

## Compact prewired limit switch

- 8387 with cable output
- 8387 with connector output
- 8387 low level with cable or connector output
- 8388 with cable output

### General characteristics

<b>Conformity to standards</b>	IEC/EN 60947.5.1 including Annex K Dimensional conformity : NFC 63145 (8387 series) Low voltage directive : 2014/35 EU
<b>Protection against electric shock</b>	IEC/EN 61140 class 1, degree of pollution 3
<b>Degree of protection IEC 60529 - IEC 62262</b>	IP66/IP67/IP69 - IK07
<b>Degree of protection according to NEMA 250</b>	Type 1, 3, 4, 6, 13
<b>Connections</b>	H05-VVF cable 5x0.75 mm <sup>2</sup> (AWG19), ext. Ø 7.3 mm
<b>Operating temperature (°C)</b>	-25 → +70 °C (-40 → +70 °C : please consult us)

# Compact prewired limit switch

## → 8387 with cable output

- Metal case - «EN» size
- Positive opening operation
- IP66/IP67/IP69
- UL approved



### Main specifications

Characteristics		Type of output	Metal plunger
Standard		Cable length 1 m	<b>83 870 101</b>
Standard		Cable length 2 m	<b>83 870 102</b>
Standard		Cable length 3 m	<b>83 870 103</b>
Standard		Cable length 6 m	<b>83 870 106</b>
Plunger with 90° roller		Cable length 1 m	-
Plunger with 90° roller		Cable length 2 m	-
Plunger with 90° roller		Cable length 3 m	-
Plunger with 90° roller		Cable length 6 m	-
Mechanical characteristics			
Sequence			
Snap-action			
Minimum operating force (N)			10
Minimum operating torque (Nm)			-
Minimum total travel force (N)			30
Minimum total travel torque (Nm)			-
Min. positive opening force (N)			28
Min. positive opening torque (Nm)			-
Mechanical life (operations)			10 <sup>7</sup>
Vertical approach speed			10 mm/min → 0.5 m/s
Horizontal approach speed (30° cam)			-
Weight - 1m cable (g)			170

### General characteristics

Assigned impulse voltage (U <sub>imp</sub> ) - V	2500
Assigned insulation voltage (U <sub>i</sub> ) V	500
Thermal current (I <sub>th</sub> ) A	10
Low-load switching - Minimum voltage (V)	10
Low-load switching - Minimum current (mA)	40
Assigned working characteristics (EN 60 947.5.1, UL 508)	A300 = AC15 240 V 3 A / 120 V 6 A Alternating current Q150 = DC13 125 V 0.55 A Direct current
Electrical life according to IEC 60947-5-1 appendix C	250 V 3 A AC15 500.000 operations 24 V 8 W DC13 500.000 operations
Electrical protection	Integral protective earth conductor Short-circuit protection device : IEC/EN 60947-5-1 Fuse 6 AgG
Approvals	UL 508, UL 50

### Product adaptations



- Low current version with gold plated contacts (see «8387 low level»)
- Rear output (see dimensions)
- Protected plunger for harsh environment
- Special cable, length of cable/connector/stripping
- -40 °C operating temperature



Steel roller plunger	Metal plunger with threaded barrel	Steel roller plunger with threaded barrel	Steel roller lever (2 directions of attack)
83 871 101	83 874 101	83 872 101	83 873 101
83 871 102	83 874 102	83 872 102	83 873 102
83 871 103	83 874 103	83 872 103	83 873 103
83 871 106	83 874 106	83 872 106	83 873 106
83 875 101	-	83 876 101	-
83 875 102	-	83 876 102	-
83 875 103	-	83 876 103	-
83 875 106	-	83 876 106	-

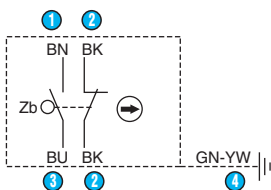
Steel roller plunger	Metal plunger with threaded barrel	Steel roller plunger with threaded barrel	Steel roller lever (2 directions of attack)
10	10	10	-
-	-	-	0.15
30	30	30	-
-	-	-	0.35
28	28	28	-
-	-	-	0.3
10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>
10 mm/min → 0.5 m/s	10 mm/min → 0.5 m/s	10 mm/min → 0.5 m/s	-
10 mm/min → 0.3 m/s	-	10 mm/min → 0.3 m/s	10 mm/min → 1.5 m/s
180	200	200	210

## Principles

### Function

Four-terminal double break two-way contact element (form Zb) with positive opening NC contacts. The 2 moving contacts are electrically isolated from one another.

### Snap-action contact

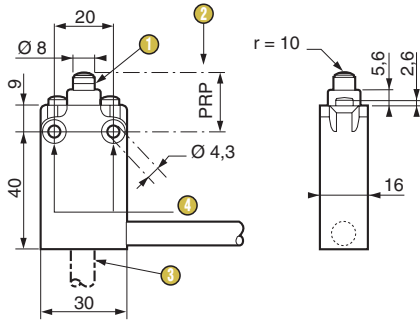


- 1 Brown
- 2 Black
- 3 Blue
- 4 Green-yellow

Dimensions

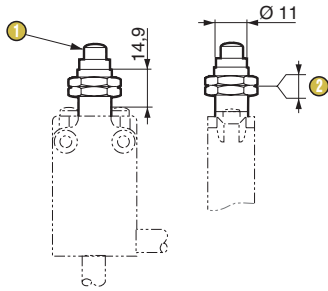
Product

83 870 1



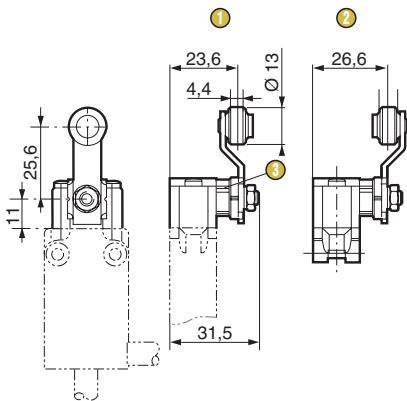
- 1 POP setting index
- 2 See sequence diagram
- 3 Rear output on request
- 4 Ø 8 x 4.3 - 4 counterbores

83 874 1



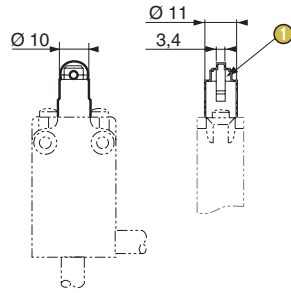
- 1 POP setting index
- 2 Max. thickness 8.5 mm

83 873 1



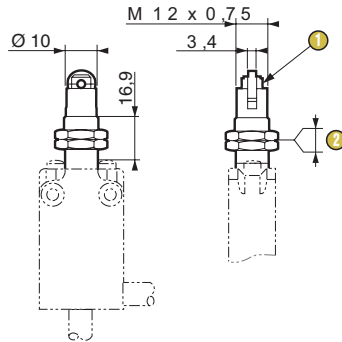
- 1 Offset A (standard mounting)
  - 2 Offset B (by turning the lever)
- For offset 13.6 or 36.6 mm: please consult us
- 3 POP setting index

83 871 1



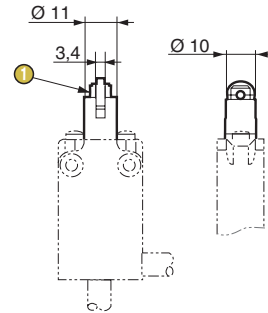
- 1 POP setting index

83 872 1



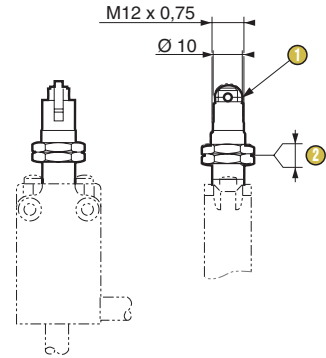
- 1 POP setting index
- 2 Max.tightening thickness 10.5

83 875 1



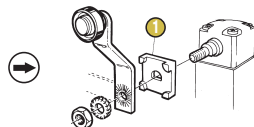
- 1 POP setting index

83 876 1

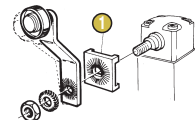


- 1 POP setting index
- 2 Max.tightening thickness 10.5

Lever angular settings



By 90° steps (standard mounting)



By 6° steps (by turning the block)

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# Compact prewired limit switch

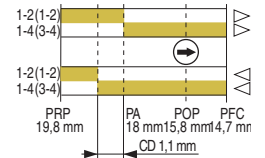
## → 8387 with connector output

- 4-pin or 5-pin M12 connectors
- Metal case - «EN» size
- Positive opening operation (4-pin models)
- IP66/IP67/IP69
- UL approved



### Main specifications

Characteristics		Type of output	Metal plunger
4-pin		Connector	<b>83 870 140</b>
4-pin / 90° roller		Connector	-
5-pin		Connector	<b>83 870 120</b>
5-pin / 90° roller		Connector	-
Mechanical characteristics			
Sequence			
Snap action			
Minimum operating force N (N.m)			10
Minimum total travel force N (N.m)			30
Min. positive opening force N (N.m)			28
Mechanical life (operations)			10 <sup>7</sup>
Vertical approach speed			10 mm/min → 0.5 m/s
Horizontal approach speed (30° cam)			-
Weight (g)			90
Comments			
4-pin : 1-2 / 1-4			
5-pin : (1-2) / (3-4)			



### General characteristics

Assigned impulse voltage (Uimp) - V	2500 (5-pin : 1500)
Assigned insulation voltage (Ui) V	250 (5-pin : 60)
Thermal current (Ith) A	4
Low-load switching - Minimum voltage (V)	10
Low-load switching - Minimum current (mA)	40
Assigned working characteristics (EN 60 947.5.1, UL 508)	C 300 Q 150 Ie = 4 A max/Ue = 250 V max (5-pin : Ie = 4 A max - Ue = 48 V max)
Electrical life according to IEC 60947-5-1 appendix C	250 V 2.5 A AC15 500.000 operations 24 V 8 W DC13 500.000 operations
Electrical protection	Integral protective earth conductor Short-circuit protection device : IEC/EN 60947.5.1 Fuse 2 A gG
Approvals	UL 508 (4 pins C300 - Q 150) , (5 pins 48 V AC/DC 4 A)

### Product adaptations



- Low current version with gold plated contacts (see «8387 low level»)
- Rear output (see dimensions)
- Protected plunger for harsh environment
- -40 °C operating temperature



Steel roller plunger	Metal plunger with threaded barrel	Steel roller plunger with threaded barrel	Steel roller lever (2 directions of attack)
<b>83 871 140</b>	<b>83 874 140</b>	<b>83 872 140</b>	<b>83 873 140</b>
<b>83 875 140</b>	-	<b>83 876 140</b>	-
<b>83 871 120</b>	<b>83 874 120</b>	<b>83 872 120</b>	<b>83 873 120</b>
<b>83 875 120</b>	-	<b>83 876 120</b>	-
10	10	10	(0.15)
30	30	30	(0.35)
28	28	28	(0.3)
10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>
10 mm/min → 0.5 m/s	10 mm/min → 0.5 m/s	10 mm/min → 0.5 m/s	-
10 mm/min → 0.3 m/s	-	10 mm/min → 0.3 m/s	10 mm/min → 1.5 m/s
100	120	120	130

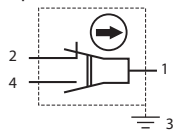
## Principles

### Function

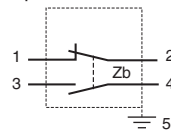
Double break two-way contact element with positive opening NC contacts (4-pin version). The 2 moving contacts are electrically isolated from one another (5-pin version).

### Snap-action contact

4-pin



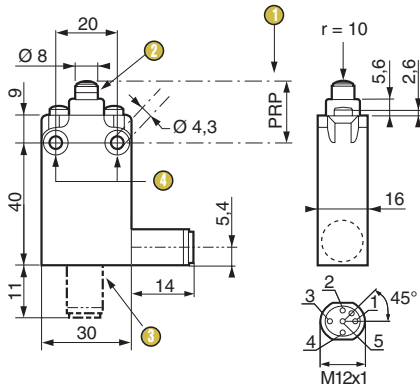
5-pin



Dimensions

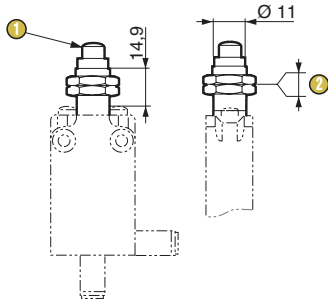
→ Product

83 870 1



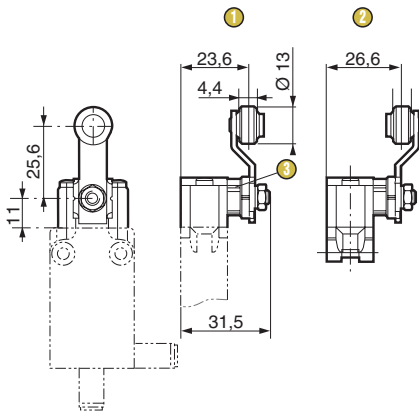
- 1 See sequence diagram
- 2 POP setting index
- 3 Rear output on request
- 4 Ø 8 x 4.3 - 4 counterbores

83 874 1



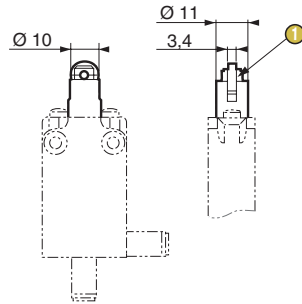
- 1 POP setting index
- 2 Max.tightening thickness 8.5

83 873 1



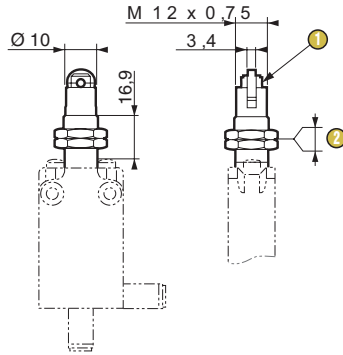
- 1 Offset A (standard mounting)
  - 2 Offset B (by turning the lever)
- For offset 13.6 or 36.6 mm: please consult us
- 3 POP setting index

83 871 1



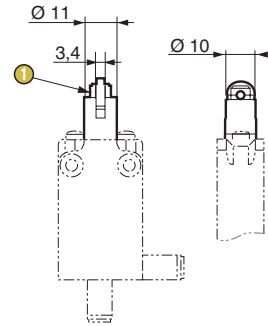
- 1 POP setting index

83 872 1



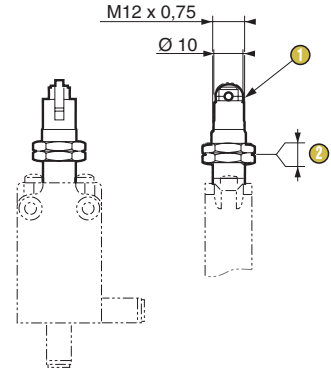
- 1 POP setting index
- 2 Max.tightening thickness 10.5

83 875 1



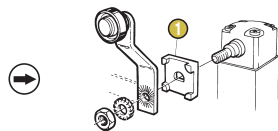
- 1 POP setting index

83 876 1

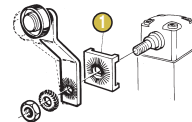


- 1 POP setting index
- 2 Max.tightening thickness 10.5

Lever angular settings



By 90° steps (standard mounting)



By 6° steps (by turning the blok)

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# Compact prewired limit switch

## → 8387 low level with cable or connector output

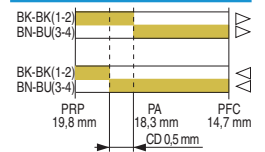
- Metal case - «EN» size
- Positive opening operation
- 5-pin M12 connector or cable output
- IP66/IP67/IP69
- UL approved



### Main specifications

#### Metal plunger

Characteristics	Type of output	
Standard	Cable 1 m long	<b>83 870 301</b>
Standard	Connector 5-pin	<b>83 870 320</b>
Plunger with 90° roller	Cable 1 m long	-
Plunger with 90° roller	Connector 5-pin	-
Mechanical characteristics		
Sequence		
Snap action		
Minimum operating force N (N.m)		10
Minimum total travel force N (N.m)		30
Mechanical life (operations)		10 <sup>7</sup>
Vertical approach speed		10 mm/min → 0.5 m/s
Horizontal approach speed (30° cam)		-
Weight - 1 m cable (g)		170
Comments		
Cable : BK-BK/BN-BU		
Connector : (1-2) / (3-4)		



### General characteristics

Assigned impulse voltage (U <sub>imp</sub> ) - V	1500
Assigned insulation voltage (U <sub>i</sub> ) V	60
Operating voltage	4 to 30 V
Operating current	1 to 100 mA
Electrical protection	Integral protective earth conductor Short-circuit protection device : IEC/EN 60947-5-1 Fuse 6 AgG (cable) or 2 AgG (connector)
Approvals	UL 508, 30 V AC/DC : 0.1A

### Product adaptations



- Rear output (see dimensions)
- Protected plunger for harsh environment
- Special cable, length of cable/connector/stripping
- -40 °C operating temperature





Steel roller plunger	Metal plunger with threaded barrel	Steel roller plunger with threaded barrel	Steel roller lever (2 directions of attack)
<b>83 871 301</b>	<b>83 874 301</b>	<b>83 872 301</b>	<b>83 873 301</b>
<b>83 871 320</b>	<b>83 874 320</b>	<b>83 872 320</b>	<b>83 873 320</b>
<b>83 875 301</b>	-	<b>83 876 301</b>	-
<b>83 875 320</b>	-	<b>83 876 320</b>	-
10	10	10	(0.15)
30	30	30	(0.35)
10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>	10 <sup>7</sup>
10 mm/min → 0.5 m/s	10 mm/min → 0.5 m/s	10 mm/min → 0.5 m/s	-
10 mm/min → 0.3 m/s	-	10 mm/min → 0.3 m/s	10 mm/min → 1.5 m/s
180	200	200	210

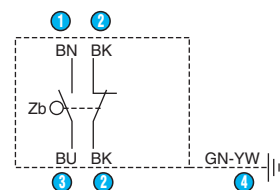
## Principles

### Function

Four-terminal double break two-way contact element (form Zb). The 2 moving contacts are electrically isolated from one another.

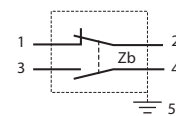
### Snap-action contact

Cable output



- 1 Brown
- 2 Black
- 3 Blue
- 4 Green-yellow

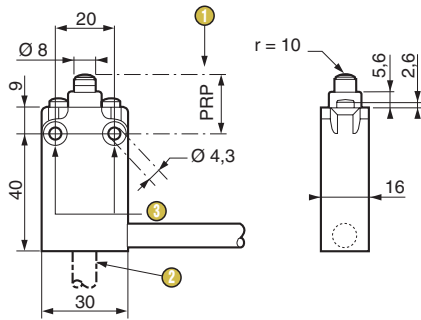
Connector output



Dimensions

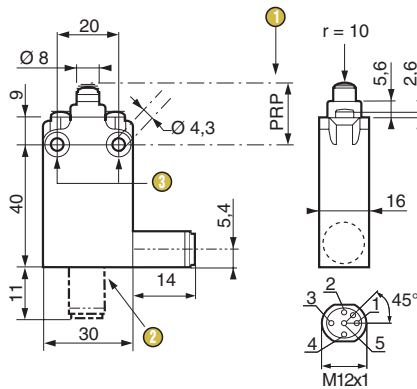
Product

83 870 3/Cable output



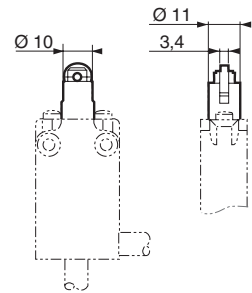
- 1 See sequence diagram
- 2 Rear output on request
- 3 Ø 8 x 4.3 - 4 counterbores

83 870 3/Connector output

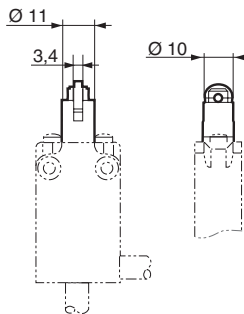


- 1 See sequence diagram
- 2 Rear output on request
- 3 Ø 8 x 4.3 - 4 counterbores

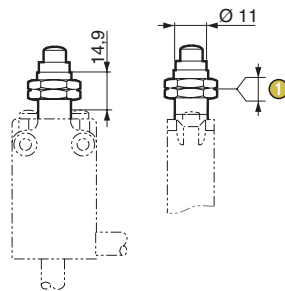
83 871 3



83 875 3

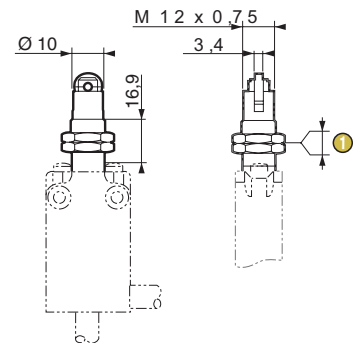


83 874 3



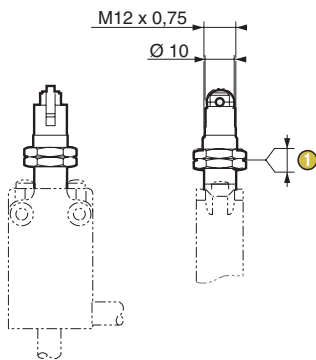
- 1 Max.tightening thickness 10.5

83 872 3



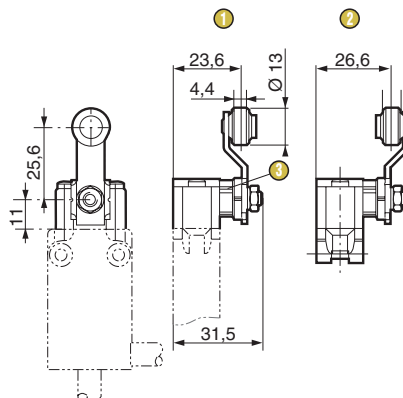
- 1 Max.tightening thickness 10.5

83 876 3



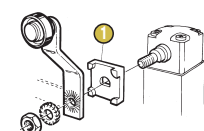
- 1 Max.tightening thickness 8.5

83 873 3

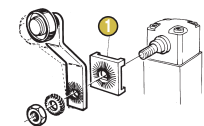


- 1 Offset A (standard mounting)
- 2 Offset B (by turning the lever)
- For offset 13.6 or 36.6 mm: please consult us
- 3 POP setting index

Lever angular settings



By 90° steps (standard mounting)



By 6° steps (by turning the block)

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