REPLACEMENT FOR ARISTONCAVI SNAKEFLEX | 0.6/1 kV | NSSHÖU-O/J | PCP rubber, yellow | article datasheet

FC-SNX 4G10 0.6/1 kV

Heavy-Duty Mining Flexible Cable – special heavy-duty polychloroprene rubber compound 5GM5, yellow. FeiChun replacement for Aristoncavi SNAKEFLEX: construction, dimensions, weight, current rating, standards and installation guidance.

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01 Application and Product Overview

FC-SNX 4G10 is a heavy-Duty Mining Flexible Cable rated 0.6/1 kV and the FeiChun replacement for Aristoncavi SNAKEFLEX 4G10. It has an outer diameter of 19.9 – 21.2 mm, weighs about 700 kg/km and carries 74 A in free air at 30 °C. The series covers 1.5 – 185 mm².

Design

4 cores laid up with a short lay length, the green-yellow protective core included. Fine-wire class 5 copper conductors and rubber insulation give the flexibility needed for repeated movement.

Typical applications

- Mobile machines and equipment in mines, quarries and tunnels
- Power supply alongside conveyor belts and to portable pumps
- Dynamic or static use with high mechanical stress and abrasion
- Wet, oily and abrasive environments; temporary immersion

4G10	0.6/1 kV	74 A	Ø 21.2 mm
Cross-section	Rated voltage U_0/U	Current at 30 °C	Outer dimension, max

Key features

- Fine-wire class 5 tinned or bare copper conductors to IEC 60228
- EPR rubber compound 3GI3 to DIN VDE 0207-20 insulation
- Flame-retardant to IEC 60332-1-2; oil, ozone and UV resistant

Replacement reference

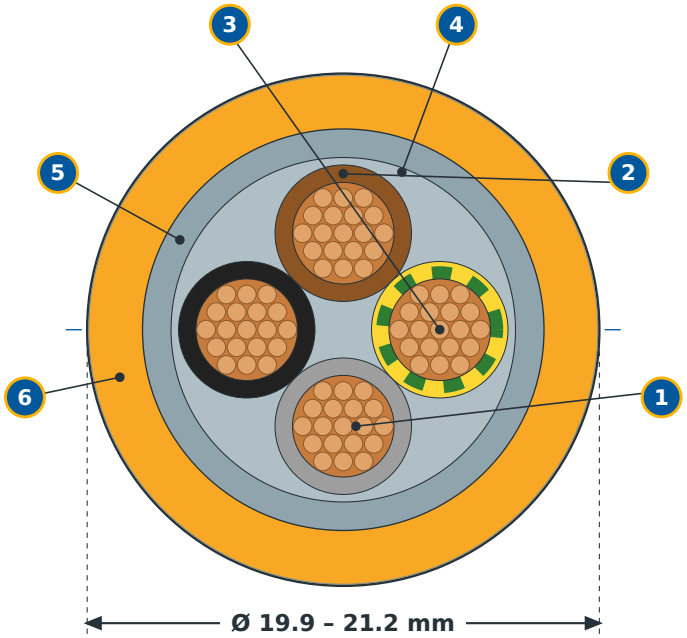
REFERENCE PRODUCT	⇄	FEICHUN REPLACEMENT
Aristoncavi SNAKEFLEX 4G10 NSSHÖU-O/J		**FC-SNX 4G10 0.6/1 kV** Heavy-Duty Mining Flexible Cable

The FeiChun cable has the same core configuration, voltage rating and field of application as the reference product. Dimensions and weights are FeiChun design values; compare them with reels, guides and glands before direct replacement.

02 Construction

FEICHUN · CROSS-SECTION A-A · 0.6/1 kV

FC-SNX
Sample size 4G10 · Rev 0 · Illustrative, not to scale



No.	Component	Material
1	Conductor	Fine-wire copper, class 5 to IEC 60228
2	Insulation	EPR rubber compound 3GI3 to DIN VDE 0207-20
3	Protective conductor	Green-yellow insulated copper
4	Filler and anti-twist braid	Rubber compound, polyester braid
5	Inner sheath	Rubber or elastomer compound
6	Outer sheath	Special heavy-duty polychloroprene rubber compound 5GM5, yellow

The drawing shows 4G10. Other sizes have the same construction with scaled dimensions.

Construction details

Conductor	Fine-wire tinned or bare copper, class 5 to IEC 60228 / DIN VDE 0295
Insulation	EPR rubber compound 3GI3 to DIN VDE 0207-20
Core identification	Colour coded to HD 308 / DIN VDE 0293
Inner sheath	Rubber or elastomer compound
Outer sheath	Special heavy-duty polychloroprene rubber compound 5GM5, yellow

Sheath material

The special yellow polychloroprene sheath 5GM5 has high tear and abrasion resistance for vertical reeling and heavy mining use; the colour improves visibility on site.

03 Electrical, Thermal and Mechanical Data

Electrical data

Rated voltage U_0/U	0.6/1 kV AC
Test voltage	3.5 kV AC, 5 min
Current-carrying capacity	DIN VDE 0298-4, 30 °C ambient; see table
Conductor resistance	Maximum at 20 °C, class 5 to IEC 60228

Thermal and mechanical data

Maximum conductor temperature	+90 °C
Short-circuit temperature	+250 °C
Ambient temperature, fixed	-40 … +80 °C
Ambient temperature, moving	-25 … +80 °C
Minimum bending radius, moving	See table (8 × D)
Maximum tensile load	15 N/mm² of copper cross-section of the power cores
Flame propagation	IEC 60332-1-2
Halogen-free sheath	No
Oil, ozone and UV resistance	Resistant

04 Dimensions, Weights and Ratings

The highlighted row is 4G10; the adjacent sizes of the series are shown for comparison.

Type designation	Article no.	Conductor Ø max mm	Outer Ø min mm	Outer Ø max mm	Min. bend radius mm	Weight approx. kg/km	Max. pull N	R_{20} max Ω/km	Rated current A	I_k (1 s) kA
4G6	FC-AR0393-4G6	3.3	17.9	19.0	152	500	360	3.30	54	0.858
4G10	**FC-AR0393-4G10**	**4.1**	**19.9**	**21.2**	**212**	**700**	**600**	**1.91**	**74**	**1.43**
4G16	FC-AR0393-4G16	5.2	22.8	24.2	242	990	960	1.21	99	2.29

Current-carrying capacity: design values to DIN VDE 0298-4, free air, 30 °C ambient. Pull force = 15 N/mm² × copper cross-section of the power cores. Dimensions and weights are nominal design values within manufacturing tolerances.

Ambient temperature factors

°C	20	25	30	35	40	45	50
Factor	1.08	1.04	1.00	0.96	0.91	0.87	0.82

Short-circuit rating

I_k = 0.143 kA/mm² × conductor cross-section for 1 s; for duration t: $I_{k,t} = I_{k,1s} / \sqrt{t}$.

05 Selection Guide

Typical use: At 4G10 this size typically feeds trolley drives, small pumps, cable-reel motors and conveyor auxiliaries up to about 40 kW.

At 400 V and cos φ 0.85, 4G10 supplies a three-phase load of about 40 kW at 30 °C in free air.

At 690 V and cos φ 0.85, 4G10 supplies a three-phase load of about 69 kW at 30 °C in free air.

For comparison: 4G6 has 19.0 mm, 500 kg/km and 54 A; 4G16 has 24.2 mm, 990 kg/km and 99 A. Choose the smallest size whose current, after the temperature factors, covers the load.

Example. A circuit carries 59 A at 40 °C ambient. Required table current = 59 / 0.91 = 65 A, so 4G10 (74 A) is suitable.

06 Standards and Testing

Standard	Scope
IEC 60228 / DIN VDE 0295	Conductors, class 5
DIN VDE 0298-3	Bending radii and tensile loads
DIN VDE 0298-4	Current-carrying capacity
IEC 60332-1-2	Flame propagation, single cable
DIN VDE 0250-812	Design reference for the construction
IEC 60811-404	Mineral oil resistance

Routine and type tests

- AC voltage test on every delivery length: 3.5 kV, 5 min
- Conductor resistance, dimensions and insulation thickness
- Continuity of all conductors
- Flame propagation, IEC 60332-1-2 (type test)

Test documentation: every delivery comes with a test certificate from FeiChun’s own laboratory; third-party witnessed tests can be arranged at the buyer’s cost.

07 Installation, Marking and Delivery

Installation guidance

- Unwind the cable tangentially from the drum; avoid loops, kinks and pulling over the drum flange.
- Keep the bending radius and tensile load within the values in this datasheet.
- Protect trailing cables from being run over; use cable bridges or hangers where vehicles cross.
- Connect the protective conductor at both ends before the other cores.

Sheath marking

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FEICHUN FC-SNX 4G10 0.6/1 kV [year] [metre mark]
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Packing and delivery

Packing	Steel or fumigated wooden drums; cable ends sealed
Delivery length	As ordered, in one continuous length
Lead time	2–3 weeks after technical approval
Warranty	1 year, covering failures not caused by human factors
Terms	FCA buyer's nominated forwarder's warehouse in China (Incoterms 2020); prices subject to LME copper

Order example: FC-SNX 4G10 0.6/1 kV – replacement for Aristoncavi SNAKEFLEX 4G10, 500 m on one drum. State type, cross-section, voltage, length per piece and installation conditions when requesting a quotation.

08 Certification and Quality

FeiChun holds CE (Low Voltage Directive), EAC and UKCA certificates and an ATEX documentation verification for defined product groups. Whether a certificate scope covers this construction is confirmed per project. All cable is routine-tested over 100 % of the delivered length.

09 Related Datasheets

This datasheet in Russian: FC-SNX 4G10 0.6/1 kV

- FC-SNX 4G6 0.6/1 kV – replacement for Aristoncavi SNAKEFLEX
- FC-SNX 4G16 0.6/1 kV – replacement for Aristoncavi SNAKEFLEX
- FC-SNX 4G4 0.6/1 kV – replacement for Aristoncavi SNAKEFLEX
- FC-SNX 4G25 0.6/1 kV – replacement for Aristoncavi SNAKEFLEX
- FC-SNX 3G1.5 0.6/1 kV – replacement for Aristoncavi SNAKEFLEX
- FC-SNX 5G1.5 0.6/1 kV – replacement for Aristoncavi SNAKEFLEX
- FC-SNX 3×50+3G10 0.6/1 kV – replacement for Aristoncavi SNAKEFLEX
- FC-SNX 7G1.5 0.6/1 kV – replacement for Aristoncavi SNAKEFLEX

Library overview: FeiChun replacements for Aristoncavi

Frequently asked questions

Can FC-SNX replace Aristoncavi SNAKEFLEX 4G10?
Yes. It is designed with the same core configuration, voltage rating and field of application. Compare the outer diameter, bending radius and weight with your reel, guides or glands before ordering; FeiChun confirms suitability on request.

What are the outer diameter and minimum bending radius of 4G10?
Outer diameter 19.9 – 21.2 mm; minimum bending radius in moving operation 212 mm (10 × D).

What current can 4G10 carry?
74 A in free air at 30 °C ambient. Apply the temperature factors in section 04.

Is the cable halogen-free?
No. The PCP rubber, yellow sheath contains halogen; a halogen-free PUR version can be offered.

10 Trademark Notice and Intellectual Property

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