

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.

Description

Sensitive, 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 mm² (AWG 22) leadwires⁽¹⁾, FEP insulation, axial or side outputs. (2 options in this case)
- (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 44.047/STPA/CIN.1/6 dated 7 October 1983.

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

AIR equipment sheets No: 6.552.206.

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

Environmental characteristics

(For other test results, please contact us)

Salt spray resistance	96 h
Humidity	93% relative humidity, +40°C duration 1000h
Mechanical shocks resistance	100 g - duration 6 ms (pulse shape = 1/2 sine) 18 shocks (3/direction, both of 3 orthogonal axis)
Sinusoidal vibrations resistance	10 _ 2000 Hz, 50 g in each of 3 orthogonal axis
Random vibrations	10 _ 2000 Hz, 0.30 g ² / Hz in each of 3 orthogonal axis
Operating temperature	-55°C +150°C

Mechanical characteristics

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

Hermetically sealed Microswitches		G3A1...	G3L11...	G3BS...	G3P30...
Max. operating force	N	10	15	12	12
Min. release force	N	1.5	2.0	1.5	1.5
Pretravel	mm	0.12 ... 0.25	0.6 max.	0.12 ... 0.50	0.12 ... 0.50
Max. differential movement	mm	0.05	0.08	0.05	0.05
Min. overtravel (1)	mm	0.08	0.40	3.0	3.0
Max. full overtravel authorised force	N	25	25	60	60

(1) Valeur à ne pas dépasser en utilisation.

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	A	5 A	10 mA	2 A
– inductive load	A	1.5 A (L/R ≤ 5 ms)	–	1 A (Cos φ ≥ 0.5)
Electrical service life	cycles	200 000	200 000	100 000
		U = 30 V d.c. for "AIR" approval	out of "AIR" approval	out of "AIR" approval
Min. switched current	mA	5	5	5
Changeover time	ms	≤ 10	≤ 10	≤ 10
Contact resistance	mΩ	≤ 25 mΩ under 6 V d.c. – 100 mA according to MIL-PRF-8805 (As new, wires or cable not included)		
Dielectric strength (50 Hz - 1 mn)				
– between terminals	V a.c.	500		
– between all terminals and earth (ground)	V a.c.	1500		
Insulation resistance	MΩ	≥ 100 MΩ sous 500 V d.c. (at 23 °C with < 80 % relative humidity)		