

## Application

Microswitch for harsh environment: humidity, corrosion, shocks and vibrations, temperature requirements...

- Operating temperature: -55 °C ... +150 °C.
- Rated breaking capacity: from few mA up to 5 A (depending on voltage and electrical load type).
- Mechanical life: 200 000 cycles (except Microswitches with added overtravel lever actuator where the life cycle depends on the overtravel applied to the product).

## Description

Encapsulated snap-action switch.

- Stainless steel casing.
  - Inert gas filled switching chamber.
  - Gold plated silver contacts.
  - Mounting holes for M2 screws.
  - Terminals:
    - solder terminals,
    - 0.38 mm<sup>2</sup> (AWG 22) leadwires<sup>(1)</sup>, FEP insulation, axial or side outputs .
- (1) Compliant to AIR 4524 specification ; NF L 52-125A Category B of 1971 - lightweight cables. Interchangeability: AICMA No 5116 recommendation of February 1961.

## Approvals and Compliance to Standards

French Air Ministry Approval as per letter 44.759/STPA/CIN1 dated 26 October 1987.

Approval according to standards: **AIR 8459, NF C 93-415.**

AIR equipment sheets No: 6.552.221 - 6.552.222 - 6.552.223 - 6.552.224.

Main compliance or performance equivalences with **MIL-PRF-8805** standard requirements.

## Environmental characteristics

( For other test results, please contact us )

<b>Salt spray resistance</b>	96 h
<b>Humidity</b>	93% relative humidity, +40°C duration 1000h
<b>Mechanical shocks resistance</b>	100 g - duration 6 ms (pulse shape = 1/2 sine) 18 shocks (3/direction, both of 3 orthogonal axis)
<b>Sinusoidal vibrations resistance</b>	10 _ 2000 Hz, 50 g in each of 3 orthogonal axis
<b>Random vibrations</b>	10 _ 2000 Hz, 0.15 g <sup>2</sup> / Hz in each of 3 orthogonal axis
<b>Operating temperature</b>	-55°C +150°C

## Mechanical characteristics

Characteristics according to the actuating point (arrow) indicated on dimension drawings.

Hermetically sealed Microswitches		T3LD...	T3LGD...	T3LD60...
<b>Max. operating force</b>	<b>N</b>	6	5	6
<b>Min. release force</b>	<b>N</b>	1	1	1
<b>Pretravel</b>	<b>mm</b>	0.30 ... 0.55	0.35 ... 0.70	0.50 ... 0.70
<b>Differential movement</b>	<b>mm</b>	0.05 ... 0.35	0.05 ... 0.45	0.05 ... 0.40
<b>Min. overtravel (1)</b>	<b>mm</b>	0.20	0.20	0.60
<b>Max. full overtravel authorised force</b>	<b>N</b>	13	8.5	13

(1) Do not exceed this value in use.

Interaction between overtravel and mechanical life for **T3LD60...** types

Overtravel	mm	0.60	0.90	1.20
<b>Mechanical service life</b>	<b>cycles</b>	5 000	2 500	1 000

## Electrical characteristics

Ratings (electrical load on one throw only)		30 ... 48 V d.c.	6 V d.c.	220 V a.c. - 50 Hz
– resistive load	<b>A</b>	5 A	10 mA	2 A
– inductive load	<b>A</b>	1.5 A (L/R ≤ 5 ms)	–	1 A (Cos φ ≥ 0.5)
<b>Electrical service life</b>	<b>cycles</b>	200 000	200 000	100 000
		U = 28 V d.c. for "AIR" approval	"AIR" approval	out of "AIR" approval
<b>Min. switched current.</b>	<b>mA</b>	5	5	5
<b>Changeover time</b>	<b>ms</b>	≤ 10	≤ 10	≤ 10
<b>Contact resistance</b>	<b>mΩ</b>	≤ 25 mΩ under 6 V d.c. – 100 mA according to MIL-PRF-8805	(As new, wires or cable not included)	
<b>Rigidité diélectrique (50 Hz - 1 mn)</b>				
– between terminals	<b>V a.c.</b>	500		
– between all terminals and earth (ground)	<b>V a.c.</b>	1200		
<b>Insulation resistance</b>	<b>MΩ</b>	≥ 1000 MΩ under 500 V d.c. (at 23 °C with < 80 % relative humidity)		

# T3 Hermetically sealed Microswitches



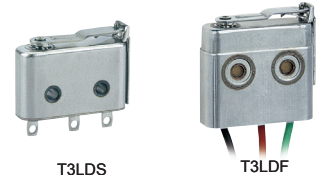
## Specific Products - Contact us for more information ; data sheet on request.

- **T3LDSH** Microswitch for operating temperatures up to +260 °C.
- **T3LDF-R9** Microswitch with 0.8 mm<sup>2</sup> (≈ AWG 18) leadwires "EPR" insulation is designed for use in irradiated areas. Some Limit switches for nuclear power plant use include this variant.

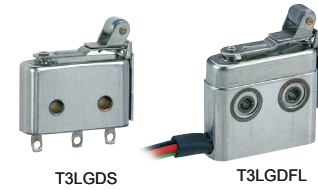
## Ordering Details

Standard leadwire length = 0.5 m ; other length on request.

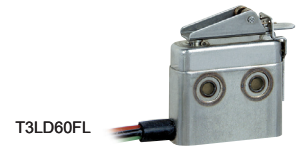
Terminals	P/N	Weight (1 piece) kg
<b>Microswitch with straight lever actuator</b>		
Solder terminals	<b>T3LDS</b>	0.005
Wired terminals	<b>T3LDF</b>	0.017
Wired terminals side outputs	<b>T3LDFL</b>	0.017



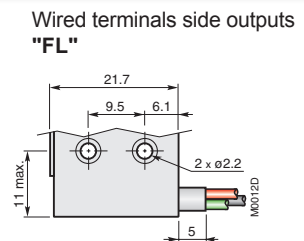
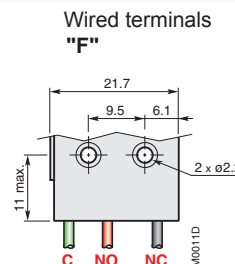
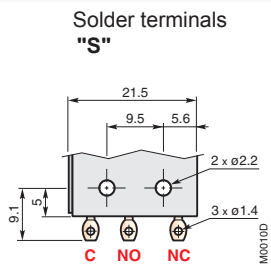
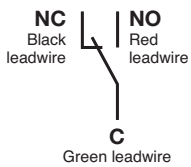
<b>Microswitch with roller lever actuator</b>		
Solder terminals	<b>T3LGDS</b>	0.006
Wired terminals	<b>T3LGDF</b>	0.018
Wired terminals side outputs	<b>T3LGDFL</b>	0.018



<b>Microswitch with lever control "overtravel absorber"</b>		
Solder terminals	<b>T3LD60S</b>	0.006
Wired terminals	<b>T3LD60F</b>	0.018
Wired terminals side outputs	<b>T3LD60FL</b>	0.01



## Circuit diagram Connection type



## Dimensions

M2 screws recommended tightening torque: 0.25 to 0.30 Nm. Warning: do not insert fan-type washer in contact with the Microswitch.

