

**Rotary Head, Momentary Action with Lever and Plastic Roller 050**  
**4 Positions - 90 degrees IP66**

<u>Features</u>	<u>Housing</u>	<u>Action</u>	<u>Part Number</u>
050 Offset 47 Positive Break	Thermoplastic case with double insulation and metal actuator head	Independent Snap NC+NO	<b><u>83853305</u></b>
050 Offset 47 Positive Break	Thermoplastic case with double insulation and metal actuator head	Dependent Action NC+NO	<b><u>83853315</u></b>
050 Offset 47 Positive Break	Metal bodies and actuator head	Independent Snap NC+NO	<b><u>83852305</u></b>
050 Offset 47 Positive Break	Metal bodies and actuator head	Dependent Action NC+NO	<b><u>83852315</u></b>

**Rotary Head, Momentary Action with Lever and Plastic Roller 050**  
**4 Positions - 90 degrees IP66**

<u>Features</u>	<u>Housing</u>	<u>Action</u>	<u>Part Number</u>
050 Offset 53.5 Positive Break	Thermoplastic case with double insulation and metal actuator head	Independent Snap NC+NO	<b><u>83853306</u></b>
050 Offset 53.5 Positive Break	Thermoplastic case with double insulation and metal actuator head	Dependent Action NC+NO	<b><u>83853316</u></b>
050 Offset 53.5 Positive Break	Metal bodies and actuator head	Independent Snap NC+NO	<b><u>83852306</u></b>
050 Offset 53.5 Positive Break	Metal bodies and actuator head	Dependent Action NC+NO	<b><u>83852316</u></b>

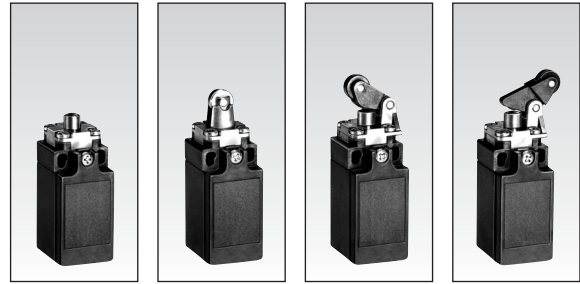
**Rotary Head, Momentary Action with Adjustable Lever and Plastic Roller 022**  
**4 Positions - 90 degrees IP66**

<u>Features</u>	<u>Housing</u>	<u>Action</u>	<u>Part Number</u>
022 Offset 32.5 or 45 Positive Break	Thermoplastic case with double insulation and metal actuator head	Independent Snap NC+NO	<b><u>83853303</u></b>
022 Offset 32.5 or 45 Positive Break	Thermoplastic case with double insulation and metal actuator head	Dependent Action NC+NO	<b><u>83853313</u></b>
022 Offset 32.5 or 45 Positive Break	Metal bodies and actuator head	Independent Snap NC+NO	<b><u>83852303</u></b>
022 Offset 32.5 or 45 Positive Break	Metal bodies and actuator head	Dependent Action NC+NO	<b><u>83852313</u></b>

**Rotary Head, Momentary Action with Adjustable Lever and Plastic Roller 050**  
**4 Positions - 90 degrees IP66**

<u>Features</u>	<u>Housing</u>	<u>Action</u>	<u>Part Number</u>
050 Offset 46 Positive Break	Thermoplastic case with double insulation and metal actuator head	Independent Snap NC+NO	<b><u>83853307</u></b>
050 Offset 46 Positive Break	Thermoplastic case with double insulation and metal actuator head	Dependent Action NC+NO	<b><u>83853317</u></b>

# Miniature Industrial Limit Switches Series 83 852 / 83 853 EN 50047



## Conform to the following standards :

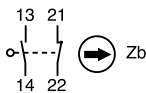
IEC 536-1, IEC 947-5-1, CSA C22.2 No. 14, EN 50047, EN 60947-5-1, EN 60204-1, NFC 20030 class I for 83 852 class II for 83 853 UL 508, VDE 0660/200.

**Degree of protection :** IP 66  
**Version :** 1 pole

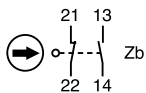
**Function :** Four-terminal double break contact element (form Zb) with positive opening NC contacts. The two moving contacts are electrically isolated from one another.

## Principle :

Independent snap action contact  
1 NO + 1 NC



Dependent action  
1 NO + 1 NC



Break Before Make

## Electrical characteristics

Assigned insulation voltage (U<sub>i</sub>) : 500 V  
Thermal rating (I<sub>th</sub>) : 10 A  
Use category : A300 - Q300  
AC15 = 6A/250 V - 1.9 A / 380 V  
DC 13 = 3A/24 V

## Short circuit test (under IEC 947.5.1 § 8.3.4)

- Current peak 1000 A at 250 V ~ 0.5 < cos φ < 0.7
- Short circuit protection (SCPD) : fuse 10 A gF
- Electrical protection by internal earth terminal (83 852)

## Connections :

Saddle washer and M 3.5 screw  
Max. wire cross-section : 2 x 1.5 mm<sup>2</sup> or 1 x 2.5 mm<sup>2</sup>

## Connection :

For 1/2" NPT

## Approvals :

UL listed A300 - Q300 - CSA A300 - Q300

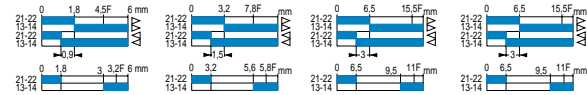
## Types

Thermoplastic case with double insulation and metal actuator head	Independent snap action NC + NO	<b>83 853 001</b>	<b>83 853 501</b>	<b>83 853 101</b>	<b>83 853 201</b>
	Dependent action NC + NO	<b>83 853 011</b>	<b>83 853 511</b>	<b>83 853 111</b>	<b>83 853 211</b>
Metal bodies and actuator heads	Independent snap action NC + NO	<b>83 852 001</b>	<b>83 852 501</b>	<b>83 852 101</b>	<b>83 852 201</b>
	Dependent action NC + NO	<b>83 852 011</b>	<b>83 852 511</b>	<b>83 852 111</b>	<b>83 852 211</b>
Control mechanisms - adjustable actuator heads 4 positions 90°		•	•	•	•
Steel plunger		•			
Plunger with steel roller			•		
Lever with plastic roller	vertical			•	
	lateral				•
<b>Rotary head, momentary action to right and left <sup>(1)</sup></b>					
With lever and plastic roller	Ø 22 offset 40				
	Ø 19 offset 53				
	Ø 50 offset 47				
	offset 53.5				
With adjustable lever and plastic roller	Ø 22 offset 32.5 or 45				
	offset 46				
	Ø 50 adjustable offset 53.5 to 69.5				
<b>With adjustable polyamide rod actuator</b>					
<b>Flexible metal lever</b>					

<sup>(1)</sup> Action either right or left according to position of head

## Sequence

Independent snap action  
Dependent action



Positive break operation



## Mechanical characteristics

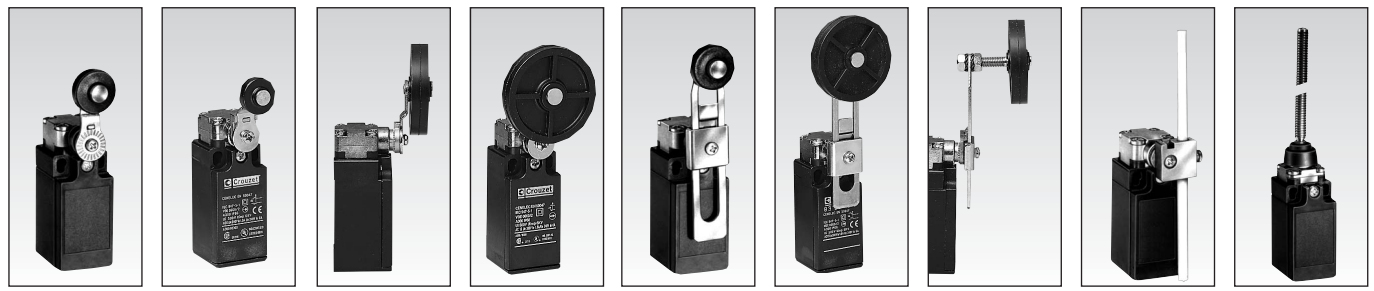
Minimum operating force	N (oz.)	10 (35.3)	10 (35.3)	9 (31.7)	9 (31.7)
Minimum total travel force	N (oz.)	12 (42.3)	12 (42.3)	10 (35.3)	10 (35.3)
Minimum positive opening force	N (oz.)	25 (88.2)	25 (88.2)	20 (70.5)	20 (70.5)
Minimum operating travel	mm (in.)	5 (.2)	5 (.2)	5 (.2)	5 (.2)
Minimum positive opening travel	mm (in.)	6 (.24)	6 (.24)	6.5 (.247)	6.5 (.247)
Differential travel	mm (in.)	1.5 (.06)	1.5 (.06)	1.5 (.06)	1.5 (.06)
Max. total travel	mm (in.)	6 (.24)	6 (.24)	6 (.24)	6 (.24)
Mechanical life (millions of operations) mini.		15	15	15	15
Temperature limits	Use °C (°F)	-25+80(-13+176)	-25+80(-13+176)	-25+80(-13+176)	-25+80(-13+176)
	Stored °C (°F)	-40+80(-40+176)	-40+80(-40+176)	-40+80(-40+176)	-40+80(-40+176)
Degree of protection		IP 66	IP 66	IP 66	IP 66
Weight	Series 83 853 g (oz.)	90 (3.2)	100 (3.5)	100 (3.5)	105 (3.7)
	Series 83 852 g (oz.)	170 (6)	180 (6.3)	180 (6.3)	180 (6.3)

## Other information

For other contact types and accessories or special modes of operation : please consult us.  
For dimensions see page 3/38.

### Replacement contact block

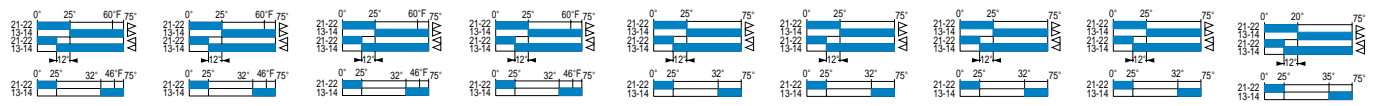
Part number	Configurations	Function
83157401	SPDT	<STD>
83157402	SPDT	Break before make
83157403	SPDT	Make before break
83157404	2 NO	DPST - Normally open
83157405	2 NC	DPST - Normally closed



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83 853 301	83 853 302	83 853 305	83 853 306	83 853 303	83 853 307	83 853 308	83 853 304	83 853 601
83 853 311	83 853 312	83 853 315	83 853 316	83 853 313	83 853 317	83 853 318	83 853 314	83 853 611
83 852 301	83 852 302	83 852 305	83 852 306	83 852 303	83 852 307	83 852 308	83 852 304	83 852 601
83 852 311	83 852 312	83 852 315	83 852 316	83 852 313	83 852 317	83 852 318	83 852 314	83 852 611

•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•
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•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•	•



28cmN (40inoz)	28cmN (40inoz)	28cmN (40inoz)	28cmN (40inoz)	28cmN (40inoz)	28cmN (40inoz)	28cmN (40inoz)	28cmN (40inoz)	3 (10)
37cmN (52inoz)	37cmN (52inoz)	37cmN (52inoz)	37cmN (52inoz)	37cmN (52inoz)	37cmN (52inoz)	37cmN (52inoz)	37cmN (52inoz)	4.5 (16)
75cmN (106inoz)	75cmN (106inoz)	75cmN (106inoz)	75cmN (106inoz)	75cmN (106inoz)	75cmN (106inoz)	75cmN (106inoz)	75cmN (106inoz)	
30°	30°	30°	30°	30°	30°	30°	30°	30°
60°	60°	60°	60°	60°	60°	60°	60°	60°
20°	20°	20°	20°	20°	20°	20°	20°	20°
75°	75°	75°	75°	75°	75°	75°	75°	75°
15	15	15	15	15	15	15	15	15
-25+80(-13+176)	-25+80(-13+176)	-25+80(-13+176)	-25+80(-13+176)	-25+80(-13+176)	-25+80(-13+176)	-25+80(-13+176)	-25+80(-13+176)	-25+80(-13+176)
-40+80(-40+176)	-40+80(-40+176)	-40+80(-40+176)	-40+80(-40+176)	-40+80(-40+176)	-40+80(-40+176)	-40+80(-40+176)	-40+80(-40+176)	-40+80(-40+176)
IP 66	IP 66	IP 66	IP 66	IP 66	IP 66	IP 66	IP 66	IP 66
130 (4.6)	130 (4.6)	130 (4.6)	130 (4.6)	130 (4.6)	153 (5.4)	153 (5.4)	153 (5.4)	130 (4.6)
205 (7.23)	205 (7.23)	205 (7.23)	205 (7.23)	205 (7.23)	225 (7.93)	225 (7.93)	225 (7.93)	200 (7.1)

**To order, specify :**

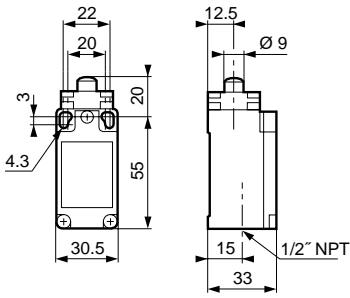
  Standard products

  Standard products, non stocked

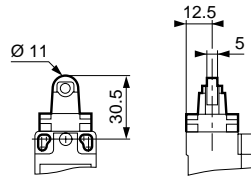
1 Part number  
 Example : Limit switch 83 853 001

# Dimensions of 83 852 / 83 853 EN 50047

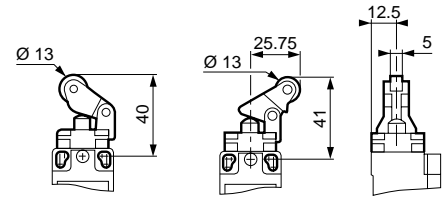
83 852 001/011  
83 853 001/011



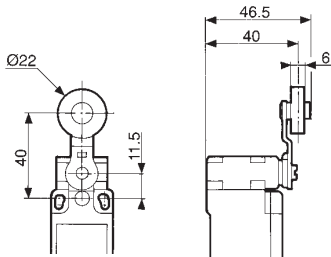
83 852 501/511  
83 853 501/511



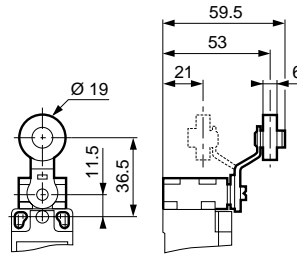
83 852 101 - 201/211  
83 853 101 - 201/211



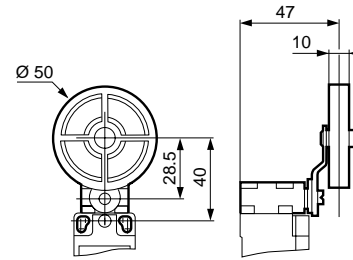
83 852 301/311  
83 853 301/311



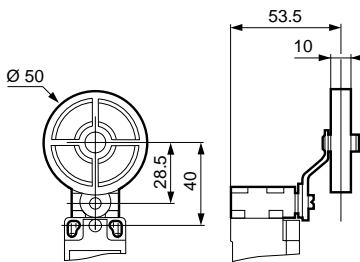
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83 853 302/312



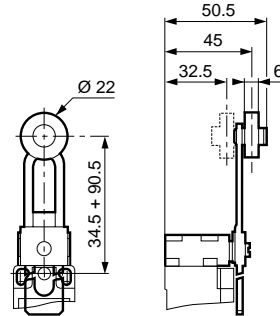
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83 853 305/315



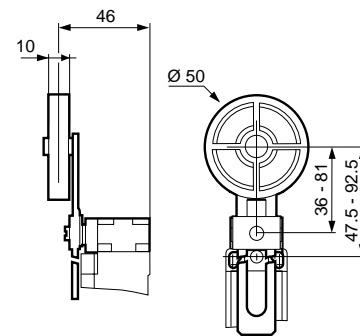
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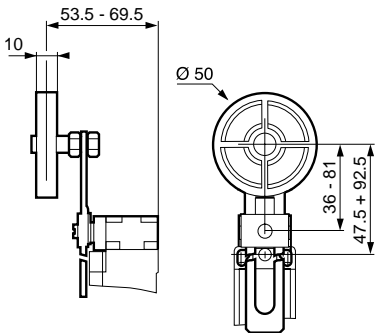
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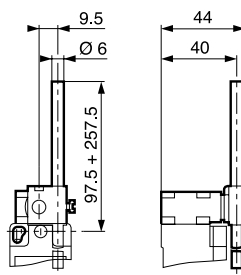
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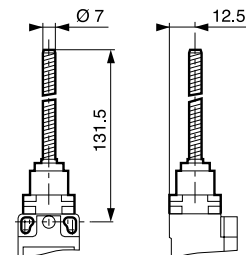
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83 852 304/314  
83 853 304/314



83 852 601/611  
83 853 601/611



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