

TYPE E PUSH-BUTTONS



CONTROL AND SIGNALING SOLUTIONS FOR HARSH ENVIRONMENTS



TYPE E PUSH BUTTONS



Robust

Long life durability :

- A reliability recognized for more than 30 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
 - Indicator light
- Up to 4 stages equipped with 2 change-over contacts or 4 stages configurable at your request
- Illuminated , 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 30 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.



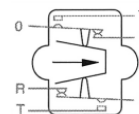
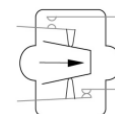
Codification of products

Types / Presentation / Special assembly/ Escutcheon plate / Signaling and lamps/ Function / Contacts scheme / Tab color / Accessories //

Eg: E / 262 / - / - / L / 501 / 2200 / BC / ST //

Types

- E** Type E push button equipped of 110V change-over contacts
- E2** Type E push button equipped of 220V contacts

Contacts
110VContacts
220V (1T+1R)

Presentation

- E262** Illuminated push button , rectangular recessed tab 17X21 ;
Drilling 24 X 27mm
- E72** Illuminated push button , round projected tab Ø11,5 ;
Drilling Ø 14,5

E262



E72



Special assembly

- SPE** Special assembly or special realization at request

Escutcheon plate

- Not applicable : No escutcheon plate available for these product

Signaling and lamps

- Non-illuminated product or non-equipped with a lamp socket
- L** Product equipped with an T5,5 socket for 1 lamp (Included in standard)
- 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)



48V



LED48V



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Function

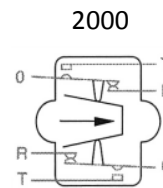
501	Single impulse : momentary action
502	Push-Push : alternate action
950	Indicator light

Contact scheme

110V Contacts stages :

A push button can be equipped from 1 to 4 stages (2 to 8 change-over contacts). Standard contacts are in silver. For low current application the contacts can be in an gold-silver alloy : option Z in the accessories codification.

2000	1 stage of two 110 V change-over contacts
2200	2 stages of four 110 V change-over contacts
2220	3 stages of six 110 V change-over contacts
2222	4 stages of eight 110 V change-over contacts

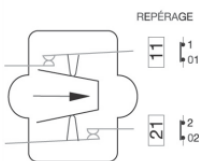


220V Contacts stages (3 types of stages available):

A push button can be equipped from 1 to 4 stages (beyond, consult us). 220V contacts are available in silver only.

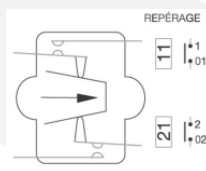
Stage 2R :

Consisting of 2 Normally Close contacts.



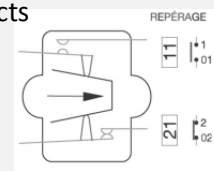
Stage 2T :

Consisting of 2 Normally Open contacts.



Stage 1TR :

Consisting of 1 Normally Open contact + 1 Normally Close contacts



To define a 220V contacts configuration, you must combine the different types of stages.

Example 1 : 2R+2T = 2 stages push button, 1st stage 2R et 2nd stage 2T

Example 2 : 1TR+2R+2T = 3 stages push button, 1st stage 1TR, 2nd stage 2R, 3rd stage 2T

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Tab color

E262

BC	White tab (standard) (Steel blue filter)
R	Red tab (red filter)
V	Green tab (green filter)
J	Yellow tab (yellow filter)
N	Black tab (red filter + green filter)
O	Orange tab (orange filter)
BU	Blue tab (blue filter)

BC



E72

B	White tab + white cap
BR	White tab + red cap
BV	White tab + green cap
BJ	White tab + yellow cap
BCR	White tab + crystal cap

BR



Accessories

Z	Use of contacts in alloy Gold-Silver in replacement of contacts in alloy Silver-Nickel (Recommended for low current level applications)
ST	Plastic cable support for rear cable outlet (included in standard)
STM	Metallic cable support for rear cable outlet
SR	Resistance support (useful when you need to reduce the supply voltage of the lamp)
CP	Plastic translucent contacts cover (IP20)

Z



ST

STM



SR



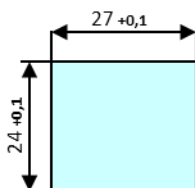
CP



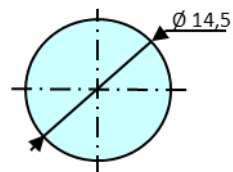
Dimensions

Drillings

E262 push button



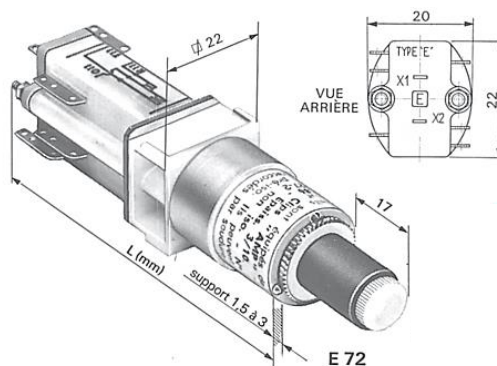
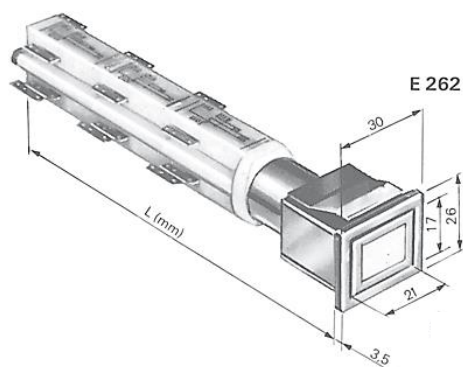
E72 push button



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

Rear length

Function	L				ST	SR
	1 stage	2 stages	3 stages	4 stages		
E262						
501 Single impulse	89	120	151	182	+24	+28
502 Push-Push	109	140	171	202		
E72						
501	85	116	147	178	+24	+28
502						



Electrical, mechanical, environmental characteristics

Electrical characteristics

Rated thermal current (I_{th})

4A

Dielectric strength

2000V-50Hz-1min

Rated alternate current (I_e) (AC)

Standard silver contacts	110 V contacts				220 V contacts			
Rated working voltages (V)	<= 60		110 127		<= 60		110 127	
AC-11 (A)	4		3		4		3	
AC-21 (A)	4		4		4		4	
AC-22 (A)	4		4		4		4	
AC-23 (A)	4		4		4		4	
Rated direct current (Ie) (DC)								
Standard silver contacts	110 V contacts				220 V contacts			
Rated working voltages (V)	24	48	60	110 127	24	48	60	110 127
DC-11 (A)	2,5	0,8	0,6	0,2	3,2	1,2	0,8	0,2
DC-21 (A)	4	2,5	1,8	0,5	4	4	2,5	0,65
DC-22 (A)	3	1	0,7	0,2	4	1,5	1	0,25
DC-23 (A)	2	0,7 5	0,5	0,15	3	1	0,75	0,2

Minimum utilization characteristics

Standard silver contacts

5V-50mA

Special Gold/Silver contacts

1V-10mA

Maximum connection (Cu only)

Rigid or flexible cable

By soldering

Fast-On Clips : 2,8 X0,3

2 X 1 mm² max
1 mm²

Electrical, mechanical, environmental characteristics

Mechanical and environmental characteristics

Mechanical strength	500 000 cycles of semi-intensive operation
Fitting	E262 : Snap-fastened on panel from 2 to 4 mm thick E72 : By central nut on a 1,5 to 3 mm panel thick The device does not have to support the weight of the cables
Terminals protection level	IP00 (without cover) – IP2X (with cover)

