



Tai Sin®

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Singapore's renowned quality brand for 30 years which offers a wide range of low voltage Cables & Wires for Power, Control, Instrumentation and Offshore & Marine applications with Low Smoke Zero Halogen (LSZH), Flame Retardant (FRT) and Fire Resistant (FR) characteristics.

Fire Resistant Cables - FRA-XOL (E)

BS 7629-1:2008



Tai Sin's FRA-XOL(E) Low Smoke Zero Halogen (LSZH) Fire Resistant Cables are suitable for emergency circuits in commercial, industrial & residential buildings, tunnels, hospitals, computer control rooms, elevators, etc.

Tai Sin's FRA-XOL(E) Cables are designed to meet the requirements as described in BS 5839-1:2002+A2:2008, clause 26.2. This range also meets the PH120 class when tested in accordance with BS EN 50200:2006 and the 120 minutes survival time when tested in accordance with BS 8434-2:2003+A2:2009. In addition, the cable also complies with BS 6387 Cat. C.W.Z..

These cables are manufactured with plain annealed copper in either solid or stranded form. The conductors are protected with a fire barrier tape and are insulated with a Low Smoke Zero Halogen (LSZH) thermosetting compound. The cores are held together with a laminated aluminum tape screen which is bonded together with a LSZH sheath and at the same time comes into contact with a tinned copper conductor which acts as a circuit protective conductor and as a screen drain wire. These cables are manufactured to meet the requirements of BS 7629-1:2008.

Range :

2 cores : 1.0mm² to 4.0mm²
3 cores : 1.0mm² to 4.0mm²
4 cores : 1.0mm² to 4.0mm²

FIRE PERFORMANCE STANDARDS ACHIEVED

Circuit Integrity : BS 5839-1:2002+A2:2008 Clause 26.2
BS 8434-2:2003+A2:2009
BS EN 50200:2006 PH120
SS 299 Cat C.W.Z., BS 6387 Cat C.W.Z., IEC 60331

Flame Propagation : BS EN 60332-1-2 / BS EN 60332-3C / BS EN 50266

Acid Gas Emission : IEC 60754, BS EN 50267

Smoke Emission : IEC 61034, BS EN 61034

BENEFITS

- Designed for ease in stripping and installation that reduces installation cost
- Tai Sin's fire resistant cable is able to maintain circuit integrity when burned, hit by a mechanical element and sprayed with water; all on the same cable and has all the elements of emitting low smoke, zero halogen and is flame retardant
- Cables have anti-termite and Ultra-Violet protection characteristics

PRODUCT FEATURES

- Certified by LPCB (U.K.)
- Civil Defence approval from - Abu Dhabi, Dubai, Oman, Qatar
- The cable is flexible and at the same time has enough rigidity to give a neat and tidy appearance when installed
- Available in 100m, 200m, 500m standard reels and customised lengths
- Voltage rating 300/500V

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BS 7629-1:2008

KEY APPLICATIONS

Fire detection and fire alarm systems for buildings. FRA-XOL (E) is LPCB approved according to the requirements of enhanced fire resistant cables as described in Clause 26.2 of BS 5839-1:2002+A2:2008.

INSULATION

Cross-linked Low Smoke Zero Halogen Insulation (Type EI5) over mineral (mica/glass) tape.

CORE IDENTIFICATION



TEMPERATURE RATINGS FACTOR

Ambient Temperature °C	25	30	35	40	45	50
Rating Factor	1.03	1.00	0.94	0.91	0.87	0.82

CORRECTION FACTORS FOR GROUPINGS

Number of Circuits	2	3	4	5	6	7
Rating Factor	0.80	0.70	0.65	0.60	0.57	0.54

Nominal Cross Sectional Area mm ²	Conceptual construction no./mm	Mean overall diameter mm	Approximate cable weight kg/km	Maximum conductor resistance at 20°C ohms/km	Current rating DC or single phase AC Enclosed Amps	Current rating DC or single phase AC Clipped direct Amps	Volt drop DC or single phase AC mV/A/m
T W O C O R E							
1.0	1/1.13	8.6	93	18.1	13	15	44
1.5	1/1.38	9.4	115	12.1	16.5	19.5	29
2.5	1/1.78	11.0	155	7.4	23	27	18
4.0	7/0.85	12.6	209	4.6	30	36	11
T H R E E C O R E							
1.0	1/1.13	9.3	121	18.1	13	15	44
1.5	1/1.38	10.0	150	12.1	16.5	19.5	29
2.5	1/1.78	11.8	206	7.4	23	27	18
4.0	7/0.85	13.4	280	4.6	30	36	11
F O U R C O R E							
1.0	1/1.13	10.3	155	18.1	13	15	44
1.5	1/1.38	11.0	194	12.1	16.5	19.5	29
2.5	1/1.78	13.1	267	7.4	23	27	18
4.0	7/0.85	15.0	362	4.6	30	36	11

Temperature Range:	Mechanical Impact	Flexibility:	Low Smoke Emissions:	Bending Radius:	Fire Performance:	Halogen Free:	Fire Resistant:
-20 to +70°C	Medium	Rigid	BS EN 61034-2 IEC 61034-2	Fixed r=6D	BS EN 60332-1-2 BS EN 60332-3C	BS EN 50267-2-2 IEC 60754-2	BS 6387 Category CWZ BS EN 50200 PH120 BS 8434-2 120 min



982a/01
982b/01

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