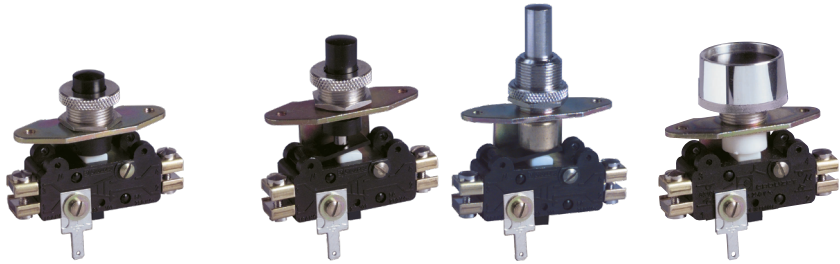


PUSHBUTTONS AND TOGGLES - MINIATURE

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 $\overline{\text{---}}$ to 10 A 250 V $\sim$
- › Operating temperature -40 °C up to +125 °C
- › Choice of connections



Main specifications						
		Pushbuttons				
		Action	Momentary	Momentary + Maintained*	Momentary	Momentary
		Features	Standard	Long travel	Long travel	Recessed button
			83507	83553 ***	83513	83522
Function	Connections					
1-pole (835--0)	I (changeover)	W1 (screw)	83507004	●	83513003	83522011
	I (changeover)	W2 (solder)	83507009	83553003	83513005	83522005
	I (changeover)	W3 (QC 6.3x0.8)	83507011	●	83513010	83522016
2-pole (835--3)	I (changeover)	W1 (screw)	83507310	●	83513309	●
	I (changeover)	W2 (solder)	83507304	●	83513301	83522302
	I (changeover)	W3 (QC 6.3x0.8)	●	●	●	83535306
Electrical characteristics						
Rating nominal / 250 V AC (A)			10	10	10	10
Rating thermal / 250 V AC (A)			17.5	17.5	17.5	17.5
Mechanical characteristics						
Maximum operating force, 1-pole (N)			4	4/25	4	4
Maximum operating force, 2-pole (N)			8	8/25	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
Total travel (mm)			2.2	6	6	2.2
Ambient operating temperature (°C)			-40 → +85	-40 → +85	-40 → +85	-40 → +85
Mechanical life (operations)			10 ⁶	5 x 10 ⁵	10 ⁶	10 ⁶
Weight, 1-pole (g)			26	24	30	40
Weight, 2-pole (g)			39	34	43	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

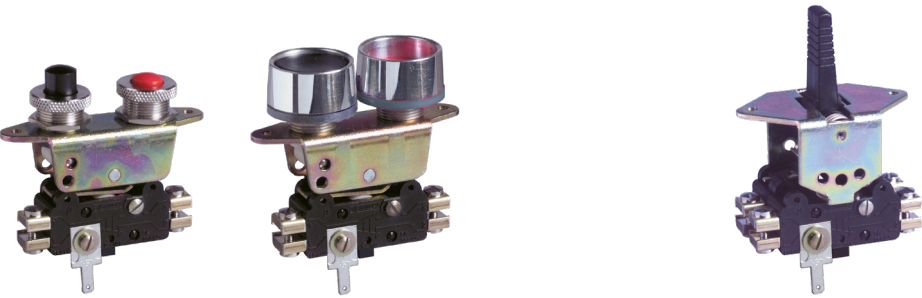
Additional specifications			
- Buttons, toggles: POM, PA66 (83502, 83507), nickel-plated brass (83522) - Mounting brackets: zinc-plated steel - Barrels, knurled bezels, nuts: nickel-plated brass - Button collars: chrome-plated ABS (83533, 83535) - Contacts: silver alloy (gold-plated silver alloy: on 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 Ui: 250 V (for Ui 400 V, please consult us) - Impulse withstand voltage Uimp: 2.5 kV - Pollution degree: 3		
	- Conformity / Certifications: US 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 $\overline{\text{---}}$ (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, 83553)
- › 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

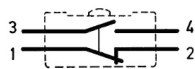


Main specifications (continued)						
Tandem buttons		Toggles				
Maintained		Momentary	Maintained	Momentary + Maintained **	Action	
Standard	Recessed buttons	3 positions Auto-return to center	3 positions	3 positions Auto-return to center on momentary side	Features	
83502	83533	83515	83516	83517		
					Func.	Conn.
83502005	83533002	83515006	83516002	●	1-pole (835--0)	W1
83502002	83533003	83515010	●	●		W2
83502008	83533005	●	●	●		W3
83502306	●	83515302	83516303	●	2-pole (835--3)	W1
83502302	●	83515301	83516301	●		W2
●	●	●	●	●		W3
					Electrical	
10	10	10	10	10	Nom rating (A)	
17.5	17.5	17.5	17.5	17.5	Therm rating (A)	
					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 ⁵	5 x 10 ⁵	10 ⁵	10 ⁵	10 ⁵	Mech. life (op)	
53	54	50	50	50	Weight, 1p (g)	
64	70	71	71	71	Weight, 2p (g)	

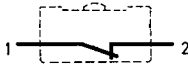
Principles (per pole)

Double break snap-action switch

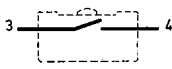
Changeover - SPDT (form Za):



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



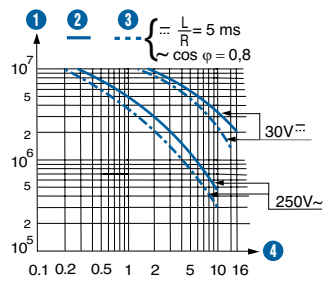
As standard: each SPDT microswitch is operated by one lever maximum position

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



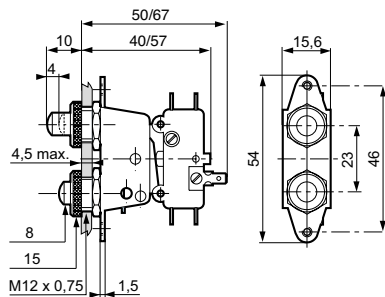
- 1 Number of cycles
- 2 Resistive circuit
- 3 Inductive circuit
- 4 Current in Amps

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

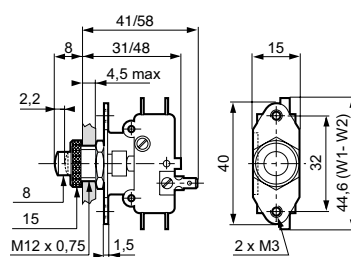
Dimensions

Products

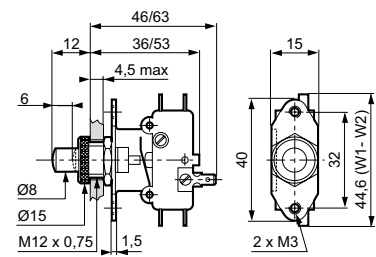
83502



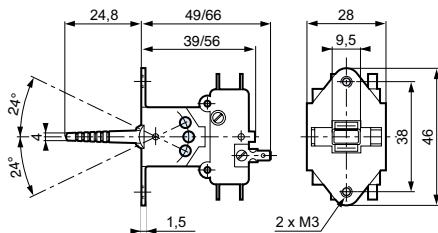
83507



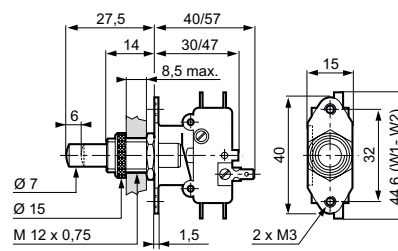
83513



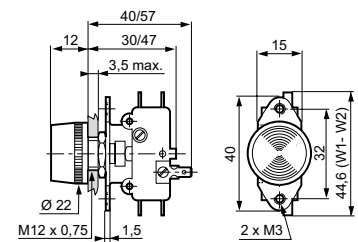
83515 - 83516 - 83517



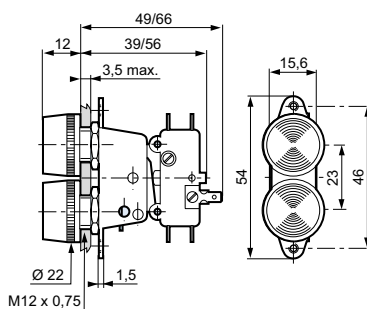
83522



83535



83533



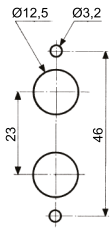
Recommended tightening torques:

Fixing by M3 screws: 0.8 to 1.2 N.m

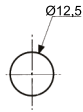
Fixing by M12 x 0.75 barrel nut and knurled bezel: 2 to 4 N.m

Panel cutouts

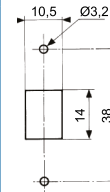
83502 - 83533



83507 - 83513 - 83522 - 83535

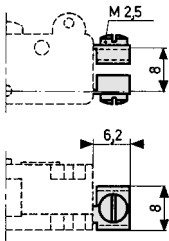


83515 - 83516 - 83517

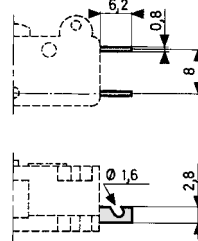


Connections

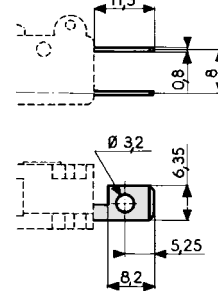
W1 screw with clamp



W2 solder



W3 quick-connect 6.3 x 0.8



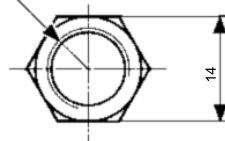
Mounting accessories

Knurled nut



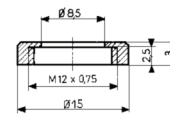
Hexagonal nut

M12x0,75



Thickness: 1.5

Knurled bezel



Mounting accessories

Part numbers for accessories

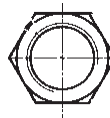
70162306

Knurled nut



70602118

Hexagonal nut-M12



70602117

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:

The product information contained in this catalogue is given purely as information and does not constitute a representation, warranty or any form of contractual commitment. Crouzet and its subsidiaries reserve the right to modify their products without notice. It is imperative that we should be consulted over any particular use or application of our products and it is the responsibility of the buyer to establish, particularly through all the appropriate tests, that the product is suitable for the use or application. Under no circumstances will our warranty apply, nor shall we be held responsible for any application (such as any modification, addition, deletion, use in conjunction with other electrical or electronic components, circuits or assemblies, or any other unsuitable material or substance) which has not been expressly agreed by us prior to the sale of our products.

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Crouzet:

<u>83522302</u>	<u>83515010</u>	<u>83516303</u>	<u>83522005</u>	<u>83522011</u>	<u>83516002</u>	<u>83515302</u>	<u>83516301</u>	<u>83533002</u>	<u>83515006</u>
<u>83533003</u>	<u>83515301</u>	<u>83502306</u>	<u>83538001</u>	<u>83538301</u>	<u>83513301</u>	<u>83537305</u>	<u>83538003</u>	<u>83535306</u>	<u>83538008</u>
<u>83538302</u>	<u>83507310</u>	<u>83502002</u>	<u>83535007</u>	<u>83502008</u>	<u>83507009</u>	<u>83507004</u>	<u>83513005</u>	<u>83507304</u>	<u>83535021</u>
<u>83535012</u>	<u>83537008</u>	<u>83513003</u>	<u>83507011</u>	<u>83537006</u>					