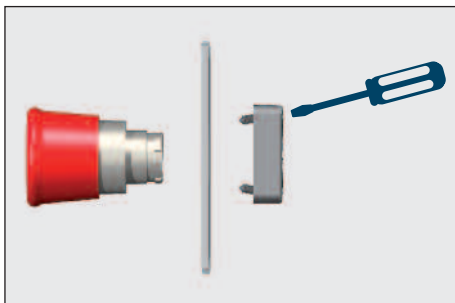
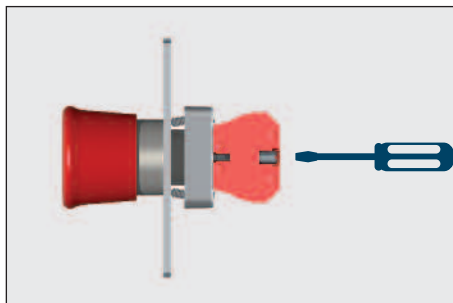


Control units Metal Series

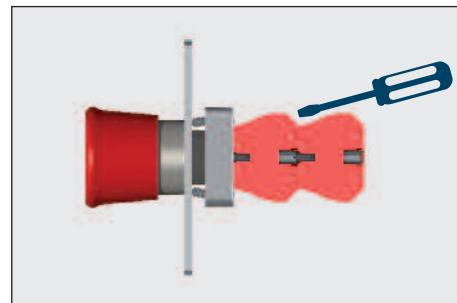
Main features



Installation of **1000 SERIES** is made by means of two **METAL SCREWS**.



CONTACT BLOCKS is installed by means of a **METAL SCREW** on the support base.



CONNECTING TERMINALS are easily and always **ACCESSIBLE**.



METAL OPERATORS and installation by means of **METAL SCREWS** ensure **MAXIMUM MECHANICAL STRENGTH**.



Ambient temperature
- operating **-25 ... + 70 °C**
- storage **-40 ... + 80 °C**



Devices certified according to International standards:
EN 60947-5-1 and **UL 508**.

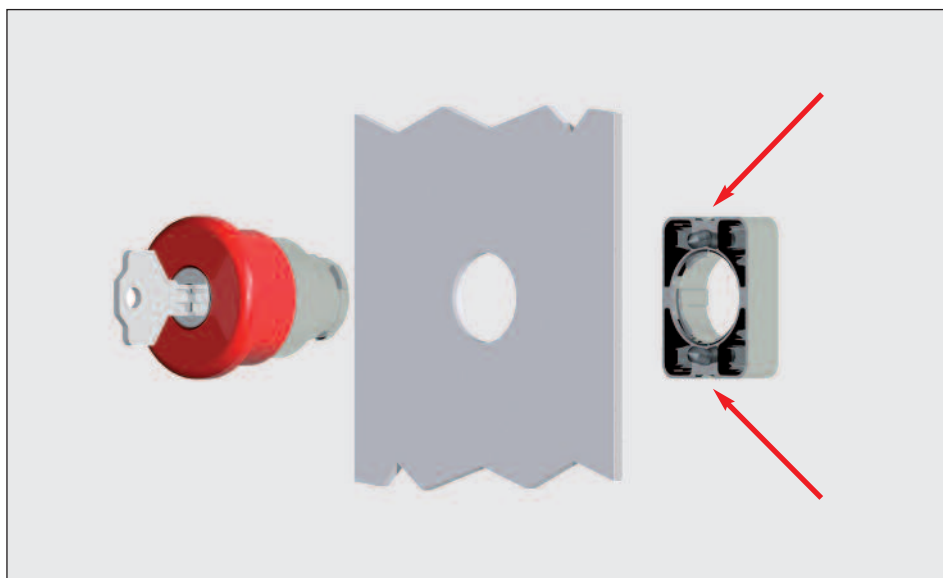


Comepi supports **SAFETY AND ENVIRONMENTAL PROTECTION**, according to European standards and directives.

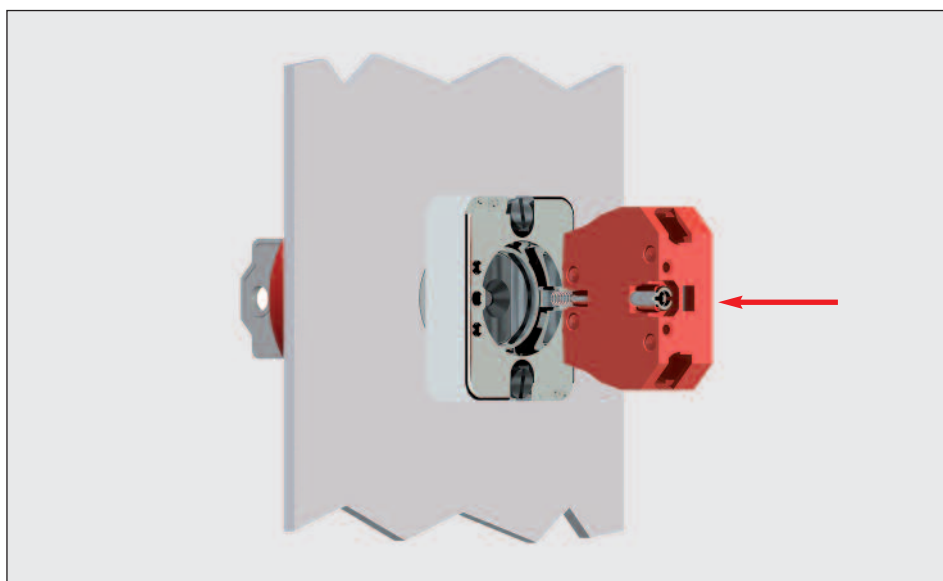


Control units Metal Series

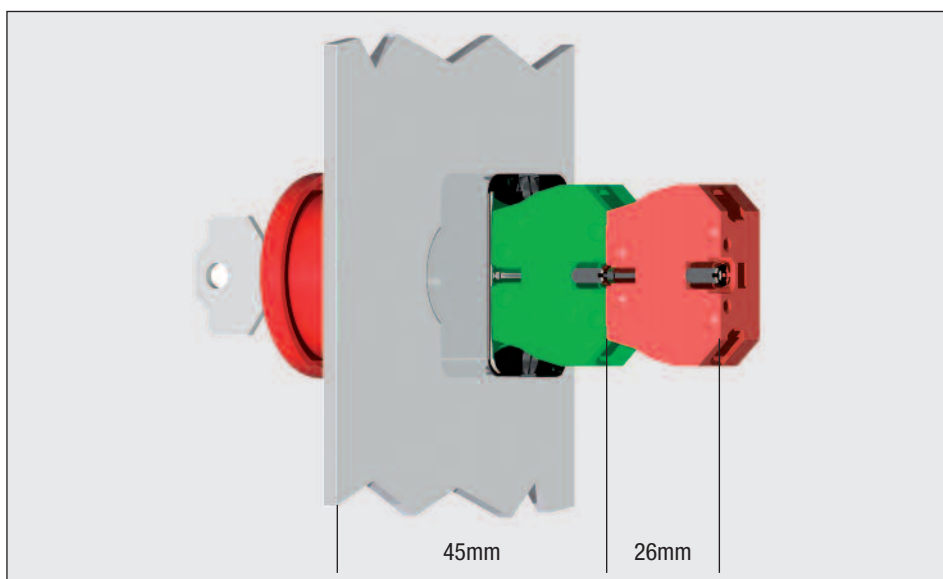
1000 SERIES: MAXIMUM MECHANICAL STRENGTH



Metal screws of the support base guarantee no rotation of the operators without need of anti-rotation notch



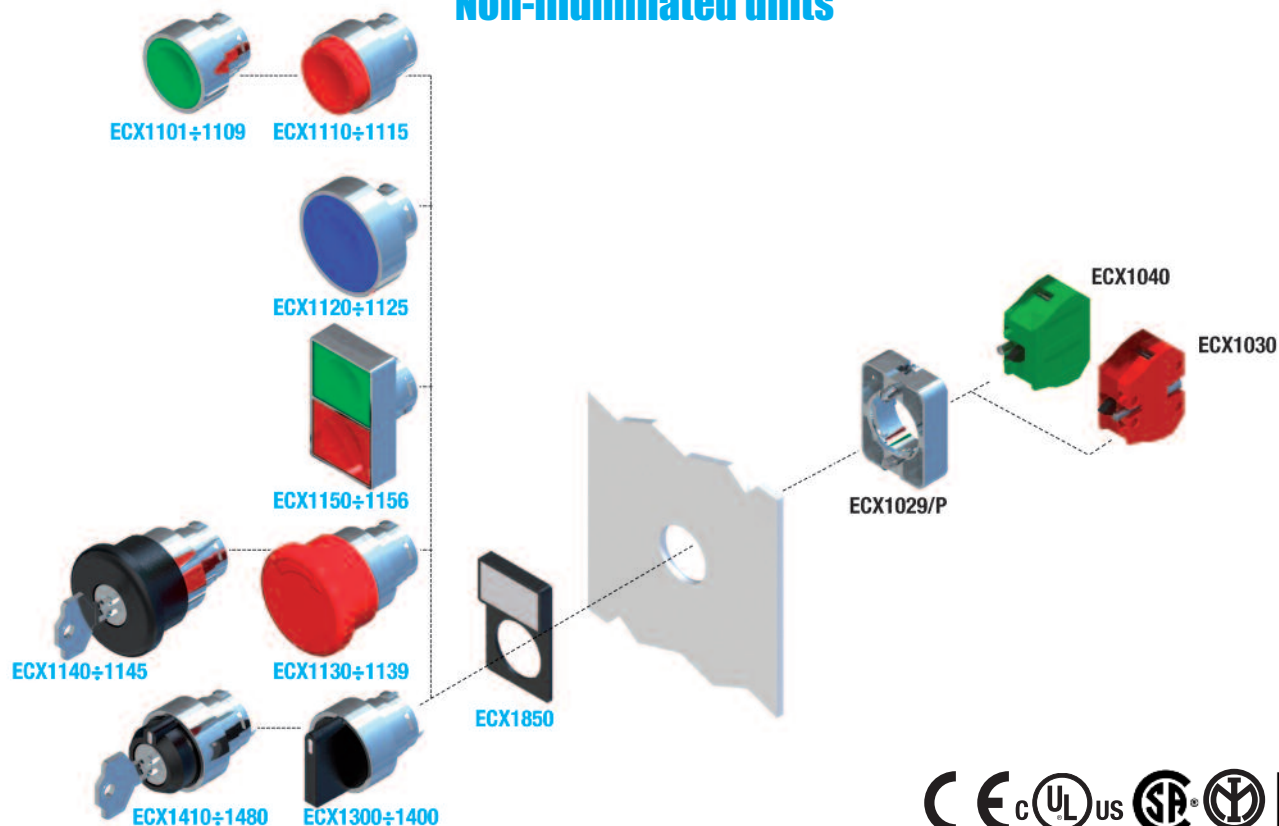
The screw on the contact block secures firmly the electrical contact to the support base and the operator



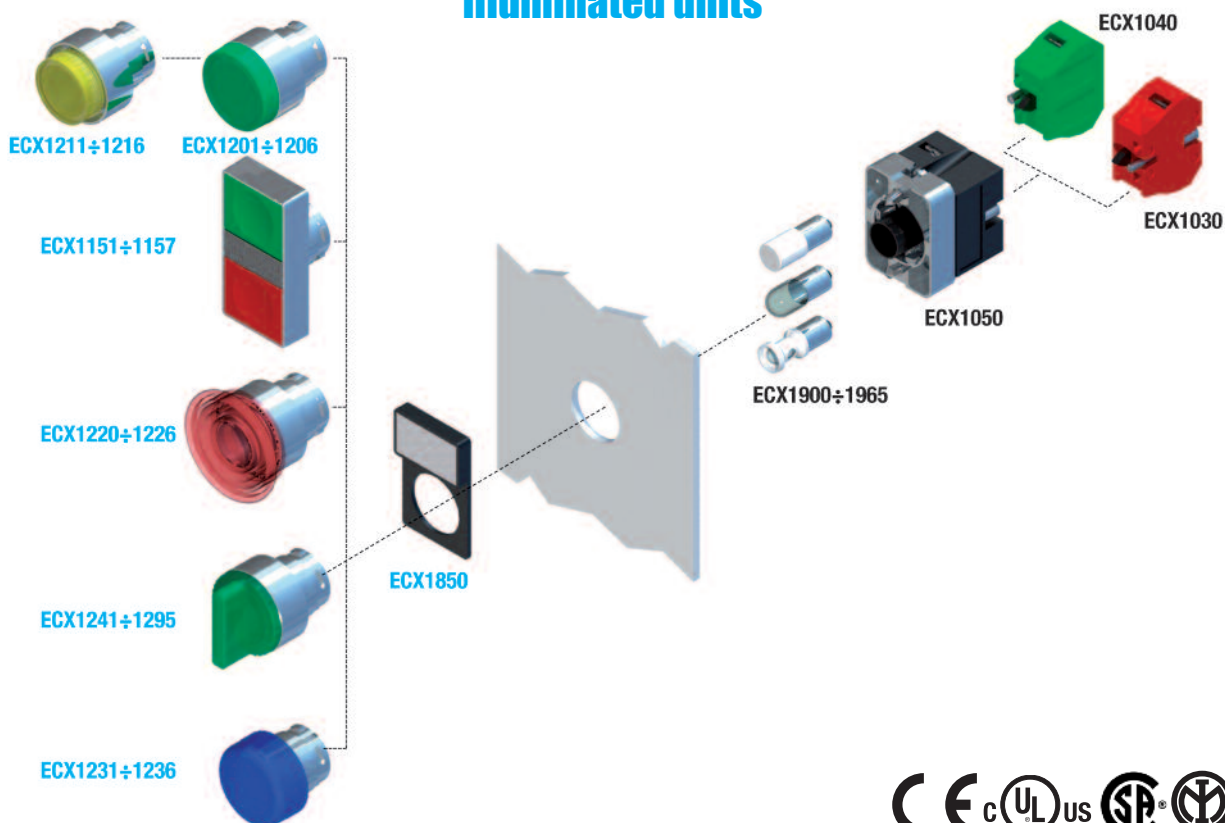
Overall dimensions:
45MM depth from panel only.
(See page 33 for overall dimensions of all models).

Control units Metal Series

Non-illuminated units



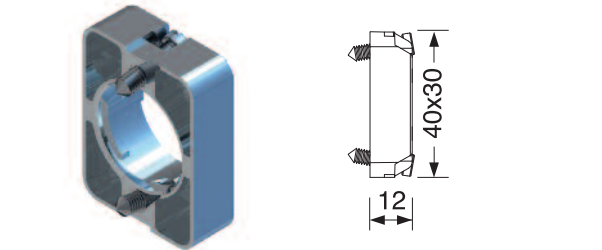
Illuminated units



Metal Series

Support base, contact blocks and BA9s lampholder

Metal support base	Description	Code
	Support base for metal control units ECX1...	ECX 1029/P



Implementation and utilization precautions: see page 33

Contact blocks (IP 20)	Operation Diagram	Colour	Code
	EN 01 1 2 ⊕	Red	ECX 1030
	EN 10 3 4	Green	ECX 1040
	EN 10 3 4	Grey	ECX 1041*
	EN 10 3 4	Brown	ECX 1042**

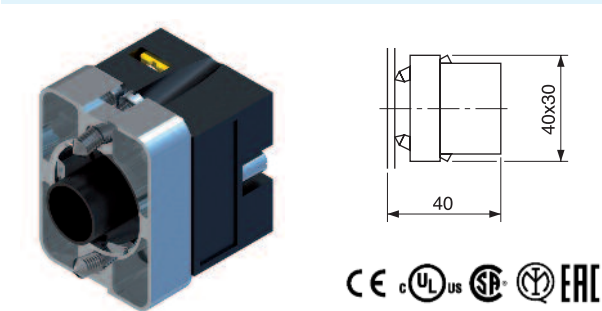


* Only use on Joy Stick4 positions - ** Only use on illuminated push/push pushbutton

Positive opening (according to IEC 60947-5-1)	Positive opening on all NC contacts
Rated insulation voltage U_i – according to IEC 60947-1 and EN 60947-1 – according to UL 508 and CSA C22-2 n° 14	660V (degree of pollution 3) A300, Q300
Rated impulse withstand voltage U_{imp} (according to IEC 60947-1 and EN 60947-1)	6 kV
Conventional free air thermal current I_{th} (IEC 60947-5-1 e EN 60947-5-1) $\theta < 40\text{ °C}$	10 A
Short-circuit protection $U_e < 500\text{ V. a.c.}$ – fusibili tipo gG (gl)	10 A
Rated operational current $I_e / \text{AC-15}$ (according to IEC 60947-5-1)	10 A 6 A 4 A
$I_e / \text{DC-13}$ (according to IEC 60947-5-1)	2,8 A 0,55 A 0,27 A
Switching frequency	3600 cycles/h
Resistance between contacts	$\leq 25\text{ m}\Omega$
Protection degree (according to IEC 60529 and EN 60529)	IP 20
Connecting terminals	On screw with non loosable plate clamp 1 or 2 conductors - 0,75...2,5 mm ²

IMQ listed values

BA9s lampholder with support base (IP 20)	Description	Code
---	-------------	------



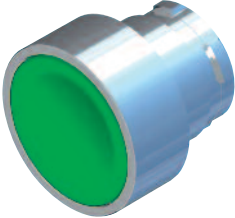
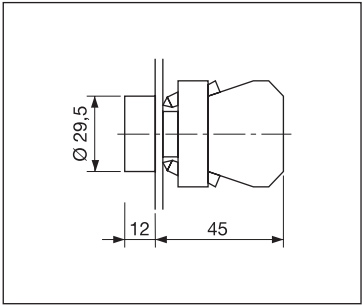
BA9s direct feed
400V ~ (Max)
(lamp not included)

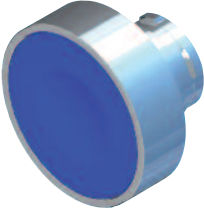
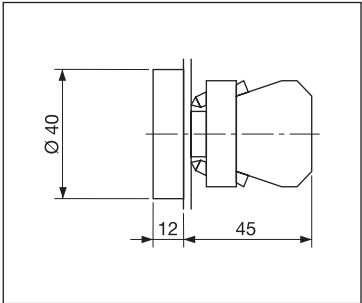


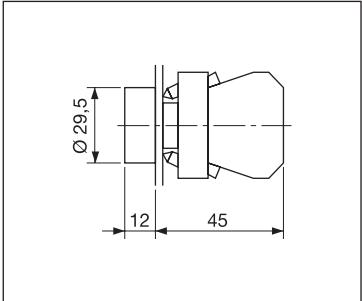
ECX 1050

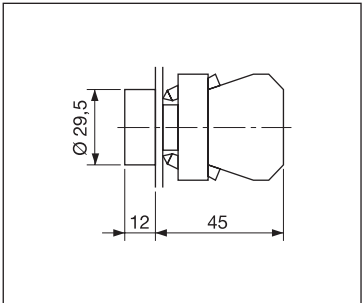
Metal Series

Non-illuminated momentary pushbuttons

Flush pushbutton - Button Ø 30		Colour	Code
		Black	ECX 1100
		Red	ECX 1101
		Green	ECX 1102
		Yellow	ECX 1103
		Blue	ECX 1104
		White	ECX 1105

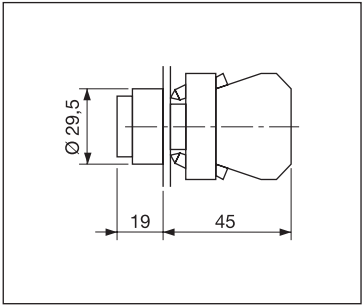
Flush pushbutton - Button Ø 40		Colour	Code
		Black	ECX 1120
		Red	ECX 1121
		Green	ECX 1122
		Yellow	ECX 1123
		Blue	ECX 1124
		White	ECX 1125

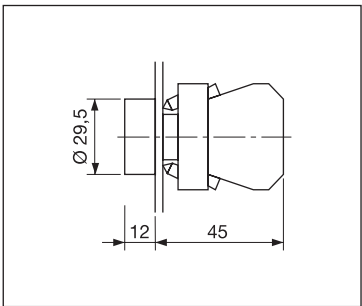
Flush pushbutton - on/off		Version	Colour	Code
			Red	ECX 1106
			Green	ECX 1107
			Black	ECX 1106/N
			White	ECX 1107/B

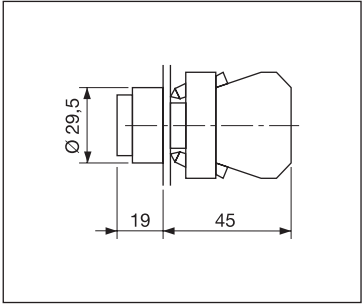
Flush pushbutton - with arrow		Version	Colour	Code
		White horizontal arrow	Black	ECX 1108
		White vertical arrow	Black	ECX 1109

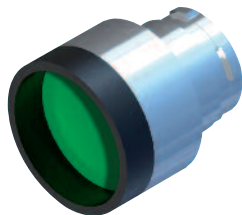
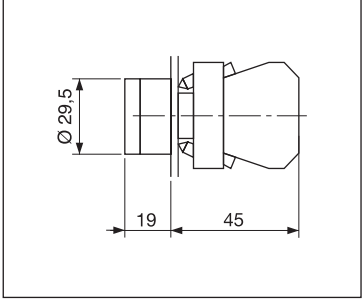
Metal Series

Non-illuminated momentary pushbuttons

Extended pushbutton		Colour	Code
		Black	ECX 1110
		Red	ECX 1111
		Green	ECX 1112
		Yellow	ECX 1113
		Blue	ECX 1114
		White	ECX 1115

Pushbutton Start / On		Version	Colour	Code
		 (flush)	White	ECX 1105-01
		 (flush)	White	ECX 1105-03

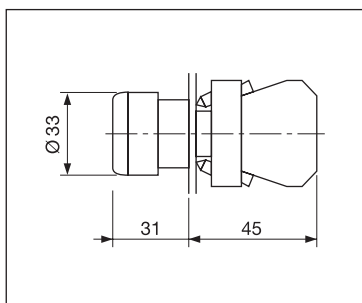
Pushbutton Stop / Off		Version	Colour	Code
		 (extended)	Black	ECX 1110-01
		 (extended)	Black	ECX 1110-03

Shrouded pushbuttons		Colour	Code
		Black	ECX 1000
		Red	ECX 1001
		Green	ECX 1002
		Yellow	ECX 1003
		Blue	ECX 1004
		White	ECX 1005

Metal Series

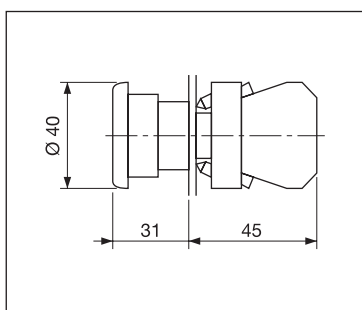
Non-illuminated mushroom pushbuttons

Mushroom pushbutton $\varnothing$ 33



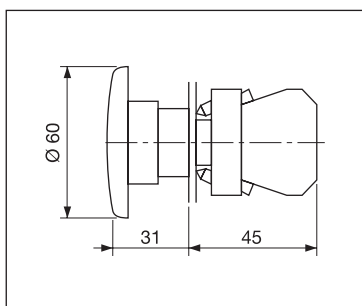
Version	Colour	Code
With latch - twist to release	Black	ECX 1160
	Red	ECX 1161
	Yellow	ECX 1168
Without latch	Black	ECX 1164
	Red	ECX 1165
	Yellow	ECX 1169

Mushroom pushbutton $\varnothing$ 40



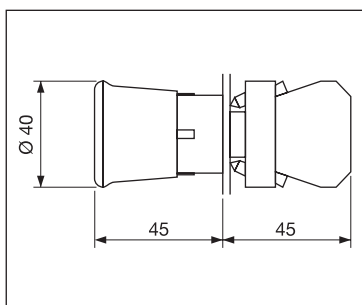
	Colour	Code
With latch - twist to release	Black	ECX 1130
	Red	ECX 1131
	Yellow	ECX 1138
Without latch	Black	ECX 1134
	Red	ECX 1135
	Yellow	ECX 1139

Mushroom pushbutton $\varnothing$ 60



Version	Colour	Code
With latch - twist to release	Black	ECX 1132
	Red	ECX 1136
Without latch	Black	ECX 1133
	Red	ECX 1137

Mushroom pushbutton $\varnothing$ 40 snap action

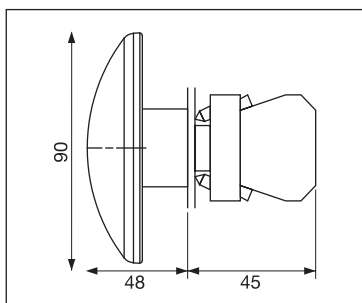


Version	Colour	Code
Snap action with latch-pull to release	Red	ECX 1146

Metal Series

Mushroom pushbuttons

Mushroom pushbutton $\varnothing$ 90 snap action



Version

Snap action with latch-pull to release

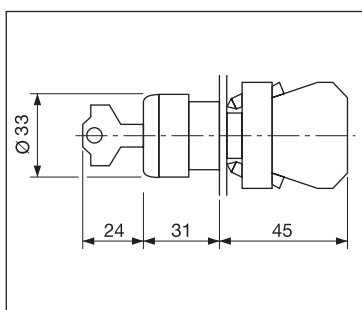
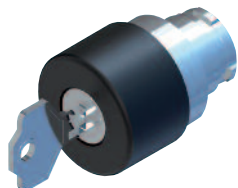
Colour

Red

Code

ECX 1147

Mushroom key operated pushbutton (key n° G.513) $\varnothing$ 33



Version

With latch - turn key to release

Colour

Black

Code

ECX 1170

Red

ECX 1171

Without latch

Black

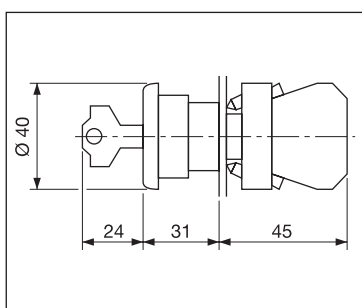
ECX 1174

Red

ECX 1175

Replacement keys: see page 35

Mushroom key operated pushbutton (key n° G.513) $\varnothing$ 40



Version

With latch - turn key to release

Colour

Black

Code

ECX 1140

Red

ECX 1141

Without latch

Black

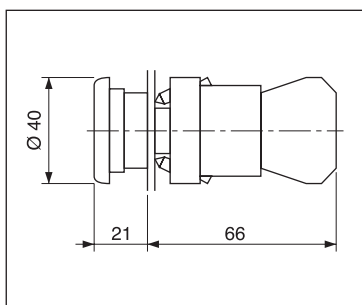
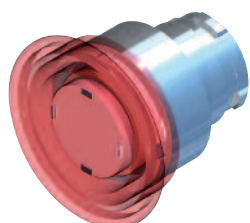
ECX 1144

Red

ECX 1145

Replacement keys: see page 35

Illuminated mushroom pushbutton $\varnothing$ 40



Version

Without latch

Colour

White

Code

ECX 1220

Red

ECX 1221

Green

ECX 1222

Yellow

ECX 1223

Blue

ECX 1224

Transparent

ECX 1225

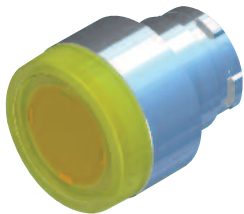
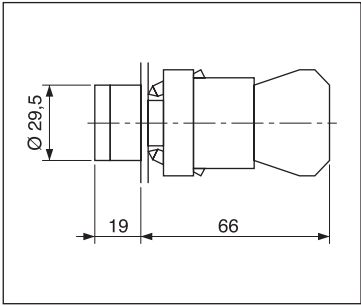
With latch - twist to release

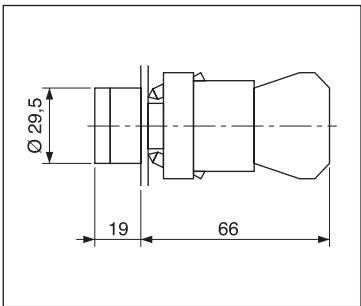
Red

ECX 1226

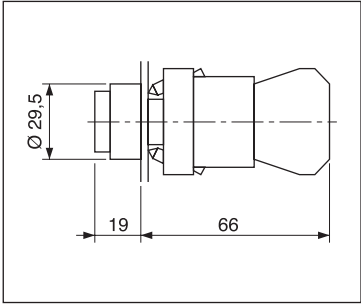
Metal Series

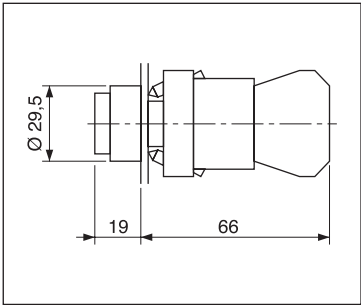
Illuminated momentary and push push buttons

Illuminated flush pushbutton		Colour	Code
 		Red	ECX 1201
		Green	ECX 1202
		Yellow	ECX 1203
		Blue	ECX 1204
		Transparent	ECX 1205
		White	ECX 1206

Illuminated flush push/push button		Version	Colour	Code
 			Red	ECX 1191
			Green	ECX 1192
			Yellow	ECX 1193
			Blue	ECX 1194
			Transparent	ECX 1195
			White	ECX 1196
		Not illuminated	Black	ECX 1190

Attention: to be used with NO contact block ECX 1042 (brown colour)

Illuminated pushbutton - extended type		Colour	Code
 		Red	ECX 1211
		Green	ECX 1212
		Yellow	ECX 1213
		Blue	ECX 1214
		Transparent	ECX 1215
		White	ECX 1216

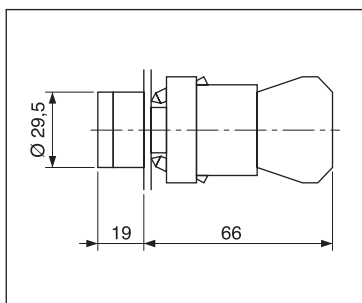
Illuminated push/push button - extended type		Version	Colour	Code
 			Red	ECX 1181
			Green	ECX 1182
			Yellow	ECX 1183
			Blue	ECX 1184
			Transparent	ECX 1185
			White	ECX 1186
		Not illuminated	Black	ECX 1180

Attention: to be used with NO contact block ECX 1042 (brown colour)

Metal Series

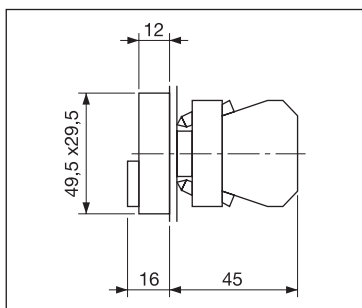
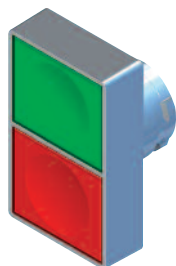
Illuminated momentary pushbuttons - two-way pushbuttons

Illuminated shrouded pushbutton



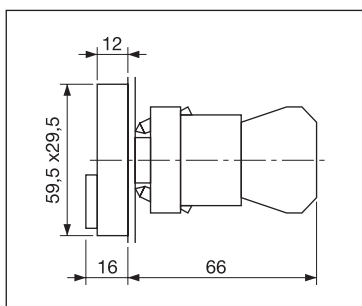
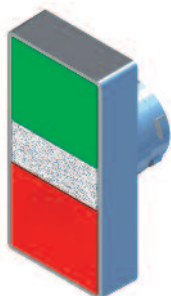
Colour	Code
Black	ECX 1011
Red	ECX 1012
Green	ECX 1013
Yellow	ECX 1014
Blue	ECX 1015
White	ECX 1016

Two-way pushbutton



Version	Code
Flush pushbutton	ECX 1150
Same as above with symbols	ECX 1152
Extended red button	ECX 1154
Same as above with symbols	ECX 1156
Upon request with black and white	ECX /BN

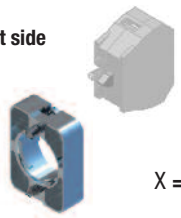
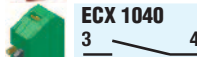
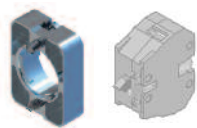
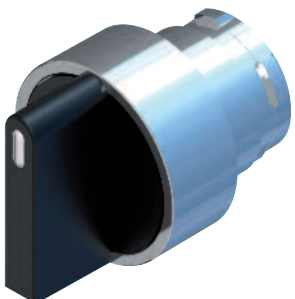
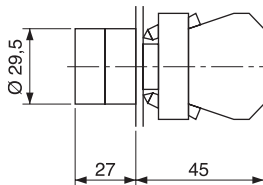
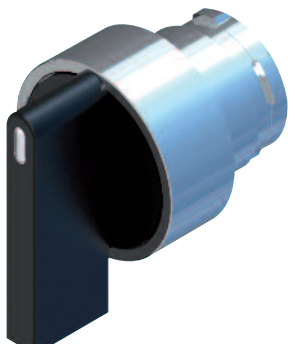
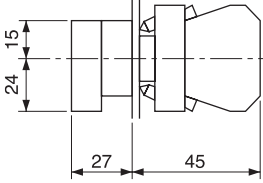
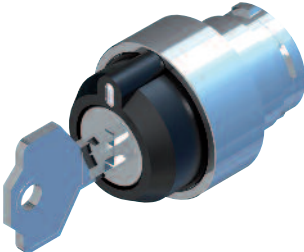
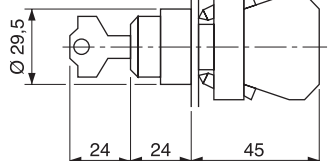
Two-way pushbutton with pilot light (IP40)



Version	Code
Flush pushbutton	ECX 1151
Same as above with symbols	ECX 1153
Extended red button	ECX 1155
Same as above with symbols	ECX 1157
Upon request with black and white	ECX /BN

Metal Series

Selector switches

Type of selector		Description	2 POS.		3 POS.			3 POS.		
	• Contacts on the left side 	ECX 1030  ECX 1040  ECX 1041 	X			X	X	—	—	—
				X	X					X
			—	—	—	—	—		X	
	• Contacts on the right side 	ECX 1030  ECX 1040  ECX 1041 	X		X	X		—	—	—
				X			X			X
			—	—	—	—	—	X		
Short lever selector switch 			ECX 1300							
			ECX 1310							
					ECX 1320			GCX 1320S*		
					EC 1330			GCX 1330S*		
					ECX 1340					
					ECX 1345					
Long lever selector switch 			ECX 1350							
			ECX 1360							
					ECX 1370			GCX 1370S*		
					ECX 1380			GCX 1380S*		
					ECX 1390					
					ECX 1400					
Key selector switch (key n° G. 513) 			ECX 1410							
			ECX 1420							
			ECX 1430							
					ECX 1440			GCX 1440S*		
					ECX 1450					
					ECX 1460					
					ECX 1470			GCX 1770S*		
					ECX 1480			GCX 1480S*		

* Supplied with contacts (2NO+2NC)

Metal Series

Selector switches

Type of selector		Description	2 POS.		3 POS.			3 POS.		
	• Contacts on the left side X = Closed contact	ECX 1030 1 2	X			X	X			
		ECX 1040 3 4		X	X					
		ECX 1041 3 4	–	–	–	–	–			
	• Contacts on the right side X = Closed contact	ECX 1030 1 2	X		X	X				
		ECX 1040 3 4		X			X			
		ECX 1041 3 4	–	–	–	–	–			
Lighted selector switch (1) 			ECX 124•							
			ECX 125•							
					ECX 126•					
					ECX 127•					
					ECX 128•					
					ECX 129•					

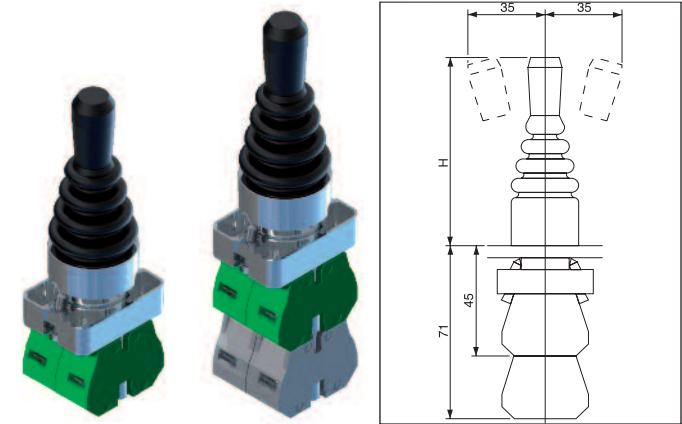
(1) Replace the symbol • with the number of the desired color:
1: Red 2: Green 3: Yellow 4: Blue 5: Transparent

Maintained positions

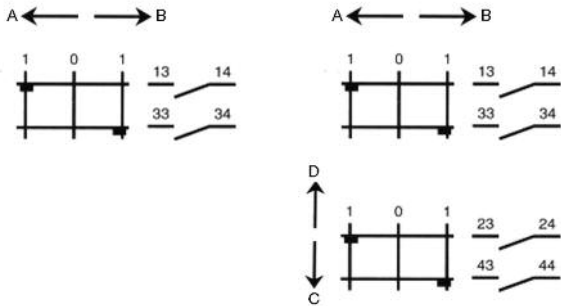
Spring return positions

Key extraction positions

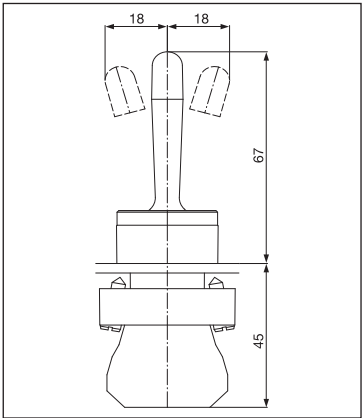
Metal Series



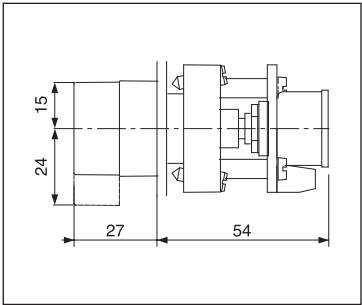
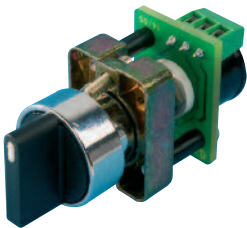
Operating diagrams



Upon request Joysticks are available in other additional settings.
These items are supplied with contact blocks.



Potentiometer with knob operator



Joystick - Wobble Joystick - Potentiometer

1 position Joystick

Code	Code	Description
H = 79	H = 55	
ECX 1515	ECX 1545	A unstable
ECX 1516	ECX 1546	A stable

2 positions Joystick

Code	Code	Description
H = 79	H = 55	
ECX 1510	ECX 1540	A-B unstable
ECX 1511	ECX 1541	A stable / B unstable
ECX 1512	ECX 1542	A-B stable

4 positions Joystick

Code	Code	Description
H = 79	H = 55	
ECX 1520	ECX 1550	A-B-C-D unstable
ECX 1521	ECX 1551	A stable / B-C-D unstable
ECX 1522	ECX 1552	A-B stable / C-D unstable
ECX 1523	ECX 1553	A-B-C stable / D unstable
ECX 1524	ECX 1554	A-B-C-D stable

Wobble Joystick

Code	Description
ECX 1530	Contacts (supplied separately) are actuated by a lever movement in any direction.

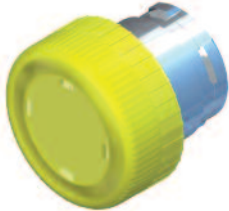
Code	Description
ECX 2300-1K	1000 Ohm
ECX 2300-5K	5000 Ohm
ECX 2300-10K	10000 Ohm
ECX 2300-20K	20000 Ohm
ECX 2300-25K	25000 Ohm

Rated Voltage: 250V - 47±63Hz
Rated power: 2W at 25°C

Potentiometer legend plate see page 36



Metal Series

Pilot light	Colour	Code
	Red	ECX 1231
	Green	ECX 1232
	Yellow	ECX 1233
	Blue	ECX 1234
	Transparent	ECX 1235
	White	ECX 1236

Special application pushbutton	Code
	ECX 1177
This special pushbutton has been developed to fulfill all the requests coming from applications which require an intentional operation in order to consent actions (as adjustments, maintenance, inspection etc.) that may cause risks. Such an operation must be therefore carried out by authorized staff. The pushbutton working depends to the connection and rotation of the codified key; the pushbutton turns back to the free position when the operator releases the pression on the device.	