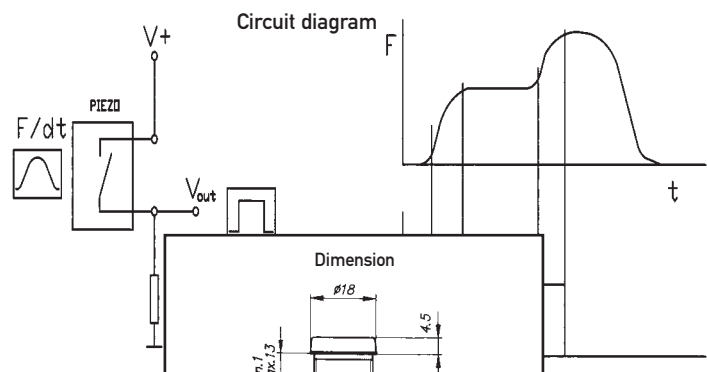


Piezo Push Button



TP7

TP7

Panel cut-out (mm) Ø 16.2, Ø 22.5, Ø 30.3, Ø 43.3

- Characteristics
- piezo technology
 - momentary
 - sealed IP68
 - with or without illumination, two colors
 - solid state output
 - NO

Rating 3 to 35 VAC/VDC, 200 mA

Dimensions (mm)
 Ø 18
 Ø 25
 Ø 36
 Ø 48

Actuator ■ housing in different colors

Approvals none



Popular products

Ordering Reference	Panel cut-out (mm)	Function	Actuator size (mm)	Actuator style	Environmental protection	Terminals	Electrical rating
TP71MD1B04XX	Ø 16.2	Momentary 1NO	Ø 18	Non-illuminated, red anodised aluminum	IP68	Prewired	35 VAC/VDC max, 200 mA
TP71MD1B02XX	Ø 16.2	Momentary 1NO	Ø 18	Non-illuminated, green anodised aluminum	IP68	Prewired	35 VAC/VDC max, 200 mA
TP71MD1B05XX	Ø 16.2	Momentary 1NO	Ø 18	Non-illuminated, black anodised aluminum	IP68	Prewired	35 VAC/VDC max, 200 mA
TP71MD1B00XX	Ø 16.2	Momentary 1NO	Ø 18	Non-illuminated, natural aluminum	IP68	Prewired	35 VAC/VDC max, 200 mA
TP72MF1B00XX	Ø 22.5	Momentary 1NO	Ø 25	Non-illuminated, natural aluminum	IP68	Prewired	35 VAC/VDC max, 200 mA
TP72MG4B00C2	Ø 22.5	Momentary 1NO	Ø 25	Green illumination natural aluminum	IP68	Molex style 5 pin	35 VAC/VDC max, 200 mA
TP72MG2B00C4	Ø 22.5	Momentary 1NO	Ø 25	Red illumination natural aluminum	IP68	Molex style 5 pin	35 VAC/VDC max, 200 mA

Specifications

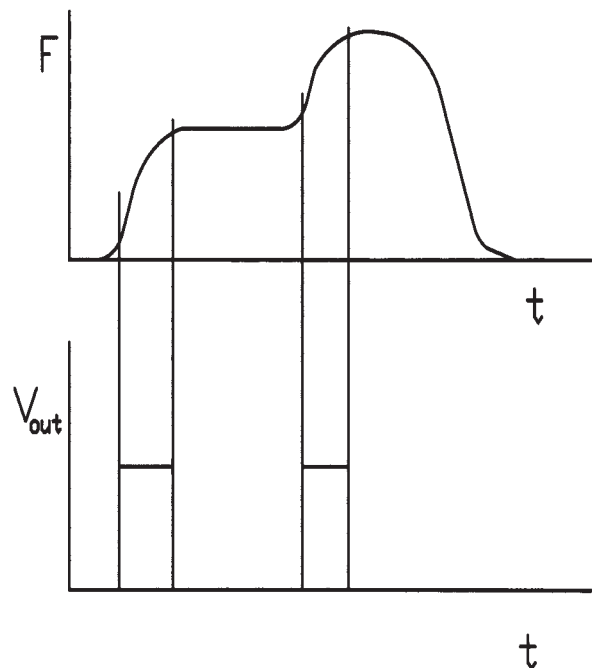
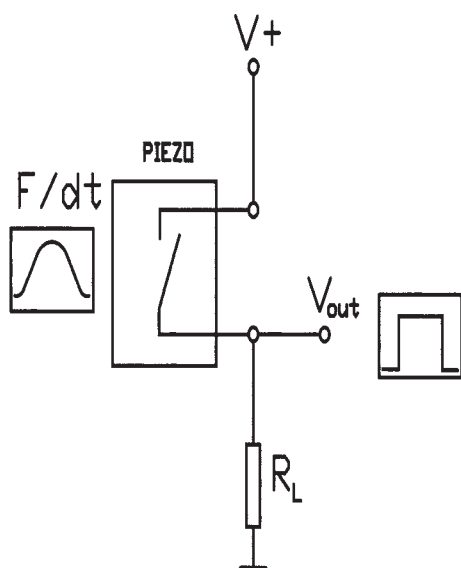
Mechanism	Piezo electronic, without auxilliary energy		
Actuating force	5N maximum at an actuating speed 500 to 1500 mm/s		
Closing impulse duration	10 to 1000 m/s - dependent on force and speed of actuation		
Mounting	Central fixing from the rear with metal lock nut		
Protection	IP68 (after installation)		
Housing and actuator material	Anodised aluminum and stainless steel		
Illumination	LED (18mm switch non-illuminated only)		
Temperature range °C	-40°C to +105°C (non-illuminated), -40°C to +85°C (illuminated)		
Life expectancy	>15 × 10 ⁶ cycles		
Contact resistance	<10 Ohm (on)		
Insulation resistance	>5M0hm (off)		
Terminals	Prewired; 2.8mm × 0.8mm faston; Molex-style 3,5 & 6 pin; AMP-style 4 pin		
Power consumption (illuminated types)	red or green:	12V IP = 40 mA	24V IF = 20 mA
	red/green:	12V IP = 2 × 20 mA	24V IF = 2 × 20 mA

Technical information

The piezo sensor converts pressure into voltage signals. These analogue voltage signals are then processed within the switch to form switching signals, using field effect transistors (FET).

Due to the internal resistor, the circuit state is dependent upon actuating force and speed, means of operation and the discharge time of the R-C system. Standard digital or relay technology can be employed to create individual timed delay, flip-flop and power amplification circuits.

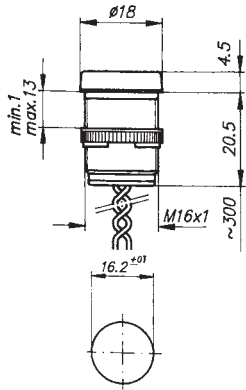
The circuit state diagram shows the approximate relationship between the force/time curve to the voltage circuit state:



Recommended maximum electrical ratings

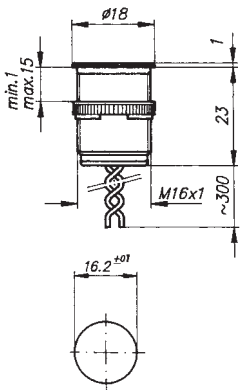
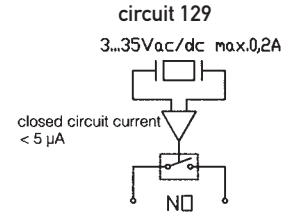
Voltage (max)	Resistive load (A)
3 to 35 VUC	0.2 A (0.7 pf)

Dimensions Non-illuminated

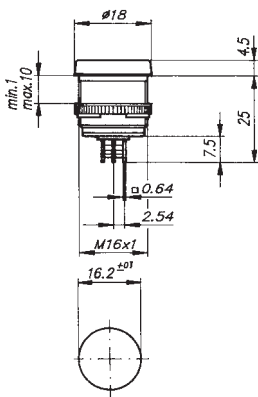
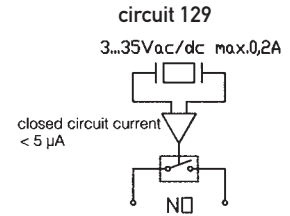


Ø 18, raised housing, prewired

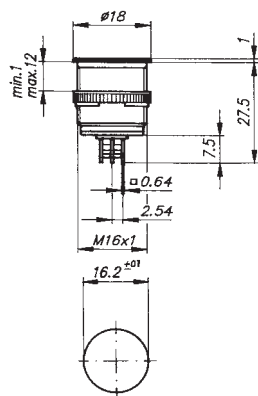
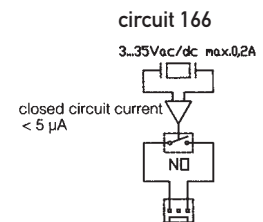
Circuit diagram



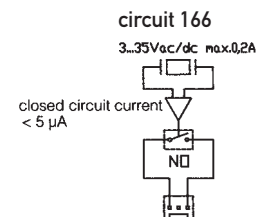
Ø 18, flush housing, prewired



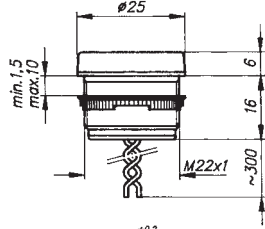
Ø 18, raised housing, Molex-style 3 pin



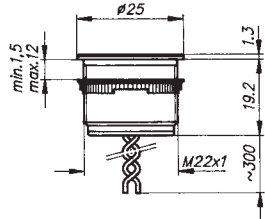
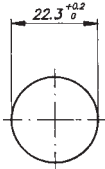
Ø 18, flush housing, Molex-style 3 pin



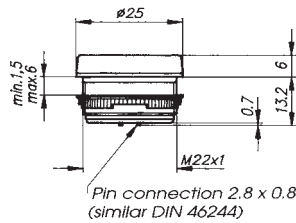
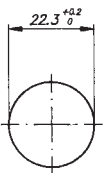
Dimensions Non-illuminated



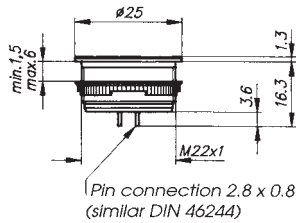
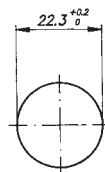
Ø 25, raised housing, prewired



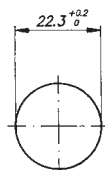
Ø 25, flush housing, prewired



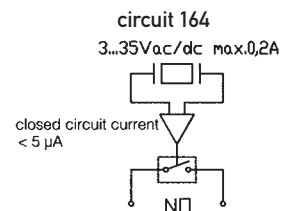
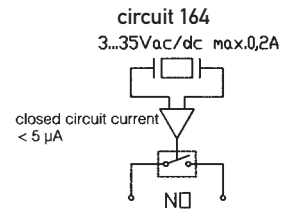
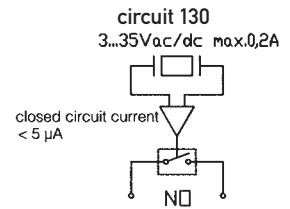
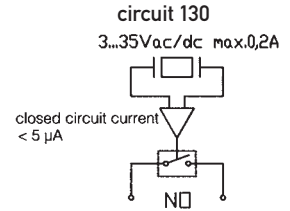
Ø 25, raised housing, solder connections 2.8 × 0.8



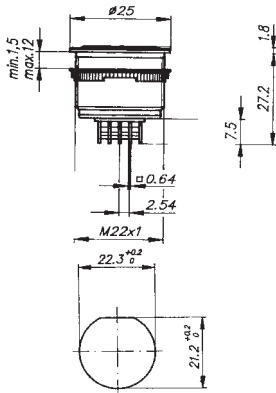
Ø 25, raised housing, solder connections 2.8 × 0.8



Circuit diagram

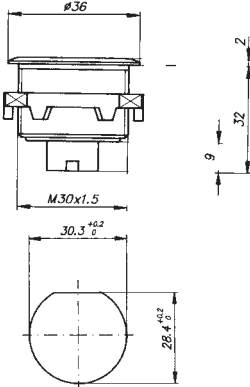
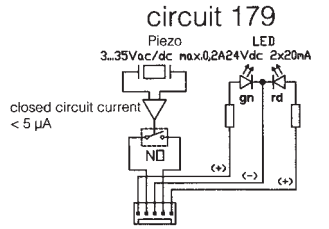
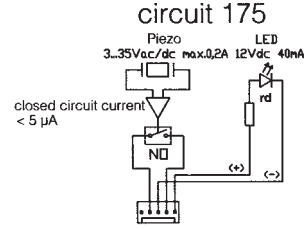
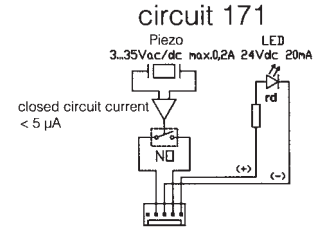
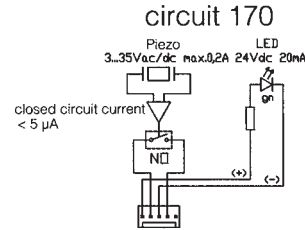
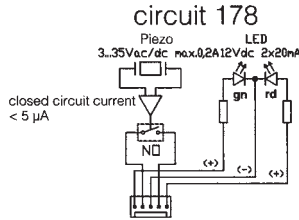
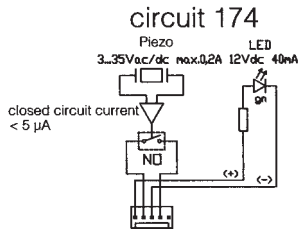


Dimensions Illuminated



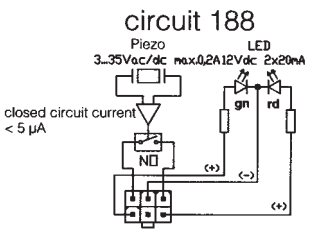
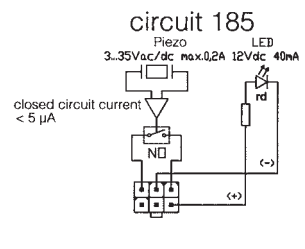
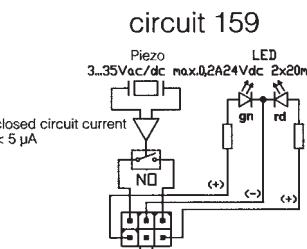
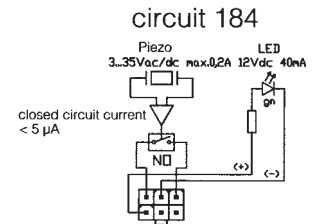
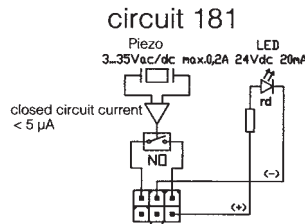
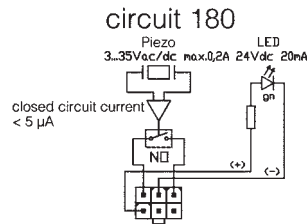
Ø 25, flush housing, Molex-style 5 pin

Circuit diagram

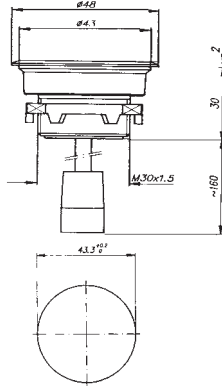


Ø 36, flush housing, Molex-style 6 pin

Circuit diagrams



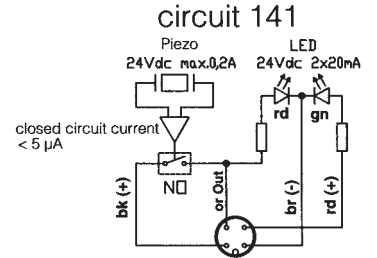
Dimensions Illuminated



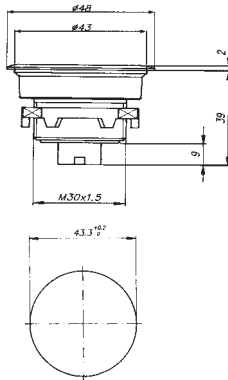
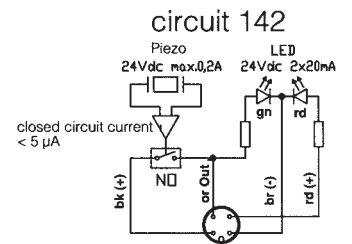
Ø 48, flush housing, wired with round connector
AMP-style 4 pin

Internally wired visual indicator, red

Circuit diagram

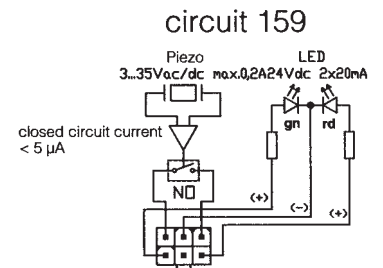
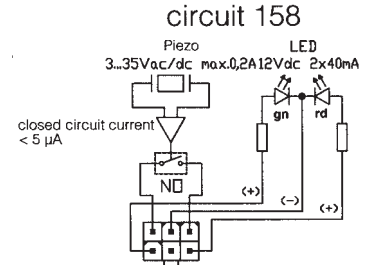


Internally wired visual indicator, green



Ø 48, flush housing, Molex-style 6 pin

Circuit diagram



Ordering Reference

Basic type		TP7						Example: TP7	
Panel cut-out	1	Ø 16.2 mm (for Actuator Ø 18 mm only)						1	MD1A
	2	Ø 22.5 mm (for Actuator Ø 25 mm only)						00	B 2
		Function	Actuator	Housing	Connector	Environmental protection	Part No. color (XX)		
Switch body	MD1A	Momentary 1NO: 35V / 0.2A	Ø 18 mm	Raised Aluminum	Prewired	IP68	TH7020XX129		
	MD2A	Momentary 1NO: 35V / 0.2A	Ø 18 mm	Raised Aluminum	3 Pin MOLEX	IP68	TH7025XX166		
	MD1B	Momentary 1NO: 35V / 0.2A	Ø 18 mm	Flush Aluminum	Prewired	IP68	TH7021XX129		
	MD2B	Momentary 1NO: 35V / 0.2A	Ø 18 mm	Flush Aluminum	3 Pin MOLEX	IP68	TH7026XX166		
Non-illuminated	MF1A	Momentary 1NO: 35V / 0.2A	Ø 25 mm	Raised Aluminum	Prewired	IP68	TH7030XX130		
	MF2A	Momentary 1NC: 35V / 0.2A	Ø 25 mm	Raised Aluminum	Prewired	IP68	TH7030XX131		
	MF4A	Momentary 1NO: 35V / 0.2A	Ø 25 mm	Raised Aluminum	2.8 × 0.8 mm	IP68	TH7035XX164		
	MF1B	Momentary 1NO: 35V / 0.2A	Ø 25 mm	Flush Aluminum	Prewired	IP68	TH7031XX130		
	MF2B	Momentary 1NC: 35V / 0.2A	Ø 25 mm	Flush Aluminum	Prewired	IP68	TH7031XX131		
	MF4B	Momentary 1NO: 35V / 0.2A	Ø 25 mm	Flush Aluminum	2.8 × 0.8 mm	IP68	TH7036XX164		
	Illuminated	MG1B	Momentary 1NO: 35V / 0.2A 12V/40mA LED red	Ø 25 mm	Flush Aluminum	5 pin MOLEX	IP68	TH7055XX175	
		MG2B	Momentary 1NO: 35V / 0.2A 24V/20mA LED red	Ø 25 mm	Flush Aluminum	5 pin MOLEX	IP68	TH7055XX171	
MG3B		Momentary 1NO: 35V / 0.2A 12V/40mA LED green	Ø 25 mm	Flush Aluminum	5 pin MOLEX	IP68	TH7055XX174		
MG4B		Momentary 1NO: 35V / 0.2A 24V/20mA LED green	Ø 25 mm	Flush Aluminum	5 pin MOLEX	IP68	TH7055XX170		
MG5B		Momentary 1NO: 35V / 0.2A 12V/40mA LED red/green	Ø 25 mm	Flush Aluminum	5 pin MOLEX	IP68	TH7055XX178		
MG6B		Momentary 1NO: 35V / 0.2A 24V/20mA LED red/green	Ø 25 mm	Flush Aluminum	5 pin MOLEX	IP68	TH7055XX179		
Actuator color (XX)	00	Natural	} Please select appropriate color code reference to complete the switch part no. eg. TH702004129						
	01	Yellow							
	02	Green							
	04	Red							
	05	Black							
	08	Dark Blue							
Illumination	X	Non-illuminated							
	B	12V	(for illuminated switch bodies only)						
	C	24V	(for illuminated switch bodies only)						
Illumination color	X	Non-illuminated							
	2	Green LED	(for illuminated switch bodies only)						
	4	Red LED	(for illuminated switch bodies only)						
	9	Red/Green LED	(for illuminated switch bodies only)						

Stainless steel versions, available upon request.