	P	3	-						<b>6.10</b>
Maintained Extended ①			M	P	4	-						<b>17.30</b>
Bezel, Black Plastic, with Holder						-	4	0				<b>2.00</b>
Bezel, Chrome Metal, with Holder						-	6	0				<b>2.00</b>
Button Color - Red									R			-
Button Color - Green									G			-
Button Color - Yellow									Y			-
Button Color - Blue									L			-
Button Color - White									W			-
Button Color - Black									B			-
Button Color - Clear									C			-
Contact Blocks, 1NO									1	0		<b>8.00</b>
Contact Blocks, 2NO									2	0		<b>16.00</b>
Contact Blocks, 3NO									3	0		<b>24.00</b>
Contact Blocks, 1NC									0	1		<b>8.00</b>
Contact Blocks, 2NC									0	2		<b>16.00</b>
Contact Blocks, 3NC									0	3		<b>24.00</b>
Contact Blocks, 1NO+1NC									1	1		<b>16.00</b>
Contact Blocks, 2NO+1NC									2	1		<b>24.00</b>
Contact Blocks, 1NO+2NC									1	2		<b>24.00</b>
Contact Blocks, 1NO, Gold									1	0	G	<b>16.00</b>
Contact Blocks, 2NO, Gold									2	0	G	<b>32.00</b>
Contact Blocks, 3NO, Gold									3	0	G	<b>48.00</b>
Contact Blocks, 1NC, Gold									0	1	G	<b>16.00</b>
Contact Blocks, 2NC, Gold									0	2	G	<b>32.00</b>
Contact Blocks, 3NC, Gold									0	3	G	<b>48.00</b>
Contact Blocks, 1NO+1NC, Gold									1	1	G	<b>32.00</b>
Contact Blocks, 2NO+1NC, Gold									2	1	G	<b>48.00</b>
Contact Blocks, 1NO+2NC, Gold									1	2	G	<b>48.00</b>
Text Caps with Clear Lens Only									C		C X X②	<b>1.80</b>
5 Block Holder												5 <b>4.00</b>
30mm Black Plastic Adaptor Ring ③	G		1									<b>8.00</b>
30mm Chrome Metal Adaptor Ring ③	G		2									<b>10.00</b>

See catalog number explanation on page 8.56.

① No contact block in center position.

② Replace "XX" with text cap legends from pages 8.121 - 8.122.

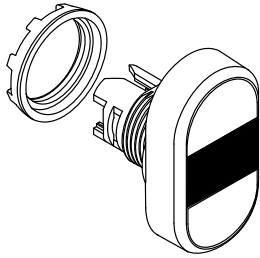
③ For 30mm devices, use Discount Schedule CC.







## Double pushbuttons, Flush/flush, non-illuminated ①

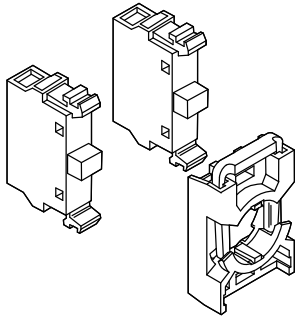


Double pushbutton

### Double pushbuttons, flush/flush, non-illuminated ①

Options	Catalog number characters										List price		
	M	P	D	1	-								
Flush/Flush, Green/Red	M	P	D	1	-							\$ 18.00	
Flush/Flush, Green/Red, I/O	M	P	D	2	-							21.00	
Flush/Flush, Green/Red, ON/OFF	M	P	D	3	-							21.00	
Flush/Flush, Green/Red, START/STOP	M	P	D	4	-							21.00	
Flush/Flush, White/Black	M	P	D	5	-							18.00	
Flush/Flush, White/Black, I/O	M	P	D	6	-							21.00	
Flush/Flush, White/Black, ON/OFF	M	P	D	7	-							21.00	
Flush/Flush, White/Black, START/STOP	M	P	D	8	-							21.00	
With Holder							2	0				2.00	
Center Lens Color - Black									B			-	
Contact Blocks, 1NO										1	0	8.00	
Contact Blocks, 2NO										2	0	16.00	
Contact Blocks, 3NO										3	0	24.00	
Contact Blocks, 1NC										0	1	8.00	
Contact Blocks, 2NC										0	2	16.00	
Contact Blocks, 3NC										0	3	24.00	
Contact Blocks, 1NO+1NC										1	1	16.00	
Contact Blocks, 2NO+1NC										2	1	24.00	
Contact Blocks, 1NO+2NC										1	2	24.00	
Contact Blocks, 1NO, Gold										1	0	16.00	
Contact Blocks, 2NO, Gold										2	0	32.00	
Contact Blocks, 3NO, Gold										3	0	48.00	
Contact Blocks, 1NC, Gold										0	1	16.00	
Contact Blocks, 2NC, Gold										0	2	32.00	
Contact Blocks, 3NC, Gold										0	3	48.00	
Contact Blocks, 1NO+1NC, Gold										1	1	32.00	
Contact Blocks, 2NO+1NC, Gold										2	1	48.00	
Contact Blocks, 1NO+2NC, Gold										1	2	48.00	
5 Block Holder												5	4.00

See catalog number explanation on page 8.56.



① No contact block in center position.





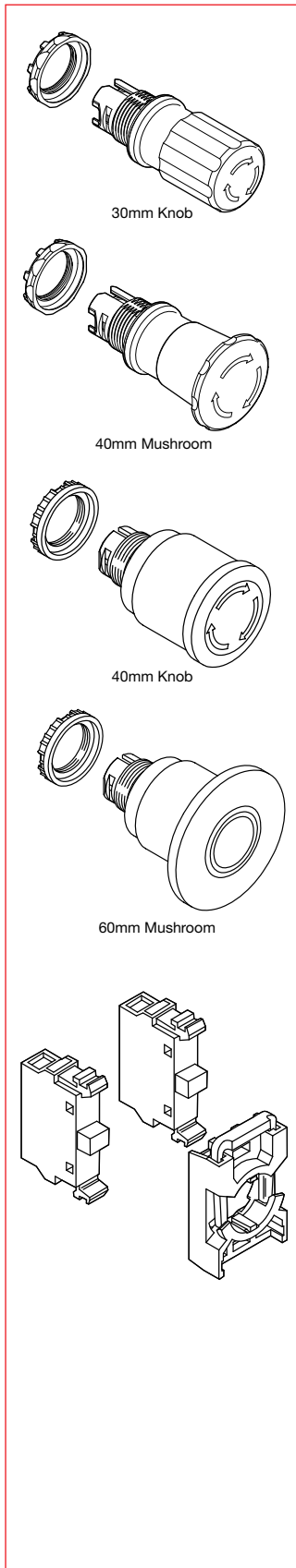


## Emergency stops & machine stops

### Non-illuminated, maintained

### Fulfills IEC 60947-5-5

#### Emergency stops and machine stops, non-illuminated, maintained



Options	Catalog number characters										List price	
30mm Knob, Twist Release			M	P	E	T	3	-				\$ 26.00
30mm Knob, Pull Release			M	P	E	P	3	-				26.00
30mm Knob, Key Release (Key Code 71)			M	P	E	K	3	-				40.00
40mm Mushroom, Twist Release			M	P	E	T	4	-				30.00
40mm Mushroom, Pull Release			M	P	E	P	4	-				30.00
40mm Mushroom, Key Release (Key Code 71)			M	P	E	K	4	-				48.00
40mm, Knob Twist Release			M	P	M	T	3	-				34.00
40mm, Knob Pull Release			M	P	M	P	3	-				34.00
60mm, Mushroom Twist Release			M	P	M	T	4	-				46.00
60mm, Mushroom Pull Release			M	P	M	P	4	-				46.00
With Holder, 3 block									2	0		2.00
Red										R		-
Contact Blocks, 1NO										1	0	8.00
Contact Blocks, 2NO										2	0	16.00
Contact Blocks, 3NO										3	0	24.00
Contact Blocks, 1NC										0	1	8.00
Contact Blocks, 2NC										0	2	16.00
Contact Blocks, 3NC										0	3	24.00
Contact Blocks, 1NO+1NC										1	1	16.00
Contact Blocks, 2NO+1NC										2	1	24.00
Contact Blocks, 1NO+2NC										1	2	24.00
Contact Blocks, 1NO, Gold										1	0	G 16.00
Contact Blocks, 2NO, Gold										2	0	G 32.00
Contact Blocks, 3NO, Gold										3	0	G 48.00
Contact Blocks, 1NC, Gold										0	1	G 16.00
Contact Blocks, 2NC, Gold										0	2	G 32.00
Contact Blocks, 3NC, Gold										0	3	G 48.00
Contact Blocks, 1NO+1NC, Gold										1	1	G 32.00
Contact Blocks, 2NO+1NC, Gold										2	1	G 48.00
Contact Blocks, 1NO+2NC, Gold										1	2	G 48.00
5 Block Holder												5 4.00
30mm Black Plastic Adaptor Ring ①	G	1										8.00
30mm Chrome Metal Adaptor Ring ①	G	2										10.00

See catalog number explanation on page 8.56.

To comply with the standard, IEC 60947-5-5, a number of tests have to be conducted:

<b>Durability test</b>	6,0505 cycles. This is not a test of mechanical life. The product has a mechanical life of 100,000 operations.	<b>Latching test</b>	Impulse voltage test at 2,500 V
<b>Robustness</b>	The force 113 N applied in three axes.	<b>Resetting test</b>	Pulling force < 50 N Turning torque < Nm
<b>Conditioning</b>	Heat and cold, moist atmosphere, and in 5% NaC	<b>Shock</b>	15 g shock
		<b>Vibration</b>	2 h at 50 m/s <sup>2</sup>
		<b>Contacts with positive opening operation</b>	15 g shock

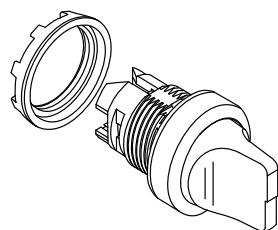
① For 30mm devices, use Discount Schedule CC.



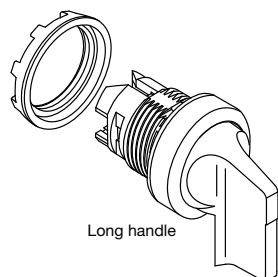


## Selector switches, 2 position Illuminated ①

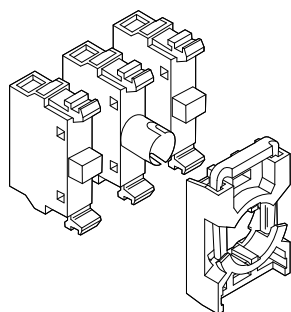
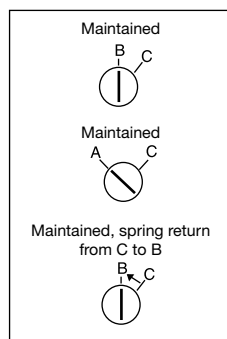
### Selector switches, 2 position, illuminated ①



Short handle



Long handle



#### Contact functions

Block positions as seen from operator front.

Handle position	Left block	Right block
A or (B)	O	O
C	X	X

O = not actuated (normal state)  
X = actuated (changed state)

Options	Catalog number characters										List price		
Short/Main B&C	M	2	S	S	1	-						\$ 11.00	
Short/Main A&C	M	2	S	S	2	-						11.00	
Short/Spring Return C to B	M	2	S	S	3	-						14.00	
Long/Main B&C	M	2	S	S	4	-						11.00	
Long/Main A&C	M	2	S	S	5	-						11.00	
Long/Spring Return C to B	M	2	S	S	6	-						14.00	
Bezel, Black Plastic, with Holder						-	4					2.00	
Bezel, Chrome Metal, with Holder						-	6					2.00	
Illuminated without Lamp block ②						-		1				-	
Lamp block, MLB-1, Bulb not Included						-		2				17.50	
Lamp block, MLB-2, Bulb not Included						-		3				21.50	
Lamp block, MLB-3, Bulb not Included						-		4				21.50	
Lamp block, MLB-4, Bulb not Included						-		5				21.50	
Lamp block, MLB-5, Bulb not Included						-		6				21.50	
Switch Color - Red						-			R			-	
Switch Color - Green						-			G			-	
Switch Color - Yellow						-			Y			-	
Switch Color - Blue						-			L			-	
Switch Color - Clear						-			C			-	
Contact Blocks, 1NO						-		1	0			8.00	
Contact Blocks, 2NO						-		2	0			16.00	
Contact Blocks, 3NO						-		3	0			24.00	
Contact Blocks, 1NC						-		0	1			8.00	
Contact Blocks, 2NC						-		0	2			16.00	
Contact Blocks, 3NC						-		0	3			24.00	
Contact Blocks, 1NO+1NC						-		1	1			16.00	
Contact Blocks, 2NO+1NC						-		2	1			24.00	
Contact Blocks, 1NO+2NC						-		1	2			24.00	
Contact Blocks, 1NO, Gold						-		1	0	G		16.00	
Contact Blocks, 2NO, Gold						-		2	0	G		32.00	
Contact Blocks, 3NO, Gold						-		3	0	G		48.00	
Contact Blocks, 1NC, Gold						-		0	1	G		16.00	
Contact Blocks, 2NC, Gold						-		0	2	G		32.00	
Contact Blocks, 3NC, Gold						-		0	3	G		48.00	
Contact Blocks, 1NO+1NC, Gold						-		1	1	G		32.00	
Contact Blocks, 2NO+1NC, Gold						-		2	1	G		48.00	
Contact Blocks, 1NO+2NC, Gold						-		1	2	G		48.00	
Filament Bulb 6V						-				F	6	6.00	
Filament Bulb 12V						-				F	7	6.00	
Filament Bulb 24V						-				F	8	6.00	
Filament Bulb 30V						-				F	3 0	6.00	
Filament Bulb 48V						-				F	9	6.00	
Filament Bulb 60V						-				F	6 0	6.00	
Filament Bulb 110V						-				F	1 1	6.00	
Filament Bulb 130V						-				F	1	6.00	
LED 12VDC						-				L	7	21.00	
LED 24VAC/DC						-				L	8	15.00	
LED 48VAC/DC						-				L	9	15.00	
LED 60VAC/DC						-				L	6 0	21.00	
LED 110-130VAC						-				L	1	15.00	
LED 110-130VAC/DC						-				L	1 3	21.00	
LED 230V						-				L	2	21.00	
Transformer Block 110-127/6VBulb						-				T	1	41.00	
Transformer Block 220-240/6VBulb						-				T	2	41.00	
Transformer Block 380-420/6VBulb						-				T	3	41.00	
Transformer Block 440-480/6VBulb						-				T	4	41.00	
Transformer Block 500-600/6VBulb						-				T	5	41.00	
Transformer Block 110-127/24VBulb						-				T	6	41.00	
Transformer Block 220-240/24VBulb						-				T	7	41.00	
Transformer Block 380-420/24VBulb						-				T	8	41.00	
Transformer Block 440-480/24VBulb						-				T	9	41.00	
Transformer Block 110-127/24VLED						-				T	L 1	50.00	
Transformer Block 220-240/24VLED						-				T	L 2	50.00	
Transformer Block 380-420/24VLED						-				T	L 3	50.00	
Transformer Block 440-480/24VLED						-				T	L 4	50.00	
5 Block Holder						-						5	4.00
30mm Black Plastic Adaptor Ring ③	G												8.00
30mm Chrome Metal Adaptor Ring ③	G												10.00

See catalog number explanation on page 8.56.

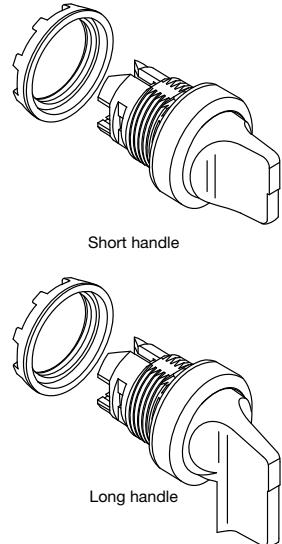
① No contact block in center position.

② No filament bulb, LED or transformer block can be combined with "illuminated without lamp block" selection.

③ For 30mm devices, use Discount Schedule CC.

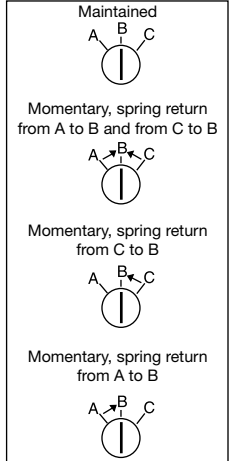
# Selector switches, 3 position Non-Illuminated ①

## Selector switches, 3 position, non-illuminated ①



Short handle

Long handle

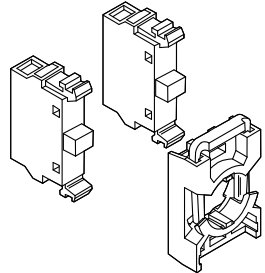


Maintained

Momentary, spring return from A to B and from C to B

Momentary, spring return from C to B

Momentary, spring return from A to B



**Contact functions**  
Block positions as seen from operator front.

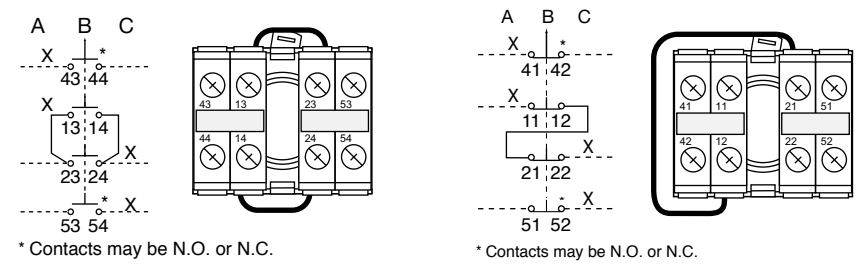
Handle position	Left block	Right block
A	X	O
B	O	O
C	O	X

O = not actuated (normal state)  
X = actuated (changed state)

Options	Catalog number characters										List price		
Short/3-Main	M	3	S	S	1	-						\$ 11.00	
Short/Spring Return to B	M	3	S	S	2	-						11.00	
Short/Main A&B/Spring Return C to B	M	3	S	S	3	-						14.00	
Long/3-Main	M	3	S	S	4	-						11.00	
Long/Spring Return to B	M	3	S	S	5	-						11.00	
Long/Main A&B/Spring Return C to B	M	3	S	S	6	-						14.00	
Short/Main B&C/Spring Return A to B	M	3	S	S	7	-						14.00	
Long/Main B&C/Spring Return A to B	M	3	S	S	8	-						14.00	
Bezel, Black Plastic, with Holder							-	4	0			2.00	
Bezel, Chrome Metal, with Holder							-	6	0			2.00	
Switch Color - Red										R		-	
Switch Color - Black										B		-	
Switch Color - Grey										U		-	
Contact Blocks, 1NO									1	0		8.00	
Contact Blocks, 2NO									2	0		16.00	
Contact Blocks, 3NO									3	0		24.00	
Contact Blocks, 1NC									0	1		8.00	
Contact Blocks, 2NC									0	2		16.00	
Contact Blocks, 3NC									0	3		24.00	
Contact Blocks, 1NO+1NC									1	1		16.00	
Contact Blocks, 2NO+1NC									2	1		24.00	
Contact Blocks, 1NO+2NC									1	2		24.00	
Contact Blocks, 1NO, Gold									1	0	G	16.00	
Contact Blocks, 2NO, Gold									2	0	G	32.00	
Contact Blocks, 3NO, Gold									3	0	G	48.00	
Contact Blocks, 1NC, Gold									0	1	G	16.00	
Contact Blocks, 2NC, Gold									0	2	G	32.00	
Contact Blocks, 3NC, Gold									0	3	G	48.00	
Contact Blocks, 1NO+1NC, Gold									1	1	G	32.00	
Contact Blocks, 2NO+1NC, Gold									2	1	G	48.00	
Contact Blocks, 1NO+2NC, Gold									1	2	G	48.00	
5 Block Holder												5	4.00
30mm Black Plastic Adaptor Ring ②	G	1											8.00
30mm Chrome Metal Adaptor Ring ②	G	2											10.00

See catalog number explanation on page 8.56.

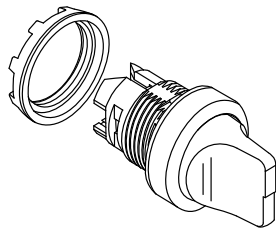
### Center position connection detail



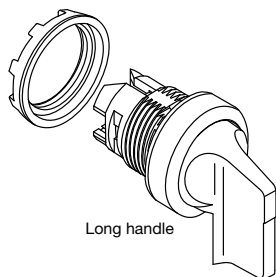
① No contact block in center position.  
② For 30mm devices, use Discount Schedule CC.

## Selector switches, 3 position Illuminated ①

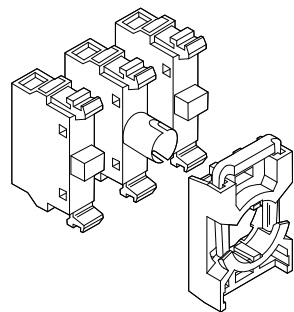
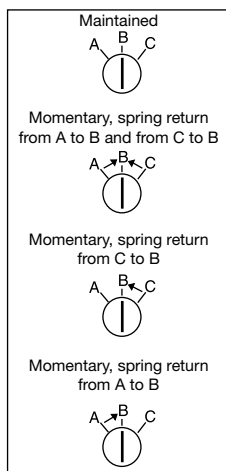
### Selector switches, 3 position, illuminated ①



Short handle



Long handle



#### Contact functions

Block positions as seen from operator front.

Handle position	Left block	Right block
A	X	O
B	O	O
C	O	X

O = not actuated (normal state)  
X = actuated (changed state)

Options	Catalog number characters										List price
Short/3-Main	M	3	S	S	1	-	-	-	-	-	\$ 11.00
Short/Spring Return to B	M	3	S	S	2	-	-	-	-	-	14.00
Short/Main A&B/Spring Return C to B	M	3	S	S	3	-	-	-	-	-	14.00
Long/3-Main	M	3	S	S	4	-	-	-	-	-	11.00
Long/Spring Return to B	M	3	S	S	5	-	-	-	-	-	14.00
Long/Main A&B/Spring Return C to B	M	3	S	S	6	-	-	-	-	-	14.00
Short/Main B&C/Spring Return A to B	M	3	S	S	7	-	-	-	-	-	14.00
Long/Main B&C/Spring Return A to B	M	3	S	S	8	-	-	-	-	-	14.00
Bezel, Black Plastic, with Holder	-	-	-	-	-	4	-	-	-	-	2.00
Bezel, Chrome Metal, with Holder	-	-	-	-	-	6	-	-	-	-	2.00
Illuminated without Lamp block ②	-	-	-	-	-	1	-	-	-	-	-
Lamp block, MLB-1, Bulb not Included	-	-	-	-	-	2	-	-	-	-	17.50
Lamp block, MLB-2, Bulb not Included	-	-	-	-	-	3	-	-	-	-	21.50
Lamp block, MLB-3, Bulb not Included	-	-	-	-	-	4	-	-	-	-	21.50
Lamp block, MLB-4, Bulb not Included	-	-	-	-	-	5	-	-	-	-	21.50
Lamp block, MLB-5, Bulb not Included	-	-	-	-	-	6	-	-	-	-	21.50
Switch Color - Red	-	-	-	-	-	-	R	-	-	-	-
Switch Color - Green	-	-	-	-	-	-	G	-	-	-	-
Switch Color - Yellow	-	-	-	-	-	-	Y	-	-	-	-
Switch Color - Blue	-	-	-	-	-	-	L	-	-	-	-
Switch Color - Clear	-	-	-	-	-	-	C	-	-	-	-
Contact Blocks, 1NO	-	-	-	-	-	1	0	-	-	-	8.00
Contact Blocks, 2NO	-	-	-	-	-	2	0	-	-	-	16.00
Contact Blocks, 3NO	-	-	-	-	-	3	0	-	-	-	24.00
Contact Blocks, 1NC	-	-	-	-	-	0	1	-	-	-	8.00
Contact Blocks, 2NC	-	-	-	-	-	0	2	-	-	-	16.00
Contact Blocks, 3NC	-	-	-	-	-	0	3	-	-	-	24.00
Contact Blocks, 1NO+1NC	-	-	-	-	-	1	1	-	-	-	16.00
Contact Blocks, 2NO+1NC	-	-	-	-	-	2	1	-	-	-	24.00
Contact Blocks, 1NO+2NC	-	-	-	-	-	1	2	-	-	-	24.00
Contact Blocks, 1NO, Gold	-	-	-	-	-	1	0	G	-	-	16.00
Contact Blocks, 2NO, Gold	-	-	-	-	-	2	0	G	-	-	32.00
Contact Blocks, 3NO, Gold	-	-	-	-	-	3	0	G	-	-	48.00
Contact Blocks, 1NC, Gold	-	-	-	-	-	0	1	G	-	-	16.00
Contact Blocks, 2NC, Gold	-	-	-	-	-	0	2	G	-	-	32.00
Contact Blocks, 3NC, Gold	-	-	-	-	-	0	3	G	-	-	48.00
Contact Blocks, 1NO+1NC, Gold	-	-	-	-	-	1	1	G	-	-	32.00
Contact Blocks, 2NO+1NC, Gold	-	-	-	-	-	2	1	G	-	-	48.00
Contact Blocks, 1NO+2NC, Gold	-	-	-	-	-	1	2	G	-	-	48.00
Filament Bulb 6V	-	-	-	-	-	-	F	6	-	-	6.00
Filament Bulb 12V	-	-	-	-	-	-	F	7	-	-	6.00
Filament Bulb 24V	-	-	-	-	-	-	F	8	-	-	6.00
Filament Bulb 30V	-	-	-	-	-	-	F	3	0	-	6.00
Filament Bulb 48V	-	-	-	-	-	-	F	9	-	-	6.00
Filament Bulb 60V	-	-	-	-	-	-	F	6	0	-	6.00
Filament Bulb 110V	-	-	-	-	-	-	F	1	1	-	6.00
Filament Bulb 130V	-	-	-	-	-	-	F	1	-	-	6.00
LED 12VDC	-	-	-	-	-	-	L	7	-	-	21.00
LED 24VAC/DC	-	-	-	-	-	-	L	8	-	-	15.00
LED 48VAC/DC	-	-	-	-	-	-	L	9	-	-	15.00
LED 60VAC/DC	-	-	-	-	-	-	L	6	0	-	21.00
LED 110-130VAC	-	-	-	-	-	-	L	1	-	-	15.00
LED 110-130VAC/DC	-	-	-	-	-	-	L	1	3	-	21.00
LED 230V	-	-	-	-	-	-	L	2	-	-	21.00
Transformer Block 110-127/6VBulb	-	-	-	-	-	-	T	1	-	-	41.00
Transformer Block 220-240/6VBulb	-	-	-	-	-	-	T	2	-	-	41.00
Transformer Block 380-420/6VBulb	-	-	-	-	-	-	T	3	-	-	41.00
Transformer Block 440-480/6VBulb	-	-	-	-	-	-	T	4	-	-	41.00
Transformer Block 500-600/6VBulb	-	-	-	-	-	-	T	5	-	-	41.00
Transformer Block 110-127/24VBulb	-	-	-	-	-	-	T	6	-	-	41.00
Transformer Block 220-240/24VBulb	-	-	-	-	-	-	T	7	-	-	41.00
Transformer Block 380-420/24VBulb	-	-	-	-	-	-	T	8	-	-	41.00
Transformer Block 440-480/24VBulb	-	-	-	-	-	-	T	9	-	-	41.00
Transformer Block 110-127/24VLED	-	-	-	-	-	-	T	L	1	-	50.00
Transformer Block 220-240/24VLED	-	-	-	-	-	-	T	L	2	-	50.00
Transformer Block 380-420/24VLED	-	-	-	-	-	-	T	L	3	-	50.00
Transformer Block 440-480/24VLED	-	-	-	-	-	-	T	L	4	-	50.00
5 Block Holder	-	-	-	-	-	-	-	-	-	5	4.00
30mm Black Plastic Adaptor Ring ③	G	1	-	-	-	-	-	-	-	-	8.00
30mm Chrome Metal Adaptor Ring ③	G	2	-	-	-	-	-	-	-	-	10.00

See catalog number explanation on page 8.56.

#### Center position connection detail

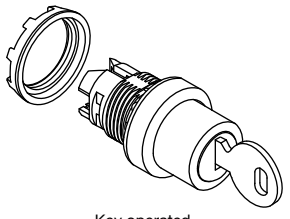
See page 8.67.

① No contact block in center position.

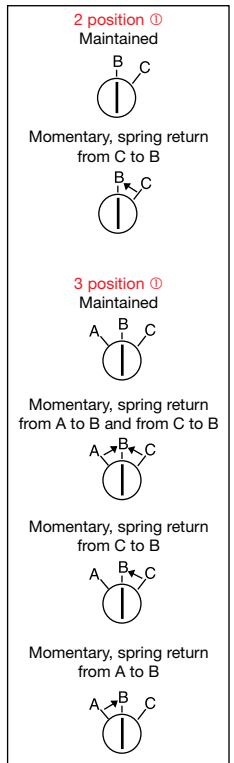
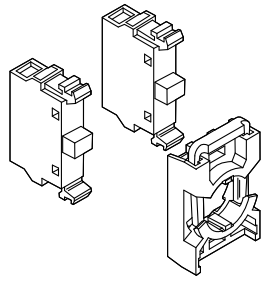
② No filament bulb, LED or transformer block can be combined with "illuminated without lamp block" selection.

③ For 30mm devices, use Discount Schedule CC.

# Key-operated selector switches 2 & 3 position ①



Key operated



## Key-operated selector switches, 2 & 3 position ①

Options	Catalog number characters										List price	
2 Maintained Positions, Key Removable in B and C	M	2	S	S	K	1	-					\$ 41.00
2 Maintained Positions, Key Removable in B	M	2	S	S	K	2	-					41.00
2 Positions, Spring Return from C to B, Key Removable in B	M	2	S	S	K	3	-					41.00
3 Maintained Positions, Key Removable in A, B and C	M	3	S	S	K	1	-					53.00
3 Maintained Positions, Key Removable in B	M	3	S	S	K	2	-					53.00
3 Positions, Spring Return from A and C to B, Key Removable in B	M	3	S	S	K	3	-					53.00
3 Positions, A and B maintained, Spring Return C to B, Key Removable in A	M	3	S	S	K	4	-					53.00
3 Positions, A and B maintained, Spring Return C to B, Key Removable in All Positions	M	3	S	S	K	5	-					53.00
Bezel, Black Plastic, with Holder							4	0				2.00
Bezel, Chrome Metal, with Holder							6	0				2.00
Key Code 71									1			-
Key Code 72									2			-
Key Code 73									3			-
Other Key Code									4			-
Contact Blocks, 1NO									1	0		8.00
Contact Blocks, 2NO									2	0		16.00
Contact Blocks, 3NO									3	0		24.00
Contact Blocks, 1NC									0	1		8.00
Contact Blocks, 2NC									0	2		16.00
Contact Blocks, 3NC									0	3		24.00
Contact Blocks, 1NO+1NC									1	1		16.00
Contact Blocks, 2NO+1NC									2	1		24.00
Contact Blocks, 1NO+2NC									1	2		24.00
Contact Blocks, 1NO, Gold									1	0	G	16.00
Contact Blocks, 2NO, Gold									2	0	G	32.00
Contact Blocks, 3NO, Gold									3	0	G	48.00
Contact Blocks, 1NC, Gold									0	1	G	16.00
Contact Blocks, 2NC, Gold									0	2	G	32.00
Contact Blocks, 3NC, Gold									0	3	G	48.00
Contact Blocks, 1NO+1NC, Gold									1	1	G	32.00
Contact Blocks, 2NO+1NC, Gold									2	1	G	48.00
Contact Blocks, 1NO+2NC, Gold									1	2	G	48.00
5 Block Holder											5	4.00
30mm Black Plastic Adaptor Ring ②	G	1										8.00
30mm Chrome Metal Adaptor Ring ②	G	2										10.00

See catalog number explanation on page 8.56.

### Extra key

Description	Catalog No.	Reference code	List Price
Ronis 455 (key code 71)	SK 616 021-71	SK 616 021-71	
Ronis 421 (key code 72)	SK 616 021-72	SK 616 021-72	\$ 10.00
Ronis 3433-E (key code 73)	SK 616 021-73	SK 616 021-73	

### Contact block functions

Block positions as seen from operator front.

#### 2 Position switch

Handle position	Left block	Right block
B	O	O
C	X	X

O = not actuated (normal state)  
X = actuated (changed state)

#### 3 Position switch

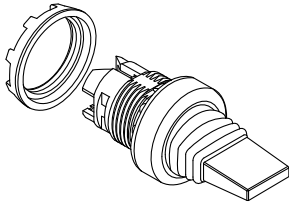
Handle position	Left block	Right block
A	O	X
B	O	O
C	X	O

O = not actuated (normal state)  
X = actuated (changed state)

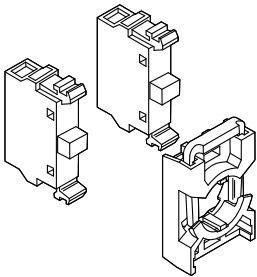
① No contact block in center position.  
② For 30mm devices, use Discount Schedule CC.

# Toggle switches

8



Toggle switch



Maintained



## Toggle switches

Options	Catalog number characters										List price	
	M	T	S	1	-	4	0	6	0	B		
2 Maintained Positions				1	-							\$ 18.00
3 Positions, Spring Return to Center				2	-							18.00
3 Maintained Positions				3	-							18.00
Bezel, Black, with Holder						4	0					2.00
Bezel, Chrome, with Holder						6	0					2.00
Switch Color - Black										B		-
Contact Blocks, 1NO									1	0		8.00
Contact Blocks, 2NO									2	0		16.00
Contact Blocks, 3NO									3	0		24.00
Contact Blocks, 1NC									0	1		8.00
Contact Blocks, 2NC									0	2		16.00
Contact Blocks, 3NC									0	3		24.00
Contact Blocks, 1NO+1NC									1	1		16.00
Contact Blocks, 2NO+1NC									2	1		24.00
Contact Blocks, 1NO+2NC									1	2		24.00
Contact Blocks, 1NO, Gold									1	0	G	16.00
Contact Blocks, 2NO, Gold									2	0	G	32.00
Contact Blocks, 3NO, Gold									3	0	G	48.00
Contact Blocks, 1NC, Gold									0	1	G	16.00
Contact Blocks, 2NC, Gold									0	2	G	32.00
Contact Blocks, 3NC, Gold									0	3	G	48.00
Contact Blocks, 1NO+1NC, Gold									1	1	G	32.00
Contact Blocks, 2NO+1NC, Gold									2	1	G	48.00
Contact Blocks, 1NO+2NC, Gold									1	2	G	48.00
5 Block Holder											5	4.00
30mm Black Plastic Adaptor Ring ①	G			1								8.00
30mm Chrome Metal Adaptor Ring ①	G			2								10.00

See catalog number explanation on page 8.56.

## Contact block functions

Block positions as seen from operator front.

### 2 Position switch

Handle position	Left block	Right block
A	O	O
C	X	X

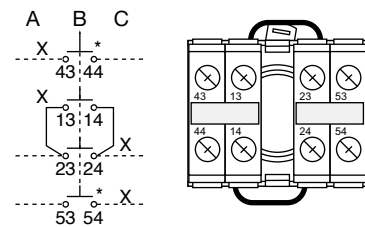
O = not actuated (normal state)  
X = actuated (changed state)

### 3 Position switch

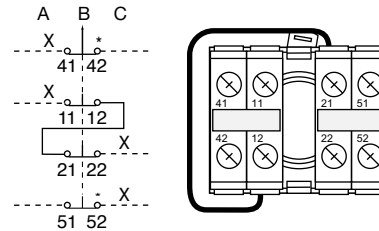
Handle position	Left block	Right block
A	O	X
B	O	O
C	X	O

O = not actuated (normal state)  
X = actuated (changed state)

## Center position connection detail



\* Contacts may be N.O. or N.C.



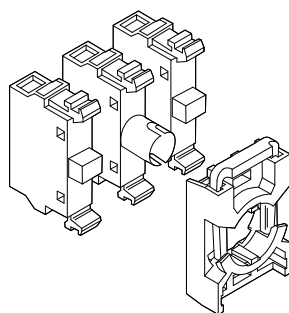
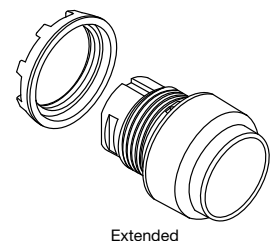
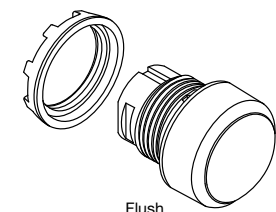
\* Contacts may be N.O. or N.C.

① For 30mm devices, use Discount Schedule CC.



## Press to test pilot lights

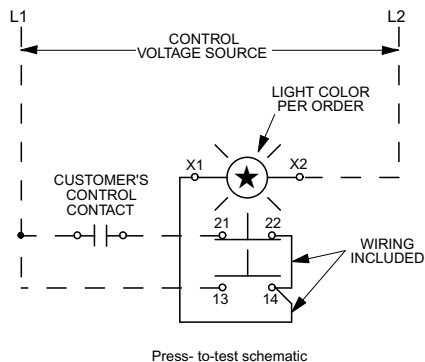
### Press to test pilot lights ③



Options	Catalog number characters								List price	
Momentary, Flush				M	P	1	-			<b>\$ 6.10</b>
Momentary, Extended				M	P	3	-			<b>6.10</b>
Bezel, Black Plastic with Holder, 1/1 Contacts							-	KL		<b>18.00</b>
Bezel, Chrome Metal with Holder, 1/1 Contacts							-	ML		<b>18.00</b>
Illuminated without Lamp Block									PT	—
Full Voltage Lamp Block, (select Filament bulb or LED from below)									FPT	<b>17.50</b>
Resistor Lamp Block, (select 120V or 240V bulb or LED only)									RPT	<b>21.50</b>
Filament Bulb 6V									6	<b>6.00</b>
Filament Bulb 12V									7	<b>6.00</b>
Filament Bulb 24V									8	<b>6.00</b>
Filament Bulb 48V									9	<b>6.00</b>
Filament Bulb 120V									1	<b>6.00</b>
LED, 12VDC									L7	<b>21.00</b>
LED, 24VAC/DC									L8	<b>15.00</b>
LED, 48VAC/DC									L9	<b>15.00</b>
LED, 60VAC/DC									L60	<b>21.00</b>
LED, 120V AC									L1	<b>15.00</b>
LED, 120 V AC/DC									L13	<b>21.00</b>
LED, 240 V AC									L2	<b>21.00</b>
Transformer + Lamp Block 110-127/6VBulb									TPT1	<b>58.50</b>
Transformer + Lamp Block 220-240/6VBulb									TPT2	<b>58.50</b>
Transformer + Lamp Block 380-420/6VBulb									TPT3	<b>58.50</b>
Transformer + Lamp Block 440-480/6VBulb									TPT4	<b>58.50</b>
Transformer + Lamp Block 500-600/6VBulb									TPT5	<b>58.50</b>
Transformer + Lamp Block 110-127/24VBulb									TPT6	<b>58.50</b>
Transformer + Lamp Block 220-240/24VBulb									TPT7	<b>58.50</b>
Transformer + Lamp Block 380-420/24VBulb									TPT8	<b>58.50</b>
Transformer + Lamp Block 440-480/24VBulb									TPT9	<b>58.50</b>
Transformer + Lamp Block 110-127/24VLED									TPTL1	<b>67.50</b>
Transformer + Lamp Block 220-240/24VLED									TPTL2	<b>67.50</b>
Transformer + Lamp Block 380-420/24VLED									TPTL3	<b>67.50</b>
Transformer + Lamp Block 440-480/24VLED									TPTL4	<b>67.50</b>
Button Color - Red									R	—
Button Color - Green									G	—
Button Color - Yellow									Y	—
Button Color - Blue									L	—
Button Color - White									W	—
Button Color - Clear									C	—
30mm Black Plastic Adaptor Ring ②	G	1								<b>8.00</b>
30mm Chrome Metal Adaptor Ring ②	G	2								<b>10.00</b>

See catalog number explanation on page 8.56.

### Schematic



① No filament bulb, LED or transformer block can be combined with "illuminated without lamp block" selection.

② For 30mm devices, use Discount Schedule C.C.

③ 1 NO & 1 NC contact blocks included.

# Catalog number explanation

## Modular pilot devices

### Pilot light

Example 1: Type **ML1-100R**

**L1** Pilot Light Head

**Lens color:**  
**R** = Red  
**G** = Green  
**Y** = Yellow  
**L** = Blue  
**W** = White  
**C** = Clear

### Operators

Example 2: Type **MP1-10Y**

**P** Pushbutton  
**PD** Pushbutton, **D**ouble  
**PK** Pushbutton, **K**ey-lockable  
**PM** Pushbutton, **M**ushroom  
**PMT** Pushbutton, **M**ushroom, **T**wist release  
**PMP** Pushbutton, **M**ushroom, **P**ull release  
**2SS** 2-pos, **S**elector **S**witch  
**3SS** 3-pos, **S**elector **S**witch  
**KB** **B**uzzer  
**KT** **P**otentiometer  
**TS** **T**oggle **S**witch

**Button color:**  
**R** = Red  
**G** = Green  
**Y** = Yellow  
**L** = Blue  
**W** = White  
**B** = **B**lack (non-illuminated only)  
**C** = Clear  
**U** = **G**rey (non-illuminated only)

**Lens color for double push-buttons**  
**R** = Red  
**G** = Green  
**Y** = Yellow  
**C** = Clear  
**B** = **B**lack (non-illuminated only)  
 -

Example 3: Type **M2SSK1-101**

**2SSK** 2-pos. **S**elector **S**witch, **K**ey-lockable  
**3SSK** 3-pos. **S**elector **S**witch, **K**ey-lockable  
**PK** Pushbutton, **K**ey-lockable

**Key code:**  
**1** = **71**  
**2** = **72**  
**3** = **73**

### Buzzer, contact blocks, lamp blocks

Example 4: Type **MCBH-10**

**B** **B**uzzer  
**CB** **C**ontact **B**lock  
**CBH** **C**ontact **B**lock with **H**older  
**LB** **L**amp **B**lock

**Contact blocks:**  
**10** = 1NO  
**01** = 1NC  
**11** = 1 NO + 1NC  
**02** = 2 NO  
**20** = 2 NC

**M** = "Generation" M, Modular Range

### Color selection according to IEC 60204-1

IEC 60204-1 specifies coding principles for indicators and actuators and gives recommendation regarding the use of colors. An excerpt from the standard is given below. For detailed information, see the standard.

### Meaning of colors - General principles

Color	Meaning		
	Safety of persons or environment	Condition of process	State of equipment
RED	Danger	Emergency	Faulty
YELLOW	Warning/caution	Abnormal	Abnormal
GREEN	Safe	Normal	Normal
BLUE	Mandatory significance		
WHITE, GREY, BLACK	No specific meaning assigned		

## 8 Non-illuminated actuators

### Emergency actuators

EMERGENCY-STOP / OFF actuators shall be identified by the color RED

### STOP / OFF actuators

WHITE, GREY and BLACK are the preferred colors for STOP / OFF actuators, with the main preference being for BLACK. RED is also permitted. GREEN shall not be used.

### START / ON actuators

WHITE, GREY and BLACK are the preferred colors for START / ON actuators, which cause the closing of switching devices and the equipment to start, with the main preference being for WHITE. GREEN is also permitted. RED shall not be used.

### Use of WHITE and BLACK for specific meanings

Where the colors WHITE and BLACK are used to distinguish between START / ON and STOP / OFF actuators, then the color WHITE shall be used for START / ON actuators and the color BLACK shall be used for STOP / OFF actuators.

### The same actuators serving for START and STOP or ON and OFF

WHITE, GREY and BLACK are the preferred colors for actuators which, when actuated several times, act alternately as a START / ON and STOP / OFF actuator. The colors YELLOW and GREEN shall not be used. The color RED shall be used only in cases where the same actuator, other than a pushbutton, is used for both EMERGENCY STOP / OFF and normal operation.

WHITE, GREY and BLACK are preferred colors for actuators which cause a movement while they are actuated and stop the movement when they are released (such as inching or jogging actuators). GREEN is also permitted. RED shall not be used.

### RESET actuators

RESET actuators (used, for example, with protective relays) shall be BLUE, WHITE, GREY and BLACK, except RESET actuators which also act as STOP / OFF actuators. The color of such STOP / OFF actuators shall be in accordance with STOP / OFF actuators above.