

# LIMIT SWITCHES - SUBMINIATURE

## 83581

- › Very small size for easy integration in tight spaces
- › Threaded barrel attachment for precise setting
- › IP67/IP69 protection
- › Operating temperature -40 °C up to +105 °C
- › Low operating force
- › Ratings from 1 mA 4 V<sub>DC</sub> to 8 A 250 V<sub>AC</sub> and 1/4 hp 125-250 V<sub>AC</sub>
- › Wire lead or cable output



### Main specifications

			Plunger 835810	Roller plunger 835811	Transverse roller plunger 835811 G/90
Type	Function	Connections			
Standard	I (changeover)	D0.5 (wires, right)	83581001	83581101	83581102
Standard	I (changeover)	G0.5 (wires, left)	•	•	•
Standard	I (changeover)	C0.5 (cable, left)	83581003	83581109	83581108
Standard	I (changeover)	Y0.5 (cable, right)	•	•	•
Standard	I - R - C	D - G - C - Y *	•	•	•
Dual-current	I - R - C	D - G - C - Y *	• (835818)	• (835819)	• (835819 G/90)
* wire length or cable length on demand					
Electrical characteristics					
Operational current / 250 VAC - Standard (Ie) A			8	8	8
Operational current / 250 VAC - Dual-current (Ie) A			5 **	5 **	5 **
Thermal current - Standard (Ith) A			10	10	10
Thermal current - Dual-current (Ith) A			6	6	6
Mechanical characteristics					
Max. Operating force (N)			5	5	5
Max. Total travel force (N)			16	12	12
Max. Allowable overtravel force (N)			25	25	25
Max. Pretravel (mm)			2	2	2
Total travel (mm)			6	4	4
Max. Differential travel (mm)			0.8	0.8	0.8
Min. Overtravel (mm)			4	2.5	2.5
Ambient operating temperature, wires (°C)			-40 → +105	-40 → +105	-40 → +105
Ambient operating temperature, cable (°C)			-40 → +90	-40 → +90	-40 → +90
Mechanical life (operations)			10 <sup>5</sup>	10 <sup>5</sup>	10 <sup>5</sup>
Weight (g)			40	45	45

### Additional specifications

- Case: PBT GF (UL 94-V0 / GWFI 960 °C)
- Plunger, Roller: nickel-plated brass
- Barrel, Nuts: nickel-plated brass
- Membrane: fluorosilicone rubber
- Contacts: silver alloy, micro-profile  
gold alloy on silver alloy, crossbar (dual-current)
- Wire leads, cable: copper, PVC insulated
- Degree of protection: IP67/IP69
- Recommended actuating speed: 0.01 mm/s to 0.5 m/s
- Max tightening torque: 9 N.m
- Rated insulation voltage U<sub>i</sub> : 250 V
- Impulse withstand voltage U<sub>imp</sub>: 2.5 kV
- Pollution degree: 3
- Protection against electric shock: Class I (connections D - G - Y);  
Class II (connection C) (see also  
«installation recommendations»)
- Conformity / Certifications: cRU<sub>us</sub> on request / CE ENEC

### Product adaptations



- › Special cables or wires, special lengths, full wiring with custom connector
- › Cable output for 105 °C operating temperature
- › Plunger with ball for lateral approach from any direction
- › Plastic plunger for reduced friction, silent operation and/or corrosion resistance
- › Longer threaded barrel for increased adjustment range and/or thick panel mounting
- › Increased plunger travel
- › AgSnO<sub>2</sub> contacts for very high inrush currents (lamp and capacitive loads)
- › Two-pole/DPDT versions
- › cURus approved versions

Standard product

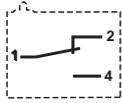
Product made to order



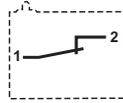
Contact us

## Principles

Single break snap-action switch  
Changeover - SPDT (form C)



Normally closed - SPST-NC (form B)

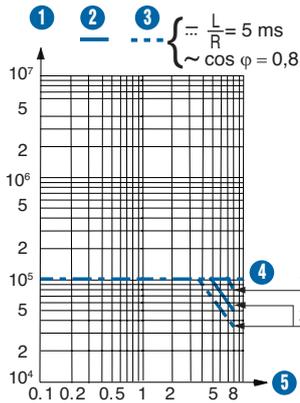


Normally open - SPST-NO (form A)

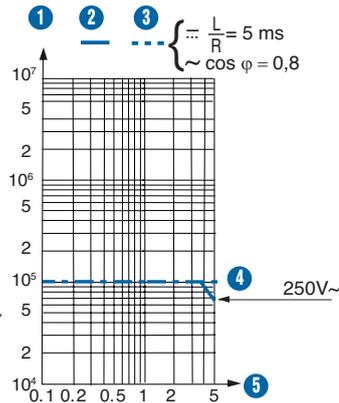


## Curves

Operating curve for type 83581  
Standard



Operating curve for 83581  
Dual-current



Making & breaking capacities IEC/EN 60947-5-1 (6000 cycles)

	83581 Standard	83581 Dual-current
AC-12 (resistive load)	8 A 24 V~	5 A 24 V~
	8 A 250 V~	5 A 250 V~
AC-15 (electromagnetic load)	4 A 24 V~	4 A 24 V~
	2.5 A 250 V~	2.5 A 250 V~
DC-12 (resistive load)	8 A 24 V---	5 A 24 V---
DC-13 (electromagnetic load)	2 A 24 V---	2 A 24 V---

For other ratings please consult us

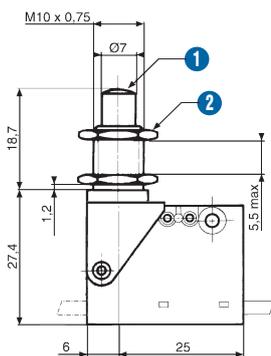
- 1 Number of cycles
- 2 Resistive circuit
- 3 Inductive circuit
- 4 Mechanical life limit
- 5 Current in Amps

\*\* Dual-current models (835818 and 835819) are designed to operate equally well on low-current (1 mA 4 V minimum recommended) or medium-current (5 A maximum) circuits. However, a given product should only be used to switch one type of circuit during its working life.

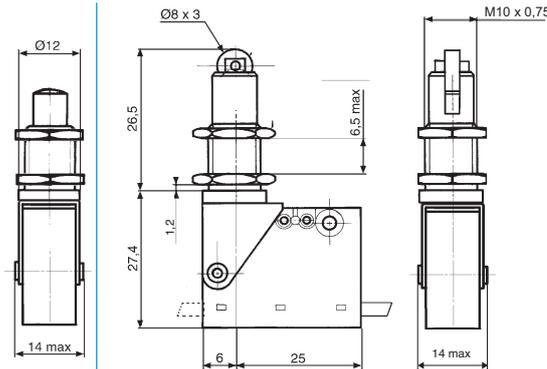
## Dimensions

### Products

835810 / 835818



835811 / 835819



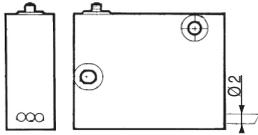
8385811 G/90 / 835819 G/90



- 1 R10 spherical
- 2 Nuts 14 across flats Thickness 2

## Connections

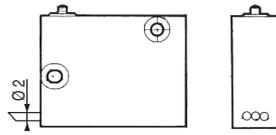
### D wire output on right



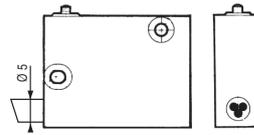
#### Wire characteristics:

1: Black (common)  
 2: Brown (NC)  
 4: Blue (NO)  
 Cross section: 1 mm<sup>2</sup>  
 Standard length: 0.5 m  
 Other lengths on request (length in meters: e.g. 1.5)

### G wire output on left



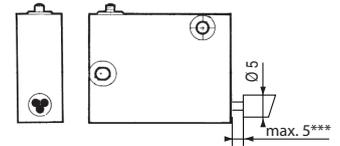
### C cable output on left



#### Cable characteristics:

1: Black (common) 2: Brown (NC) 4: Grey (NO)  
 except NC or NO versions: Black - Red  
 Cross section: 3 x 0.75 or 2 x 0.75 mm<sup>2</sup>  
 Standard length: 0.5 m  
 Other lengths on request (length in meters: e.g. 1.5)

### Y cable output on right



\*\*\*Outer jacket stripping

## Installation recommendations

See "Basic technical concepts".

Metal barrel doesn't need to be earthed.

## How to order

Use the 8 digit part numbers when they are defined

Other cases, please precise: Type of microswitch - Function - Connection - Adaptation\*

\* if needed

Example: 835819 G/90 R Y1.5



Model with short barrel and two  
 Ø3 fixing holes for even smaller  
 footprint (SP4978)

### 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.