CP4050-12 UL

SA63920099



Series of insulators suitable for use as supports or spacers for electrically active parts such as busbars used in the construction of electrical panels. Made of polyamide with added glass fibres, they ensure long-term mechanical and electrical resistance. The material is anti-hygroscopic, highly self-extinguishing, halogen-free and UL V0 approved. The insulators feature a female threaded insert in brass or white galvanised steel on both support sides, allowing coupling with the relevant parts via special headless screws. The lower part includes a hexagonal band for fastening.

Technical specifications

Functional characteristics	
Arc resistance	> 180 s - ASTM D-495
Tracking resistance	3 W/min - ASTM D-2302
Operating voltage	1500 AC / DC (V)
Minimum internal discharge voltage	40 AC (kV)
Rated withstand voltage at 50 Hz for 1 min	10 kV
Operating conditions	
Operating temperature range	-40 ÷ 130 °C
Approvals and certifications	
UL approval	✓
Mechanical features	
Water absorption	< 0,2% - ASTM D-570
Tensile stress	1000 daN
Bending stress	500 daN
Physical features	
Color	Black
Material class	Self-extinguishing, class V0 (1.6 mm) according to UL-94 standard
Halogen free	✓
Material	Polyamide
Overall dimensions	
Height (A)	50 mm
Other dimensions	
Dimension - D	14 mm

Vemer S.p.A. declines all responsibility for the use of the products for purposes other than those for which they are intended, as indicated in the technical documentation. Vemer S.p.A. reserves the right to make, without prior notice, such changes as may, in its sole discretion, improve the technical and functional characteristics of the products and the related production logic. The technical characteristics and images of the products indicated are given for information only and are not binding in any way, since they may be modified without prior notice.

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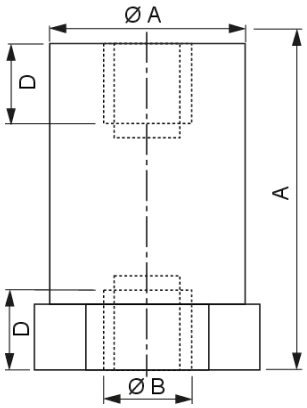
Diameter dimension	
Dimension Ø - A	40 mm
Dimension Ø - B	M12 mm

Dimensions

Total View



Product variants

CP4040-12 UL
SA63350099

CP4045-12 UL
SA63680099

CP4055-12 UL
SA64590099

CP4060-12 UL
SA64830099

Reference standards

Compliance with Community Directives:

• 2014/35/UE (LVD) • 2011/65/UE e 2015/863/UE (ROHS)
is declared with reference to the following Standards:

• EN IEC 61439-1 • EN IEC 63000

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TECHNICAL GUIDE

ELECTRODYNAMIC FORCES BETWEEN CONDUCTORS

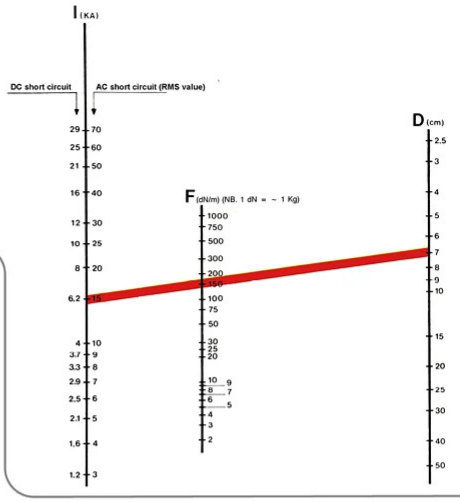
Nomogram 1

Determination of force **F** per unit length

Required data: I = short-circuit current
D = distance between phases

Example: Isc = 15 kA (AC) D = 7 cm

result obtained from the nomogram: F ≅ 150 daN/m



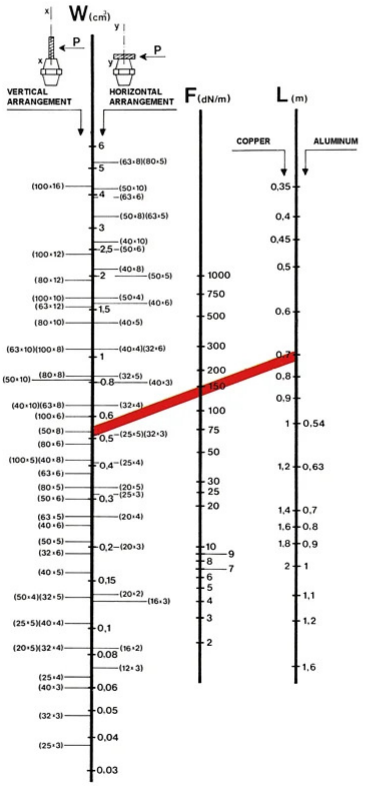
Nomogram 2

Determinaton of distance **L** between supports

Required data: F = force per unit length
(obtained from the previous nomogram)
W = longitudinal and transverse section modulus of the busbars according to X-X oppure Y-Y respectively
(obtainable based on the dimensions and arrangement of the busbar, whether horizontal or vertical)

Example: F ≅ 150 daN/m W = 0,5 cm³
(50 x 8 vertical arrangement)

result obtained deducibile dal nomogramma: L ≅ 0,7 m



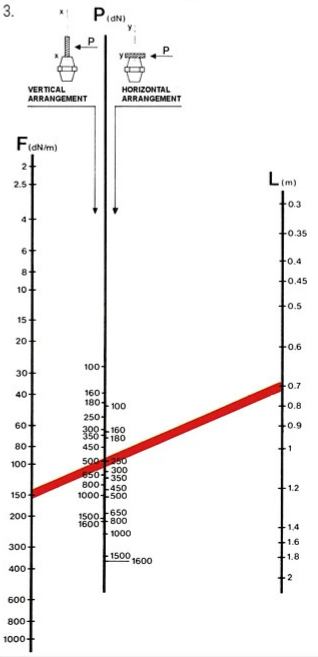
Nomogram 3

Determination of the minimum cantilever breaking load **P**

Required data: F = force per unit length
L = distance between supports (obtained from the previous nomogram)

Esempio: F ≅ 150 daN/m L ≅ 0,7 m (vertical arrangement)
result obtained from the nomogram:
P ≅ 500 daN
(for vertically arranged busbar system)

Once the value of load P is determined, the suitable insulator can be identified by checking the specific tables for each item (cantilever breaking load columns) for a value greater than or equal to the one obtained from Nomogram 3.



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