

## Pushbutton switch model TJ

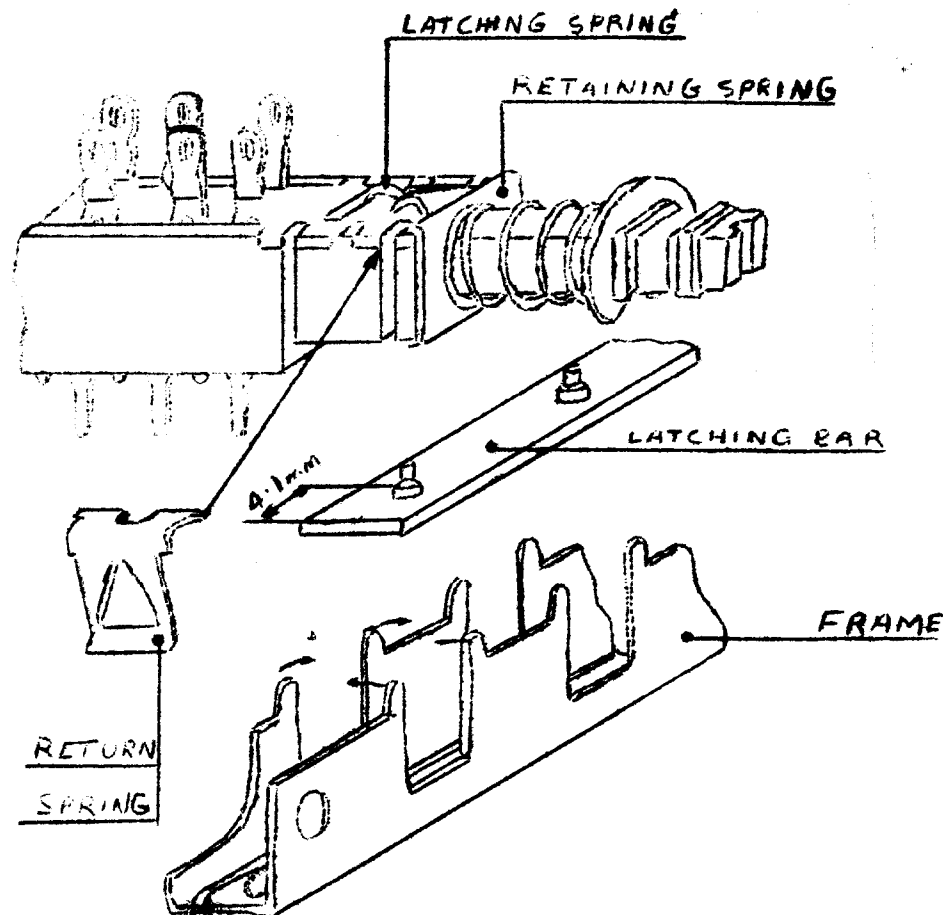
### Assembly instructions:

- All cells as supplied are independent action i.e. push on- push off
- To obtain a cell for normal interlock or spring return - first ease the retaining spring away from the front of the cell, lift out the latching spring and return the retaining spring to its original position.

### Assembling the banks

#### "Normal action"

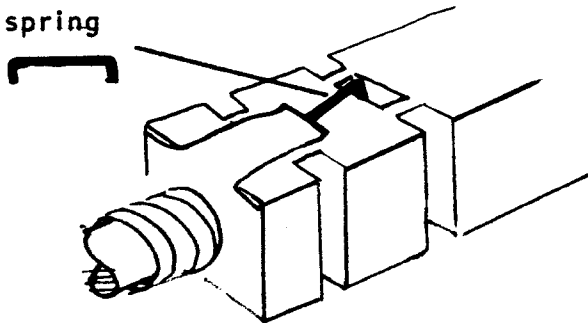
- ~~1. select the appropriate frame~~
- ~~2. Cut a section of latching bar appropriate to the number of normal action keys to be interlocked. Ensure that the cut end is  $4.1\text{mm} \pm 0.1\text{mm}$  from the centre line of the stud at the RIGHT hand end of the bar, viewed from the front of the switch (note illustration is reversed)~~
3. Apply small amount of light oil to bottom of frame, place latching bar in position, select extreme right hand cell, ease up top cover and insert return spring between top cover and body moulding on RIGHT HAND SIDE OF BLOCK.
4. Insert block in frame ensuring it is bottomed and that the latching bar is behind return spring.
5. Insert other cells into frame
6. Check action, ensure all cells bottomed.
7. Bend retaining clips inwards.
8. Note: If desired- spring return reset block without contacts may be inserted into a normal action bank to enable it to be reset without any button remaining in a depressed position.
9. Spring return and independent action - Simply assemble the cells into the frame and bend over retaining clips.



## PUSH SWITCH ASSEMBLY DETAILS

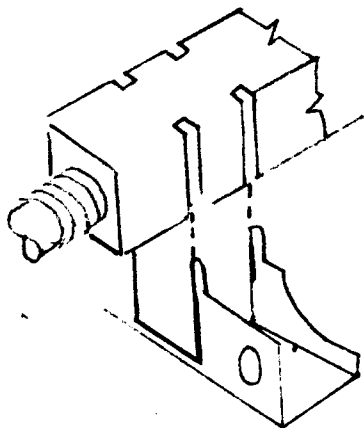
### TO CONVERT SWITCH TO MOMENTARY OPERATION

remove action spring

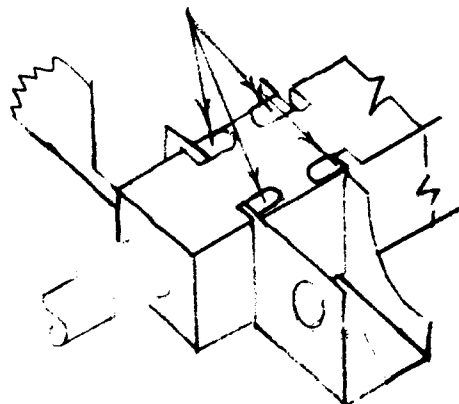


### TO MOUNT ONTO SINGLE PRESS MOUNT

(1) locate on mounting bracket



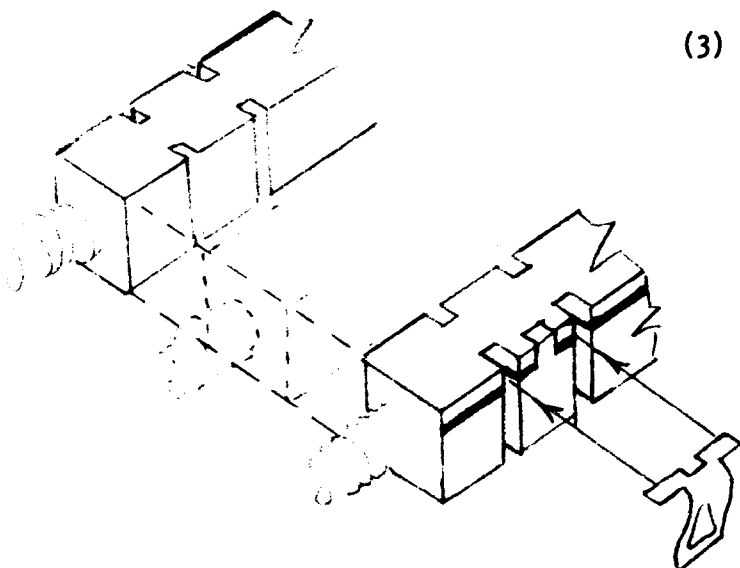
(2) bend over fixing tags



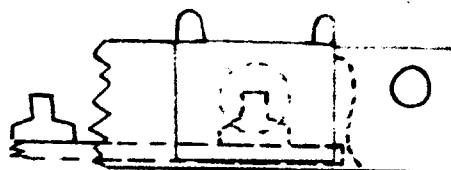
### TO MOUNT ON "LATCHING BAR" ASSEMBLY

(1) Remove action springs on all switches

(2) Locate Latching Return Spring on right hand switch.



(3) locate onto mounting bracket with latching bar located into place on each switch and between Latching Return Spring .



(4) Bend over fixing tags

# Pushbutton Switches

Type TJ - TJ4A

## Mechanical characteristics

Pitch	10,16 mm - 12,70 mm (standard)	15,24 mm - 20,32 mm
Number of keys	1 to 13	1 to 6 for 20,32 mm
Mechanical function *	FU - ID - N - R - RA	
Security system	8 A - 8 B - 8 C	

\* FU = Momentary. ID = Push on Push off. N = Mutual release. R = Release key without cts.

RA = Release key with cts.

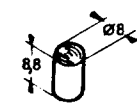
## Electrical characteristics

Type of contact	BBM or MBB			TJ4A 1 AND 2 C/O
	TJM - TJ - TJX	TJMY TJY TJXY		
Nominal voltage at 50 Hz	250	250		250
Switching current max.	0,1	0,02		4
Carrying current	5	5		4
Max switching power	5	1		600
Average contact resistance (mΩ)	< 10	< 15		
Dielectric rigidity between contacts and contacts and frame	1000 V ~ 2000 V ~	1000 V ~ 2000 V ~		2000 V ~ 2000 V ~
Insulation resistance MΩ	1.10 <sup>6</sup>	1.10 <sup>6</sup>		1.10 <sup>4</sup>
Capacity	< 2	< 2		
Life expectancy without load at 50 Hz Max. switching power	25 000 10 000	100 000 25 000		10 000 10 000
Temperature range				T < 55° C

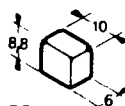
UTE and SEMKO approved (NFC 61 120).

## Buttons

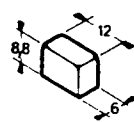
### Series TJ



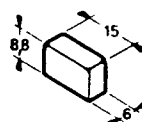
81



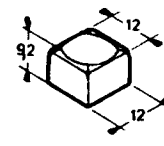
82



83



84

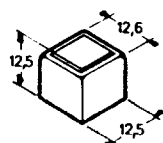


85

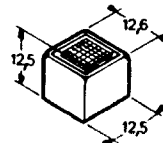
### Series TJ LUF

#### Colour

Dark grey	Blue
Light grey	Green
Black	White
Red	Chrom



LUF 88



LUF 88 G

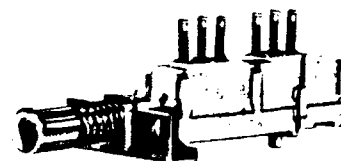
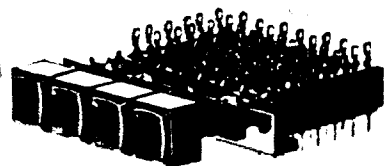
# Pushbutton Switches

## Type TJ - TJ4A

The push button switch type TJ has a contact system which is operated by a free rolling ball principal. The contacts on the top face are for wiring with PC terminals on the other face on 5,08 mm pitch which is the international standard grid.

Mains switch type TJ4A is approved to UTE specification NFC 61 120.

SEMKO



Type TJ

Type TJ4A

Reference in semi professional	Contacts	Normal fixing	Bush fixing
	2 change over	TJM	TJMD
	4 change over	TJ	
	6 change over	TJX	TJXD
Reference in professional	2 change over	TJMY	TJMYD
	4 change over	TJY	TJYD
	6 change over	TJXY	TJXYD
Mains switch	pole make (faston terminals)		
	single change over	TJ4A 1 c o	TJ4AD 1 c o
	double change over	TJ4A 2 c o	TJ4AD 2 c o

Note : TJR - TJXR now replaced by TJ4A.

### Fixing

Front fixing by 2 holes of 3,2 mm Ø on a chassis from 1 to 13 positions.

A single module can on request be mounted on a chassis with a threaded bush of Ø 12 mm x 100.

### Ordering code

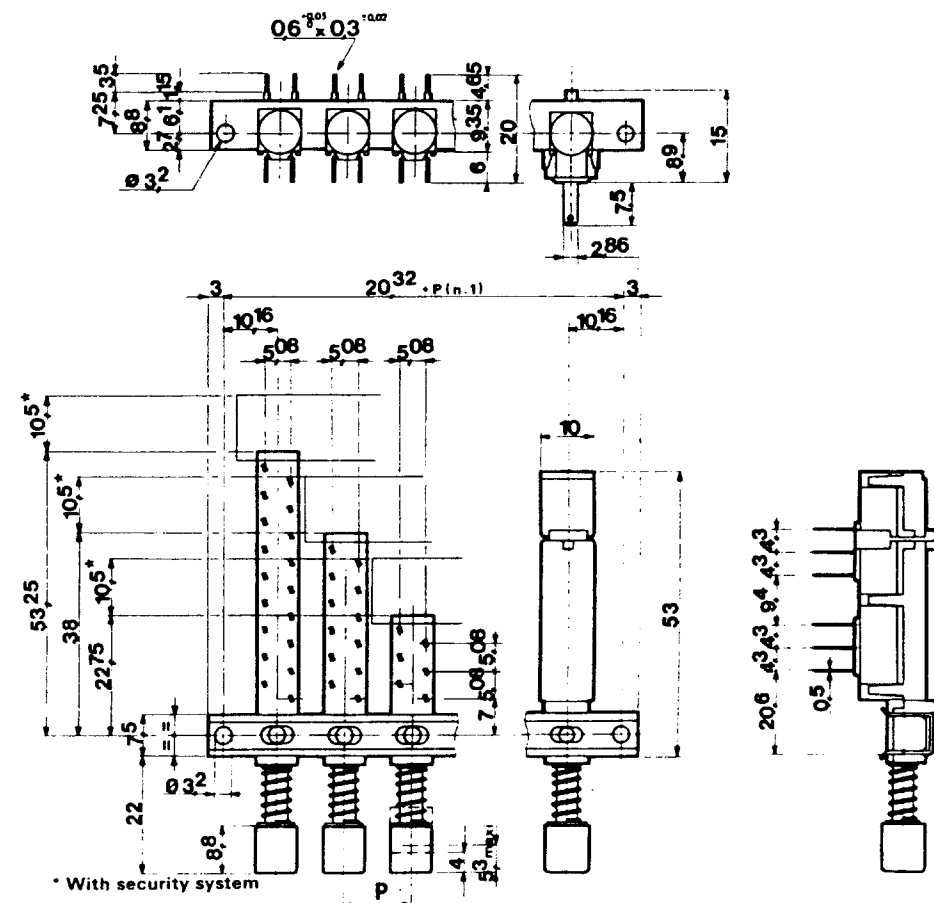
- the reference
- BBM or MBB
- pitch
- nb of keys
- mechanical function
- colour and nb of buttons
- engraving and it's colour.

### Buttons

References n° 81, 82, 83, 84, 85,

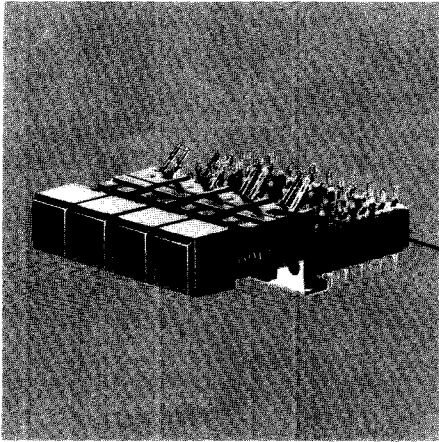
Colours red, blue, green, black, white, light grey, dark grey

Chrome on special request.



# Pushbutton Switches

## Type TJ - LUF



The TJ switch and its derivatives can also be supplied in illuminated version. The coding of this is suffixed by LUF (for ex : TJM ... LUF). The series TJD ... switches (bush mounting) can not be illuminated.

The minimum pitch for illuminations is 12,7 mm.  
2 lens styles are available LUF 88 and LUF 88 G.

NOTE NOW LAMP HOLDERS  
ARE FITTED

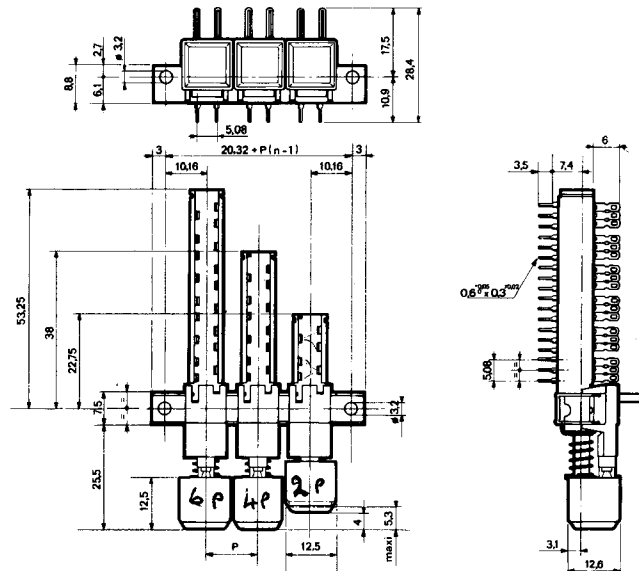
### Lamp

3 versions of filament lps are available.  
12 V 50 mA life expectancy 10 000 h min.  
24 V 35 mA life expectancy 10 000 h min.  
Possibility of LED on request (see below).

### Mounting

The lamp holder and button can only be mounted on the top face of the switch.

### Dimensions



### Buttons

Standard	LUF 88 G
Spécial	LUF 88

### Colours

LUF 88 G : Red, Green, Blue, Orange, Crystal yellow.

LUF 88 : Red, Green, Blue, White, Yellow.

colour	Red	Green	Yellow
Direct max current	40 mA	50 mA	50 mA
Inverse voltage	3 V	3 V	3 V
Direct voltage (20 mA)	1,6 V	2,5 V	2,5 V
Luminous intensity	0,5 mcd	1,5 mcd	1,5 mcd
Soldering at 230° C	5 s	5 s	5 s

\* These characteristics are only given as an indication.

# Pushbutton Switches

## Type TJ - TJ4A

### Mechanical characteristics

Pitch	10,16 mm - 12,70 mm (standard)	15,24 mm - 20,32 mm
Number of keys	1 to 13	1 to 6 for 20,32 mm
Mechanical function *	FU - ID - SI* - N - R - RA	* SI, Only for 12,7 (12 keys max.)
Security system	8 A - 8 B - 8 C.	

\* FU = Momentary. ID = Push on Push off. N = Mutual release. R = Release key without cts.

RA = Release key with cts. SI = Interlock key needs a release key.

### Electrical characteristics

Type of contact	BBM or MBB		
	TJM - TJ - TJX	TJMY - TJY - TJXY	TJ4A** 1 AND 2 C/O TJR - TJXR
Nominal voltage at 50 Hz	250	250	250
Switching current max.	0,1	0,02	4
Carrying current	5	5	4
Max switching power	5	1	600
Average contact resistance (mΩ)	< 10	< 15	
Dielectric rigidity between contacts and contacts and frame	1000 V ~ 2000 V ~	1000 V ~ 2000 V ~	2000 V ~ 2000 V ~
Insulation resistance M Ω	$1 \cdot 10^6$	$1 \cdot 10^6$	$1 \cdot 10^4$
Tangent δ at 1 M Hz	$150 \cdot 10^{-4}$	$150 \cdot 10^{-4}$	
Capacity	$\approx 2$	$\approx 2$	
Life expectancy without load at 50 Hz Max. switching power	25 000 10 000	100 000 25 000	10 000 10 000
Temperature range			T < 55° C

Silver plated  
brass contacts  
(3 μ.silver)  
Silver plated ball  
spring 178