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MECHANICAL FEATURES

terminology according to IEC 60947.5.1
These features are given for bare microswitches
(without auxiliary actuator)

-Dimensions according to DIN 41 635 shape A
-Mechanical life (at 2/3 of OT and 1 cycle/s) : 20 millions cycles
-Maximum frequency of operating cycles : 10 cycles/s
-Minimum speed of actuation : 0,1 mm/mn
-Contact force (rest or working positions) : 0,3 N
-Changeover time : 4 a 10 ms
including bounce time : 1,5 ms
time between bounces : 1 ms max
-Vibration resistance (according to NFC 20 706 or IEC 60068-2-6): 10g- 10 to 500Hz
with no micro opening of contact >= 10µs 3 axes
-Shock resistance (according to NFC 20 727 or IEC 60068-2-27) : 100g 6 ms
with no micro opening of contact >= 10µs 3 axes
-Materials : enclosure: glass-reinforced polyamide
: button: polyamide
: movable blade: copper beryllium alloy
: terminals: brass (except terminals W2 copper-nickel alloy)
: contacts: silver nickel alloy
-Solderability: in accordance with NFC 20 720 or IEC 60068-2-20
Ta and Tb tests with ageing
-Tightening torque with M3 screw :0.4 to 0.6 m.N
-Robustness of terminations according to NFC 20 721 or IEC 60068.2.21
Ua =100N (45N lateral) Ub = method 1
-Weight :5.6g

ENVIRONMENTAL FEATURES

-Climatic category (NFC 20 700 or IEC 60068-1) : 25/125/56
-Operating temperature : -25°/+125°C
-Storage temperature : -40°/+150°C
-Tracking resistance : ITC: 250V
(according to NFC 26 220 or IEC 60112)
-Mould growth: test according to NFC 20 710
or IEC 60068-2-10 (severity 28 days)
-Damp heat: NFC 20 703 or IEC 60068-2-3 severity 4
-Salt spray:according to NFC 20 711 or IEC 60068-2-11 (duration :96 hours)
-Resistance to sulphur dioxide atmosphere corrosion
(according to IEC 60068.2.42 , severity 10 days)
- Flammability : UL 94 V2 - IEC 60695-2-1 : 960°C
-Rapid changes of temperature (NFC 20 714 or IEC 60068-2-14)
Method Na (5 cycles)
-Degree of protection according to NFC 20 010 or IEC 60529
IP 40 (with insulated connections)

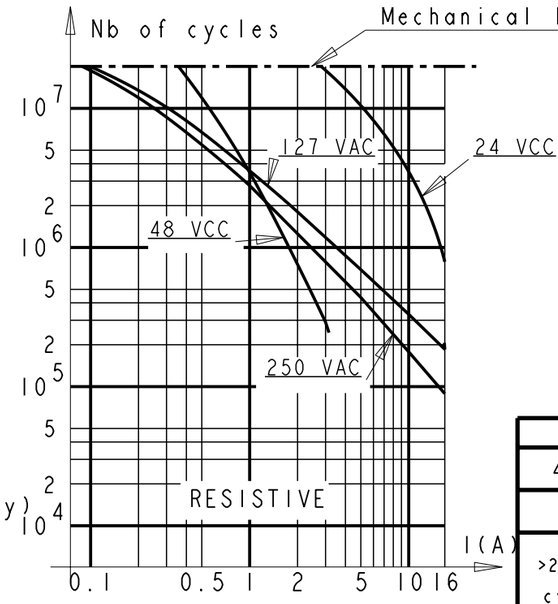
APPROVALS

- NF
- UL - CSA (type U 83161..)

GENERAL FEATURES

16 A - 250 V OPERATING FORCE : 0.8 N max

-Electrical life in normal conditions
1 cycle/2s for AC and 1 cycle/6s for DC



Making and breaking capacities
according to IEC 60947.5.1

6000 cycles

Ie(A) /	24V	48V	110/ 127V	220/ 240V	320/ 440V	480V
AC-12	20	20	16	16	12	10
AC-13	6	6	5	4	3	2
AC-14	Limited to 72 VA					
AC-15	6	6	5	4	3	2
DC-12	16	2.5	0.4	0.2		
DC-13	4	1	0.2	0.1		
DC-14	1	0.2	0.02	0.01		

Durable enduring according to IEC 60947-5-1

AC15 circuit C1				DC13				
48V	110V	220V		24VCC		48VCC		120VCC
5A	5A	10A	2A	10W	30W	10W	50W	5W
$>2,5.10^5$ cycles	$>2.10^5$ cycles	$1,5.10^5$ cycles	10^6	$>10^6$ cycles	$>3.10^5$	$>2.10^6$ cycles	5.10^4	$>3.10^6$ cycles

-Contact gap : 0,4 mm
-Contact resistance : < 10 mΩ
(according to NFC 93 050) condition A measured with 1A , 30V
-Dielectric strength (according to NFC 93 050)
between open contacts : >1000 V
between contacts connected together
and electric mass : >2500 v
-Insulation resistance(according to NFC 93050)at 500V= :>10000 MΩ
-Short time overcurrent
according to NFC 63145 p.632 :100 A during 30 ms
and :1000 A , 1.5 ms
-Short circuit protective device according to IEC 60947-5-1 : 10AgG fuse
(conditional short circuit current: 1000A)
-Impulse withstand voltage (IEC 60060) (1,2/50µs)
between open contacts : 2000V
between contacts connected together
and grounded parts : 5000V
-Switching under low energy load (new switches)
min. voltage : 10 V
min. current : 30 mA
(low energy version: 83161.8)

Note:unless otherwise specified,these are average values concerning new switches

MINIATURE PROTECTED SWITCH "V3"

DATA SHEET

Edition N°: 4
du: 18.01.2002

Crouzet®

FC831613GB

X 4
Z .
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