



Afumex™ LSOH CABLES



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The Safe Choice

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PRYSMIAN AFUMEX™ (LSOH) is the safe choice for cables in achieving the continuity of the electrical supply up to 180 minutes under fire conditions. State of the art cable insulation materials and techniques are employed to provide the flame retardancy with lower toxic gas evolutions and significantly lower smoke density, thereby ensuring better visibility in the ambient during fire and ensuring safety of lives. Due to its zero halogen content, corrosive emissions into the immediate environment are totally eliminated, securing the material integrity for electrical, electronic and metal structures.

Attaining the Maximum Safety for Lives and Ensuring Full Security for Materials is now Easier...

AFUMEX™ cables are ideal for use in various locations where high human traffic and density existing in high rises, historical buildings, hospitals, universities.

PVC insulated single cables, although have displayed limited flame propagation, necessary actions must still be taken for bunched PVC cable installations in order to minimize high density smoke, toxic gases and eliminate corrosive emissions threatening safety of lives and security of materials, and select AFUMEX™ cable.

Fire is dangerous; it should not create more dangerous ones.

High smoke density formed with burning of the bunched PVC insulated cables decrease the visibility severely and cause panic during the escape rendering the search and escape operations more difficult. Inhaling toxic gases such as carbon monoxide and carbon dioxide result in suffocation with muscle weakness resulting in immediate deaths within minutes. Corrosive emissions during the fire also bring about irreversible damages to all electrical, electronics and metal equipment and building structures.

PRYSMIAN AFUMEX™ cables are specifically developed to maximize the safety of lives and eliminate security risks at highest levels providing every one of us a **PEACE of MIND**.



Standard PVC cable during flame conductivity test



AFUMEX™ cable during flame conductivity test

A P P L I C A T I O N S

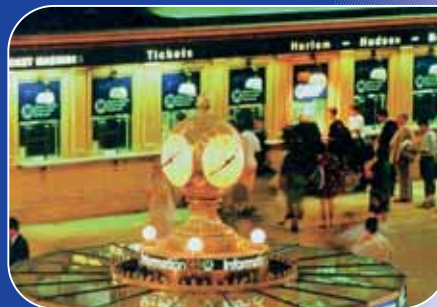
Industry

AFUMEX™ cables provide safety where expensive equipment or crucial processes are at risk. Control rooms, switchboards, panels, white rooms are typical applications (i.e. in powerplants, petrochemical industry, electronics, mines, paper industry).



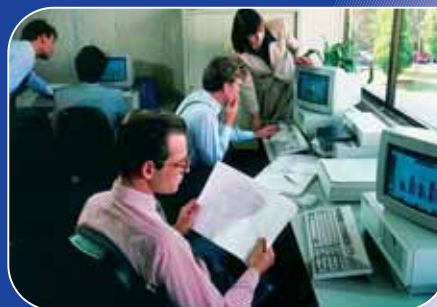
Infrastructure

Where a large number of people congregate, often in an unfamiliar environment (such as airports, stations, indoor sports stadiums, concert arenas etc.), fire becomes potentially very dangerous. AFUMEX™ guarantees the necessary level of safety, both by avoiding panic-generating fumes and toxic gases and also by aiding the intervention of fire fighters.



Commercial

A wide number of applications are covered by AFUMEX™. In case of fire safety, people in hotels, hospitals, schools, cinemas, discos, banks, commercial centers, offices are threatened by a number of factors and reaction time in case of an emergency can be slower than normal. AFUMEX™ provides the extra time for a safe escape.



Residential

The level of safety in our homes can be significantly increased by the use of AFUMEX™ cables. AFUMEX™, whilst being a worthwhile improvement in all situations, becomes essential when the property is of particular interest (historical buildings, valuable furnishings) or if it has potential risks in case of fire (e.g. low speed of evacuation)



Current carrying capacities of **Afumex™** cables in air (A):
(In 30 °C ambient temperature)

Cable Type	07Z1-U	07Z1-R	07Z1-K	NHMH / NHXMH		N2XH / N2XH FE 180				
No of cores Cross Section (mm²)	1	1	1	2-3	4-5	1	1	2	3-4	5
1	19	-	19	-	-	-	-	-	-	-
1,5	24	-	24	22	18,5	-	-	26	23	23
2,5	32	-	32	30	25	-	-	36	32	32
4	42	-	42	40	34	56	40	49	42	42
6	54	-	54	51	43	73	53	63	54	54
10	73	-	73	70	60	101	74	86	75	75
16	-	98	98	-	-	137	101	115	100	100
25	-	129	129	-	-	182	135	149	127	127
35	-	158	158	-	-	226	169	185	158	158
50	-	198	198	-	-	275	207	225	192	192
70	-	245	245	-	-	353	268	289	246	246
95	-	292	292	-	-	430	328	352	298	298
120	-	344	344	-	-	500	383	410	346	346
150	-	391	391	-	-	577	444	473	399	399
185	-	448	448	-	-	661	510	542	456	456
240	-	528	528	-	-	781	607	641	538	538

INSTALLATION METHODS

TS HD 384.5.523 Table	-	-	-	52-C9/2	52-C9/3	52-C11/7	52-C11/5	52-C11/2	52-C11/3	52-C11/3
DIN VDE 0298-4 Table	11/2	11/2	11/2	4/4	4/5	6/9	6/8	6/4	6/5	6/5

AFUMEX™ PROPERTIES	07Z1-U / 07Z1-R / 07Z1-K	NHMH	NHXMH	N2XH	N2XH FE 180
Standard	TS HD 21.3 S3	VDE 0250-215	VDE 0250-214	VDE 0276-604 (Energy) VDE 0276-627 (Control)	VDE 0276-604 (Energy) VDE 0276-627 (Control)
Rated Voltage U ₀ /U	450/750 V	300/500 V	300/500 V	0,6/1 kV	0,6/1 kV
Insulation	Special LSOH Material	Special LSOH Material	XLPE	XLPE	XLPE on Mica Tape
Outer Sheath	-	Special LSOH Material	Special LSOH Material	Special LSOH Material	Special LSOH Material
Operating Temperature °C	70	70	70	90	90
Short Circuit Temperature °C	160	160	160	250	250
Performance Tests:					
LS (Low Smoke) test	IEC 61034-2	IEC 61034-2	IEC 61034-2	IEC 61034-2	IEC 61034-2
HF (Halogen Free) test	IEC 60754-2	IEC 60754-2	IEC 60754-2	IEC 60754-2	IEC 60754-2
FR (Flame Retardant) test	IEC 60332-1	IEC 60332-1	IEC 60332-3-24 Cat. C	IEC 60332-3-24 Cat. C	IEC 60332-3-24 Cat. C
FE (Functional Endurance) test	-	-	-	-	IEC 60331-21 (180 minutes)

CERTIFICATIONS



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