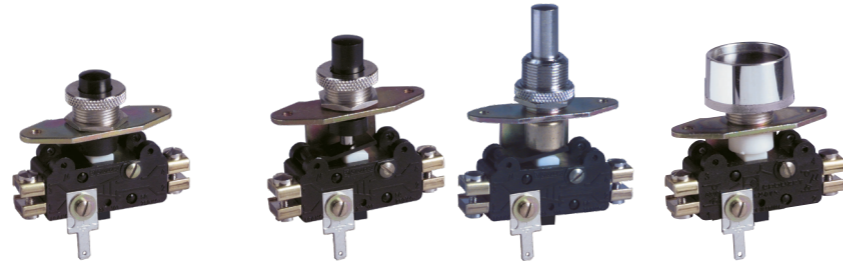


# PUSHBUTTONS AND TOGGLES - MINIATURE

## 8350 / 8351 / 8352 / 8353

- › Double-break flexible leaf snap-action mechanism
- › Momentary or maintained action
- › Changeover-SPDT microswitch as standard
- › One, two and three-pole configurations
- › Long life
- › Ratings from 10 mA 4 V<sub>DC</sub> to 10 A 250 V<sub>AC</sub>
- › Operating temperature -40 °C up to +125 °C
- › Choice of connections



### Main specifications

		Pushbuttons				
		Momentary	Momentary + Maintained*	Momentary	Momentary	Momentary
		Standard	Long travel	Long travel	Long travel Metal plunger	Recessed button
		83507	83553 ***	83513	83522	83535
Function	Connections					
1-pole (835--0)	I (changeover)	W1 (screw)	●	83513003	83522011	83535012
	I (changeover)	W2 (solder)	83553003	83513005	83522005	83535007
	I (changeover)	W3 (QC 6.3x0.8)	●	83513010	83522016	83535021
2-pole (835--3)	I (changeover)	W1 (screw)	●	83513309	●	●
	I (changeover)	W2 (solder)	●	83513301	83522302	83535306
	I (changeover)	W3 (QC 6.3x0.8)	●	●	●	●
Electrical characteristics						
Rating nominal / 250 V AC (A)		10	10	10	10	10
Rating thermal / 250 V AC (A)		17.5	17.5	17.5	17.5	17.5
Mechanical characteristics						
Maximum operating force, 1-pole (N)		4	4/25	4	4	4
Maximum operating force, 2-pole (N)		8	8/25	8	8	8
Maximum total travel force, 1-pole (N)		-	-	35	15	-
Maximum total travel force, 2-pole (N)		-	-	35	15	-
Pretravel (mm)		1.1	1.1	1.1	1.1	1.1
Total travel (mm)		2.2	6	6	6	2.2
Ambient operating temperature (°C)		-40 → +85	-40 → +85	-40 → +85	-40 → +85	-40 → +85
Mechanical life (operations)		10 <sup>6</sup>	5 x 10 <sup>5</sup>	10 <sup>6</sup>	10 <sup>6</sup>	10 <sup>6</sup>
Weight, 1-pole (g)		26	24	30	40	29
Weight, 2-pole (g)		39	34	43	53	42

\* Push slightly for momentary action. Fully push for maintained action, to latch, then to unlatch  
 \*\* One side momentary, the other side maintained  
 \*\*\* Please consult us

### Additional specifications

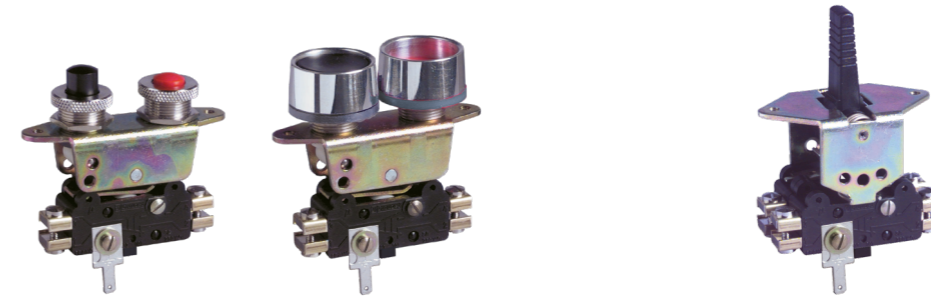
- Buttons, toggles: POM, PA66 (83502, 83507), nickel-plated brass (83522)
- Mounting brackets: zinc-plated steel
- Barrels, knurled bezels, nuts: nickel-plated brass
- Button collars: chrome-plated ABS (83533, 83535)
- Contacts: silver alloy (gold-plated silver alloy: on request)
- Terminals: brass, copper nickel (W2)
- Sealing cap (accessory): silicone rubber
- Degree of protection: IP40 (button side), IP50 with cap (accessory)
- Protection against electric shock: Class I (see also "installation recommendations")
- Rated insulation voltage U<sub>i</sub>: 250 V (for U<sub>i</sub> 400 V, please consult us)
- Impulse withstand voltage U<sub>imp</sub>: 2.5 kV
- Pollution degree: 3
- Conformity / Certifications: on request /

### Product adaptations



- › Functions on request: normally closed (R) or normally open (C) SPST microswitches
- › 3-pole configurations: 835--6 (except for 83515, 83516, 83517)
- › High DC switching capacity: 5 A 250 V<sub>DC</sub> (with 83154 microswitches)
- › Dual-current variants with gold-plated contacts for use from 10mA to 5A
- › Built-in screw connections (with 83112 microswitches)
- › Solder connections on front face (with 83109 microswitches)
- › Sealing cap accessory for IP50 protection on button side (for 83502, 83507, 83513, 83535)
- › Red button on 83507 and 83535 models
- › High operating temperature: +125 °C (on 83507, 83513, 83522)
- › cURus approved models

Standard product    Product made to order    ● Contact us



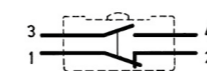
### Main specifications (continued)

Tandem buttons		Toggles			Action	
Maintained		Momentary	Maintained	Momentary + Maintained **		
Standard	Recessed buttons	3 positions Auto-return to center	3 positions	3 positions Auto-return to center on momentary side	Features	
83502	83533	83515	83516	83517		
					Func. Conn.	
83502005	83533002	83515006	83516002	●	I W1	
83502002	83533003	83515010	●	●	I W2	
83502008	83533005	●	●	●	I W3	
83502306	●	83515302	83516303	●	I W1	
83502302	●	83515301	83516301	●	I W2	
●	●	●	●	●	I W3	
Electrical		Electrical			Electrical	
10	10	10	10	10	Nom rating (A)	
17.5	17.5	17.5	17.5	17.5	Therm rating (A)	
Mechanical		Mechanical			Mechanical	
20	20	8	8	8	OF max, 1p (N)	
20	20	10	10	10	OF max, 2p (N)	
-	-	-	-	-	TTF max, 1p (N)	
-	-	-	-	-	TTF max, 2p (N)	
-	-	± 16°	-	± 16°	PT (mm)	
4	4	± 24°	± 24°	± 24°	TT (mm)	
-40 → +85	-40 → +85	-40 → +85	-40 → +85	-40 → +85	Temp (°C)	
5 x 10 <sup>5</sup>	5 x 10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>	Mech. life (op)	
53	54	50	50	50	Weight, 1p (g)	
64	70	71	71	71	Weight, 2p (g)	

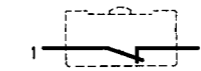
### Principles (per pole)

#### Double break snap-action switch

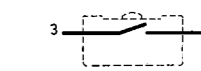
##### Changeover - SPDT (form Za):



##### Normally closed - SPST-NC (form Y)

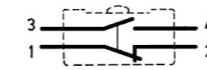


##### Normally open - SPST-NO (form X)



Both circuits must be used at same polarity

#### Changeover - 2 x SPDT (2 x form Za): for 83515/83516/83517



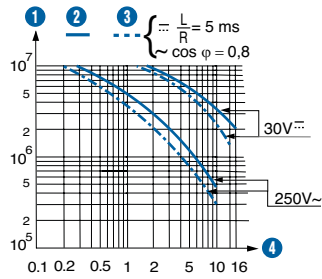
As standard: each SPDT microswitch is operated by one lever maximum position

As adaptation: both SPDT microswitches can be simultaneously operated by one lever maximum position ; the other maximum position being locked. (SP3218)

Standard product    Product made to order    ● Contact us

**Curves**

**Operating curve for types  
8350 / 8351 / 8352 / 8353**



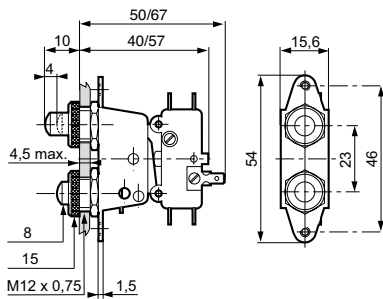
- 1 Number of cycles
- 2 Resistive circuit
- 3 Inductive circuit
- 4 Current in Amps

The operating curve relates to contact life, but switch durability is also limited by mechanical life of operating device: see "Mechanical life"

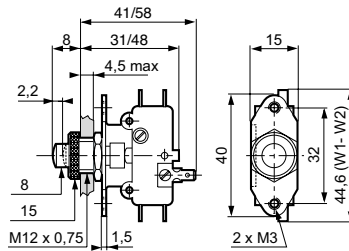
**Dimensions**

**Products**

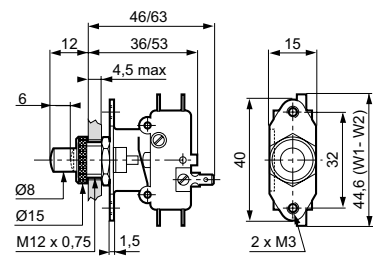
**83502**



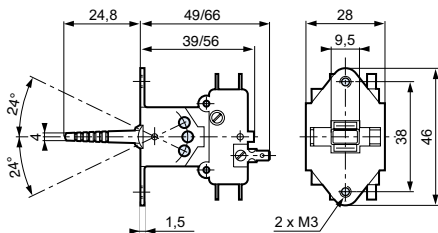
**83507**



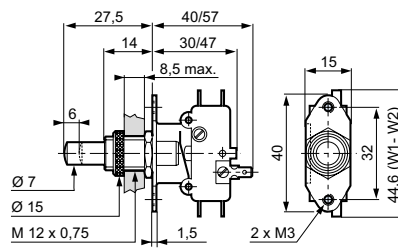
**83513**



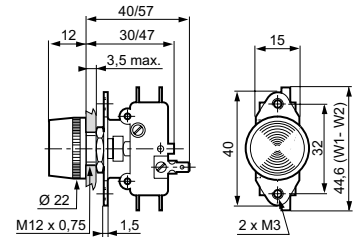
**83515 - 83516 - 83517**



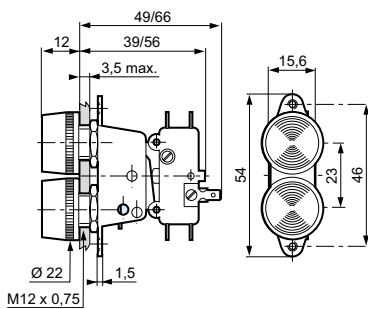
**83522**



**83535**



**83533**



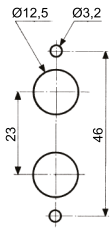
**Recommended tightening torques:**

Fixing by M3 screws: 0.8 to 1.2 N.m

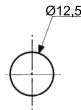
Fixing by M12 x 0.75 barrel nut and knurled bezel: 2 to 4 N.m

## Panel cutouts

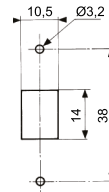
83502 - 83533



83507 - 83513 - 83522 - 83535

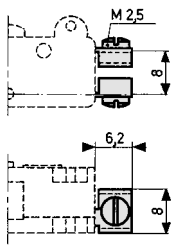


83515 - 83516 - 83517

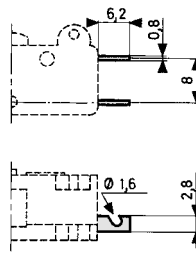


## Connections

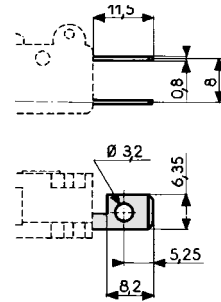
W1 screw with clamp



W2 solder

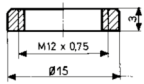


W3 quick-connect 6.3 x 0.8

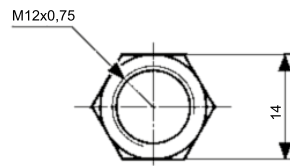


## Mounting accessories

Knurled nut

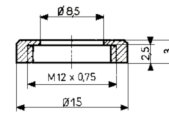


Hexagonal nut



Thickness: 1.5

Knurled bezel



## Mounting accessories

Part numbers for accessories

70162306

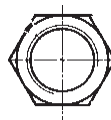
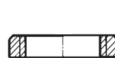
70602118

70602117

Knurled nut

Hexagonal nut-M12

Knurled bezel-M12



## Installation recommendations

See "Basic technical concepts"

For 83522: to ensure protection against electric shock, direct manual operation on the metal plunger is not permitted above 48 V.

## How to order

Use the 8 digit part numbers when they are defined

Other cases, precise:

Type of switch/nb of poles - Function - Connection - UL approval\* - Adaptation\* + Mounting accessories\*

\* if needed

Example: 835073 | W3 UL

## Warning:

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