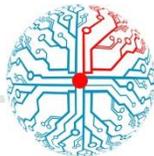


TYPE C PUSH BUTTONS



CONTROL AND SIGNALING SOLUTIONS FOR HARSH ENVIRONMENTS



TYPE C PUSH-BUTTONS



Robust

Long life durability :

- A reliability recognized for more than 40 years
- Qualified according to nuclear standards IEEE 323 & 344
- A foolproof mechanical and electrical robustness
- Applications in harsh environments

Configurable

Adaptable to your applications :

- Available functions:
 - Momentary action button
 - Alternate action button
- Up to 8 contacts configurable at your request
- Illuminated , protected, recessed push buttons...

APPLICATION

> Electrical equipment's control.

- These push-buttons have a particularly strong design which allows them very numerous applications in severe environments (shocks, vibrations, temperature, radiations, earthquakes).
- This range of product is a reference for more than 40 years in control room of nuclear power plants worldwide. It also equips very numerous electrical distribution plants and railways electrical dispatch.
- This range allows to realize all your functions of control push-buttons.

Codification of products

Types	Special assembly	Contacts	Accessories	Signaling and lamps	Button color	Escutcheon plate or special accessories
Eg1 : C16BL /	-	/ F4-O4	/ 45X45+PD	/ E14+LED48V	/ BC	/ PRC //

Types

- C16BL** | Illuminated push-button ; Single impulse
- C16CL** | Illuminated push-button ; "push-push"
- C16BLE** | Illuminated push-button recessed type ; Single impulse
- C16CLE** | Illuminated push-button recessed type ; "push-push"
- C16BLEP** | Illuminated push-button protected recessed type ; Single impulse
- C16CLEP** | Illuminated push-button protected recessed type ; "push-push"
- C16B** | Non-illuminated push-button ; Single impulse
- C16C** | Non-illuminated push-button ; "push-push"
- C16BE** | Non-illuminated push-button recessed type ; Single impulse
- C16CE** | Non-illuminated push-button recessed type ; "push-push"
- C16BEP** | Non-illuminated push-button protected recessed type ; Single impulse
- C16CEP** | Non-illuminated push-button protected recessed type ; Single impulse

C16BL / C16CL



C16BLE / C16CLE



C16BLEP / C16CLEP



C16B C16C



C16BE / C16CE



C16BEP / C16CEP



C50



ESN



Special assembly

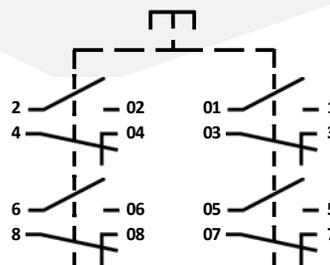
- C50** | Product equipped with a special front part which allow to install it on our MAFELEC mosaic panel □50. (C16B-C16BL-C16CL)
- ESN** | Black central nut (in replacement of the standard chromed central nut) (C16BL-C16CL)

Contacts

Example of contacts configuration

F4-O4

F : Number of Normally Open contacts (NO)
 O : Number of Normally Close contacts (NC)



Codification of products

Types / Special assembly / Contacts / **Accessories / Signaling and lamps /** Button color / Escutcheon plate or special accessories //

Eg1 : C16BL / - / F4-O4 / 45X45+PD / E14+LED48V / BC / PRC //

Accessories

45X45 or
70X45

Plastic contacts cover (Included in standard)
Dimension 45X45 equipped in standard and 70X45 at request

PD

Rear plate cutted to allow rear cable outlet *(Included in standard)*

ST

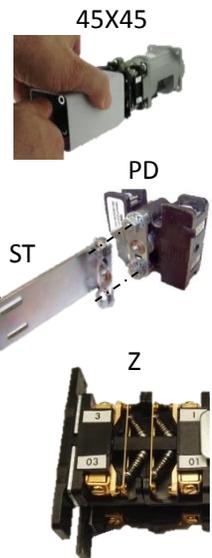
Metallic cable support for rear cable outlet

CF

Protective cover split on one side to allow an easy placement after wiring

Z

Use of contacts in alloy Gold-Silver in replacement of contacts in alloy Silver-Nickel
(Recommended for low current level applications)



Signaling and lamps

-

Non-illuminated product or non-equipped with a lamp socket

E10

or

E14

or

BA9S

Product equipped with an E10 socket for 1 lamp

Product equipped with a E14 socket for 1 lamp

Product equipped with a BA9S socket for 2 lamps (1 common point)



48V

or

LED48V

The voltage indicated in complement of socket type mean that the product will be supplied with a filament lamp working in this nominal voltage.
The indication LED before the voltage mean that the product will be supplied with a white LED lamp working in this nominal voltage.

(products can be equipped with filaments lamps, white or colored LED lamps, for most common AC/DC nominal voltage)



Codification of products

Types	/ Special assembly	/ Contacts	/ Accessories	/ Signaling and lamps	Button color	/Escutcheon plate or special accessories //
Eg1 : C16BL/	-	/ F4-O4	/ 45X45+PD	/ E14+LED48V	/ BC	/ PRC //

Button color

BC	Translucent white button <i>(in standard on illuminated push-button)</i>
N	Black button <i>(in standard on non-illuminated push-button)</i>

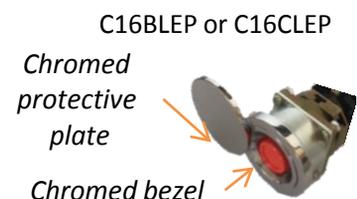
Other buttons colors on request (J : Yellow; V : Green; R : Red ; BU: Blue)



Escutcheon plate

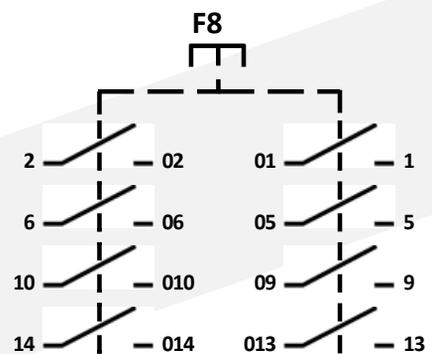
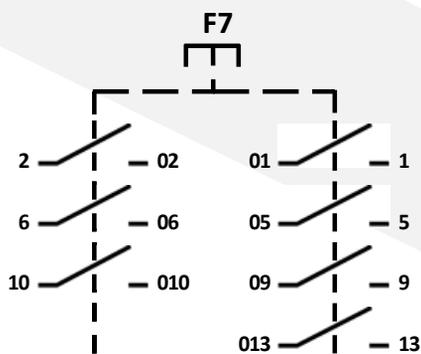
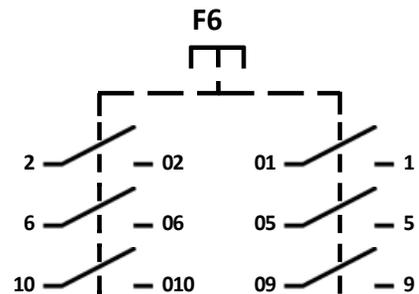
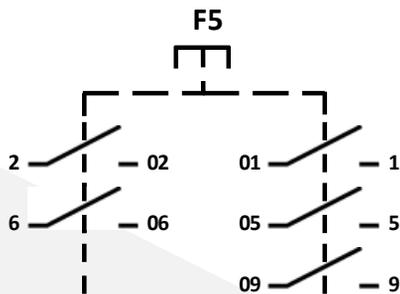
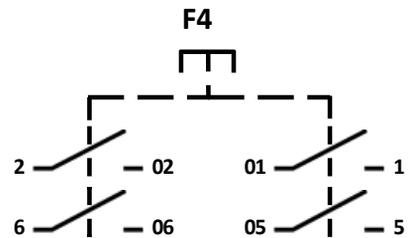
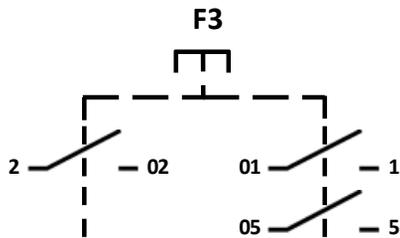
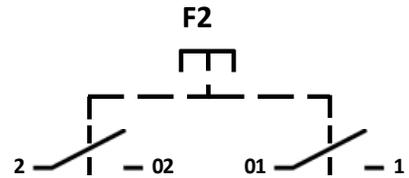
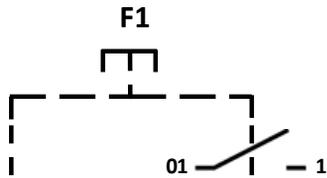
i Products types C16B, C16BL, C16CL, C16BLE, C16CLE can be equipped with escutcheon plates or symbols (only escutcheon plates can be engraved)
 Products types C16BE, C16CE, C16BEP, C16CEP, C16BLEP, C16CLEP et C16C cannot be equipped with escutcheon plates or symbols. It can be engraved on their bezel or protective plate if equipped. C16C type can be engraved on their mounting plate.

SRC	Round chromed symbol: Ø54 for C16BLE, C16CLE Ø42 for C16BL, C16CL
PCC	Square chromed escutcheon (for engraving) : □58 for C16BLE, C16CLE □42 for C16BL, C16CL, □38 for C16B
PRC	Round chromed escutcheon (for engraving) : Ø54 for C16BLE, C16CLE Ø42 for C16BL, C16CL, Ø38 for C16B
G	« G » in complement of PCC or PRC indicate that product is engraved Or « G » alone indicate that bezel or protective plate is engraved
-	Product without escutcheon plate or engraving



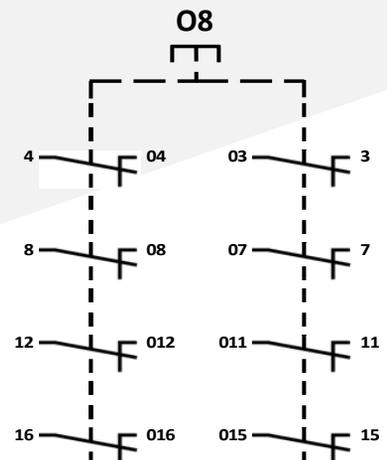
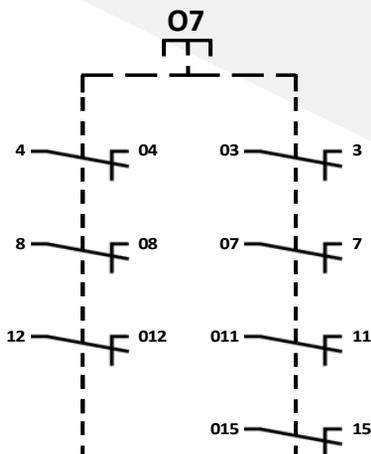
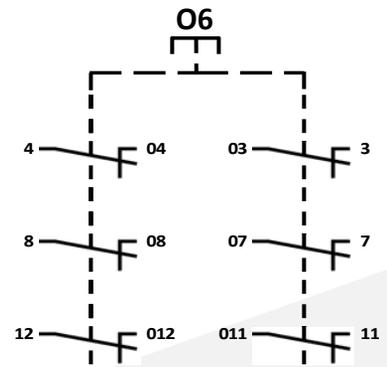
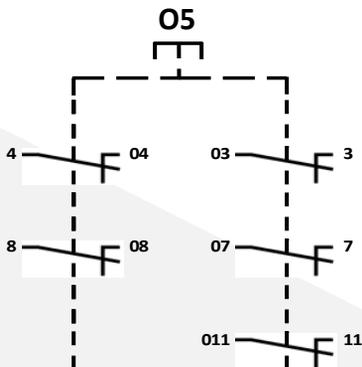
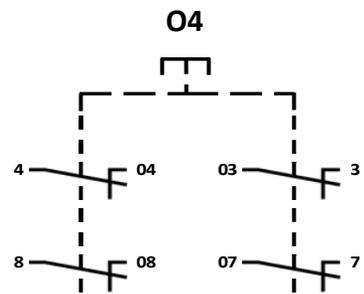
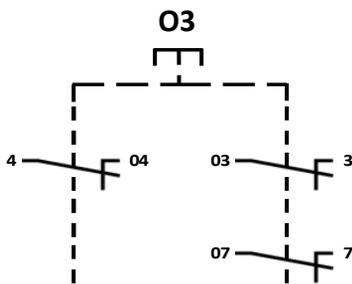
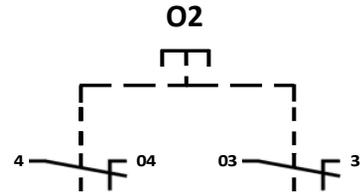
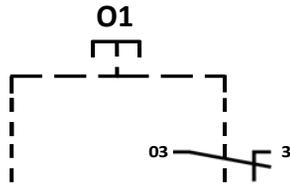
Currently used diagrams

i Below the currently used diagrams of Normally Open contacts and their associated labeling



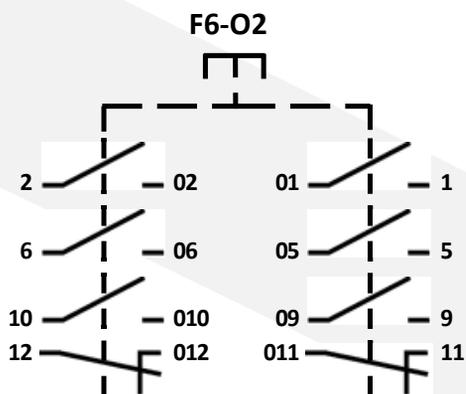
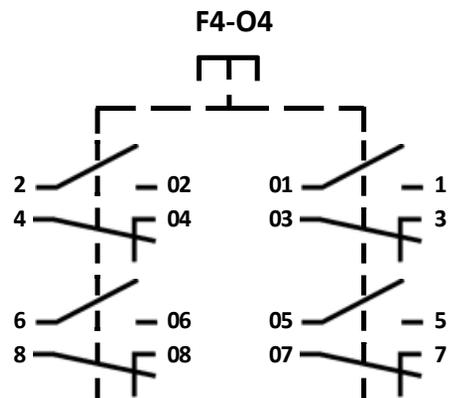
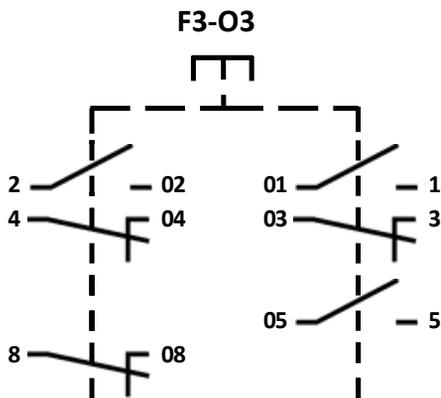
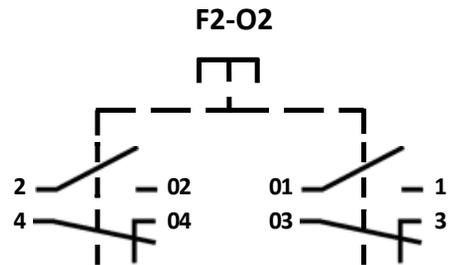
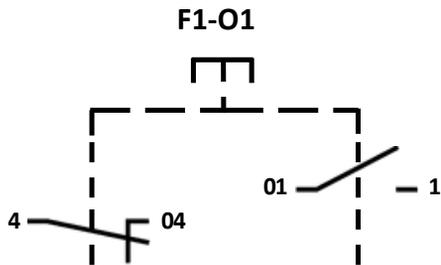
Currently used diagrams

i Below the currently used diagrams of Normally Close contacts and their associated labeling



Currently used diagrams

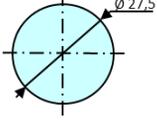
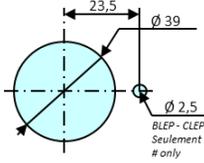
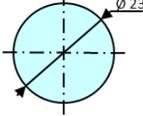
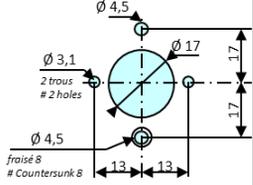
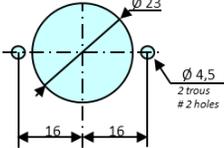
i Below the currently used diagrams of Mix Normally Open and close contacts and their associated labeling



i Possibility to realize other contacts diagrams or special labeling on request.

Dimensions

Drillings

C16BC-C16CL	C16BLE-C16CLE- C16BLEP-C16CLEP	C16B	C16C	C16BE-C16CE- C16BEP-C16CEP
				

i Refer to installation guide for type C push-buttons for installation and maintenance.

Rear length

Rear length (mm) for currently used diagrams

Illuminated push-button function Single impulse

function	F1-O1	F2-O2	F3-O3	F4-O4	F6-O2	F8	O8
L (mm)	160	160	209	209	224	238	307

Illuminated push-button function « push-push »

function	F1-O1	F2-O2	F3-O3	F4-O4			
L (mm)	175	202	239	266			

Non-illuminated push-button function Single impulse

function	F1-O1	F2-O2	F3-O3	F4-O4	F6-O2	F8	O8
L (mm)	96	96	145	145	160	174	243

Non-illuminated push-button function « push-push »

function	F1-O1	F2-O2	F3-O3	F4-O4			
L (mm)	104	131	168	195			

Electrical characteristics

Rated thermal current (I_{th})

10A

Dielectric strength

2500V-50Hz-1min

Rated alternate current (I_e) (AC)

Standard silver contacts	Push		
Rated working voltages (V)	220	380	
AC-11 (A)	6	4	
AC-21 (A)	10	10	
AC-22 (A)	10	10	
AC-23 (A)	7	5	

Rated direct current (I_e) (DC)

Standard silver contacts	Push						
Rated working voltages (V)	24	48	60	110	127	220	
DC-11 (A)	10	8	6	2	1,5	0,5	
DC-21 (A)	10	10	10	6,5	4,5	1,8	
DC-22 (A)	10	8,5	6,5	2	1,5	0,6	
DC-23 (A)	10	7,5	5,5	1,8	1,3	0,5	

Minimum utilization characteristics

Standard silver contacts

5V-50mA

Special Gold/Silver contacts

1V-10mA

Maximum connection (Cu only)

Rigid or flexible cable
Screw/clamp

2 X 2,5 mm² max

Mechanical and environmental characteristics

Mechanical strength	1 000 000 cycles of semi-intensive operation
Fitting	By central nut or screws on a 2 to 4mm panel thick The device does not have to support the weight of the cables
Tightening torque for terminals (Recommended screwdriver : \varnothing 4mm)	0,5-0,8 N.m
Terminals protection level	IP00 (without cover) – IP2X (with cover)