

Assembled Modular range

ABB**Assembled Modular Range**
22mm

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# E57057
- 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

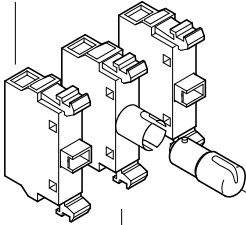
- Full voltage, resistor and transformer
- LED and filament bulbs available

Mounting

Exploded view

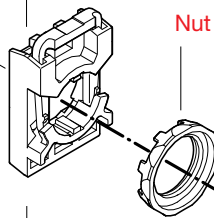
Contact block

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.

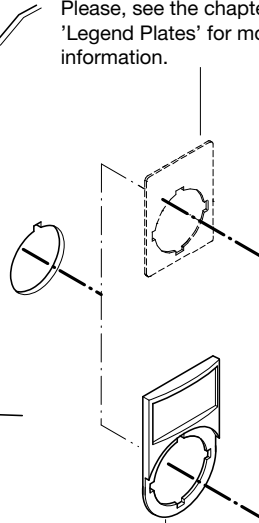


Nut

Legend plates

Of brushed aluminum with slots that guide the legend plate and the operator into the correct position.

Please, see the chapter 'Legend Plates' for more information.



30mm adaptor

Operator

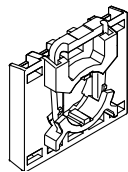
Buttons, lenses and handles in several colors. Illuminated or non-illuminated.



Lamp block

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

Five block holder



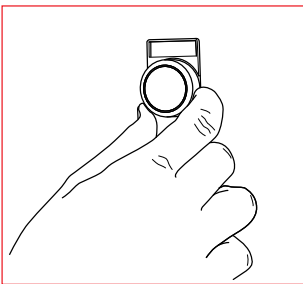
Legend plate holder

Of black plastic. Insert of brushed aluminum. Please, see the chapter 'legend plates' for more information.

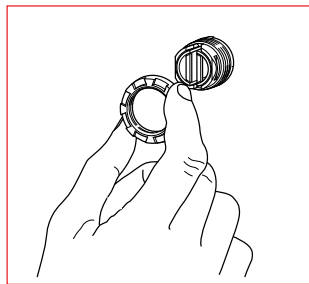
Bezels

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

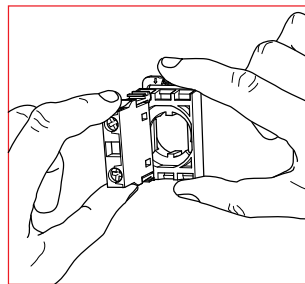
Easy to mount



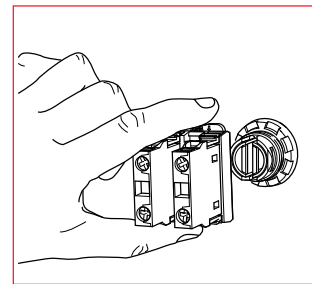
The operator is to be inserted from the front.....



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

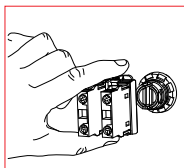
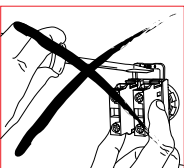


The contact blocks/lamp block are then snapped onto the holder...



...and the holder snaps onto the operator.

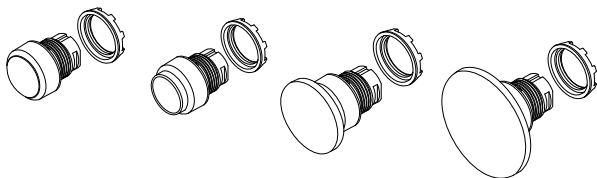
...and to remove



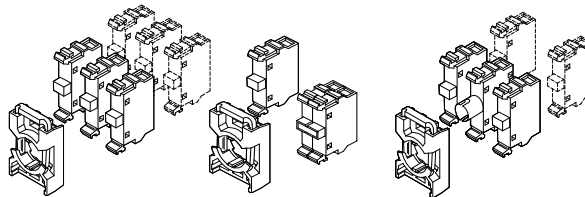
Press down the spring clip on the holder and pull the holder from the actuator.

Selection guide

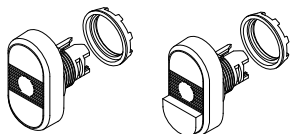
Pushbuttons and Mushroom pushbuttons



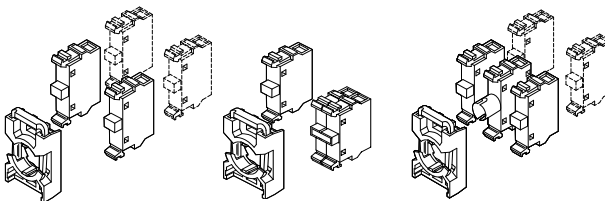
Contact block/lamp block combinations



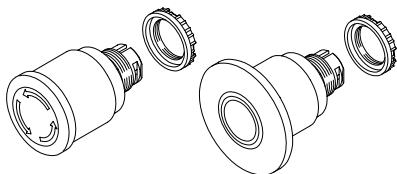
Double pushbuttons



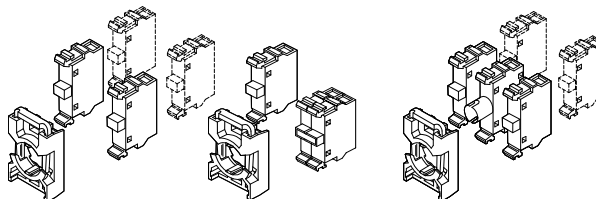
Contact block/lamp block combinations



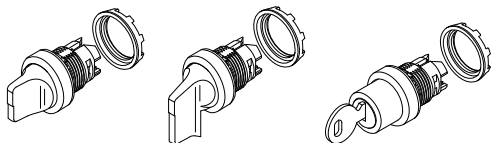
Emergency stop pushbuttons



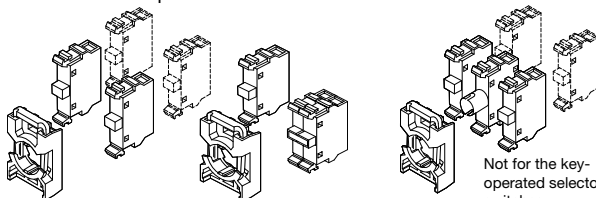
Contact block/lamp block combinations



Selector switches



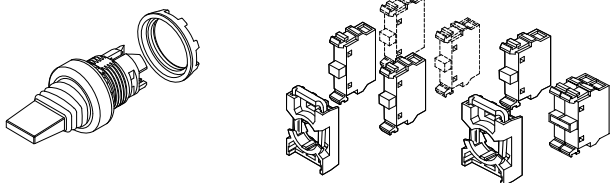
Contact block/lamp block combinations



Not for the key-operated selector switches

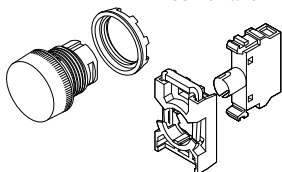
Toggle switches

Contact block combinations

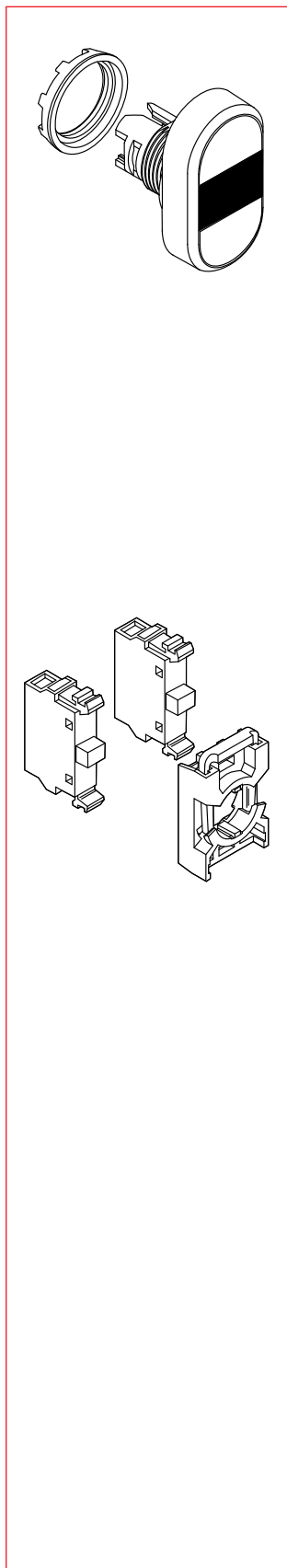


Pilot lights

Lamp block combination



Double pushbuttons Flush/flush, non-illuminated ①



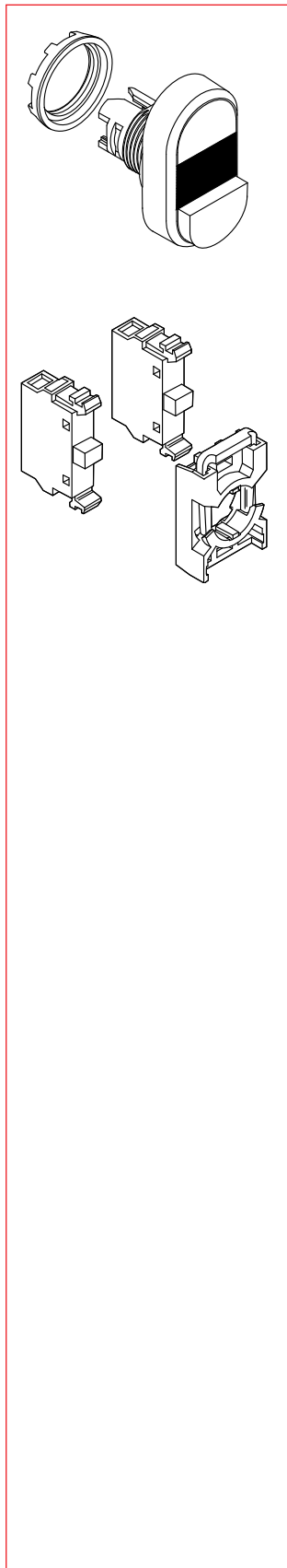
Double pushbutton, flush/flush, non-illuminated ①

Options	Catalog number characters										List Price	
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	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

See catalog number explanation on page 4.

① No contact block in center position.

Double pushbuttons Flush/extended, non-illuminated ①



Double pushbutton, flush/extended, non-illuminated ①

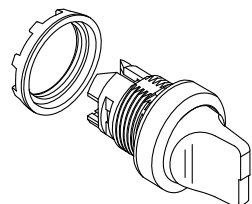
Options	Catalog number characters										List price	
Flush/Extended, Green/Red	M	P	D	1	2	-						\$ 18.00
Flush/Extended, Green/Red, I/O	M	P	D	1	3	-						21.00
Flush/Extended, Green/Red, ON/OFF	M	P	D	1	4	-						21.00
Flush/Extended, Green/Red, START/STOP	M	P	D	1	5	-						21.00
Flush/Extended, White/Black	M	P	D	1	6	-						18.00
Flush/Extended, White/Black, I/O	M	P	D	1	7	-						21.00
Flush/Extended, White/Black, ON/OFF	M	P	D	1	8	-						21.00
Flush/Extended, White/Black, START/STOP	M	P	D	1	9	-						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	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

See catalog number explanation on page 4.

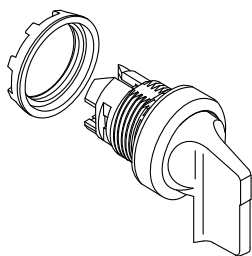
① No contact block in center position.

Selector switches, 2 position Non-illuminated ①

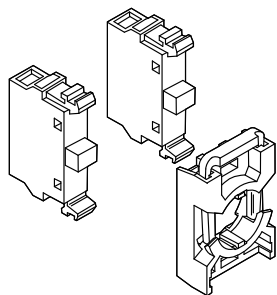
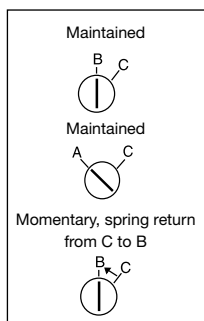
Selector switches, 2 position, non-illuminated ①



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

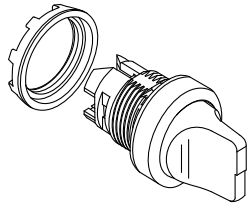
O = not actuated (normal state)
X = actuated (changed state)

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	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

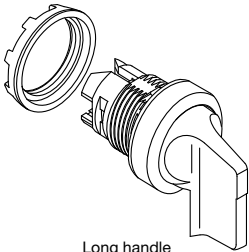
See catalog number explanation on page 4.

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

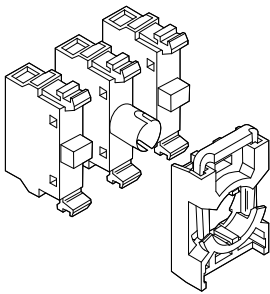
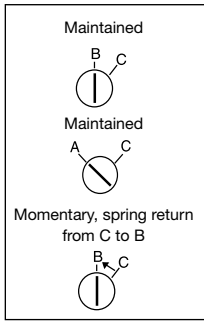
Selector switches, 2 position Illuminated ①



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)

Selector switches, 2 position, illuminated ①

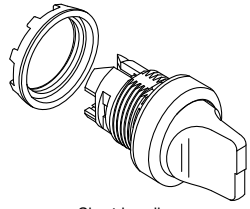
Options	Catalog number characters													List price				
Short/Main B&C	M	2	S	S	1	-												\$ 17.00
Short/Main A&C	M	2	S	S	2	-												17.00
Short/Spring Return C to B	M	2	S	S	3	-												26.00
Long/Main B&C	M	2	S	S	4	-												17.00
Long/Main A&C	M	2	S	S	5	-												17.00
Long/Spring Return C to B	M	2	S	S	6	-												26.00
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						21.00
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, 230VAC						-					L	2						21.00
Transformer Block, 110-127/6V, bulb 6V						-					T	1						41.00
Transformer Block, 220-240/6V, bulb 6V						-					T	2						41.00
Transformer Block, 380-420/6V, bulb 6V						-					T	3						41.00
Transformer Block, 440-480/6V, bulb 6V						-					T	4						41.00
Transformer Block, 500-600/6V, bulb 6V						-					T	5						41.00
Transformer Block, 110-127/24V, bulb 24V						-					T	6						41.00
Transformer Block, 220-240/24V, bulb 24V						-					T	7						41.00
Transformer Block, 380-420/24V, bulb 24V						-					T	8						41.00
Transformer Block, 440-480/24V, bulb 24V						-					T	9						41.00
Transformer Block, 110-127/24V, bulb 24V LED						-					T	L	1					50.00
Transformer Block, 220-240/24V, bulb 24V LED						-					T	L	2					50.00
Transformer Block, 380-420/24V, bulb 24V LED						-					T	L	3					50.00
Transformer Block, 440-480/24V, bulb 24V LED						-					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 4.

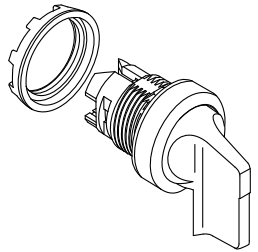
① No contact block in center position.
② No filament bulb, LED or transformer block can be combined with "Illuminated without Lamp block" selection.
③ For 30mm devices, use Discount Schedule CC.

Selector switches, 3 position Non-illuminated ①

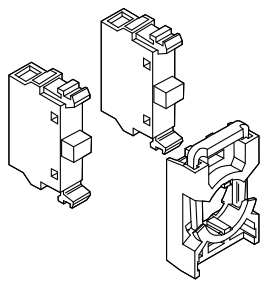
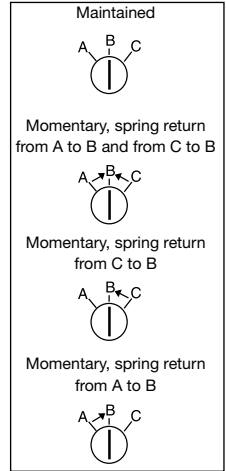
Selector switches, 3 position, non-illuminated ①



Short handle



Long handle



Contact functions

Block positions as seen from operator front.

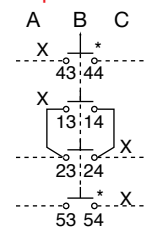
Handle position	Left block	Right block
A	X	O
B	O	O
C	O	X

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

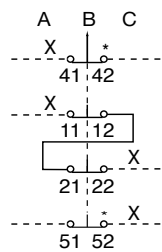
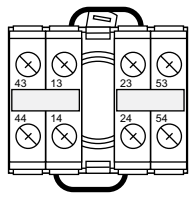
Options	Catalog number characters										List price		
Short/3-Main				M	3	S	S	1	-			\$ 11.00	
Short/Spring Return to B				M	3	S	S	2	-			14.00	
Short/Main A&B/Spring Return C to B				M	3	S	S	3	-			14.00	
Long/3-Main				M	3	S	S	4	-			11.00	
Long/Spring Return to B				M	3	S	S	5	-			14.00	
Long/Main A&B/Spring 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 0	2.00	
Bezel, Chrome Metal, with Holder											6 0	2.00	
Switch Color - Red												-	
Switch Color - Black											R	-	
Switch Color - Grey											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 4.

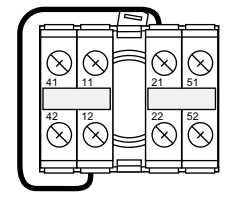
Center position connection detail



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



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

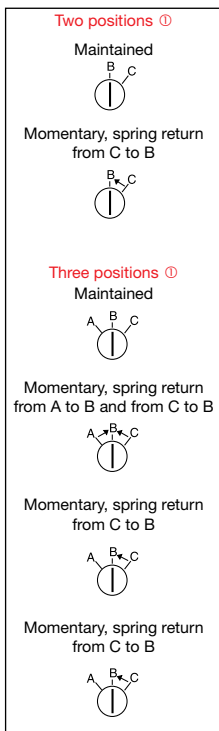
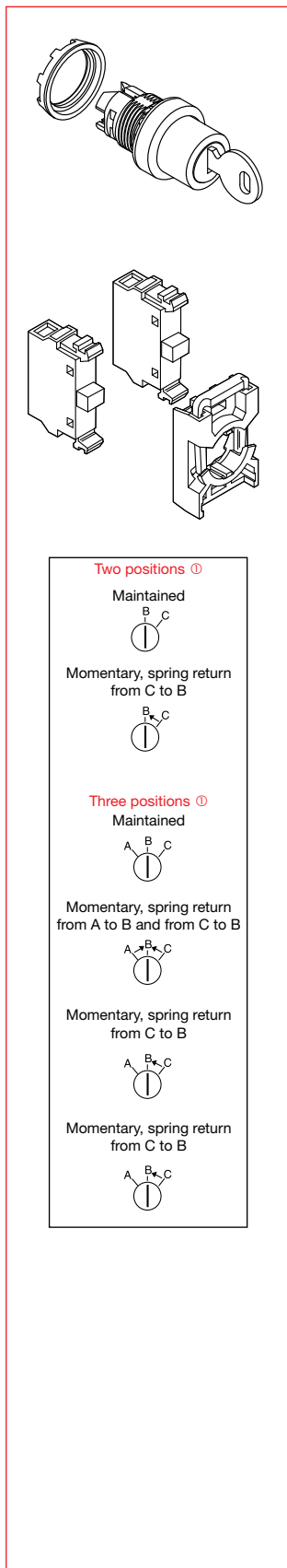


① No contact block in center position.
② For 30mm devices, use Discount Schedule CC.

Key-operated selector switches

2 & 3 position ①

Key-operated selector switches 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
Contact Blocks, 2NO											2	0
Contact Blocks, 3NO											3	0
Contact Blocks, 1NC											0	1
Contact Blocks, 2NC											0	2
Contact Blocks, 3NC											0	3
Contact Blocks, 1NO+1NC											1	1
Contact Blocks, 2NO+1NC											2	1
Contact Blocks, 1NO+2NC											1	2
Contact Blocks, 1NO, Gold											1	0
Contact Blocks, 2NO, Gold											2	0
Contact Blocks, 3NO, Gold											3	0
Contact Blocks, 1NC, Gold											0	1
Contact Blocks, 2NC, Gold											0	2
Contact Blocks, 3NC, Gold											0	3
Contact Blocks, 1NO+1NC, Gold											1	1
Contact Blocks, 2NO+1NC, Gold											2	1
Contact Blocks, 1NO+2NC, Gold											1	2
5 Block Holder												5
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 4.

Extra key

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

Contact block functions

Block positions as seen from operator front.

Two-position switch

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

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

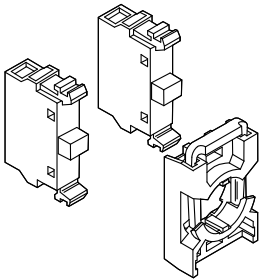
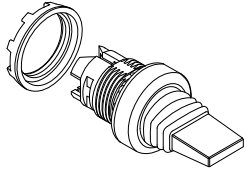
Three-position switch

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

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

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

Toggle switches



Toggle switches

Options	Catalog number characters										List price		
2 Maintained Positions			M	T	S	1	-					\$ 18.00	
3 Positions, Spring Return to Center			M	T	S	2	-					18.00	
3 Maintained Positions			M	T	S	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 4.

Contact block functions

Block positions as seen from operator front.

Two-position maintained switch

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

O = not actuated (normal state)

X = actuated (state changed)

Three-position switch

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

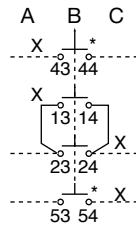
O = not actuated (normal state)

X = actuated (state changed)

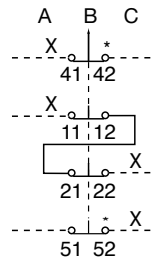
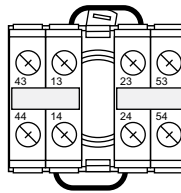
Maintained



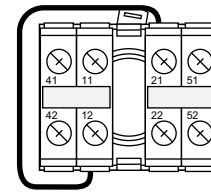
Center position connection detail



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



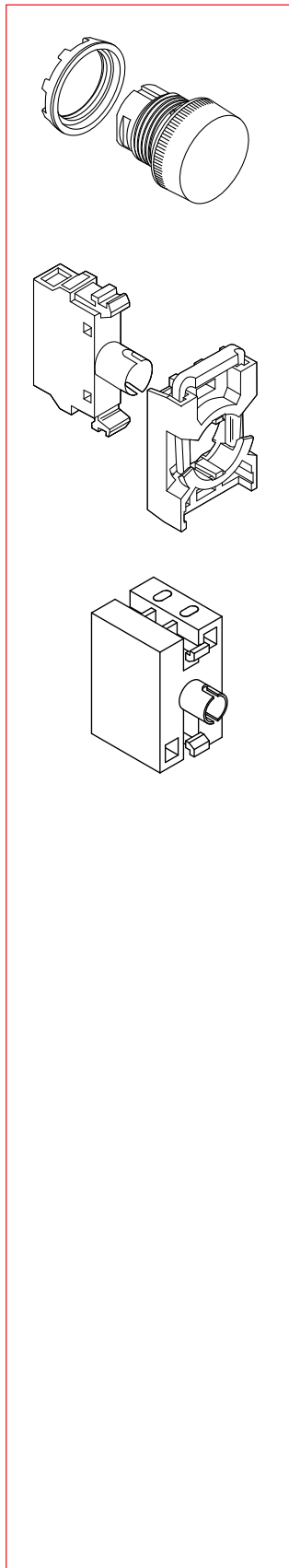
* Contacts may be N.O. or N.C.



① For 30mm devices, use Discount Schedule CC.

Pilot lights

Pilot Devices
Modular Range
Assembled, 22mm



Pilot lights

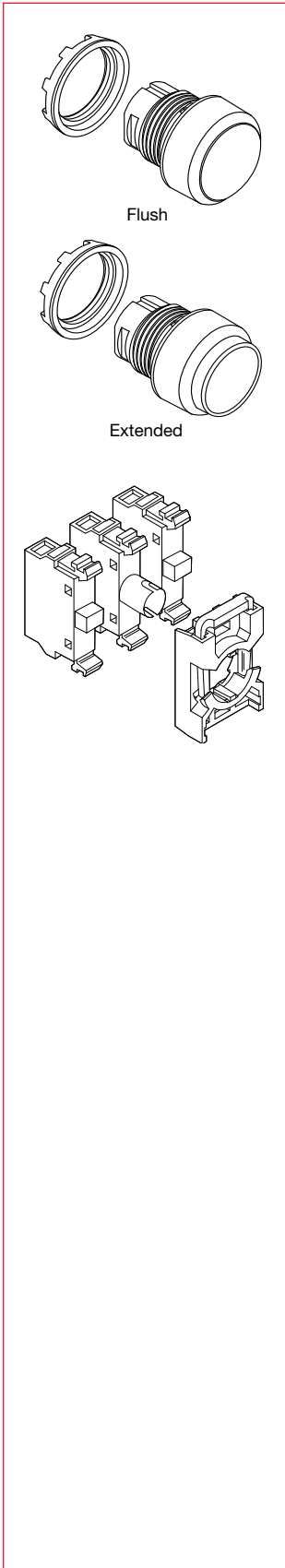
Options	Catalog number characters													List price			
	M	L	1	-	2	0	R	G	Y	L	W	C	F		L	T	G
Pilot Light with light diffusing lens																	\$ 7.50
With Holder						2	0										2.00
Lens Color - Red								R									—
Lens Color - Green								G									—
Lens Color - Yellow								Y									—
Lens Color - Blue								L									—
Lens Color - White								W									—
Lens Color - Clear								C									—
Lamp block, MLB-1, Bulb not Included										1	0						17.50
Lamp block, MLB-2, Bulb not Included										2	0						21.50
Lamp block, MLB-3, Bulb not Included										3	0						21.50
Lamp block, MLB-4, Bulb not Included										0	1						21.50
Lamp block, MLB-5, Bulb not Included										0	2						21.50
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			21.00
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, 230VAC													L	2			21.00
Transformer Block, 110-127V/6V, bulb 6V														T	1		41.00
Transformer Block, 220-240V/6V, bulb 6V														T	2		41.00
Transformer Block, 380-420/6V, bulb 6V														T	3		41.00
Transformer Block, 440-480/6V, bulb 6V														T	4		41.00
Transformer Block, 500-600/6V, bulb 6V														T	5		41.00
Transformer Block, 110-127/24V, bulb 24V														T	6		41.00
Transformer Block, 220-240/24V, bulb 24V														T	7		41.00
Transformer Block, 380-420/24V, bulb 24V														T	8		41.00
Transformer Block, 440-480/24V, bulb 24V														T	9		41.00
Transformer Block, 110-127/24V, bulb 24V LED														TL	1		50.00
Transformer Block, 220-240/24V, bulb 24V LED														TL	2		50.00
Transformer Block, 380-420/24V, bulb 24V LED														TL	3		50.00
Transformer Block, 440-480/24V, bulb 24V LED														TL	4		50.00
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 4.

① For 30mm devices, use Discount Schedule CC.

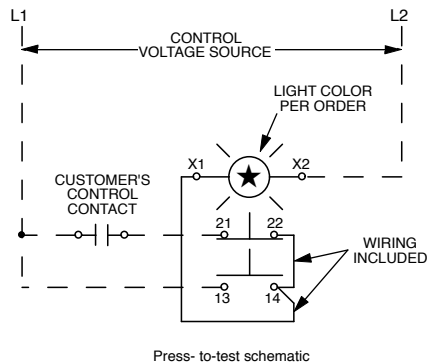
Press to test pilot lights

Press to test pilot lights



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

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 CC.

Catalog number explanation Modular pilot devices

Pilot light

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

L1 Pilot Light Head

Lens color:

R = Red W = White
G = Green C = Clear
Y = Yellow
L = Blue

Operators

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

P Pushbutton
PD Pushbutton, Double
PK Pushbutton, Key-lockable
PM Pushbutton, Mushroom
PMT Pushbutton, Mushroom, Twist release
PMP Pushbutton, Mushroom, Pull release
2SS 2-pos. Selector Switch
3SS 3-pos. Selector Switch
KB Buzzer
KT Potentiometer
TS Toggle Switch

Button color:

R = Red W = White
G = Green B = Black (non-illuminated only)
Y = Yellow C = Clear
L = Blue U = Grey (non-illuminated only)

Lens color for double pushbuttons:

R = Red
G = Green
Y = Yellow
C = Clear
B = Black (non-illuminated only)

Example 3: Type **M2SSK1-101**

2SSK 2-pos. Selector Switch, Key-lockable
3SSK 3-pos. Selector Switch, Key-lockable
PK Pushbutton, Key-lockable

Key code :

1 = 71
2 = 72
3 = 73

Buzzer, contact blocks, lamp block

Example 4: Type **MCBH-10**

B Buzzer
CB Contact Block
CBH Contact Block with Holder
LB Lamp Block

Contact blocks:

10 1 NO
01 1 NC
11 1 NO +1 NC
02 2 NO
20 2 NC

M= "Generation" M, Modular range

Color selection

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		

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 push-button, 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.