

## Datasheet - ML 441-11Y



Position switch / medium heavy Position switch / T/M 441 /  
441 Roller lever L



- Metal enclosure
- 2 Contacts
- 106 mm x 99 mm x 63 mm (basic component)
- Protection class IP65
- Actuator head can be repositioned in steps 4 x 90°
- Continuous adjustment of lever position 360°
- Lever can be transposed by 180°
- In temperature-resistant version, the roller can be mounted in two different positions on the shaft
- 2 cable entries M 20 x 1.5

(Minor differences between the printed image and the original product may exist!)


### Ordering details

Product type description	ML 441-11Y
Article number	1170496
EAN code	4030661297781

### Approval

Approval	 CCC
----------	---

### Global Properties

Product name	441 Rollenschwenkhebel L
Standards	EN 60947-5-1
Compliance with the Directives (Y/N) 	Yes
Suitable for safety functions (Y/N)	No
Standard housing (Y/N)	No
Materials	
- Material of the housings	cast iron, galvanized
- Roller material	Plastic
- Material of the contacts	Silver
Housing coating	painted
Weight	1655 g
Slide form	Castor

## Mechanical data

---

Design of electrical connection	Screw connection
Cable section	
- Min. Cable section	1.5 mm <sup>2</sup>
- Max. Cable section	2.5 mm <sup>2</sup>
AWG-Number	13
Active principle	mechanical
Mechanical life	5.000.000 operations
Design of actuating element	Roller lever
Bounce duration	≤ 5 ms
Switchover time	≤ 35 ms
Contact opening	2 x 2.5 mm
Actuating speed with vertical actuating angle to switch axis	
- Min. Actuating speed	1 mm/min
- Max. Actuating speed	3 m/s
- Actuating angle from left of switch axis	30°
- Actuating angle from right of switch axis	30°
notice	All indications about the cable section are including the conductor ferrules.

## Ambient conditions

---

Ambient temperature	
- Min. environmental temperature	- 30°C
- Max. environmental temperature	+ 90°C
Protection class	IP65 to IEC/EN 60529

## Electrical data

---

Design of control element	Normally open contact (NO), Opener (NC)
- Change-over contact with double break	
- galvanically separated contact bridges	
Switching principle	Snap switch element
Number of shutters	1 piece
Number of openers	1 piece
Rated impulse withstand voltage $U_{imp}$	4 kV
Rated insulation voltage $U_i$	250 V
Thermal test current $I_{the}$	16 A
Utilisation category	AC-15: 250 V / 4 A
Max. fuse rating	16 A gG D-fuse

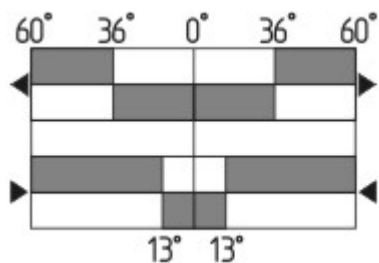
## Dimensions

---






Dimensions of the sensor	
- Width of sensor	106 mm
- Height of sensor	192 mm
- Length of sensor	63 mm
Roller wide	9 mm
Roller diameter	36 mm

## Switch travel diagram

---



Notes Switch travel diagram

-  Contact closed
-  Contact open
-  Setting range
-  Break point
-  Positive opening sequence/- angle
- VS** adjustable range of NO contact
- VÖ** adjustable range of NC contact
- N** after travel

### Ordering suffix

The applicable ordering suffix is added at the end of the part number of the safety switch.

Order example: ML 441-11Y-**A**

...- <b>A</b>	Aluminium enclosure
...- <b>1276-2</b>	gold-plated contacts
...- <b>T</b>	Temperature-resistant and tropical version with ceramic insulation for -40°C ... +200°C
...- <b>K</b>	Tropical version with ceramic insulation
...- <b>1801</b>	Splined shaft and lever available with 10° toothing
...- <b>RMS</b>	Available with metal roller

### Ordering code

(1)(2) 441-11Y(3)-(4)-(5)

(1)

- T** Slow action
- M** Snap action

(2)

- S** Plunger S
- 2S** Telescopic plunger 2S
- R** Roller plunger R
- K** Offset roller lever K
- J** Offset roller lever J
- 2C** Fork lever 2C
- L** Roller lever L
- D** Roller lever D

(3)

**UE** Slow action with overlapping contacts

(4)

*without* Cast iron enclosure

**A** Aluminium enclosure

(5)

**K** Tropical version with ceramic insulation

**T** Temperature-resistant and tropical version with ceramic insulation for -40°C ... +200°C

**1276-2** gold-plated contacts

## Documents

---

**Mounting and wiring instructions** (de, en, fr) 25 kB, 07.05.2002

[http://www.schmersal.net/Bilddata/Posi/Pdf/Tm250/montage/M\\_v55p01.pdf](http://www.schmersal.net/Bilddata/Posi/Pdf/Tm250/montage/M_v55p01.pdf)

**Declaration of conformity** (de, en) 79 kB, 20.05.2009

[http://www.schmersal.net/Bilddata/Posi/Pdf/T422/konform/\\_\\_\\_422p01.pdf](http://www.schmersal.net/Bilddata/Posi/Pdf/T422/konform/___422p01.pdf)

**CCC certification** (en) 583 kB, 12.12.2006

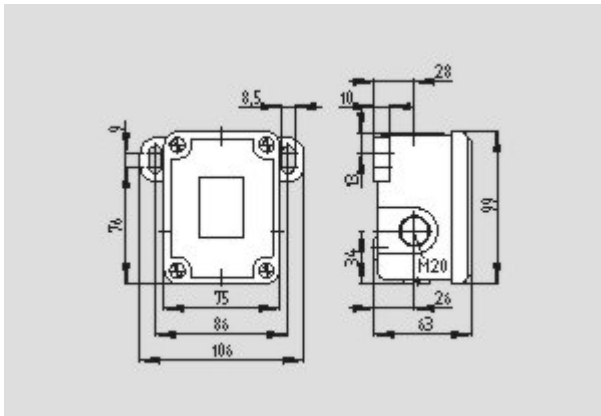
[http://www.schmersal.net/Bilddata/Posi/Pdf/Tm441/zertifikat/q\\_352p02.pdf](http://www.schmersal.net/Bilddata/Posi/Pdf/Tm441/zertifikat/q_352p02.pdf)

**CCC certification** (cn) 606 kB, 12.12.2006

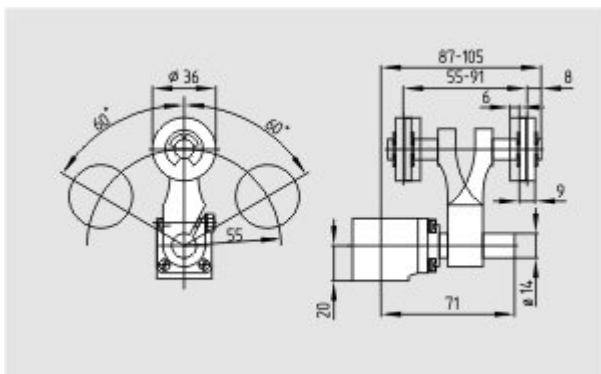
[http://www.schmersal.net/Bilddata/Posi/Pdf/Tm441/zertifikat/q\\_352p03.pdf](http://www.schmersal.net/Bilddata/Posi/Pdf/Tm441/zertifikat/q_352p03.pdf)

## Images

---

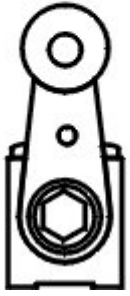


Dimensional drawing (basic component)



Dimensional drawing (miscellaneous)

---



Operating principle

---

K.A. Schmersal GmbH, Möddinghofe 30, D-42279 Wuppertal  
The data and values have been checked thoroughly. Technical modifications and errors excepted.  
Generiert am 29.03.2010 - 17:56:37h Kasbase 1.3.5 DBI