AFIAM

ECOGAMMA

AFIAM patriot®

CAVO ULTRARAPIDO ANTIFIAMMA

PATRIOT, the range of non-sheathed single core flexible cables, PVC insulated, resistant to fire propagation and with reduced emission of corrosive gases, coloured with skin coating technology. For fixed wiring.

A CHOICE OF QUALITY

PATRIOT, marked IMQ, is resistant to fire propagation (CEI 20-22 II) and with reduced emission of halogens gasses and low content of hydrochloric acid in the fumes (lower that 18% measured according CEI 20-37) when involved in a fire.

A CORRECT CHOICE

PATRIOT facilitates every type of installation, and maintenance due to it's smooth and shining surface. It is available in a wide range of colours: blue, dark blue, black, brown, grey, red, orange, white, violet, pink, turquoise and green/yellow.

A SAFE CHOICE

PATRIOT eliminates risk during installation in conduit, due to the anti-abrasive layer on the insulation surface.

AN EFFICIENT CHOICE

PATRIOT assures more rapid installation thanks to it's remarkable smoothness and flexibility.

AN ECOLOGICAL CHOICE

PATRIOT is manufactured with lead free compounds to give maximum respect to the environment; it belongs to the eco line ECOGAMMA designated by the windmill, a symbol of clean energy.

Icel® conduttori di energie

CSQ CERTIFICAZIONE DEL SISTEMA QUALITÀ DELLE AZIENDE UNI EN ISO 9001

AFIAM-PATRIOT

N07V-K

Single core non-sheathed power cable with PVC insulation, **flexible** conductors for fixed wiring. Resistant to fire propagation and with reduced emission of corrosive gases.

Tab. CEI-UNEL 35752

Nominal cross-sectional area of conductor mm²	Maximum diameter of conductor wires mm	Thickness of insulation Specified value mm	Maximum overall diameter mm	Indicative cable weight g/m	Maximum conductor resistance at 20°C ohm/km	Minimum insulation resistance at 70°C Mohm•km
1	0,21	0,7	3,0	15	19,5	0,095
1.5	0,26	0,7	3,4	21	13,3	0,082
2.5	0,26	0,8	4,1	32	7,98	0,077
4	0,31	0,8	4,8	47	4,95	0,062
6	0,31	0,8	5,3	65	3,30	0,050

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AFIAM-PATRIOT N07V-K Single-core flexible cable

Rated voltage:
Uo/U = 450/750 V

Standards:
CENELEC HD 21 (as far as applicable); CEI 20-11, 20-29, 20-22 II; EN/IEC 60332-1;
CEI UNEL 35752.

European directives:
L.V.D. 2006/95/EC - 2002/95/CEE (RoHS).

Conductor:
flexible annealed plain copper.

Insulation:
PVC of type R2 with low emission of corrosive gases if involved in a fire.

Insulation colour:
blue, dark blue, black, brown, grey, green/yellow, red, white, turquoise, violet, orange, pink.

Marking:
continuous marking on the insulation: on one side «ICEL "AFIAM" N07V-K CEI 20-22 II IEMMEQU ECOGAMMA», on the opposite side the nominal cross section and the year of manufacture.

Maximum operating temperature:
70°C on the conductor.

Maximum short circuit temperature:
160°C on the conductor (for maximum 5 seconds).

Minimum permissible bending radii:
4 times the cable overall diameter.

Maximum tensile stress:
1,5 kg/mm² of the conductor cross section.

Current carrying capacity:
see CENELEC HD 516 and CEI-UNEL 35024.

Guide to Use:
for installations for which the standards require cables resistant to fire propagation; for installation in surface mounted or embedded conduits or pipes. The cross-section of 1 mm^2 is intended only for the electric circuits of lifts and elevators, or for the internal wiring of switchboards for signalling and control circuits.

Cables to be used only for electrical power transmission and to be installed only by skilled personal.
Further guidance and warnings for use of these cables are given in the guide to use standards CENELEC HD 516 or CEI 20-40.

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The **PATRIOT** mark highlights a range of PVC electric cables resistant to fire propagation, designed only for fixed wiring, and with the quality mark IMQ.
All the **PATRIOT** cables belong to the AFIAM line and are marked "CEI 20-22 II", to highlight that they are "**resistant to fire propagation**"; this means that they conform to the requirements of resistance to fire propagation as prescribed in the standard CEI 20-22/2 (Tests for resistance to fire propagation for cables). The cables have passed this fire test at the certified CESI laboratory (Italy), using a test bundle containing at least 10 kg/m of non metallic material.
The **PATRIOT** cables are also "**flame retardant on a single vertical cable test**" according to the test CEI 20-35 (EN and IEC 60332-1).
Furthermore, to prevent additional risks from the toxic substances released during the combustion of the plastic components, **PATRIOT** cables employ a PVC compound "**with reduced emission of corrosive gases"**, lower than 18% w/w in terms of hydrochloric acid, measured according to the standards **CEI 20-37/0; 20-37/2-0 (EN 50267 - 1); 20-37/2-1 (EN 50267-2-1)**.
All the **PATRIOT** cables belong to the eco-line “ECOGAMMA”, identified on the documentation and on the packaging, by the symbol of a Windmill. In the new eco-cables **lead** and it’s compounds have been eliminated. Lead is a heavy metal, which can be dangerous for the environment and to humans, if present in high quantity. The use of **PATRIOT** cables is recommended in installations with danger of fire spread, such as thermal and electrical power stations, chemical and petrochemical plants, steel plants, fuel distribution plants, etc., or in public places where fire could have consequences for high numbers of people, such as in theatres, cinema, discos, exhibition halls, schools, hotels, hospitals, buildings, etc.

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