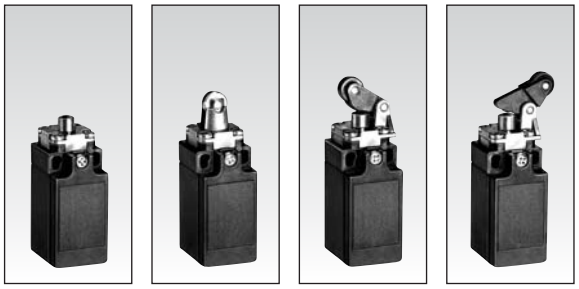
Miniature Industrial Limit Switches Series 83 852 / 83 853 EN 50047



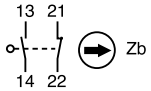
Conform to the following standards :
IEC 536-1, IEC 947-5-1,
CSA C22.2 No. 14, EN 50047,
EN 60947-5-1, EN 60204-1,
NFC 20030 class I for 83 852
class II for 83 853
UL 508, VDE 0660/200.

Degree of protection : IP 66
Version : 1 pole

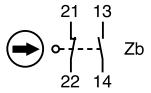
Function : Four-terminal double break contact element (form Zb) with positive opening NC contacts.
The two moving contacts are electrically isolated from one another.

Principle :

Independent snap action contact 1 NO + 1NC



Dependent action 1 NO + 1NC



Break Before Make

Electrical characteristics

Assigned insulation voltage (Ui) : 500 V
Thermal rating (Ith) : 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 mm² or 1 x 2.5 mm²

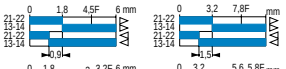
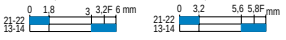
Connection :
For 1/2˝ NPT

Approvals :
UL listed A300 - Q300 -
CSA A300 - Q300

Types

Thermoplastic case with double insulation and metal actuator head	Independent snap action NC + NO		**83 853 001**	**83 853 501**	**83 853 101**	**83 853 201**
	Dependent action NC + NO		**83 853 011**	**83 853 511**	**83 853 111**	**83 853 211**
Metal bodies and actuator heads	Independent snap action NC + NO		**83 852 001**	**83 852 501**	**83 852 101**	**83 852 201**
	Dependent action NC + NO		**83 852 011**	**83 852 511**	**83 852 111**	**83 852 211**
Control mechanisms - adjustable actuator heads 4 positions 90°			●	●	●	●
Steel plunger			●			
Plunger with steel roller				●		
Lever with plastic roller	vertical				●	
	lateral					●
Rotary head, momentary action to right and left *(1)*						
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				
With adjustable polyamide rod actuator						
Flexible metal lever						

(1) 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.

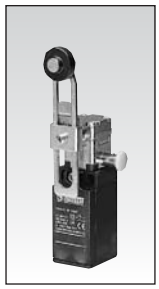
Replacement contact block

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



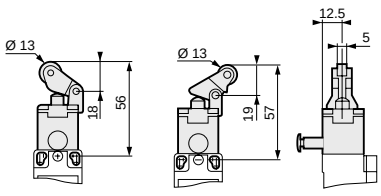




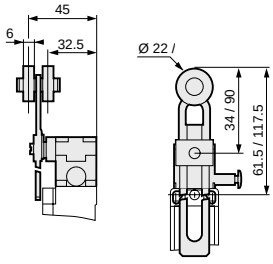



83 857 011	83 857 511	83 857 111	83 857 211	83 857 311 (Ø22) 83 857 315 (Ø50)	83 857 312 (Ø19) 83 857 316 (Ø50)	83 857 313 (Ø22) 83 857 317 (Ø50)	83 857 318 (Ø50)
83 856 011	83 856 511	83 856 111	83 856 211	83 856 311 (Ø22) 83 856 315 (Ø50)	83 856 312 (Ø19) 83 856 316 (Ø50)	83 856 313 (Ø22) 83 856 317 (Ø50)	83 856 318 (Ø50)
•	•	•	•	•	•	•	•
•	•	•	•	•	•	•	•
				•	•	•	
				•	•	•	
						•	
						•	
							•
10	9	9	9	(28)	(28)	(28)	(28)
12	10	10	10	(37)	(37)	(37)	(37)
2.5	2.5	20	20	(75)	(75)		
5	5	5	5	(30)	(30)	(30)	(30)
3.2	5.6	11	11	(46)	(46)		
1.5	1.5	1.5	1.5	(20)	(20)	(20)	(20)
6	6	6	6	(75)	(75)	(75)	(75)
1	1	1	1	1	1	1	1
-20 +80	-20 +80	-20 +80	-20 +80	-20 +80	-20 +80	-20 +80	-20 +80
-40 +80	-40 +80	-40 +80	-40 +80	-40 +80	-40 +80	-40 +80	-40 +80
IP 66	IP 66	IP 66	IP 66	IP 66	IP 66	IP 66	IP 66
145/230	155/240	150/240	150/240	190/270	190/270	210/300	230/320

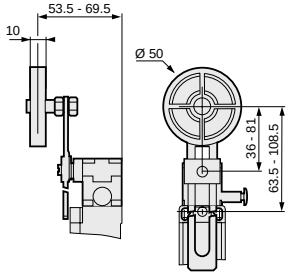
83 856 111 / 211 - 83 857 111 / 211



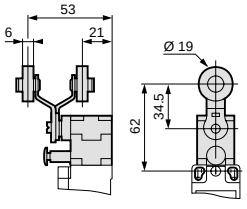
83 856 313 - 83 857 313



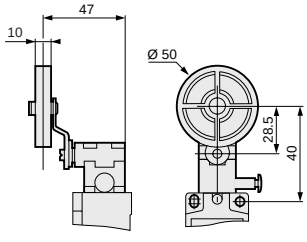
83 856 318 - 83 857 318



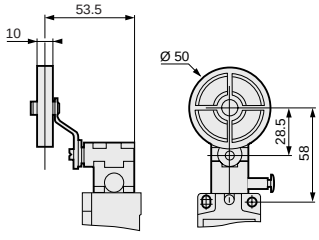
83 856 312 - 83 857 312



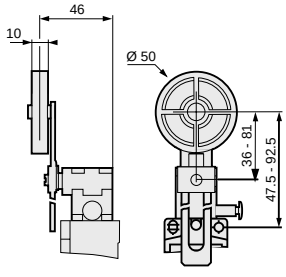
83 856 315 - 83 857 315



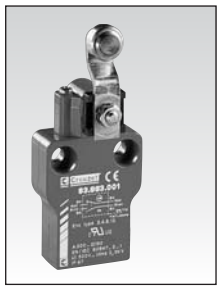
83 856 316 - 83 857 316



83 856 317 - 83 857 317

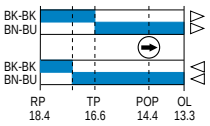


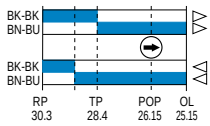


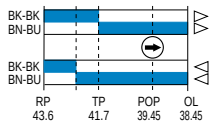



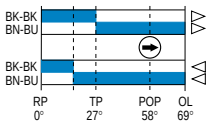

1

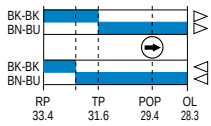
83 880 0	83 881 0 83 885 0	83 882 0 83 886 0	83 883 0	83 884 0
83 880 102	83 881 102	83 882 102	83 883 102	83 884 102
83 880 103	83 881 103	83 882 103	83 883 103	83 884 103
●	●	●	●	●
36 (10)	36 (10)	36 (10)	22 in.oz. (15cmN)	36 (10)
108 (30)	108 (30)	108 (30)	52 in.oz. (35cmN)	108 (30)
100 (28)	100 (28)	100 (28)	22 in.oz. (15cmN)	100 (28)
10	10	10	10	10
10.3 (290)	10.4 (295)	11.1 (315)	10.3 (290)	10.9 (310)



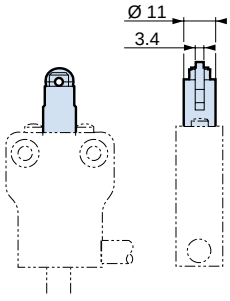




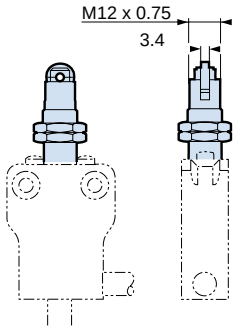




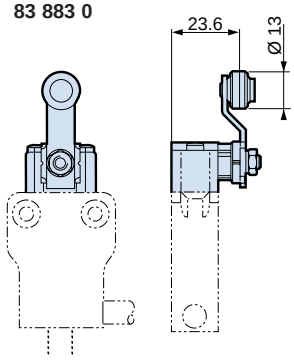
83 881 0



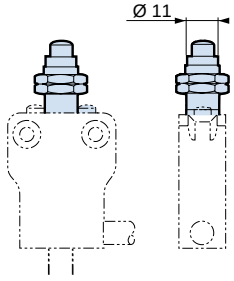
83 882 0



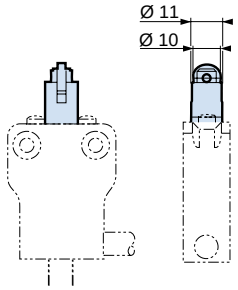
83 883 0



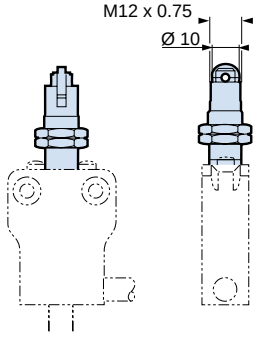
83 884 0



83 885 0



83 886 0



mm

To order, specify:

Standard products

2 Part number

Example: Limit switch 83 881 102

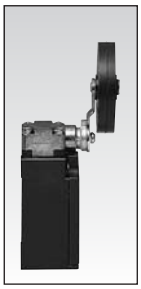
Standard products, non stocked

1 Type

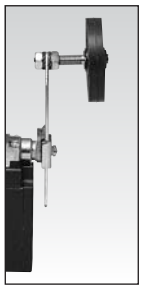
Examples: Limit switch 83 881 003 ; cable length = 3 m - Limit switch 83 881 006 ; cable length = 6 m

3











1

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
●	●	●	●	●	●	●	●	●
●								
	●							
		●						
			●					
				●				
					●			
						●		
							●	
								●
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°
60º	60º	60º	60º	60º	60º	60º	60º	
20º	20º	20º	20º	20º	20º	20º	20º	20º
75º	75º	75º	75º	75º	75º	75º	75º	75º
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

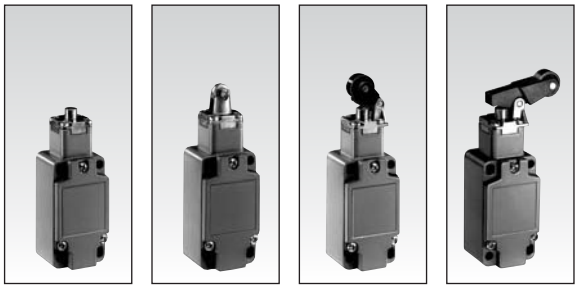
Standard products, non stocked

1 Part number

Example : Limit switch 83 853 001

Products and specifications subject to change without notice.

Industrial Limit Switches Series 83 862 EN 50041

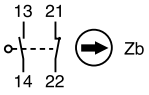


Conform to the following standards :
EN 50041, IEC 947-5-1, VDE 0660/200
UL 508, CSA C22.2 No.14
IEC 536-1, EN 60204-1, NFC 20030
class I

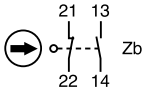
Degree of protection : IP 66

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 + 1NC



Dependent action
1 NO + 1NC



Break before make

Electrical characteristics :

Assigned insulation voltage (Ui) : 500 V
Thermal rating (Ith) : 10 A
Use category : A300 - Q300
AC15 = 6A/250 V - 1.9 A / 380 V
DC 13 = 3A/24 V

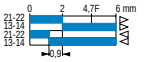
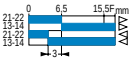
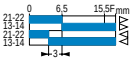
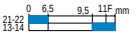
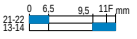
Short circuit test (under IEC 947.5.1 § 8.3.4)
- Current peak 1000 A at 250 V~0.5 < cos φ < 0.7
- Short circuit protection (SCPD) : fuse 10 A gF
- Electrical protection by internal earth terminal

Connections :
Saddle washer and M 3.5 screw
Max. wire cross-section : 2 x 1.5 mm² or 2.5 mm²

Connection :
1/2″ NPT

Approvals :
UL listed A300 - Q300 -
CSA A300 - Q300

Types

Dependent action NC + NO		**83 862 011**	**83 862 511**	**83 862 111**	**83 862 211**
Independent snap action NC + NO		**83 862 001**	**83 862 501**	**83 862 101**	**83 862 201**
Control mechanisms - adjustable actuator heads 4 positions 90°		●	●	●	●
Steel plunger		●			
Plunger with steel roller			●		
Lever with plastic roller	vertical			●	
	lateral				●
Rotary head, momentary action to clockwise and/or anti-clockwise (1)					
With lever and plastic roller	Ø 22 offset 43.5				
	Ø 19 offset 56				
	Ø 50 offset 50.5				
	Ø 50 offset 57				
With adjustable lever and plastic roller	Ø 22 offset 36 or 48				
	Ø 50 offset 49				
	adjustable offset 57 to 73				
With adjustable polyamide rod actuator					
Flexible metal lever					
Sequence	Independent snap action				
	Dependent action				
Positive break operation		⊕	⊕	⊕	⊕

Mechanical characteristics					
Minimum operating force	N (oz.)	10 (35.5)	10 (35.5)	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 travel	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 (.26)	6.5 (.26)
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)
Temperature limits 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	g (oz.)	305 (10.76)	315 (11.11)	320 (11.28)	325 (11.46)

(1) Action either right or left according to position of head

Accessories

Cover with status indicator (supplied loose)	24.30 V ~ ⎓	**79 250 290**	
	220 V ~	**79 250 291**	

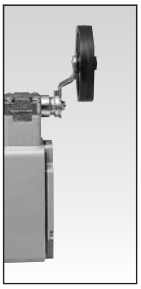
Replacement contact block

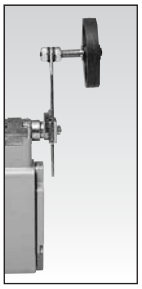
Part number	Configuration	Function
83157401	SPDT	<STD>
83157402	SPDT	Break before make
83157403	SPDT	Make before break
83157404	2 NO	DPST - Normally open
83157405	2 NC	DPST - Normally closed

Other information

For other contact types and accessories or special modes of operation : please consult us.
For dimensions see page 3/39.

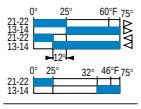
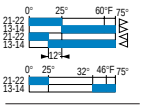
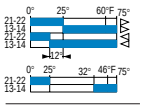
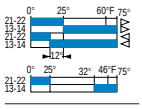
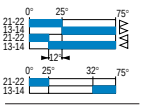
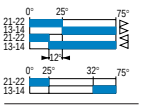
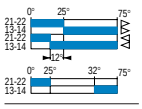
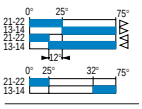
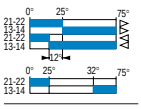




1

83 862 311 83 862 301	83 862 312 83 862 302	83 862 315 83 862 305	83 862 316 83 862 306	83 862 313 83 862 303	83 862 317 83 862 307	83 862 318 83 862 308	83 862 314 83 862 304	83 862 611 83 862 601
●	●	●	●	●	●	●	●	●
●				●	●	●	●	●
	●							
		●						
			●					
				●				
					●			
						●		
							●	
								●
								
								
28cmN (40inoz)	28cmN (40inoz)	28cmN (40inoz)	28cmN (40inoz)	28cmN (40inoz)	28cmN (40inoz)	28cmN (40inoz)	28cmN (40inoz)	3 (10.5)
37cmN (52inoz)	37cmN (52inoz)	37cmN (52inoz)	37cmN (52inoz)	37cmN (52inoz)	37cmN (52inoz)	37cmN (52inoz)	37cmN (52inoz)	4.5 (15.8)
75cmN (106inoz)	75cmN (106inoz)	75cmN (106inoz)	75cmN (106inoz)	75cmN (106inoz)	75cmN (106inoz)	75cmN (106inoz)	75cmN (106inoz)	
30º	30º	30º	30º	30º	30º	30º	30º	30º
60º	60º	60º	60º	60º	60º	60º	60º	
20º	20º	20º	20º	20º	20º	20º	20º	20º
75º	75º	75º	75º	75º	75º	75º	75º	75º
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
340 (12)	340 (12)	340 (12)	340 (12)	365 (12.8)	365 (12.8)	365 (12.8)	360 (12.7)	335 (11.8)

2

3

To order, specify :

Standard products

1 Part number

Example : Limit switch 83 860 001

Standard products, non stocked

1 Type 2 Accessory

Example : Limit switch 83 861 001 - Cover with status indicator 79 250 290