

SWITCH'AIR® non-stick Four-Legged domes

Thanks to its SWITCH'AIR® process, NICOMATIC has eliminated all risk of dome sticking thus ensuring efficient automatic placement and packaging in tubes for quick and easy positioning. Nicomatic offers one of the widest product ranges on the market.

DESCRIPTION ADVANTAGES

The SWITCH'AIR® notch helps to create a cushion of air between the domes so that they no longer stick together.

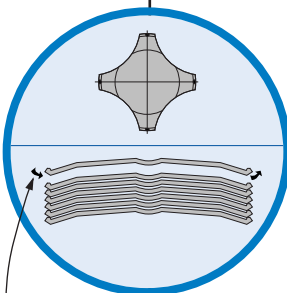
The SWITCH'AIR® non-stick domes offer :

- Excellent tactile effect even after rigorous tests (click ratio > 50%)
- Very long life expectancy : up to 5 million cycles
- Stable forces and homogeneity of forces per batch number
- Control of dimensional and mechanical characteristics
- No burrs, thus eliminating the scratching effect
- Successful and reliable automatic placement with NICOMATIC machines
- Domes in tubes save routine manual pre-separation of the domes by the operator
- The standard model is pre-nickel plated to avoid all risk of contamination
- 100% traceability per batch number

PRODUCTION CAPACITY

NICOMATIC is one of the worldwide largest manufacturers of metal domes:

- Over 100 standard references available
- On-site R&D and production
- Proprietary manufacturing process for DOME ARRAYS

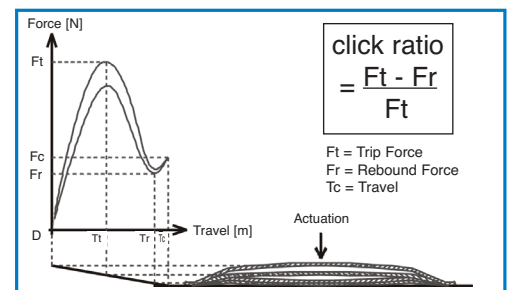


SWITCH'AIR®
technology
patented
by NICOMATIC

QUALIFICATION TESTS

- Life expectancy
- Overload test (static load)
- Overstroke
- Sweet spot (position of the actuator shifted from the dome centre)
- O.S.O. test (at a time : overload, sweet spot, overstroke)
- Electrical measurement

Mechanical characteristics



Typical force versus travel curve for a metal dome

PACKAGING

NICOMATIC SWITCH'AIR® non-stick domes can be ordered :

- In bulk quantities
- In tubes of 800 domes each*
- In tape & reel
- In sheets for custom made arrays

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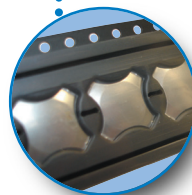
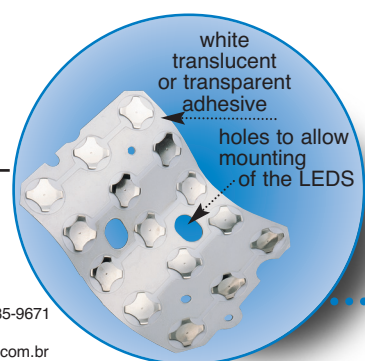
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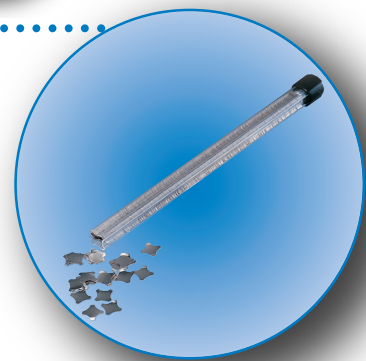
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The domes are already pre-positioned on adhesive arrays according to customer configurations, ready to be placed onto the circuit.



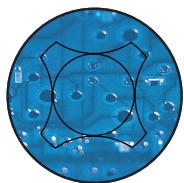
NICOMATIC HEADQUARTERS

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For more information on the NICOMATIC distributor network, please visit the web site <http://www.nicomatic.com>



NICOMATIC FRANCE
is certified ISO 9001



SWITCH'AIR® non-stick Four-Legged domes

SERIES 4-LEG DOMES

6 MM 4L ■ With and without micro-dimple

DOME REFERENCE XXX	140	170	220
Trip force (g)	140 +/- 20	170 ⁺³⁰ / ₋₂₀	220 +/- 30
Rebound force	60 +/- 20	70 +/- 20	90 +/- 20 / -30
Height (mm)	0.30 +/- 0.08	0.35 +/- 0.08	0.35 +/- 0.05
Total travel (mm) without dimple	0.23 +/- 0.08	0.28 +/- 0.08	0.28 +/- 0.05
Total travel (mm) with dimple	0.215 +/- 0.08	0.265 +/- 0.08	0.25 +/- 0.05
Foot print (mm)	5.40 +/- 0.08	5.40 +/- 0.08	5.40 +/- 0.08
Diameter (mm)	6 ⁺⁰ / _{-0.20}	6 ⁺⁰ / _{-0.20}	6 ⁺⁰ / _{-0.20}
Square size (mm)	4.80 +/- 0.08	4.80 +/- 0.08	4.80 +/- 0.08
Click ratio (%)	40 - 70 %	40 - 70 %	50 - 80 %

MATERIAL

- Stainless steel
- RoHS directive compliant
- REACH regulations compliant

PLATING

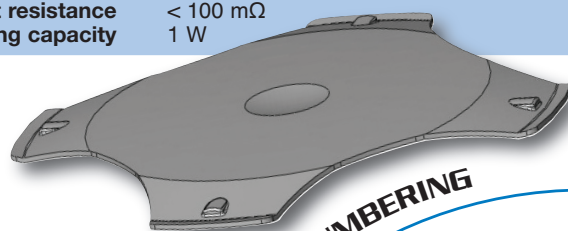
- Nickel plated standard model (-21)
- Optional one side gold plated (-31)

ENVIRONMENTAL

- Storage temperature from -55°C to + 125°C
- Operating temperature from -40°C to + 105°C

ELECTRICAL

- Rated voltage up to 100 V RMS
- Rated current 5µA to 100 mA
- Contact resistance < 100 mΩ
- Switching capacity 1 W



8.4 MM 4L ■ With and without dimple

DOME REFERENCE XXX	220	280	340	400
Trip force (g)	220 +/- 30	280 +/- 30	340 +/- 40	400 +/- 40
Rebound force	90 +/- 30	90 +/- 30	110 +/- 30	110 +/- 30
Height (mm)	0.45 +/- 0.10	0.50 +/- 0.10	0.60 +/- 0.10	0.50 +/- 0.05
Total travel (mm) without dimple	0.37 +/- 0.10	0.42 +/- 0.10	0.52 +/- 0.10	0.40 +/- 0.05
Total travel (mm) with dimple	0.33 +/- 0.10	0.38 +/- 0.10	0.48 +/- 0.10	0.38 +/- 0.05
Foot print (mm)	8.00 +/- 0.10	8.00 +/- 0.10	8.00 +/- 0.10	8.00 +/- 0.10
Diameter (mm)	8.4 ⁺⁰ / _{-0.20}	8.4 ⁺⁰ / _{-0.20}	8.4 ⁺⁰ / _{-0.20}	8.4 ⁺⁰ / _{-0.20}
Square size (mm)	7.00 +/- 0.10	7.00 +/- 0.10	7.00 +/- 0.10	7.00 +/- 0.10
Click ratio (%)	40 - 70 %	50 - 80 %	50 - 80 %	60 - 80 %

10 MM 4L ■ With and without dimple

DOME REFERENCE XXX	220	280	340	400
Trip force (g)	220 +/- 30	280 +/- 30	340 +/- 40	400 +/- 30
Rebound force (g)	85 +/- 20	90 +/- 30	90 +/- 30	100 +/- 30
Height (mm)	0.55 +/- 0.05	0.57 +/- 0.05	0.60 +/- 0.05	0.62 +/- 0.05
Total travel (mm) without dimple	0.45 +/- 0.05	0.47 +/- 0.05	0.50 +/- 0.05	0.52 +/- 0.05
Total travel (mm) with dimple	0.42 +/- 0.05	0.44 +/- 0.05	0.47 +/- 0.05	0.49 +/- 0.05
Foot print (mm)	9.50 +/- 0.20	9.50 +/- 0.20	9.50 +/- 0.20	9.50 +/- 0.20
Diameter (mm)	10 ⁺⁰ / _{-0.20}	10 ⁺⁰ / _{-0.20}	10 ⁺⁰ / _{-0.20}	10 ⁺⁰ / _{-0.20}
Square size (mm)	8.40 +/- 0.10	8.40 +/- 0.10	8.40 +/- 0.10	8.40 +/- 0.10
Click ratio (%)	40 - 70 %	50 - 80 %	60 - 80 %	70 - 85 %

12.2 MM 4L ■ With and without dimple

DOME REFERENCE XXX	220	280	340	420
Trip force (g)	220 +/- 30	280 +/- 30	340 +/- 40	420 +/- 40
Rebound force (g)	85 +/- 20	90 +/- 30	100 +/- 30	120 +/- 40
Height (mm)	0.70 ^{+0.05} / _{-0.10}	0.75 +/- 0.05	0.75 +/- 0.05	0.80 +/- 0.05
Total travel (mm) without dimple	0.60 ^{+0.05} / _{-0.10}	0.65 +/- 0.05	0.65 +/- 0.05	0.70 +/- 0.10
Total travel (mm) with dimple	0.56 ^{+0.05} / _{-0.10}	0.61 +/- 0.05	0.61 +/- 0.05	0.66 +/- 0.10
Foot print (mm)	11.70 +/- 0.20	11.70 +/- 0.20	11.70 +/- 0.20	11.70 +/- 0.20
Diameter (mm)	12.20 ⁺⁰ / _{-0.20}	12.20 ⁺⁰ / _{-0.20}	12.20 ⁺⁰ / _{-0.20}	12.20 ⁺⁰ / _{-0.20}
Square size (mm)	9.90 +/- 0.10	9.90 +/- 0.10	9.90 +/- 0.10	9.90 +/- 0.10
Click ratio (%)	40 - 70 %	50 - 80 %	50 - 80 %	50 - 80 %

PART NUMBERING

Dimple (D)
D = with dimple

Packaging
N : in bulk
TN : in tube
RN : in tape & reel

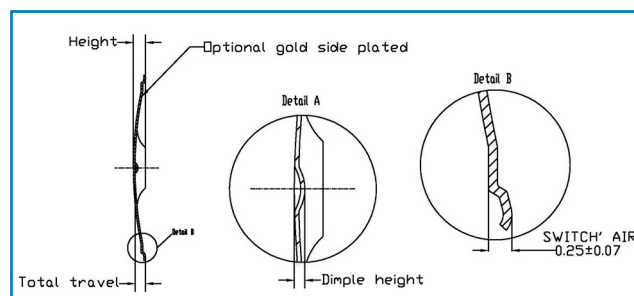
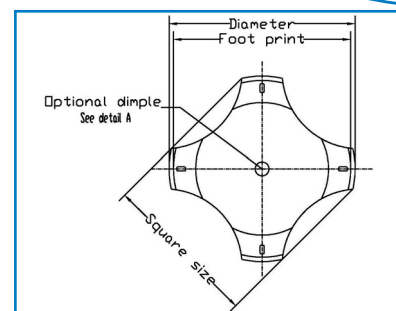
Trip force
140g - 170g - 180g
220g - 280g - 340g
400g - 420g

N12.2 - 4L - (D) - XXX - YY

Diameter
Ø6
Ø8.4
Ø10
Ø12.2

Plating
21 : nickel plated
(standard)
31 : 1 side
gold plated

Type of dome
4L : 4 legs



NEW