

# TP2

## Panel Mounted

Push Button

### TP2

Panel cut-out (mm)  $\varnothing$  16.2/22.5

- Characteristics
- momentary or latching
  - sealed IP40, IP65 or IP67
  - wide range of bezels
  - with or without illumination
  - NO, NC, CO
  - gold plated single or double pole contact blocks

Rating 250 VAC, 5 A

Dimensions (mm) 18 × 24  
18 × 18  
 $\varnothing$  18  
 $\varnothing$  25

Actuator lenses in different shapes and colours

Approvals UL, CSA, VDE



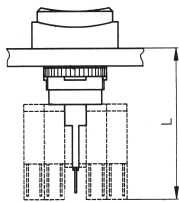
### Popular products

Ordering Reference	Panel cut-out	Function	Actuator style	Terminals	Electrical rating
TP21LAAC1C1A4CN	$\varnothing$ 16.2 mm	Latching; IP40	18 × 24 mm, red Illumination	2.8 × 0.5 mm faston	250 VAC, 5A
TP21LDAC1C1D4CN	$\varnothing$ 16.2 mm	Latching; IP40	$\varnothing$ 18 mm, red Illumination	2.8 × 0.5 mm faston	250 VAC, 5A
TP21MAAC1C1A4CN	$\varnothing$ 16.2 mm	Momentary; IP40	18 × 24 mm, red Illumination	2.8 × 0.5 mm faston	250 VAC, 5A
TP21MDAC1C1D4CN	$\varnothing$ 16.2 mm	Momentary; IP40	$\varnothing$ 18 mm, red Illumination	2.8 × 0.5 mm faston	250 VAC, 5A
TP22LFAC1C1F4CN	$\varnothing$ 22.5 mm	Latching; IP65	$\varnothing$ 25 mm, red Illumination	2.8 × 0.5 mm faston	250 VAC, 5A
TP22MFAC1C1F4CN	$\varnothing$ 22.5 mm	Momentary; IP65	$\varnothing$ 25 mm, red Illumination	2.8 × 0.5 mm faston	250 VAC, 5A

## Specifications

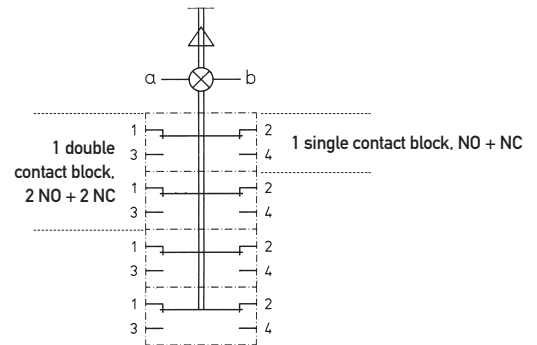
Mechanism	Bi-functional – momentary or latching
Actuating force	Approximately 2.5N – 1 contact block
Mounting	Central fixing with metal lock nut
Protection	IP40, IP65, IP67
Bezel material	Thermoplastic or anodized aluminium alloy
Lens material	Polycarbonate – engravable
Illumination	T1 ¾ midget grooved lamps – incandescent lamps, LEDs, multi LEDs 60 V, 1.2W maximum Lamp contact "b" = cathode (-) Appropriate safety regulations should be respected when using the indicator light.
Temperature range °C	-30°C to +80°C
Mechanical life	10 <sup>6</sup> cycles
Contact block	Slide-on assembly by the user with locking mechanism
Contact block housing	Self-extinguishing duroplastic (UL 94 plus V0)
Terminal material	Silver alloy with 0.2 µm silver plating, 0.4 µm gold plating
Contact resistance	<30 mOhm
Number of contact blocks	User configurable NO or NC types up to a maximum of 2 double contact blocks
Terminals	Solder – suitable for wire diameter 1 × 1.00 mm <sup>2</sup> (braided), 2 × 0.75 mm (stranded) Faston – 2.8 mm × 0.5 mm
Vibration resistance	1.5 mm pp amplitude at 55 Hz

Dimensions



Length in mm (with contact block)	
plastic bezels	43.0
aluminium bezels	42.0
aluminium bezels concealed mounting	50.0

Circuit diagram (2 double contact blocks)



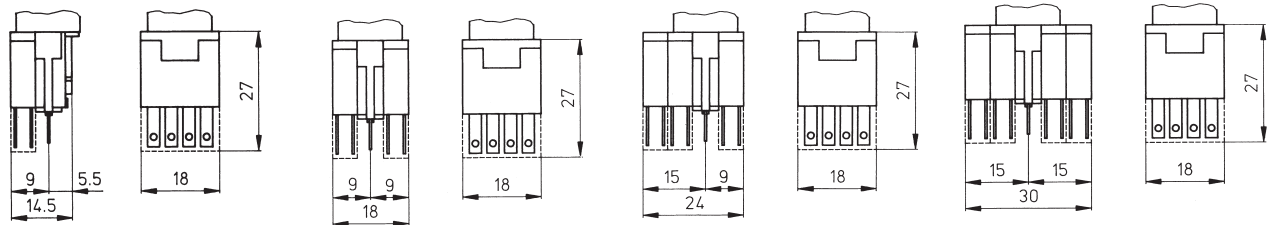
Contact blocks

1 single contact block

2 single contact blocks

1 single contact block +  
1 double contact block

2 double contact blocks

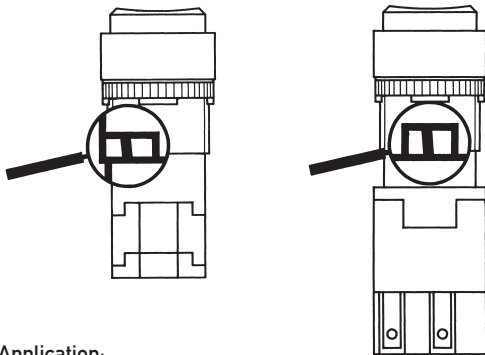


## Recommended maximum electrical ratings

Voltage (max)	Resistive load (A)	Inductive load (A)	Approval
250 VAC	5.0 (0.7 pf)		UL, CSA, VDE - max. admissible circuit breaker C6A
12 VDC	5.0	3.0	General rating
24 VDC	4.0	2.0	General rating
36 VDC	3.0	1.7	General rating
48 VDC	2.0	1.5	General rating
60 VDC	1.5	1.2	General rating
125 VDC	0.5	0.3	General rating
250 VDC	0.3	0.2	General rating
Electrical life	70,000 cycles at 5A, 250 VAC, 0.7 pf		

Bi-functional selection

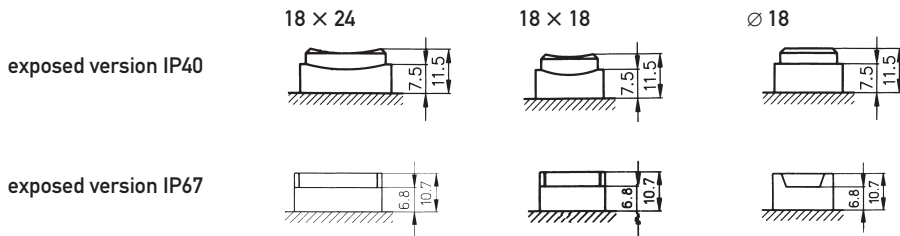
All latching switches in the range incorporate a simple selector mechanism for modifying the function of the switch. This function is not available with momentary switches.



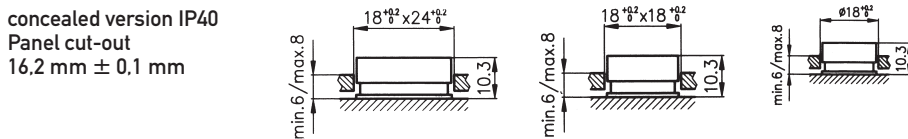
Application:

When the switch is in the off position the selector mechanism can be moved to the right to obtain a momentary function, or to the left to return to a latching function.

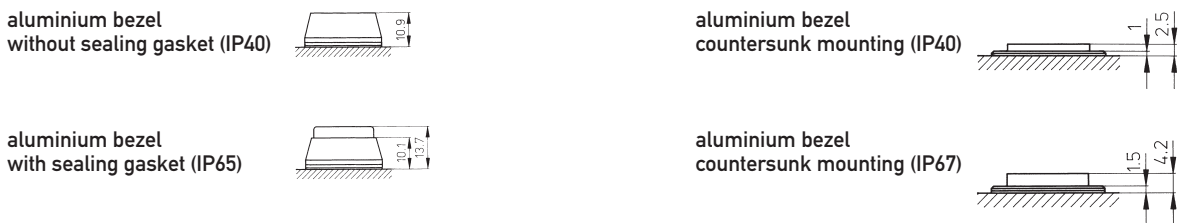
Plastic bezel and lens heights in mm (switch off position)



Panel cut-out exposed version 16.2 ± 0.1 mm



Aluminium bezel ∅ 25 and lens heights in mm (switch off position)



Panel cut-out 22.5 ± 0.1 mm

Front panel thickness	plastic bezel	1.0 mm to 6.5 mm
	aluminium bezel	1.0 mm to 5.0 mm
	countersunk mounting	2.0 mm to 15.0 mm

## Ordering Reference

Range	TP2				
Panel cut-out	1	16.2 mm			
Switch body (A)	MAA	Function	Actuator	Housing (plastic)	
	MAB	Momentary	18 × 24 mm	Exposed ; IP40; faston	
	MAC	Momentary	18 × 24 mm	Concealed ; IP40; faston	
	LAA	Latching_	18 × 24 mm	Exposed ; IP67; faston	
	LAB	Latching_	18 × 24 mm	Exposed ; IP40; faston	
	LAC	Latching_	18 × 24 mm	Concealed ; IP40; faston	
				Exposed ; IP67; faston	
	(B)	MBA	Momentary	18 × 18 mm	Exposed ; IP40; faston
		MBB	Momentary	18 × 18 mm	Concealed ; IP40; faston
		MBC	Momentary	18 × 18 mm	Exposed ; IP67; faston
		LBA	Latching_	18 × 18 mm	Exposed ; IP40; faston
		LBB	Latching_	18 × 18 mm	Concealed ; IP40; faston
		LBC	Latching_	18 × 18 mm	Exposed ; IP67; faston
	(C)	MDA	Momentary	Ø 18 mm	Exposed ; IP40; faston
		MDB	Momentary	Ø 18 mm	Concealed ; IP40; faston
		MDC	Momentary	Ø 18 mm	Exposed ; IP67; faston
		LDA	Latching_	Ø 18 mm	Exposed ; IP40; faston
		LDB	Latching_	Ø 18 mm	Concealed ; IP40; faston
	LDC	Latching_	Ø 18 mm	Exposed ; IP67; faston	
Contact block, gold Position 1	XX	Without contact block		Terminals	
	A1	NO		2.8 × 0.5mm	
	A9	NO		Insulated faston	
	A8	NO		Solder	
	B1	NC		2.8 × 0.5mm	
	B9	NC		Insulated faston	
	B8	NC		Solder	
	C1	1 NO + 1 NC		2.8 × 0.5mm	
	C9	1 NO + 1 NC		Insulated faston	
	C8	1 NO + 1 NC		Solder	
	D1	2 NO + 2 NC		2.8 × 0.5mm	
	D9	2 NO + 2 NC		Insulated faston	
	D8	2 NO + 2 NC		Solder	
Contact block, gold Position 2	XX	Without contact block		Terminals	
	A1	NO		2.8 × 0.5mm	
	A9	NO		Insulated faston	
	A8	NO		Solder	
	B1	NC		2.8 × 0.5mm	
	B9	NC		Insulated faston	
	B8	NC		Solder	
	C1	1 NO + 1 NC		2.8 × 0.5mm	
	C9	1 NO + 1 NC		Insulated faston	
	C8	1 NO + 1 NC		Solder	
	D1	2 NO + 2 NC		2.8 × 0.5mm	
	D9	2 NO + 2 NC		Insulated faston	
	D8	2 NO + 2 NC		Solder	
Lens, transparent For Switch body style (A)	A0	White	Exposed 15 × 21 mm	Concealed 18 × 24 mm	
	A1	Yellow	15 × 21 mm	18 × 24 mm	
	A2	Green	15 × 21 mm	18 × 24 mm	
	A3	Blue	15 × 21 mm	18 × 24 mm	
	A4	Red	15 × 21 mm	18 × 24 mm	
	A6	Orange	15 × 21 mm	18 × 24 mm	
	For Switch body style (B)	B0	White	15 × 15 mm	18 × 18 mm
		B1	Yellow	15 × 15 mm	18 × 18 mm
		B2	Green	15 × 15 mm	18 × 18 mm
		B3	Blue	15 × 15 mm	18 × 18 mm
		B4	Red	15 × 15 mm	18 × 18 mm
		B6	Orange	15 × 15 mm	18 × 18 mm
	For Switch body style (C)	D0	White	Ø 15 mm	Ø 18 mm
		D1	Yellow	Ø 15 mm	Ø 18 mm
		D2	Green	Ø 15 mm	Ø 18 mm
		D3	Blue	Ø 15 mm	Ø 18 mm
		D4	Red	Ø 15 mm	Ø 18 mm
		D6	Orange	Ø 15 mm	Ø 18 mm
Illumination	X	Non illuminated			
	A	6V			
	B	12V			
	C	24V			
	F	48V			
Illumination Colour	X	Non illuminated			
	N	Incandescent lamp			
	1	Yellow LED			
	2	Green LED			
	4	Red LED			

Note: Contact blocks will be supplied unassembled

### Ordering Reference

Range	TP2		
Panel cut-out	2	22.5 mm	
Switch body (A)	Function	Actuator	Housing
	MFA Momentary	Ø 25	Exposed plastic; IP65; faston
	LFA Latching_	Ø 25	Exposed plastic; IP65; faston
	(B) MFB Momentary	Ø 25	Exposed aluminium; IP40 / IP65*; faston
	LFB Latching_	Ø 25	Exposed aluminium; IP40 / IP65*; faston
	MFC Momentary	Ø 25	Exposed aluminium; IP65* with silicon cap; faston
	LFC Latching_	Ø 25	Exposed aluminium; IP65* with silicon cap; faston
	MFD Momentary	Ø 25	Flush-aluminium; IP40; faston
	LFD Latching_	Ø 25	Flush-aluminium; IP40; faston
	MFE Momentary	Ø 25	Flush-aluminium; IP67; faston
LFE Latching_	Ø 25	Flush-aluminium; IP67; faston	
Contact block, gold Position 1	XX	Without contact block	
	A1	NO	2.8 × 0.5mm
	A9	NO	Insulated faston
	A8	NO	Solder
	B1	NC	2.8 × 0.5mm
	B9	NC	Insulated faston
	B8	NC	Solder
	C1	1 NO + 1 NC	2.8 × 0.5mm
	C9	1 NO + 1 NC	Insulated faston
	C8	1 NO + 1 NC	Solder
	D1	2 NO + 2 NC	2.8 × 0.5mm
	D9	2 NO + 2 NC	Insulated faston
	D8	2 NO + 2 NC	Solder
Contact block, gold Position 2	XX	Without contact block	
	A1	NO	2.8 × 0.5mm
	A9	NO	Insulated faston
	A8	NO	Solder
	B1	NC	2.8 × 0.5mm
	B9	NC	Insulated faston
	B8	NC	Solder
	C1	1 NO + 1 NC	2.8 × 0.5mm
	C9	1 NO + 1 NC	Insulated faston
	C8	1 NO + 1 NC	Solder
	D1	2 NO + 2 NC	2.8 × 0.5mm
	D9	2 NO + 2 NC	Insulated faston
	D8	2 NO + 2 NC	Solder
Lens, transparent For Switch body style (A)	E0	White	Ø 21
	E1	Yellow	Ø 21
	E2	Green	Ø 21
	E3	Blue	Ø 21
	E4	Red	Ø 21
	E6	Orange	Ø 21
For Switch body style (B)	F0	White	Ø 18
	F1	Yellow	Ø 18
	F2	Green	Ø 18
	F3	Blue	Ø 18
	F4	Red	Ø 18
	F6	Orange	Ø 18
Illumination	X	Non illuminated	
	A	6V	
	B	12V	
	C	24V	
	F	48V	
Illumination Colour	X	Non illuminated	
	N	Incandescent lamp	
	1	Yellow LED	
	2	Green LED	
	4	Red LED	

Note: Contact blocks will be supplied unassembled