



Low Smoke Halogen Free cables

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cable & interconnect





Low Smoke Halogen Free cables

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└ SINGLE CORE HALOGEN FREE CABLE



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Low Smoke Halogen Free products

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General information

AXON' CABLE,
the manufacturer of
wires, cables
and cable assemblies,
offers a range of
**Low Smoke
Halogen Free cables**
for public places and
industrial facilities.
This range of cables
has been designed
to avoid propagation
of fire and emission
of toxic fumes
in case of fire
in enclosed spaces.

Non propagation of flame and fire

In public places, buildings, trains, subways, ships as well as industrial facilities, electrical cables have to work whilst maintaining a high level of security of people and material. In case of fire, the electrical cables shall not cause the fire or spread it. They shall not emit impenetrable, toxic or corrosive fumes that could damage equipment or harm people. Axon' low smoke and fire cables have been designed to meet the following requirements :

- Non-propagation of flame and fire.
- Low or no emission of fumes to allow the rescue team to work without visibility problems.
- No emission of toxic fumes to assure the security of the people detained in the premises affected by the fire.
- No emission of corrosive fumes to save equipment and buildings not affected by the fire.

The term «Zero Halogen»

During a fire, the most dangerous toxic gases emitted are acid gases such as hydrogen chloride (HCl), hydrogen fluoride (HF) and hydrogen bromide (HBr).

These gases are produced by the combustion of materials containing halogen materials such as Chlorine, Fluorine, Bromine, Iodine and Astatine.

As a consequence, insulation materials of cables should not contain halogen materials to meet the security requirements.

Axon' has listed the insulating materials of primary wires and jacketing according to their reaction to fire. Standardized tests have enabled to define the behaviour of the materials with regard to flame and fire propagation, fume opacity, toxicity and corrosivity of the gas emissions.

Common terminology

LSHF Low Smoke Halogen Free
LSZH/ LSOH Low Smoke Zero Halogen
HFFR Halogen Free Flame Retardant
ZH/OH Zero Halogen
LSF Low Smoke Fume

Qualification tests performed

Axon' Low Smoke Halogen-Free (LSHF) solutions have been fully evaluated in independent laboratories to guarantee safety and performances in terms of Halogen-Free, low smoke density and toxicity requirements. The tables below present an overview of tests performed, based on International (IEC) and French (NF) standards as well as their results. More detailed information about test purposes are provided on page 6.

STANDARD	STANDARD DESCRIPTION SUMMARY	MEASUREMENTS	REQUIREMENTS
IEC 60332-1	VERTICAL FLAME PROPAGATION	Burned distance	Self Extinguished
IEC 60754-1	HALOGEN ACID GAS CONTENT	mg/g	≤ 5 mg/g
IEC 60754-2	DETERMINATION OF GAS ACIDITY AND CONDUCTIVITY	pH ; μS/mm	pH> 4,3 ; <10 μS/mm
IEC 61034-2	SMOKE DENSITY OF CABLES	% transmittance	> 60% recommended
NF X 70-100	ANALYSIS OF PYROLYSIS & COMBUSTION GASES	ITC	Depends on the application
NF X 10-702	SPECIFIC OPTICAL DENSITY OF SMOKE	Dm ; VOF4	Depends on the application
NF F16-101	SMOKE INDEX IF	IF	Smoke index (F0 - F5)
EN 50399	HEAT RELEASE & SMOKE PRODUCTION	THR, HHR,	Classification

Quality assurance

ISO 9001
TS 16949
EN 9100

Business Excellence Models (EFQM)
ISO 14001
OHSAS 18001
ISO 13485

Halogen content, flammability, smoke density & toxicity test results

AXON' LSHF MATERIAL		ASC3-55J	TPUE850HVO	POLIAX™	POLIAX-HT™	NEUTRAX™	TPI238MI (*)	FH
THERMAL RATING		70°C	125°C	135°C	150°C	200°C	240°C	250°C
FLEXIBILITY		●●●●	●●●●●	●●●	●●	●	●	●
INSULATION		✓	-	✓	✓	✓	✓	✓
JACKET		✓	✓	✓	✓	✓	✓	-
STANDARD	MEASUREMENT	RESULTS						
IEC 60332-1	Compliance	✓	✓	✓	✓	✓	✓	✓
IEC 60754-1	Compliance	✓	✓	✓	✓	✓	✓	✓
IEC 60754-2	Compliance	✓	✓	✓	✓	✓	✓	✓
IEC 61034-2	% Transmittance	97%	52%	75%	89%	83%	99%	100%
NF X 70-100	ITC (material)	4	32	10.8	11.6	5	2.1	8.8
NF X 10-702	Dm	200	253	283	25	0.97	0.6	0.46
NF X 10-702	VOF4	8	512	30	0.6	1.52	0.58	0.12
NF F16-101	IF	4.3	35.6	9.2	6.1	2.6	1.1	4.4
NF F16-101	IF Class	F0	F2	F1	F1	F0	F0	F0
EN 50399	Class	NOT TESTED	NOT TESTED	B2 _{ca} -s1-d0	▲	▲	▲	▲

LEGEND: ● LIMITED ●● FAIR ●●● GOOD ●●●● EXCELLENT ●●●●● OUTSTANDING / ▲ NOT TESTED BUT EXPECTED TO BE AT LEAST AS GOOD AS POLIAX™ RESULT

(*) RESTRICTED USE FOR MEDICAL APPLICATIONS AND SPECIFIC MILITARY EQUIPMENT, PLEASE CONTACT US

Test procedures

IEC 60332 - Vertical Flame Propagation

A burner flame is applied at 45° on a 550mm cable sample fixed in vertical position:

- For **IEC 60332-1**, a flame of 1kW is applied during 60 s.
- In case of conductor's breakage, test is done following **IEC 60332-2** with a flame of 500W during 20 s.



IEC 60332 REQUIREMENTS

- The fire damage must stop at least 50 mm below the upper fixing clamp.
- The cable must be self-extinguishing

IEC 60754 - Halogen Content and gas Acidity

The test is performed on 1 gram of raw insulation material.

IEC 60754-1 determines the Halogen gas content by combustion of the material at 800°C during 20 minutes in tubular oven.
IEC 60754-2: the sample is burned at 935°C in tubular oven during 30 minutes with constant air flow.
Conductivity and pH of the gas are then measured.



IEC 60754 REQUIREMENTS

- Halogen Acid gas content ≤ 5 mg HCl/g
- Gas acidity (pH) > 4.3
- Gas conductivity < 10 μ S/mm

IEC 61034-2 - Smoke density of cables

A bundle of cables is burned in a dedicated 3 m³ test chamber.
A light beam emitted from a window is projected across the enclosure to a photo cell connected to a recorder at the opposite window.

The minimum Light Transmission (%) is recorded.

The higher the light transmittance, the less smoke is emitted during a fire.



IEC 61034-2 REQUIREMENTS

- (depend on the market)
- Usually the minimum light transmission should exceed 60%

NF X 10-702 - Smoke opacity

A bundle of cables (0.76m length) is vertically pyrolysed.

Two parameters are measured:

Dm = maximum optical density

VOF4 = sum of optical density after 4 minutes.



NF X 10-102 REQUIREMENTS

- Used to calculate Smoke Index (IF) with NF 16-101

NF X 70-100 - Analysis of gaseous effluents & toxicity index (ITC)

The test is done on 1 gram of material. The sample is burned at 800°C and the following gazes are analyzed: CO, CO₂, HCN, HCl, HBr, HF, SO₂ and NO₂.

The quantity of each gas, is measured in mg/g of material.

ITC: Each of the gas concentrations (ti) is divided by a reference value (Cci) from NF X 70-100 and summed to determine the toxicity index called ITC according to the following formula: $ITC = 100 \times \sum (ti/Cci)$.



NF X 70-100 REQUIREMENTS

- The maximum ITC depends on the application/ market

NF F 16-101 - Smoke index (S.I) & F-rating

The smoke index (SI or IF for "Indice de Fumée") is calculated based on combined smoke parameters of NF X 70-100 and NF X 10-702 test results. A correspondent F-rating is then attributed with 6 smoke levels, from F0 to F5, F0 being the best class. $IF = Dm/100 + VOF4/30 + ITC/2$.



NF F 16-101 REQUIREMENTS

- The maximum F Class level depends on the application/ market

EN 50399 - Heat release and smoke production

A bundle of cables is burned vertically during 20 minutes in a dedicated test chamber. The test method generates data in terms of flame spread, heat release, fire growth rate and smoke formation. EN 50399 test results, associated to other standards like EN 60332-1 and 61034-2 are used to determine the **CPR** rating of a cable. The CPR Euroclasses are A_{ca}, B1_{ca}, B2_{ca}, C_{ca}, D_{ca}, E_{ca} and F_{ca}.

A_{ca} corresponds to the highest performance (non-combustible) and F_{ca} to the lowest (Flame propagation). Low Fire Hazard Cables ranges from B1_{ca} (very limited contribution to fire) to D_{ca} (acceptable contribution to fire).



EN 50399 CPR REQUIREMENTS

- The minimum CPR Euroclass rating of a cable depends on the application and the country

Mechanical performances

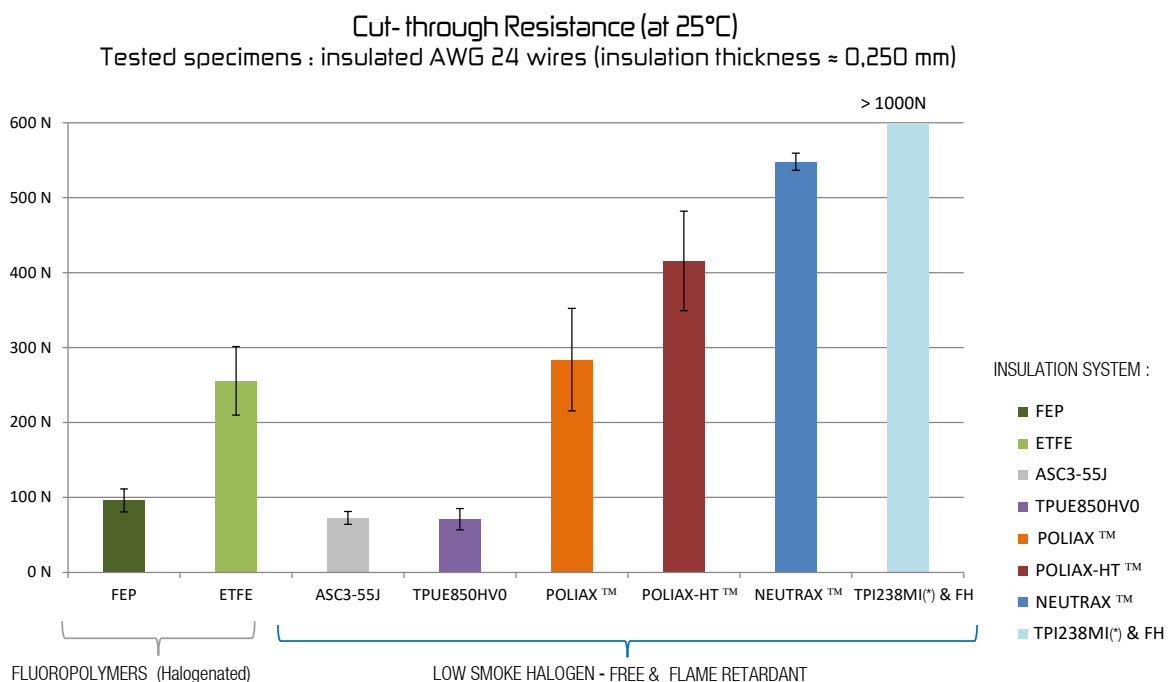
The table below presents a comparison of the mechanical performances of Axon' standard range of Halogen-Free Flame Retardant Low smoke insulating systems (LSHF). The comparison is based on wires insulated with exactly the same insulation thickness.

Resistance to extreme mechanical and thermal stresses can be achieved with the use of specialty materials, but the offered cables are usually stiffer. Axon' engineers will select the appropriate materials and optimize the design of the very cable you need in terms of performance, mass saving and flexibility.

AXON' LSHF MATERIAL		ASC3-55J	TPUE850HV0	POLIAX™	POLIAX-HT™	NEUTRAX™	TPI238MI(*)	FH
THERMAL RATING		70°C	125°C	135°C	150°C	200°C	240°C	250°C
FLEXIBILITY		●●●●	●●●●●	●●●●	●●	●	●	●
INSULATION		✓	-	✓	✓	✓	✓	✓
JACKET		✓	✓	✓	✓	✓	✓	-
ABRASION RESISTANCE	at 25°C	●●	●●●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●●
	at 100°C	●	●	●●	●●●●	●●●●●	●●●●●	●●●●●
	at 125°C	N/A		●	●●●●	●●●●●	●●●●●	●●●●●
	at 150°C	N/A			●●●●	●●●●●	●●●●●	●●●●●
	at 180°C	N/A				●●●●●	●●●●●	●●●●●
CUT-THROUGH RESISTANCE	at 25°C	●●	●●	●●●●	●●●●●	●●●●●	●●●●●	●●●●●
	at -80°C	✓	✓	✓	✓	✓	✓	✓

LEGEND: ● LIMITED ●● FAIR ●●● GOOD ●●●● EXCELLENT ●●●●● OUTSTANDING

(*) RESTRICTED USE FOR MEDICAL APPLICATIONS AND SPECIFIC MILITARY EQUIPMENT, PLEASE CONTACT US



Electrical properties

The hereafter table presents a comparison of electrical performance relating to different Low Smoke Flame Retardant Halogen free insulating solutions. Tests have been performed on insulated wires of the same thickness.

Outstanding insulation resistivity and dielectric strength can be maintained up to 250°C with the right selected material. LSHF Antistatic Jacketing solutions are also available and prove to be useful for challenging requirements including ATEX environment or for dynamic applications where the build-up of anti-static charges on the jacket surface must be avoided.



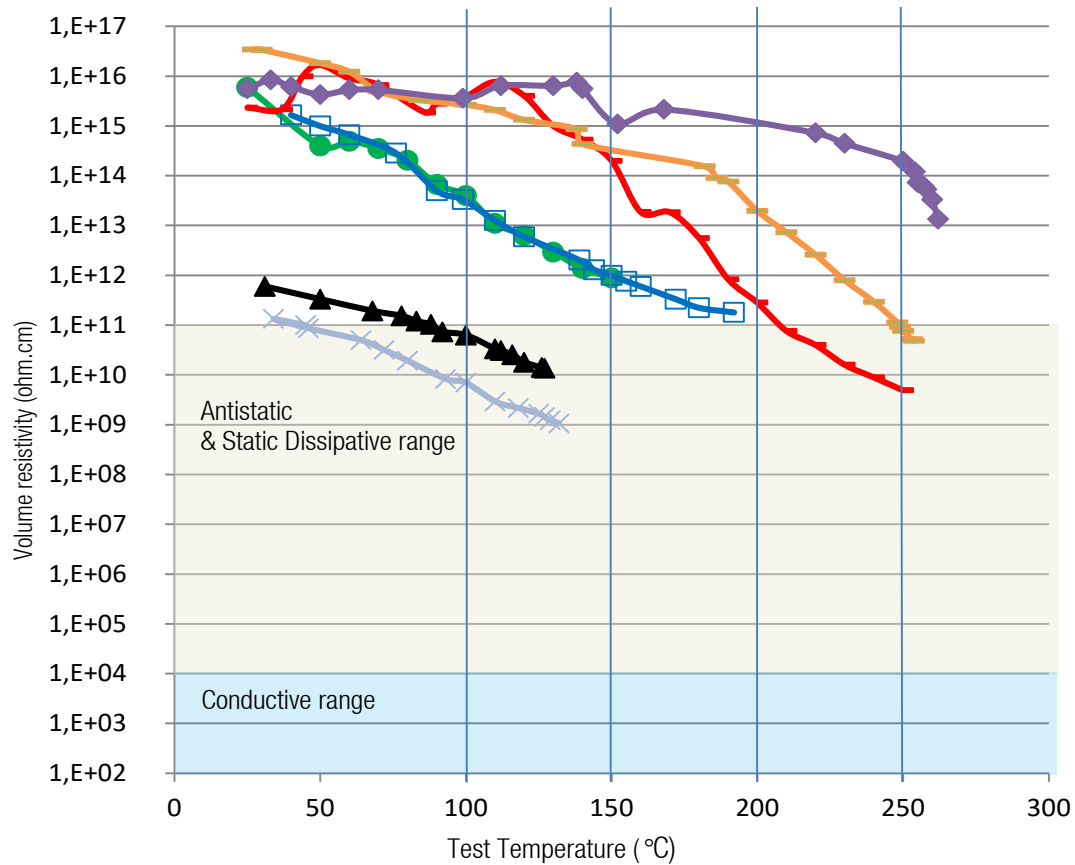
INDUSTRIAL FACILITIES

AXON' LSHF MATERIAL		ASC3-55J	TPUE850HVD	POLIAX™	POLIAX-HT™	NEUTRAX™	TPI238MI (+)	FH
THERMAL RATING		70°C	125°C	135°C	150°C	200°C	240°C	250°C
FLEXIBILITY		●●●●	●●●●●	●●●	●●	●	●	●
INSULATION		✓	-	✓	✓	✓	✓	✓
JACKET		✓	✓	✓	✓	✓	✓	-
VOLUME RESISTIVITY	at 25°C	●●	● ANTISTATIC	●●●●●	●●●●●	●●●●●	●●●●●	●●●●●
	at 100°C	● ANTISTATIC	● ANTISTATIC	●●●●	●●●●	●●●●●	●●●●●	●●●●●
	at 125°C	N/A	● ANTISTATIC	●●●	●●●	●●●●●	●●●●●	●●●●●
	at 150°C	N/A			●●●	●●●●	●●●●	●●●●●
	at 200°C	N/A				●●	●●●●	●●●●
	at 250°C	N/A				● ANTISTATIC	●●●	●●
DIELECTRIC STRENGTH	at 25°C	●●●	●●	●●●●	●●●●	●●●●●	●●●●●	●●●●●
	at 100°C	N/A		●●	●●●	●●●●●	●●●●●	●●●●●
	at 150°C	N/A			●●	●●●●	●●●●●	●●●●●
	at 200°C	N/A				●●	●●●●●	●●●●●
	at 240°C	N/A				●●	●●●●	●●●●
DIELECTRIC CONSTANT	at 25°C	●	●	●●●	●●●	●●●	●●●	●●

LEGEND: ● LIMITED ●● FAIR ●●● GOOD ●●●● EXCELLENT ●●●●● OUTSTANDING

(*) RESTRICTED USE FOR MEDICAL APPLICATIONS AND SPECIFIC MILITARY EQUIPMENT, PLEASE CONTACT US

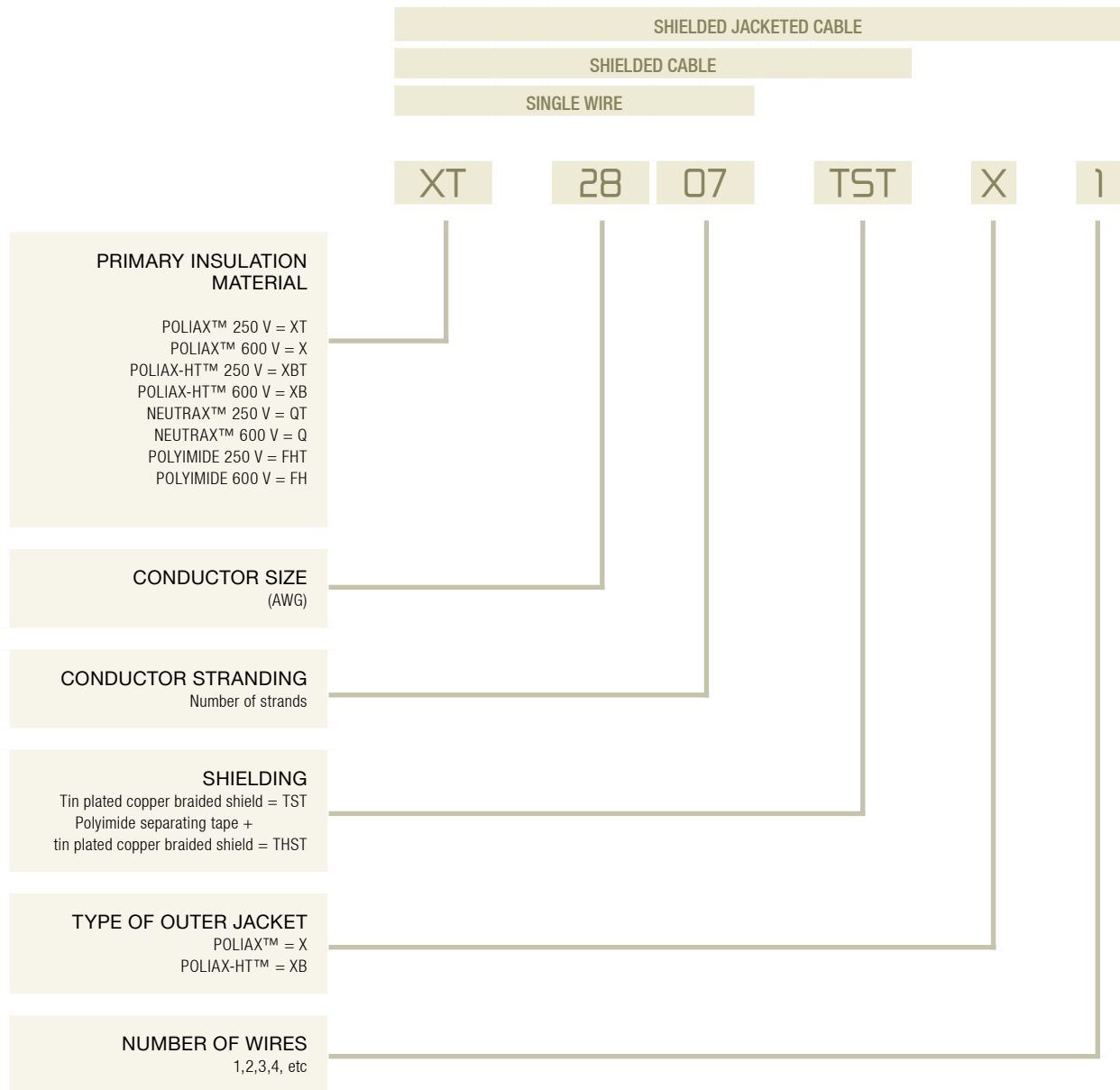
VOLUME RESISTIVITY DEPENDING ON TEMPERATURE



Halogen - Free
Flame - Retardant

- ▲ ASC3
- ✕ TPUE850HV0
- POLIAX™
- POLIAX-HT™
- NEUTRAX™
- Polyimide tape (FH)
- ◆ TPI238MI (*)

AXON' identification code



FOR FURTHER INFORMATION,
our sales team is at your disposal for any advice you may require.

Single wires

TYPE XT xxxx TPC

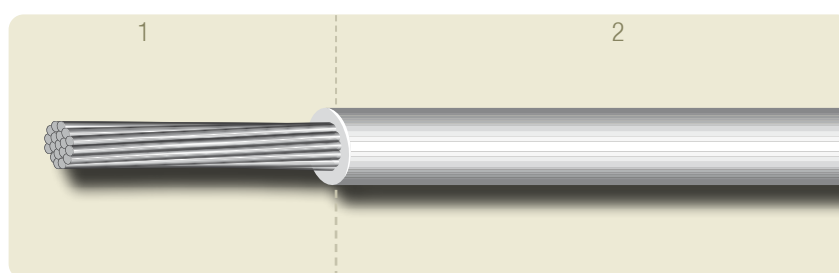
Insulation: POLIAX™ halogen free / LSZH.

Operating temperature: -40°C up to +130°C.

Voltage rating: 250 VAC.

Radiation resistance: 3 MGy (300 Mrad) in standard atmosphere,
6 MGy (600 Mrad) in inert atmosphere.

Colours: according to the customers requirements.



Construction

PRIMARY WIRE

1 - Conductor: tin plated annealed copper (TPC).

2 - Insulation: POLIAX™.

Main characteristics

Pairs, triples and quads as well as shielded cables jacketed with ASC3-55J or other insulation materials will be studied according to customer requirements.

Other constructions on request.

AXON' REFERENCE	AWG	CONDUCTOR				INSULATED WIRE	
		CONSTRUCTION (Nb x Ø mm)	Ø (mm)	AREA (mm²)	MAXIMUM RESISTANCE (Ω/ 100m)	NOMINAL Ø (mm)	WEIGHT (g/m)
XT 2807 TPC	28	7 x 0.127	0.38	0.0886	20.8	0.70	1.10
XT 2619 TPC	26	19 x 0.102	0.48	0.154	12.87	0.80	1.80
XT 2419 TPC	24	19 x 0.127	0.60	0.24	7.66	0.95	2.70
XT 2237 TPC	22	37 x 0.114	0.78	0.38	5.08	1.10	4.20
XT 2037 TPC	20	37 x 0.142	0.97	0.59	3.37	1.30	6.20

TPC: TIN PLATED ANNEALED COPPER - LSZH: LOW SMOKE ZERO HALOGEN

Shielded jacketed single core cables

TYPE XT xxxx TSTX1 TPC

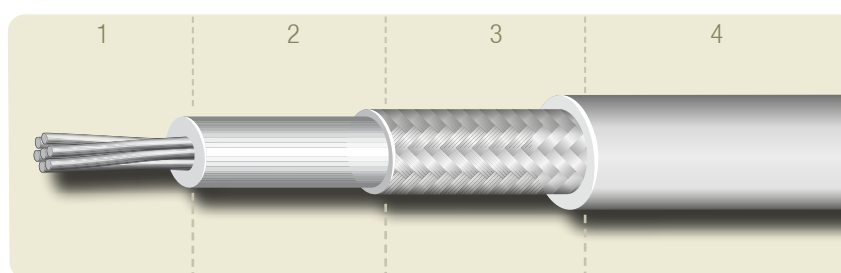
Insulation: POLIAX™ halogen free / LSZH.

Operating temperature: -40°C up to +130°C.

Voltage rating: 250 VAC.

Radiation resistance: 3 MGy (300 Mrad) in standard atmosphere,
6 MGy (600 Mrad) in inert atmosphere.

Outer jacket colour: white. Other colours upon request.



Construction

PRIMARY WIRE

1 - Conductor: tin plated annealed copper (TPC).

2 - Insulation: POLIAX™.

SHIELDING

3 - Braided shield: tin plated annealed copper (TPC).

OUTER JACKET

4 - POLIAX™.

Main characteristics

Pairs, triples and quads as well as shielded cables jacketed with ASC3-55J or other insulation materials will be studied according to customer requirements.

Other constructions on request.

AXON' REFERENCE	PRIMARY WIRE		SHIELDING			CABLE	
	REFERENCE	Ø (mm)	SHIELDING WIRE Ø (mm)	COVERAGE (%)	SHIELDING Ø (mm)	NOMINAL Ø (mm)	WEIGHT (g/m)
XT 2807 TSTX 1	XT 2807 TPC	0.70	0.102	85	1.15	1.40	4.40
XT 2619 TSTX 1	XT 2619 TPC	0.80	0.102	96	1.25	1.50	6.50
XT 2419 TSTX 1	XT 2419 TPC	0.95	0.102	93	1.40	1.70	7.60
XT 2237 TSTX 1	XT 2237 TPC	1.10	0.102	88	1.55	1.90	9.50
XT 2037 TSTX 1	XT 2037 TPC	1.30	0.102	93	1.75	2.15	13.10

TPC: TIN PLATED ANNEALED COPPER - LSZH: LOW SMOKE ZERO HALOGEN

Shielded jacketed twisted pairs

TYPE XT xxxx THSTX2 TPC

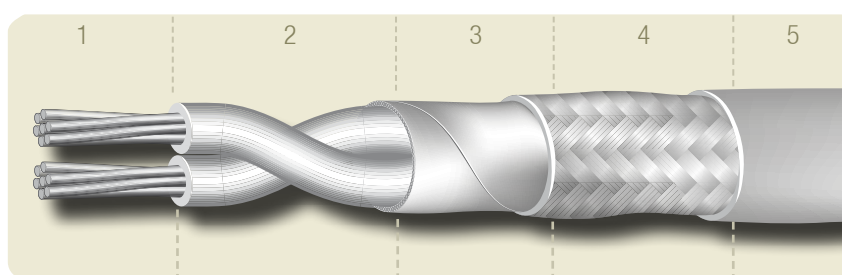
Insulation: POLIAX™ halogen free / LSZH.

Operating temperature: -40°C up to +130°C.

Voltage rating: 250 VAC.

Radiation resistance: 3 MGy (300 Mrad) in standard atmosphere,
6 MGy (600 Mrad) in inert atmosphere.

Outer jacket colour: white. Other colours upon request.



Construction

PRIMARY WIRE

1 - Conductor: tin plated annealed copper (TPC).

2 - Insulation: POLIAX™.

TAPE

3 - Polyimide separating tape.

SHIELDING

4 - Braided shield: tin plated annealed copper (TPC).

OUTER JACKET

5 - POLIAX™.

Main characteristics

Pairs, triples and quads as well as shielded cables jacketed with ASC3-55J or other insulation materials will be studied according to customer requirements.

Other constructions on request.

AXON' REFERENCE	PRIMARY WIRE		SHIELDING			CABLE	
	REFERENCE	Ø (mm)	SHIELDING WIRE Ø (mm)	COVERAGE (%)	SHIELDING Ø (mm)	NOMINAL Ø (mm)	WEIGHT (g/m)
XT 2807 THSTX 2	XT 2807 TPC	0.70	0.102	82	1.90	2.20	8.00
XT 2619 THSTX 2	XT 2619 TPC	0.80	0.127	83	2.20	2.50	11.60
XT 2419 THSTX 2	XT 2419 TPC	0.95	0.127	89	2.50	2.80	15.80
XT 2237 THSTX 2	XT 2237 TPC	1.10	0.127	84	2.80	3.10	19.30
XT 2037 THSTX 2	XT 2037 TPC	1.30	0.127	95	3.20	3.55	28.50

TPC: TIN PLATED ANNEALED COPPER - LSZH: LOW SMOKE ZERO HALOGEN

Shielded jacketed twisted triples

TYPE XT xxxx THSTX3 TPC

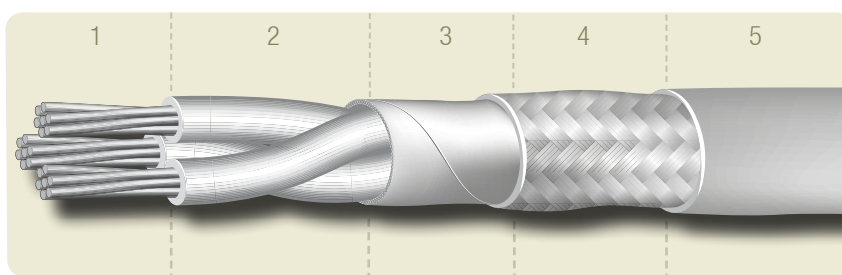
Insulation: POLIAX™ halogen free / LSZH.

Operating temperature: -40°C up to +130°C.

Voltage rating: 250 VAC.

Radiation resistance: 3 MGy (300 Mrad) in standard atmosphere,
6 MGy (600 Mrad) in inert atmosphere.

Outer jacket colour: white. Other colours upon request.



Construction

PRIMARY WIRE

1 - Conductor: tin plated annealed copper (TPC).

2 - Insulation: POLIAX™.

TAPE

3 - Polyimide separating tape.

SHIELDING

4 - Braided shield: tin plated annealed copper (TPC).

OUTER JACKET

5 - POLIAX™.

Main characteristics

Pairs, triples and quads as well as shielded cables jacketed with ASC3-55J or other insulation materials will be studied according to customer requirements.

Other constructions on request.

AXON' REFERENCE	PRIMARY WIRE		SHIELDING			CABLE	
	REFERENCE	Ø (mm)	SHIELDING WIRE Ø (mm)	COVERAGE (%)	SHIELDING Ø (mm)	NOMINAL Ø (mm)	WEIGHT (g/m)
XT 2807 THSTX 3	XT 2807 TPC	0.70	0.102	90	2.00	2.30	10.40
XT 2619 THSTX 3	XT 2619 TPC	0.80	0.127	93	2.30	2.60	15.50
XT 2419 THSTX 3	XT 2419 TPC	0.95	0.127	87	2.65	3.00	19.10
XT 2237 THSTX 3	XT 2237 TPC	1.10	0.127	90	2.95	3.30	25.80
XT 2037 THSTX 3	XT 2037 TPC	1.30	0.127	92	3.35	3.80	35.30

TPC: TIN PLATED ANNEALED COPPER - LSZH: LOW SMOKE ZERO HALOGEN

Single wires

TYPE X xxxx TPC

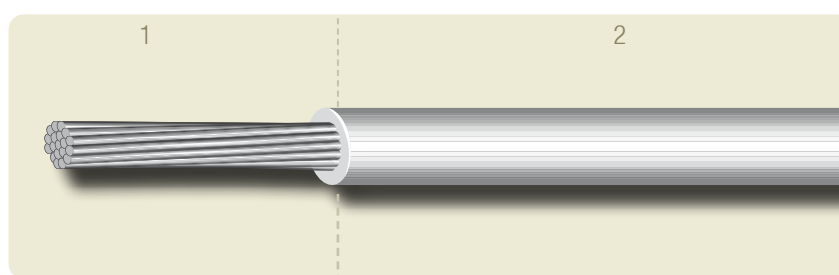
Insulation: POLIAX™ halogen free / LSZH.

Operating temperature: -40°C up to +130°C.

Voltage rating: 600 VAC.

Radiation resistance: 3 MGy (300 Mrad) in standard atmosphere,
6 MGy (600 Mrad) in inert atmosphere.

Colours: according to the customers requirements.



Construction

PRIMARY WIRE

1 - Conductor: tin plated annealed copper (TPC).

2 - Insulation: POLIAX™.

Main characteristics

Pairs, triples and quads as well as shielded cables jacketed with ASC3-55J or other insulation materials will be studied according to customer requirements.

Other constructions on request.

AXON' REFERENCE	AWG	CONDUCTOR				INSULATED WIRE	
		CONSTRUCTION (Nb x Ø mm)	Ø (mm)	AREA (mm²)	MAXIMUM RESISTANCE (Ω/ 100m)	NOMINAL Ø (mm)	WEIGHT (g/m)
X 2807 TPC	28	7 x 0.127	0.38	0.0886	20.8	0.85	1.40
X 2619 TPC	26	19 x 0.102	0.48	0.154	12.87	0.95	2.00
X 2419 TPC	24	19 x 0.127	0.60	0.24	7.66	1.05	2.80
X 2237 TPC	22	37 x 0.114	0.78	0.38	5.08	1.20	4.40
X 2037 TPC	20	37 x 0.142	0.97	0.59	3.37	1.50	6.70
X 1861 TPC	18	61 x 0.142	1.24	0.97	2.05	1.80	10.60
X 1661 TPC	16	61 x 0.160	1.45	1.23	1.56	2.00	13.10
X 1461 TPC	14	61 x 0.203	1.75	1.91	1.04	2.35	20.80
X 1291 TPC	12	91 x 0.203	2.15	2.94	0.68	2.90	31.20
X 1091 TPC	10	91 x 0.254	2.70	4.46	0.43	3.55	47.60
X 8133 TPC	8	133 x 0.287	4.20	8.60	0.23	5.10	86.90

TPC: TIN PLATED ANNEALED COPPER - LSZH: LOW SMOKE ZERO HALOGEN

Shielded jacketed single core cables

TYPE X xxxx TSTX1 TPC

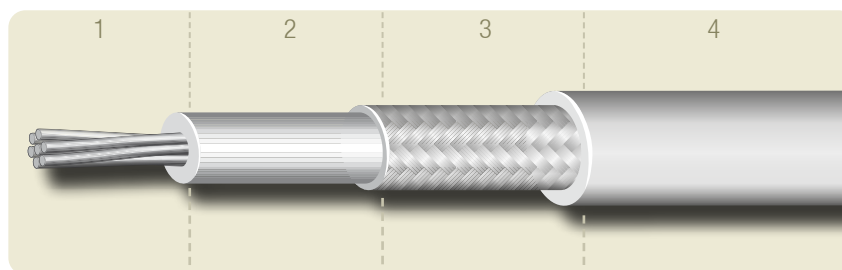
Insulation: POLIAX™ halogen free / LSZH.

Operating temperature: -40°C up to +130°C.

Voltage rating: 600 VAC.

Radiation resistance: 3 MGy (300 Mrad) in standard atmosphere,
6 MGy (600 Mrad) in inert atmosphere.

Outer jacket colour: white. Other colours upon request.



Construction

PRIMARY WIRE

1 - Conductor: tin plated annealed copper (TPC).

2 - Insulation: POLIAX™.

SHIELDING

3 - Braided shield: tin plated annealed copper (TPC).

OUTER JACKET

4 - POLIAX™.

Main characteristics

Pairs, triples and quads as well as shielded cables jacketed with ASC3-55J or other insulation materials will be studied according to customer requirements.

Other constructions on request.

AXON' REFERENCE	PRIMARY WIRE		SHIELDING			CABLE	
	REFERENCE	Ø (mm)	SHIELDING WIRE Ø (mm)	COVERAGE (%)	SHIELDING Ø (mm)	NOMINAL Ø (mm)	WEIGHT (g/m)
X 2807 TSTX 1	X 2807 TPC	0.85	0.102	98	1.30	1.60	6.30
X 2619 TSTX 1	X 2619 TPC	0.95	0.102	95	1.40	1.75	7.10
X 2419 TSTX 1	X 2419 TPC	1.05	0.102	92	1.50	1.85	8.00
X 2237 TSTX 1	X 2237 TPC	1.20	0.127	96	1.75	2.15	12.40
X 2037 TSTX 1	X 2037 TPC	1.50	0.127	97	2.05	2.40	16.60
X 1861 TSTX 1	X 1861 TPC	1.80	0.127	92	2.35	2.75	21.00
X 1661 TSTX 1	X 1661 TPC	2.00	0.127	96	2.55	2.95	26.80
X 1461 TSTX 1	X 1461 TPC	2.35	0.127	91	2.90	3.50	35.10
X 1291 TSTX 1	X 1291 TPC	2.90	0.127	90	3.45	3.90	47.10
X 1091 TSTX 1	X 1091 TPC	3.55	0.127	89	4.10	4.90	63.30
X 8133 TSTX 1	X 8133 TPC	5.10	0.127	91	5.65	6.55	119.40

TPC: TIN PLATED ANNEALED COPPER - LSZH: LOW SMOKE ZERO HALOGEN

Shielded jacketed twisted pairs

TYPE X xxxx TSTX2 TPC

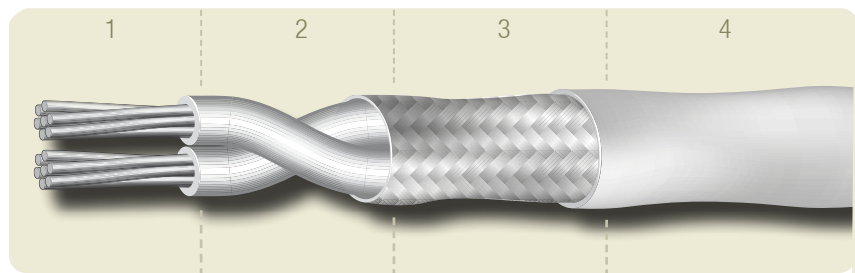
Insulation: POLIAX™ halogen free / LSZH.

Operating temperature: -40°C up to +130°C.

Voltage rating: 600 VAC.

Radiation resistance: 3 MGy (300 Mrad) in standard atmosphere,
6 MGy (600 Mrad) in inert atmosphere.

Outer jacket colour: white. Other colours upon request.



Construction

PRIMARY WIRE

1 - Conductor: tin plated annealed copper (TPC).

2 - Insulation: POLIAX™.

SHIELDING

3 - Braided shield: tin plated annealed copper (TPC).

OUTER JACKET

4 - POLIAX™.

Main characteristics

Pairs, triples and quads as well as shielded cables jacketed with ASC3-55J or other insulation materials will be studied according to customer requirements.

Other constructions on request.

AXON' REFERENCE	PRIMARY WIRE		SHIELDING			CABLE	
	REFERENCE	Ø (mm)	SHIELDING WIRE Ø (mm)	COVERAGE (%)	SHIELDING Ø (mm)	NOMINAL Ø (mm)	WEIGHT (g/m)
X 2807 TSTX 2	X 2807 TPC	0.85	0.127	95	2.25	2.60	13.20
X 2619 TSTX 2	X 2619 TPC	0.95	0.127	90	2.45	2.80	14.50
X 2419 TSTX 2	X 2419 TPC	1.05	0.127	86	2.65	3.00	18.50
X 2237 TSTX 2	X 2237 TPC	1.20	0.127	91	2.95	3.35	22.40
X 2037 TSTX 2	X 2037 TPC	1.50	0.127	90	3.55	4.00	29.60
X 1861 TSTX 2	X 1861 TPC	1.80	0.127	91	4.15	4.60	41.70
X 1661 TSTX 2	X 1661 TPC	2.00	0.127	86	4.55	5.00	49.10
X 1461 TSTX 2	X 1461 TPC	2.35	0.127	89	5.25	5.90	69.60
X 1291 TSTX 2	X 1291 TPC	2.90	0.127	89	6.35	7.00	96.80
X 1091 TSTX 2	X 1091 TPC	3.55	0.160	87	7.80	8.90	146.30
X 8133 TSTX 2	X 8133 TPC	5.10	0.160	93	10.90	12.30	261.20

TPC: TIN PLATED ANNEALED COPPER - LSZH: LOW SMOKE ZERO HALOGEN

Shielded jacketed twisted triples

TYPE X xxxx TSTX3 TPC

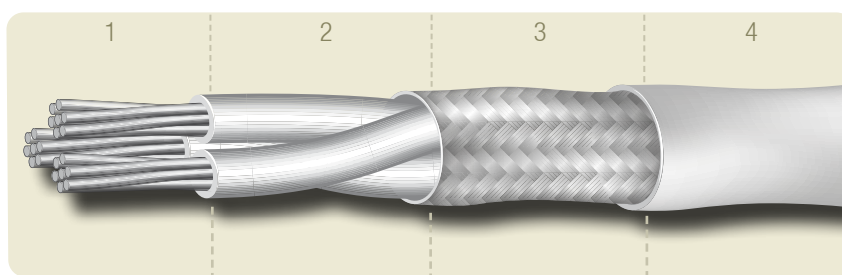
Insulation: POLIAX™ halogen free / LSZH.

Operating temperature: -40°C up to +130°C.

Voltage rating: 600 VAC.

Radiation resistance: 3 MGy (300 Mrad) in standard atmosphere,
6 MGy (600 Mrad) in inert atmosphere.

Outer jacket colour: white. Other colours upon request.



Construction

PRIMARY WIRE

1 - Conductor: tin plated annealed copper (TPC).

2 - Insulation: POLIAX™.

SHIELDING

3 - Braided shield: tin plated annealed copper (TPC).

OUTER JACKET

4 - POLIAX™.

Main characteristics

Pairs, triples and quads as well as shielded cables jacketed with ASC3-55J or other insulation materials will be studied according to customer requirements.

Other constructions on request.

AXON' REFERENCE	PRIMARY WIRE		SHIELDING			CABLE	
	REFERENCE	Ø (mm)	SHIELDING WIRE Ø (mm)	COVERAGE (%)	SHIELDING Ø (mm)	NOMINAL Ø (mm)	WEIGHT (g/m)
X 2807 TSTX 3	X 2807 TPC	0.85	0.127	92	2.40	2.75	14.70
X 2619 TSTX 3	X 2619 TPC	0.95	0.127	96	2.60	3.00	19.00
X 2419 TSTX 3	X 2419 TPC	1.05	0.127	92	2.80	3.20	21.40
X 2237 TSTX 3	X 2237 TPC	1.20	0.127	94	3.15	3.60	29.40
X 2037 TSTX 3	X 2037 TPC	1.50	0.127	92	3.80	4.25	38.70
X 1861 TSTX 3	X 1861 TPC	1.80	0.127	90	4.40	4.95	54.90
X 1661 TSTX 3	X 1661 TPC	2.00	0.127	92	4.85	5.35	68.40
X 1461 TSTX 3	X 1461 TPC	2.35	0.127	90	5.60	6.25	93.60
X 1291 TSTX 3	X 1291 TPC	2.90	0.127	87	6.80	7.55	132.20
X 1091 TSTX 3	X 1091 TPC	3.55	0.160	89	8.35	9.55	208.00
X 8133 TSTX 3	X 8133 TPC	5.10	0.160	90	11.65	13.15	262.00

TPC: TIN PLATED ANNEALED COPPER - LSZH: LOW SMOKE ZERO HALOGEN

Single wires

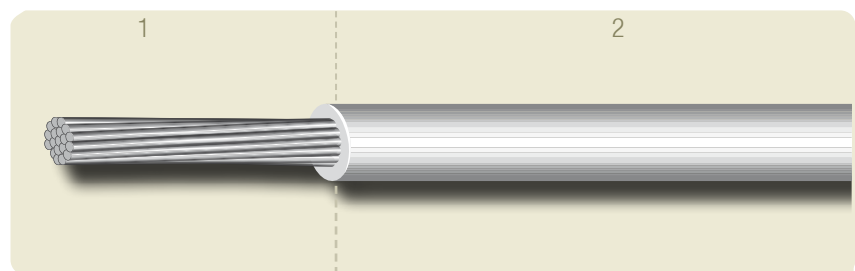
TYPE XBT xxxx TPC

Insulation: POLIAX-HT™ halogen free / LSZH.

Operating temperature: -40°C up to +150°C.

Voltage rating: 250 VAC.

Colours: according to the customers requirements.



Construction

PRIMARY WIRE

1 - Conductor: tin plated annealed copper (TPC).

2 - Insulation: POLIAX-HT™.

Main characteristics

Pairs, triples and quads as well as shielded cables jacketed with other insulation materials will be studied according to customer requirements.

Other constructions on request.

AXON® REFERENCE	AWG	CONDUCTOR				INSULATED WIRE	
		CONSTRUCTION (Nb x Ø mm)	Ø (mm)	AREA (mm²)	MAXIMUM RESISTANCE (Ω/ 100m)	NOMINAL Ø (mm)	WEIGHT (g/m)
XBT 2807 TPC	28	7 x 0.127	0.38	0.0886	20.8	0.70	1.10
XBT 2619 TPC	26	19 x 0.102	0.48	0.154	12.87	0.80	1.80
XBT 2419 TPC	24	19 x 0.127	0.60	0.24	7.66	0.95	2.70
XBT 2237 TPC	22	37 x 0.114	0.78	0.38	5.08	1.10	4.20
XBT 2037 TPC	20	37 x 0.142	0.97	0.59	3.37	1.30	6.20

TPC: TIN PLATED ANNEALED COPPER - LSZH: LOW SMOKE ZERO HALOGEN

Shielded jacketed single core cables

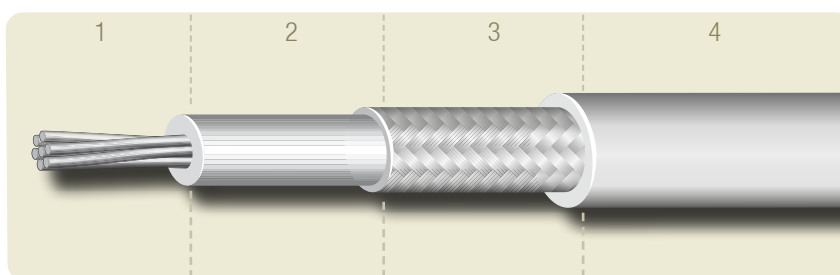
TYPE XBT xxxx TSTXB 1 TPC

Insulation: POLIAX-HT™ halogen free / LSZH.

Operating temperature: -40°C up to +150°C.

Voltage rating: 250 VAC.

Outer jacket colour: white. Other colours upon request.



Construction

PRIMARY WIRE

1 - Conductor: tin plated annealed copper (TPC).

2 - Insulation: POLIAX-HT™.

SHIELDING

3 - Braided shield: tin plated annealed copper (TPC).

OUTER JACKET

4 - POLIAX-HT™.

Main characteristics

Pairs, triples and quads as well as shielded cables jacketed or other insulation materials will be studied according to customer requirements.

Other constructions on request.

AXON' REFERENCE	PRIMARY WIRE		SHIELDING			CABLE	
	REFERENCE	Ø (mm)	SHIELDING WIRE Ø (mm)	COVERAGE (%)	SHIELDING Ø (mm)	NOMINAL Ø (mm)	WEIGHT (g/m)
XBT 2807 TSTXB 1	XBT 2807 TPC	0.70	0.102	85	1.15	1.40	4.40
XBT 2619 TSTXB 1	XBT 2619 TPC	0.80	0.102	96	1.25	1.50	6.50
XBT 2419 TSTXB 1	XBT 2419 TPC	0.95	0.102	93	1.40	1.70	7.60
XBT 2237 TSTXB 1	XBT 2237 TPC	1.10	0.102	88	1.55	1.90	9.50
XBT 2037 TSTXB 1	XBT 2037 TPC	1.30	0.102	93	1.75	2.15	13.10

TPC: TIN PLATED ANNEALED COPPER - LSZH: LOW SMOKE ZERO HALOGEN

Shielded jacketed twisted pairs

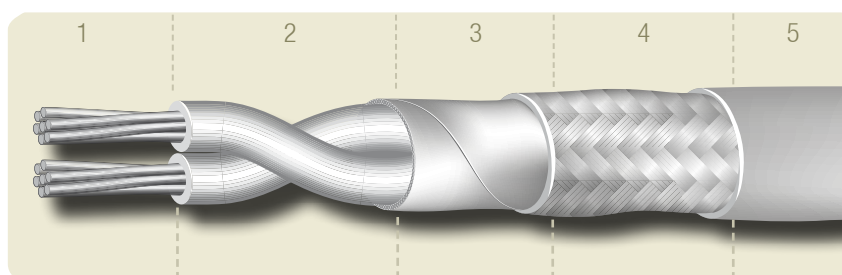
TYPE XBT xxxx THSTXB 2 TPC

Insulation: POLIAX-HT™ halogen free / LSZH.

Operating temperature: -40°C up to +150°C.

Voltage rating: 250 VAC.

Outer jacket colour: white. Other colours upon request.



Construction

PRIMARY WIRE

1 - Conductor: tin plated annealed copper (TPC).

2 - Insulation: POLIAX-HT™.

TAPE

3 - Polyimide separating tape.

SHIELDING

4 - Braided shield: tin plated annealed copper (TPC).

OUTER JACKET

5 - POLIAX-HT™.

Main characteristics

Pairs, triples and quads as well as shielded cables jacketed or other insulation materials will be studied according to customer requirements.

Other constructions on request.

AXON' REFERENCE	PRIMARY WIRE		SHIELDING			CABLE	
	REFERENCE	Ø (mm)	SHIELDING WIRE Ø (mm)	COVERAGE (%)	SHIELDING Ø (mm)	NOMINAL Ø (mm)	WEIGHT (g/m)
XBT 2807 THSTXB 2	XBT 2807 TPC	0.70	0.102	82	1.90	2.20	8.00
XBT 2619 THSTXB 2	XBT 2619 TPC	0.80	0.127	83	2.20	2.50	11.60
XBT 2419 THSTXB 2	XBT 2419 TPC	0.95	0.127	89	2.50	2.80	15.80
XBT 2237 THSTXB 2	XBT 2237 TPC	1.10	0.127	84	2.80	3.10	19.30
XBT 2037 THSTXB 2	XBT 2037 TPC	1.30	0.127	95	3.20	3.55	28.50

TPC: TIN PLATED ANNEALED COPPER - LSZH: LOW SMOKE ZERO HALOGEN

Shielded jacketed twisted triples

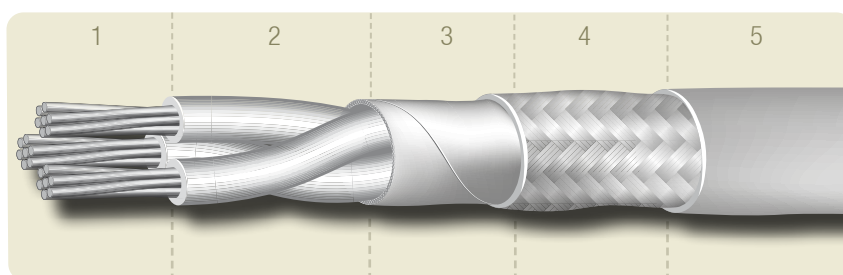
TYPE XBT xxxx THSTXB 3 TPC

Insulation: POLIAX-HT™ halogen free / LSZH.

Operating temperature: -40°C up to +150°C.

Voltage rating: 250 VAC.

Outer jacket colour: white. Other colours upon request.



Construction

PRIMARY WIRE

1 - Conductor: tin plated annealed copper (TPC).

2 - Insulation: POLIAX-HT™.

TAPE

3 - Polyimide separating tape.

SHIELDING

4 - Braided shield: tin plated annealed copper (TPC).

OUTER JACKET

5 - POLIAX-HT™.

Main characteristics

Pairs, triples and quads as well as shielded cables jacketed with other insulation materials will be studied according to customer requirements.

Other constructions on request.

AXON' REFERENCE	PRIMARY WIRE		SHIELDING			CABLE	
	REFERENCE	Ø (mm)	SHIELDING WIRE Ø (mm)	COVERAGE (%)	SHIELDING Ø (mm)	NOMINAL Ø (mm)	WEIGHT (g/m)
XBT 2807 THSTXB 3	XBT 2807 TPC	0.70	0.102	90	2.00	2.30	10.40
XBT 2619 THSTXB 3	XBT 2619 TPC	0.80	0.127	93	2.30	2.60	15.50
XBT 2419 THSTXB 3	XBT 2419 TPC	0.95	0.127	87	2.65	3.00	19.10
XBT 2237 THSTXB 3	XBT 2237 TPC	1.10	0.127	90	2.95	3.30	25.80
XBT 2037 THSTXB 3	XBT 2037 TPC	1.30	0.127	92	3.35	3.80	35.30

TPC: TIN PLATED ANNEALED COPPER - LSZH: LOW SMOKE ZERO HALOGEN

Single wires

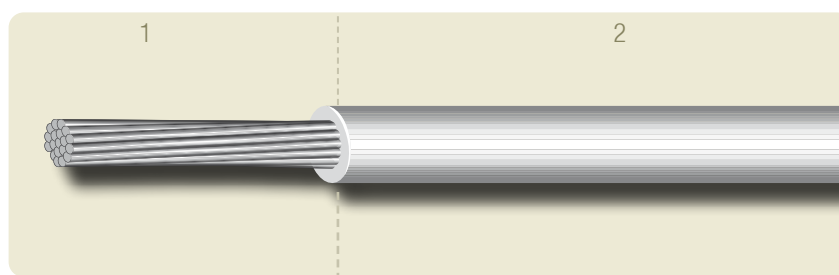
TYPE XB xxxx TPC

Insulation: POLIAX-HT™ halogen free / LSZH.

Operating temperature: -40°C up to +150°C.

Voltage rating: 600 VAC.

Colours: according to the customers requirements.



Construction

PRIMARY WIRE

1 - Conductor: tin plated annealed copper (TPC).

2 - Insulation: POLIAX-HT™.

Main characteristics

Pairs, triples and quads as well as shielded cables jacketed with other insulation materials will be studied according to customer requirements.

Other constructions on request.

AXON' REFERENCE	AWG	CONDUCTOR				INSULATED WIRE	
		CONSTRUCTION (Nb x Ø mm)	Ø (mm)	AREA (mm²)	MAXIMUM RESISTANCE (Ω/ 100m)	NOMINAL Ø (mm)	WEIGHT (g/m)
XB 2807 TPC	28	7 x 0.127	0.38	0.0886	20.8	0.85	1.40
XB 2619 TPC	26	19 x 0.102	0.48	0.154	12.87	0.95	2.00
XB 2419 TPC	24	19 x 0.127	0.60	0.24	7.66	1.05	2.80
XB 2237 TPC	22	37 x 0.114	0.78	0.38	5.08	1.20	4.40
XB 2037 TPC	20	37 x 0.142	0.97	0.59	3.37	1.50	6.70
XB 1861 TPC	18	61 x 0.142	1.24	0.97	2.05	1.80	10.60
XB 1661 TPC	16	61 x 0.160	1.45	1.23	1.56	2.00	13.10
XB 1461 TPC	14	61 x 0.203	1.75	1.91	1.04	2.35	20.80
XB 1291 TPC	12	91 x 0.203	2.15	2.94	0.68	2.90	31.20
XB 1091 TPC	10	91 x 0.254	2.70	4.46	0.43	3.55	47.60
XB 8133 TPC	8	133 x 0.287	4.20	8.60	0.23	5.10	86.90

TPC: TIN PLATED ANNEALED COPPER - LSZH: LOW SMOKE ZERO HALOGEN

Shielded jacketed single core cables

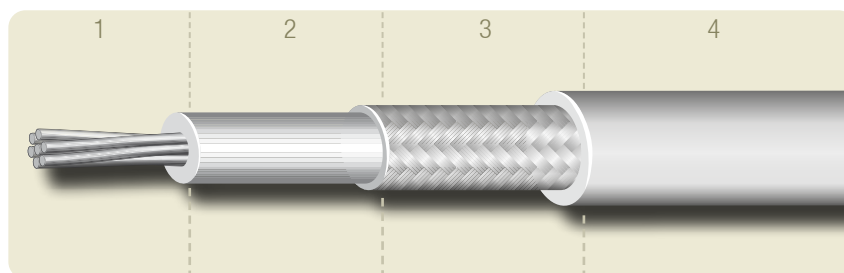
TYPE XB xxxx TSTXB 1 TPC

Insulation: POLIAX-HT™ halogen free / LSZH.

Operating temperature: -40°C up to +150°C.

Voltage rating: 600 VAC.

Outer jacket colour: white. Other colours upon request.



Construction

PRIMARY WIRE

1 - Conductor: tin plated annealed copper (TPC).

2 - Insulation: POLIAX-HT™.

SHIELDING

3 - Braided shield: tin plated annealed copper (TPC).

OUTER JACKET

4 - POLIAX-HT™.

Main characteristics

Pairs, triples and quads as well as shielded cables jacketed with other insulation materials will be studied according to customer requirements.

Other constructions on request.

AXON' REFERENCE	PRIMARY WIRE		SHIELDING			CABLE	
	REFERENCE	Ø (mm)	SHIELDING WIRE Ø (mm)	COVERAGE (%)	SHIELDING Ø (mm)	NOMINAL Ø (mm)	WEIGHT (g/m)
XB 2807 TSTXB 1	XB 2807 TPC	0.85	0.102	98	1.30	1.60	6.30
XB 2619 TSTXB 1	XB 2619 TPC	0.95	0.102	95	1.40	1.75	7.10
XB 2419 TSTXB 1	XB 2419 TPC	1.05	0.102	92	1.50	1.85	8.00
XB 2237 TSTXB 1	XB 2237 TPC	1.20	0.127	96	1.75	2.15	12.40
XB 2037 TSTXB 1	XB 2037 TPC	1.50	0.127	97	2.05	2.40	16.60
XB 1861 TSTXB 1	XB 1861 TPC	1.80	0.127	92	2.35	2.75	21.00
XB 1661 TSTXB 1	XB 1661 TPC	2.00	0.127	96	2.55	2.95	26.80
XB 1461 TSTXB 1	XB 1461 TPC	2.35	0.127	91	2.90	3.50	35.10
XB 1291 TSTXB 1	XB 1291 TPC	2.90	0.127	90	3.45	3.90	47.10
XB 1091 TSTXB 1	XB 1091 TPC	3.55	0.127	89	4.10	4.90	63.30
XB 8133 TSTXB 1	XB 8133 TPC	5.10	0.127	91	5.65	6.55	119.40

TPC: TIN PLATED ANNEALED COPPER - LSZH: LOW SMOKE ZERO HALOGEN

Shielded jacketed twisted pairs

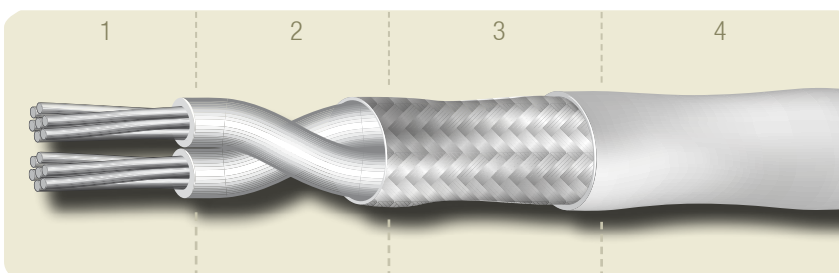
TYPE XB xxxx TSTXB 2 TPC

Insulation: POLIAX-HT™ halogen free / LSZH.

Operating temperature: -40°C up to +150°C.

Voltage rating: 600 VAC.

Outer jacket colour: white. Other colours upon request.



Construction

PRIMARY WIRE

1 - Conductor: tin plated annealed copper (TPC).

2 - Insulation: POLIAX-HT™.

SHIELDING

3 - Braided shield: tin plated annealed copper (TPC).

OUTER JACKET

4 - POLIAX-HT™.

Main characteristics

Pairs, triples and quads as well as shielded cables jacketed with other insulation materials will be studied according to customer requirements.

Other constructions on request.

AXON' REFERENCE	PRIMARY WIRE		SHIELDING			CABLE	
	REFERENCE	Ø (mm)	SHIELDING WIRE Ø (mm)	COVERAGE (%)	SHIELDING Ø (mm)	NOMINAL Ø (mm)	WEIGHT (g/m)
XB 2807 TSTXB 2	XB 2807 TPC	0.85	0.127	95	2.25	2.60	13.20
XB 2619 TSTXB 2	XB 2619 TPC	0.95	0.127	90	2.45	2.80	14.50
XB 2419 TSTXB 2	XB 2419 TPC	1.05	0.127	86	2.65	3.00	18.50
XB 2237 TSTXB 2	XB 2237 TPC	1.20	0.127	91	2.95	3.35	22.40
XB 2037 TSTXB 2	XB 2037 TPC	1.50	0.127	90	3.55	4.00	29.60
XB 1861 TSTXB 2	XB 1861 TPC	1.80	0.127	91	4.15	4.60	41.70
XB 1661 TSTXB 2	XB 1661 TPC	2.00	0.127	86	4.55	5.00	49.10
XB 1461 TSTXB 2	XB 1461 TPC	2.35	0.127	89	5.25	5.90	69.60
XB 1291 TSTXB 2	XB 1291 TPC	2.90	0.127	89	6.35	7.00	96.80
XB 1091 TSTXB 2	XB 1091 TPC	3.55	0.160	87	7.80	8.90	146.30
XB 8133 TSTXB 2	XB 8133 TPC	5.10	0.160	93	10.90	12.30	261.20

TPC: TIN PLATED ANNEALED COPPER - LSZH: LOW SMOKE ZERO HALOGEN

Shielded jacketed twisted triples

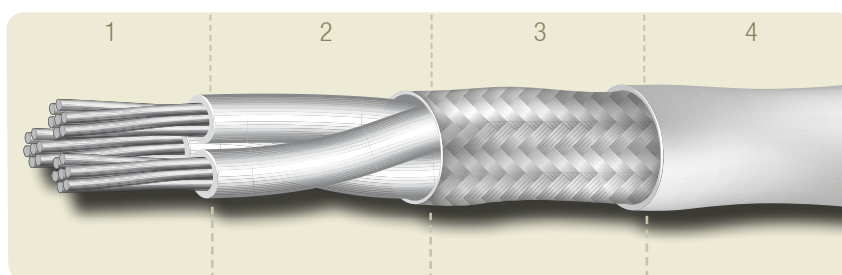
TYPE XB xxxx TSTXB 3 TPC

Insulation: POLIAX-HT™ halogen free / LSZH.

Operating temperature: -40°C up to +150°C.

Voltage rating: 600 VAC.

Outer jacket colour: white. Other colours upon request.



Construction

PRIMARY WIRE

1 - Conductor: tin plated annealed copper (TPC).

2 - Insulation: POLIAX-HT™.

SHIELDING

3 - Braided shield: tin plated annealed copper (TPC).

OUTER JACKET

4 - POLIAX-HT™.

Main characteristics

Pairs, triples and quads as well as shielded cables jacketed with other insulation materials will be studied according to customer requirements.

Other constructions on request.

AXON' REFERENCE	PRIMARY WIRE		SHIELDING			CABLE	
	REFERENCE	Ø (mm)	SHIELDING WIRE Ø (mm)	COVERAGE (%)	SHIELDING Ø (mm)	NOMINAL Ø (mm)	WEIGHT (g/m)
XB 2807 TSTXB 3	XB 2807 TPC	0.85	0.127	92	2.40	2.75	14.70
XB 2619 TSTXB 3	XB 2619 TPC	0.95	0.127	96	2.60	3.00	19.00
XB 2419 TSTXB 3	XB 2419 TPC	1.05	0.127	92	2.80	3.20	21.40
XB 2237 TSTXB 3	XB 2237 TPC	1.20	0.127	94	3.15	3.60	29.40
XB 2037 TSTXB 3	XB 2037 TPC	1.50	0.127	92	3.80	4.25	38.70
XB 1861 TSTXB 3	XB 1861 TPC	1.80	0.127	90	4.40	4.95	54.90
XB 1661 TSTXB 3	XB 1661 TPC	2.00	0.127	92	4.85	5.35	68.40
XB 1461 TSTXB 3	XB 1461 TPC	2.35	0.127	90	5.60	6.25	93.60
XB 1291 TSTXB 3	XB 1291 TPC	2.90	0.127	87	6.80	7.55	132.20
XB 1091 TSTXB 3	XB 1091 TPC	3.55	0.160	89	8.35	9.55	208.00
XB 8133 TSTXB 3	XB 8133 TPC	5.10	0.160	90	11.65	13.15	262.00

TPC: TIN PLATED ANNEALED COPPER - LSZH: LOW SMOKE ZERO HALOGEN

Single wires

TYPE QT xxxx SPC

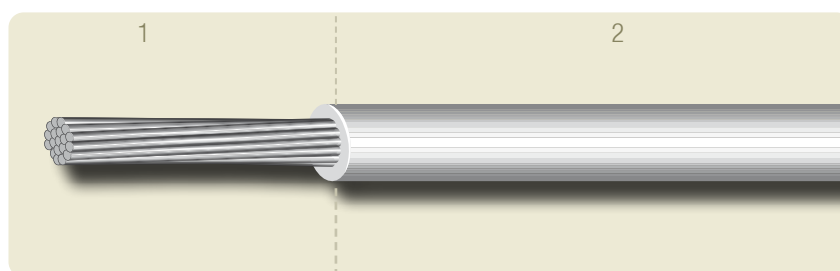
Insulation: NEUTRAX™ halogen free / LSZH.

Operating temperature: -50°C up to +200°C.

Voltage rating: 250 VAC.

Radiation resistance: 5 MGy (500 Mrad) in standard atmosphere,
10 MGy (1000 Mrad) in inert atmosphere.

Standard colour: natural (beige). Other colours upon request.



Construction

PRIMARY WIRE

1 - Conductor: electrolytic silver plated annealed copper (SPC).

2 - Insulation: NEUTRAX™.

Other constructions on request.

AXON' REFERENCE	AWG	CONDUCTOR				INSULATED WIRE	
		CONSTRUCTION (Nb x Ø mm)	Ø (mm)	AREA (mm²)	NOMINAL RESISTANCE (Ω/ 100m)	NOMINAL Ø (mm)	WEIGHT (g/m)
QT 3007	30	7 x 0.102	0.304	0.057	31.1	0.62	1.1
QT 2819	28	19 x 0.079	0.395	0.093	19.3	0.7	1.75
QT 2807	28	7 x 0.127	0.381	0.088	20.1	0.7	1.5
QT 2619	26	19 x 0.102	0.504	0.154	11.6	0.82	2.2
QT 2607	26	7 x 0.160	0.48	0.141	12.6	0.8	2.0
QT 2419	24	19 x 0.127	0.634	0.239	7.5	0.95	3.15
QT 2407	24	7 x 0.203	0.609	0.228	7.9	0.93	3.0
QT 2219	22	19 x 0.160	0.80	0.382	4.7	1.13	4.6
QT 2207	22	7 x 0.254	0.762	0.354	5.0	1.1	4.4
QT 2019	20	19 x 0.203	1.009	0.616	2.9	1.33	7.0
QT 2007	20	7 x 0.320	0.96	0.565	3.2	1.25	6.3

SPC: SILVER PLATED ANNEALED COPPER - LSZH: LOW SMOKE ZERO HALOGEN

Single wires

TYPE Q xxxx SPC

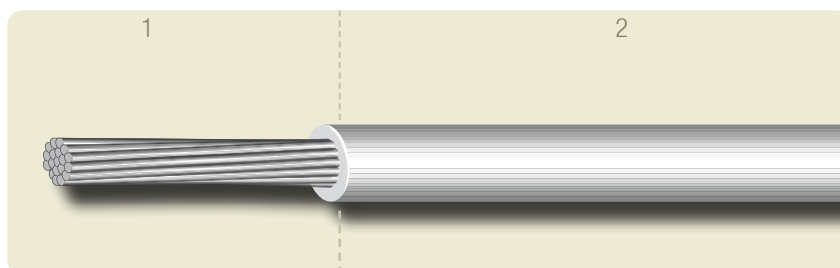
Insulation: NEUTRAX™ halogen free / LSZH.

Operating temperature: -50°C up to +200°C.

Voltage rating: 600 VAC.

Radiation resistance: 5 MGy (500 Mrad) in standard atmosphere,
10 MGy (1000 Mrad) in inert atmosphere.

Standard colour: natural (beige). Other colours upon request.



Construction

PRIMARY WIRE

1 - Conductor: electrolytic silver plated annealed copper (SPC).

2 - Insulation: NEUTRAX™.

Other constructions on request.

AXON' REFERENCE	AWG	CONDUCTOR				INSULATED WIRE	
		CONSTRUCTION (Nb x Ø mm)	Ø (mm)	AREA (mm²)	NOMINAL RESISTANCE (Ω/ 100m)	NOMINAL Ø (mm)	WEIGHT (g/m)
Q 3007	30	7 x 0.102	0.303	0.057	31	0.8	2.1
Q 2819	28	19 x 0.079	0.395	0.093	19.3	0.9	2.5
Q 2807	28	7 x 0.127	0.381	0.088	20.1	0.9	2.0
Q 2619	26	19 x 0.102	0.504	0.154	11.6	1.0	3.0
Q 2607	26	7 x 0.160	0.48	0.141	12.6	1.0	2.7
Q 2419	24	19 x 0.127	0.634	0.239	7.5	1.15	4.1
Q 2407	24	7 x 0.203	0.609	0.228	7.9	1.1	3.6
Q 2219	22	19 x 0.160	0.80	0.382	4.7	1.3	5.7
Q 2207	22	7 x 0.254	0.762	0.354	5.0	1.25	5.0
Q 2019	20	19 x 0.203	1.009	0.616	2.9	1.5	7.9
Q 2007	20	7 x 0.320	0.96	0.565	3.2	1.45	7.7
Q 1819	18	19 X 0.254	1.269	0.962	1.9	1.75	11.5
Q 1619	16	19 X 0.300	1.5	1.343	1.35	2.1	16.3
Q 1427	14	27 X 0.300	1.8	1.91	0.95	2.45	21.8
Q 1419	14	19 X 0.360	1.803	1.938	0.92	2.35	21.8
Q 1245	12	45 X 0.300	2.45	3.18	0.58	3.05	34.0
Q 1237	12	37 X 0.320	2.22	2.97	0.6	2.85	33.4
Q 1219	12	19 X 0.455	2.273	3.097	0.58	2.85	33.0
Q 1037	10	37 X 0.405	2.8	4.74	0.39	3.35	51.0

SPC: SILVER PLATED ANNEALED COPPER - LSZH: LOW SMOKE ZERO HALOGEN

Single wires

TYPE FHT xxxx SPC or SCA

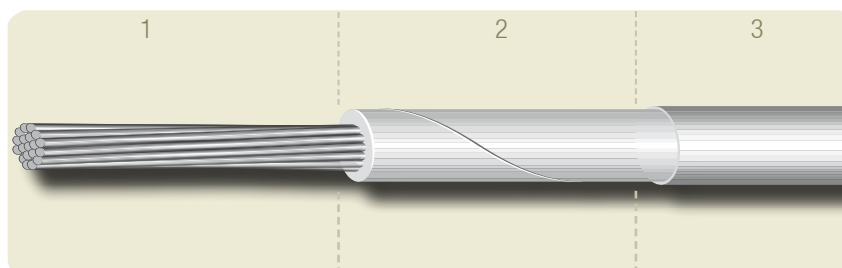
Insulation: POLYIMIDE tape halogen free / LSZH.

Operating temperature: -100°C up to +200°C.

Voltage rating: 250 VAC.

Radiation resistance: 10 MGy (1000 Mrad) in standard atmosphere,
50 MGy (5000 Mrad) in inert atmosphere.

Standard colour: natural (amber). Other colours upon request.



Construction

PRIMARY WIRE

- 1 - Conductor: electrolytic silver plated annealed copper (SPC) or silver plated copper alloy (SCA).
- 2 - Insulation: wrapped Polyimide tape.
- 3 - Insulation: Polyimide coating.

Other constructions on request.

AXON' REFERENCE	AWG	CONDUCTOR				INSULATED WIRE	
		CONSTRUCTION (Nb x Ø mm)	Ø (mm)	AREA (mm ²)	NOMINAL RESISTANCE (Ω/100m)	NOMINAL Ø (mm)	WEIGHT (g/m)
FHT 3007 SCA	30	7 x 0.102	0.304	0.057	37	0.53	0.76
FHT 3001 SCA	30	1 x 0.254	0.254	0.051	39	0.48	0.69
FHT 2807 SCA	28	7 x 0.127	0.381	0.089	23	0.61	1.11
FHT 2801 SCA	28	1 x 0.320	0.320	0.080	26	0.55	1.00
FHT 2619	26	19 x 0.102	0.504	0.16	12	0.74	1.79
FHT 2601	26	1 x 0.404	0.404	0.13	13	0.63	1.49
FHT 2419	24	19 x 0.127	0.634	0.24	7.6	0.86	2.65
FHT 2401	24	1 x 0.511	0.511	0.20	8.4	0.74	2.26
FHT 2219	22	19 x 0.160	0.800	0.38	4.7	1.03	4.73
FHT 2201	22	1 x 0.643	0.643	0.32	5.3	0.87	3.41
FHT 2019	20	19 x 0.203	1.009	0.616	3.2	1.24	6.26
FHT 2001	20	1 x 0.812	0.812	0.52	3.3	1.04	5.30
FHT 1819	18	19 x 0.254	1.269	0.96	2.1	1.50	9.63
FHT 1619	16	19 X 0.300	1.500	1.34	1.4	1.73	12.30

SPC: SILVER PLATED ANNEALED COPPER - SCA: SILVER COPPER ALLOY - LSZH: LOW SMOKE ZERO HALOGEN

Single wires

TYPE FH xxxx SPC or SCA

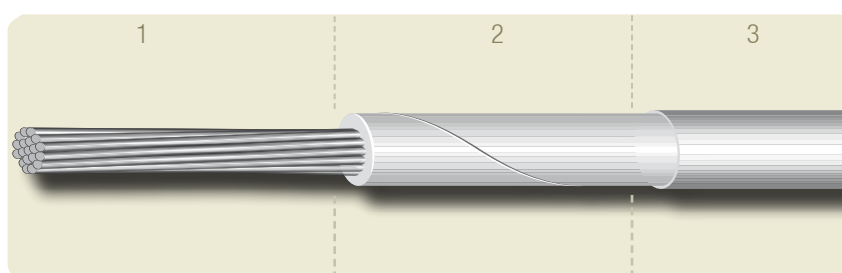
Insulation: POLYIMIDE tape halogen free / LSZH.

Operating temperature: -100°C up to +200°C.

Voltage rating: 600 V_{AC}.

Radiation resistance: 10 MGy (1000 Mrad) in standard atmosphere,
50 MGy (5000 Mrad) in inert atmosphere.

Standard colour: natural (amber). Other colours upon request.



Construction

PRIMARY WIRE

- 1 - Conductor: electrolytic silver plated annealed copper (SPC) or silver plated copper alloy (SCA).
- 2 - Insulation: wrapped Polyimide tape.
- 3 - Insulation: Polyimide coating.

Other constructions on request.

AXON [®] REFERENCE	AWG	CONDUCTOR				INSULATED WIRE	
		CONSTRUCTION (Nb x Ø mm)	Ø (mm)	AREA (mm ²)	NOMINAL RESISTANCE (Ω/ 100m)	NOMINAL Ø (mm)	WEIGHT (g/m)
FH 3007 SCA	30	7 x 0.102	0.303	0.057	37	0.60	0.88
FH 3001 SCA	30	1 x 0.254	0.254	0.051	39	0.55	0.78
FH 2807 SCA	28	7 x 0.127	0.381	0.089	23	0.68	1.24
FH 2801 SCA	28	1 x 0.320	0.320	0.080	26	0.62	1.11
FH 2619	26	19 x 0.102	0.504	0.16	12	0.81	1.94
FH 2601	26	1 x 0.404	0.404	0.13	13	0.70	1.62
FH 2419	24	19 x 0.127	0.634	0.24	7.6	0.93	2.82
FH 2401	24	1 x 0.511	0.511	0.20	8.4	0.81	2.42
FH 2219	22	19 x 0.160	0.800	0.38	4.7	1.10	4.14
FH 2201	22	1 x 0.643	0.643	0.32	5.3	0.94	3.58
FH 2019	20	19 x 0.203	1.009	0.61	3.2	1.31	6.51
FH 2001	20	1 x 0.812	0.812	0.52	3.3	1.11	5.50
FH 1819	18	19 x 0.254	1.269	0.96	2.1	1.57	9.92
FH 1619	16	19 x 0.300	1.500	1.34	1.4	1.80	12.60
FH 1419	14	19 x 0.361	1.805	1.94	0.95	2.15	19.80

SPC: SILVER PLATED ANNEALED COPPER - SCA: SILVER COPPER ALLOY - LSZH: LOW SMOKE ZERO HALOGEN

Single wires

TYPE FHT xxxx NPC or NCA

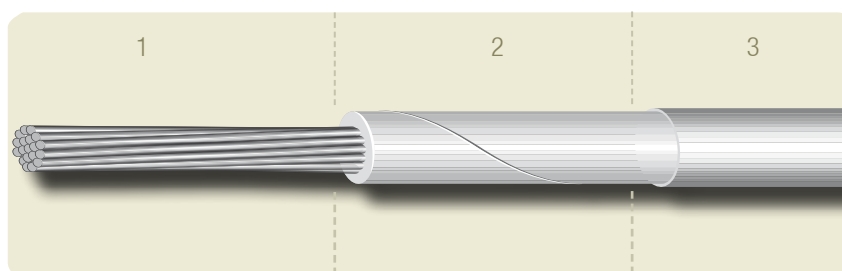
Insulation: POLYIMIDE tape halogen free / LSZH.

Operating temperature: -100°C up to +250°C.

Voltage rating: 250 VAC.

Radiation resistance: 10 MGy (1000 Mrad) in standard atmosphere,
50 MGy (5000 Mrad) in inert atmosphere.

Standard colour: natural (amber). Other colours upon request.



Construction

PRIMARY WIRE

- 1 - Conductor: nickel plated annealed copper (NPC) or nickel plated copper alloy (NCA).
- 2 - Insulation: wrapped Polyimide tape.
- 3 - Insulation: Polyimide coating.

Other constructions on request.

AXON [®] REFERENCE	AWG	CONDUCTOR				INSULATED WIRE	
		CONSTRUCTION (Nb x Ø mm)	Ø (mm)	AREA (mm ²)	NOMINAL RESISTANCE (Ω/ 100m)	NOMINAL Ø (mm)	WEIGHT (g/m)
FHT 3007 NCA	30	7 x 0.102	0.304	0.057	37	0.53	0.76
FHT 3001 NCA	30	1 x 0.254	0.254	0.051	39	0.48	0.69
FHT 2807 NCA	28	7 x 0.127	0.381	0.089	23	0.61	1.11
FHT 2801 NCA	28	1 x 0.320	0.320	0.080	26	0.55	1.00
FHT 2619 NPC	26	19 x 0.102	0.504	0.16	12	0.74	1.79
FHT 2601 NPC	26	1 x 0.404	0.404	0.13	13	0.63	1.49
FHT 2419 NPC	24	19 x 0.127	0.634	0.24	7.6	0.86	2.65
FHT 2401 NPC	24	1 x 0.511	0.511	0.20	8.4	0.74	2.26
FHT 2219 NPC	22	19 x 0.160	0.800	0.38	4.7	1.03	4.73
FHT 2201 NPC	22	1 x 0.643	0.643	0.32	5.3	0.87	3.41
FHT 2019 NPC	20	19 x 0.203	1.009	0.616	3.2	1.24	6.26
FHT 2001 NPC	20	1 x 0.812	0.812	0.52	3.3	1.04	5.30
FHT 1819 NPC	18	19 x 0.254	1.269	0.96	2.1	1.50	9.63
FHT 1619 NPC	16	19 X 0.300	1.500	1.34	1.4	1.73	12.30

NPC: NICKEL PLATED ANNEALED COPPER - NCA: NICKEL COPPER ALLOY - LSZH: LOW SMOKE ZERO HALOGEN

Single wires

TYPE FH xxxx NPC or NCA

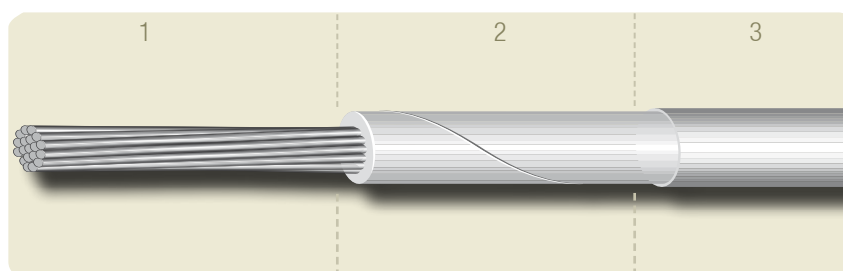
Insulation: POLYIMIDE tape halogen free / LSZH.

Operating temperature: -100°C up to +250°C.

Voltage rating: 600 V_{AC}.

Radiation resistance: 10 MGy (1000 Mrad) in standard atmosphere,
50 MGy (5000 Mrad) in inert atmosphere.

Standard colour: natural (amber). Other colours upon request.



Construction

PRIMARY WIRE

- 1 - Conductor: nickel plated annealed copper (NPC) or nickel plated copper alloy (NCA).
- 2 - Insulation: wrapped Polyimide tape.
- 3 - Insulation: Polyimide coating.

Other constructions on request.

AXON' REFERENCE	AWG	CONDUCTOR				INSULATED WIRE	
		CONSTRUCTION (Nb x Ø mm)	Ø (mm)	AREA (mm ²)	NOMINAL RESISTANCE (Ω/ 100m)	NOMINAL Ø (mm)	WEIGHT (g/m)
FH 3007 NCA	30	7 x 0.102	0.303	0.057	37	0.60	0.88
FH 3001 NCA	30	1 x 0.254	0.254	0.051	39	0.55	0.78
FH 2807 NCA	28	7 x 0.127	0.381	0.089	23	0.68	1.24
FH 2801 NCA	28	1 x 0.320	0.320	0.080	26	0.62	1.11
FH 2619 NPC	26	19 x 0.102	0.504	0.16	12	0.81	1.94
FH 2601 NPC	26	1 x 0.404	0.404	0.13	13	0.70	1.62
FH 2419 NPC	24	19 x 0.127	0.634	0.24	7.6	0.93	2.82
FH 2401 NPC	24	1 x 0.511	0.511	0.20	8.4	0.81	2.42
FH 2219 NPC	22	19 x 0.160	0.800	0.38	4.7	1.10	4.14
FH 2201 NPC	22	1 x 0.643	0.643	0.32	5.3	0.94	3.58
FH 2019 NPC	20	19 x 0.203	1.009	0.61	3.2	1.31	6.51
FH 2001 NPC	20	1 x 0.812	0.812	0.52	3.3	1.11	5.50
FH 1819 NPC	18	19 x 0.254	1.269	0.96	2.1	1.57	9.92
FH 1619 NPC	16	19 x 0.300	1.500	1.34	1.4	1.80	12.60
FH 1419 NPC	14	19 x 0.361	1.805	1.94	0.95	2.15	19.80

NPC: NICKEL PLATED ANNEALED COPPER - NCA: NICKEL PLATED COPPER ALLOY - LSZH: LOW SMOKE ZERO HALOGEN

Single wires

TYPE AT xxxx SPC or SCA

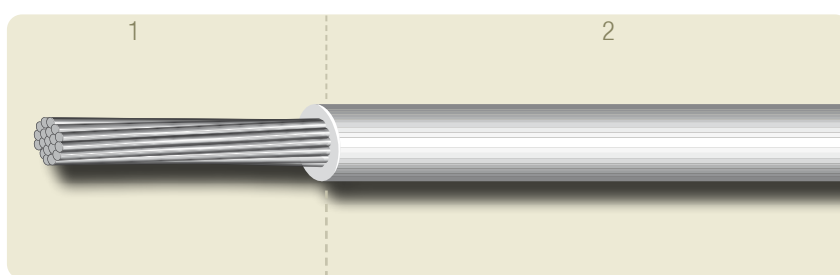
Insulation: Extruded POLYIMIDE (TPI) halogen free / LSZH.

Operating temperature: -200°C up to +200°C.

Voltage rating: 250 VAC.

Radiation resistance: 20 MGy (2000 Mrad) in standard atmosphere,
70 MGy (7000 Mrad) in inert atmosphere.

Standard colour: natural (amber).



Construction

PRIMARY WIRE

- 1 - Conductor: electrolytic silver plated annealed copper (SPC)
or silver plated copper alloy (SCA).
- 2 - Insulation: extruded Polyimide (TPI).

Other constructions on request.

AXON' REFERENCE	AWG	CONDUCTOR				INSULATED WIRE	
		CONSTRUCTION (Nb x Ø mm)	Ø (mm)	AREA (mm ²)	NOMINAL RESISTANCE (Ω/ 100m)	NOMINAL Ø (mm)	WEIGHT (g/m)
AT 3007 SCA	30	7 x 0.102	0.304	0.057	37	0.62	0.84
AT 3001 SCA	30	1 x 0.254	0.254	0.051	39	0.56	0.72
AT 2807 SCA	28	7 x 0.127	0.381	0.089	23	0.70	1.20
AT 2801 SCA	28	1 x 0.320	0.320	0.080	26	0.65	1.10
AT 2619	26	19 x 0.102	0.504	0.16	12	0.82	2.00
AT 2601	26	1 x 0.404	0.404	0.13	13	0.72	1.50
AT 2419	24	19 x 0.127	0.634	0.24	7.6	0.95	2.80
AT 2401	24	1 x 0.511	0.511	0.20	8.4	0.83	2.30
AT 2219	22	19 x 0.160	0.800	0.38	4.7	1.13	4.20
AT 2201	22	1 x 0.643	0.643	0.32	5.3	0.95	4.00
AT 2019	20	19 x 0.203	1.009	0.616	3.2	1.33	6.50
AT 2001	20	1 x 0.812	0.812	0.52	3.3	1.13	5.30
AT 1819	18	19 x 0.254	1.269	0.96	2.1	1.61	10.00
AT 1619	16	19 X 0.300	1.500	1.34	1.4	1.87	14.00

SPC: SILVER PLATED ANNEALED COPPER - SCA: SILVER PLATED COPPER ALLOY - LSZH: LOW SMOKE ZERO HALOGEN

Single wires

TYPE A xxxx SPC or SCA

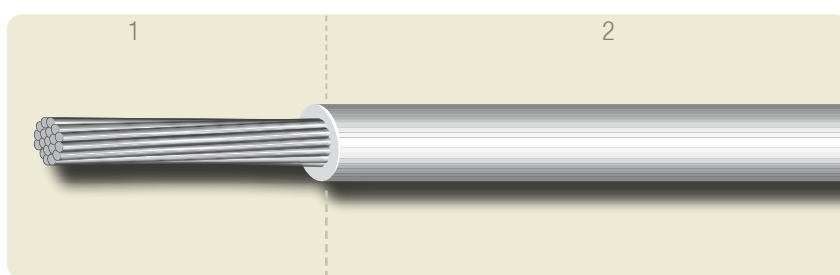
Insulation: extruded POLYIMIDE (TPI) halogen free / LSZH.

Operating temperature: -200°C up to +200°C.

Voltage rating: 600 VAC.

Radiation resistance: 20 MGy (2000 Mrad) in standard atmosphere,
70 MGy (7000 Mrad) in inert atmosphere.

Standard colour: natural (amber).



Construction

PRIMARY WIRE

- 1 - Conductor: electrolytic silver plated annealed copper (SPC)
or silver plated copper alloy (SCA).
- 2 - Insulation: extruded Polyimide (TPI).

Other constructions on request.

AXON' REFERENCE	AWG	CONDUCTOR				INSULATED WIRE	
		CONSTRUCTION (Nb x Ø mm)	Ø (mm)	AREA (mm ²)	NOMINAL RESISTANCE (Ω/ 100m)	NOMINAL Ø (mm)	WEIGHT (g/m)
A 3007 SCA	30	7 x 0.102	0.303	0.057	37	0.80	1.10
A 3001 SCA	30	1 x 0.254	0.254	0.051	39	0.76	1.00
A 2807 SCA	28	7 x 0.127	0.381	0.089	23	0.90	1.50
A 2801 SCA	28	1 x 0.320	0.320	0.080	26	0.82	1.30
A 2619	26	19 x 0.102	0.504	0.16	12	1.00	2.20
A 2601	26	1 x 0.404	0.404	0.13	13	0.90	1.80
A 2419	24	19 x 0.127	0.634	0.24	7.6	1.15	3.20
A 2401	24	1 x 0.511	0.511	0.20	8.4	1.05	2.70
A 2219	22	19 x 0.160	0.800	0.38	4.7	1.30	4.60
A 2201	22	1 x 0.643	0.643	0.32	5.3	1.15	3.40
A 2019	20	19 x 0.203	1.009	0.61	3.2	1.50	7.00
A 2001	20	1 x 0.812	0.812	0.52	3.3	1.30	5.70
A 1819	18	19 x 0.254	1.269	0.96	2.1	1.75	10.40
A 1619	16	19 x 0.300	1.500	1.34	1.4	2.10	14.80
A 1419	14	19 x 0.361	1.805	1.94	0.95	2.35	20.40
A 1237	12	37 x 0.320	2.22	2.98	0.60	2.85	31.20

SPC: SILVER PLATED ANNEALED COPPER - SCA: SILVER COPPER ALLOY - LSZH: LOW SMOKE ZERO HALOGEN

Single wires

TYPE AT xxxx NPC or NCA

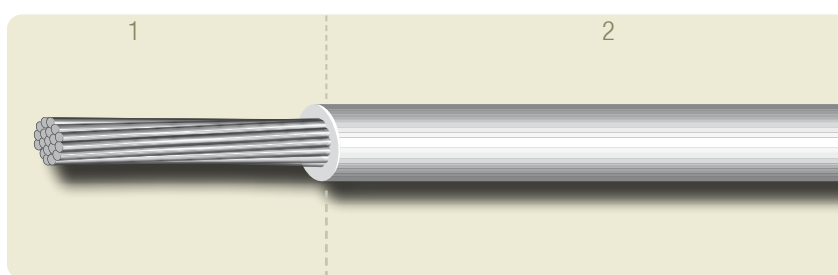
Insulation: extruded POLYIMIDE (TPI) halogen free / LSZH.

Operating temperature: -200°C up to +240°C.

Voltage rating: 250 VAC.

Radiation resistance: 20 MGy (2000 Mrad) in standard atmosphere,
70 MGy (7000 Mrad) in inert atmosphere.

Standard colour: natural (amber).



Construction

PRIMARY WIRE

- 1 - Conductor: nickel plated annealed copper (NPC)
or nickel plated copper alloy (NCA).
- 2 - Insulation: extruded Polyimide (TPI).

Other constructions on request.

AXON' REFERENCE	AWG	CONDUCTOR				INSULATED WIRE	
		CONSTRUCTION (Nb x Ø mm)	Ø (mm)	AREA (mm ²)	NOMINAL RESISTANCE (Ω/ 100m)	NOMINAL Ø (mm)	WEIGHT (g/m)
AT 3007 NCA	30	7 x 0.102	0.304	0.057	37	0.62	0.84
AT 3001 NCA	30	1 x 0.254	0.254	0.051	39	0.56	0.72
AT 2807 NCA	28	7 x 0.127	0.381	0.089	23	0.70	1.20
AT 2801 NCA	28	1 x 0.320	0.320	0.080	26	0.65	1.10
AT 2619 NPC	26	19 x 0.102	0.504	0.16	12	0.82	2.00
AT 2601 NPC	26	1 x 0.404	0.404	0.13	13	0.72	1.50
AT 2419 NPC	24	19 x 0.127	0.634	0.24	7.6	0.95	2.80
AT 2401 NPC	24	1 x 0.511	0.511	0.20	8.4	0.83	2.30
AT 2219 NPC	22	19 x 0.160	0.800	0.38	4.7	1.13	4.20
AT 2201 NPC	22	1 x 0.643	0.643	0.32	5.3	0.95	4.00
AT 2019 NPC	20	19 x 0.203	1.009	0.616	3.2	1.33	6.50
AT 2001 NPC	20	1 x 0.812	0.812	0.52	3.3	1.13	5.30
AT 1819 NPC	18	19 x 0.254	1.269	0.96	2.1	1.61	10.00
AT 1619 NPC	16	19 X 0.300	1.500	1.34	1.4	1.87	14.00

NPC: NICKEL PLATED ANNEALED COPPER - NCA: NICKEL PLATED COPPER ALLOY - LSZH: LOW SMOKE ZERO HALOGEN

Single wires

TYPE A xxxx NPC or NCA

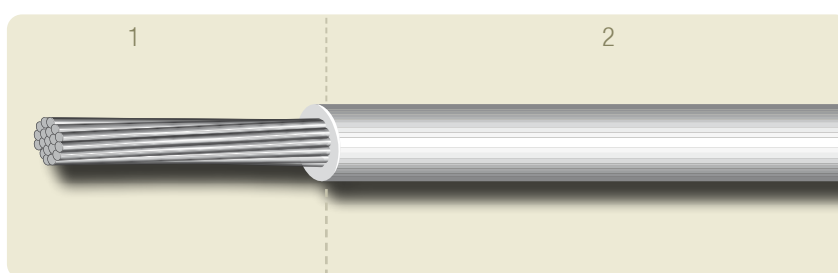
Insulation: extruded POLYIMIDE (TPI) halogen free / LSZH.

Operating temperature: -200°C up to +240°C.

Voltage rating: 600 VAC.

Radiation resistance: 20 MGy (2000 Mrad) in standard atmosphere,
70 MGy (7000 Mrad) in inert atmosphere.

Standard colour: natural (amber).



Construction

PRIMARY WIRE

- 1 - Conductor: nickel plated annealed copper (NPC)
or nickel plated copper alloy (NCA).
- 2 - Insulation: extruded Polyimide (TPI).

Other constructions on request.

AXON' REFERENCE	AWG	CONDUCTOR				INSULATED WIRE	
		CONSTRUCTION (Nb x Ø mm)	Ø (mm)	AREA (mm ²)	NOMINAL RESISTANCE (Ω/ 100m)	NOMINAL Ø (mm)	WEIGHT (g/m)
A 3007 NCA	30	7 x 0.102	0.303	0.057	37	0.80	1.10
A 3001 NCA	30	1 x 0.254	0.254	0.051	39	0.76	1.00
A 2807 NCA	28	7 x 0.127	0.381	0.089	23	0.90	1.50
A 2801 NCA	28	1 x 0.320	0.320	0.080	26	0.82	1.30
A 2619 NPC	26	19 x 0.102	0.504	0.16	12	1.00	2.20
A 2601 NPC	26	1 x 0.404	0.404	0.13	13	0.90	1.80
A 2419 NPC	24	19 x 0.127	0.634	0.24	7.6	1.15	3.20
A 2401 NPC	24	1 x 0.511	0.511	0.20	8.4	1.05	2.70
A 2219 NPC	22	19 x 0.160	0.800	0.38	4.7	1.30	4.60
A 2201 NPC	22	1 x 0.643	0.643	0.32	5.3	1.15	3.40
A 2019 NPC	20	19 x 0.203	1.009	0.61	3.2	1.50	7.00
A 2001 NPC	20	1 x 0.812	0.812	0.52	3.3	1.30	5.70
A 1819 NPC	18	19 x 0.254	1.269	0.96	2.1	1.75	10.40
A 1619 NPC	16	19 x 0.300	1.500	1.34	1.4	2.10	14.80
A 1419 NPC	14	19 x 0.361	1.805	1.94	0.95	2.35	20.40
A 1237 NPC	12	37 x 0.320	2.22	2.98	0.60	2.85	31.20

NPC: NICKEL PLATED ANNEALED COPPER - NCA: NICKEL PLATED COPPER ALLOY - LSZH: LOW SMOKE ZERO HALOGEN

Composite cables

EXAMPLE OF A Z_T OPTIMIZED COMPOSITE CABLE

As a specialist in composite cables, AXON' offer custom designed constructions. Please contact us.

TYPE XZT 19x0.59 / AWG 20

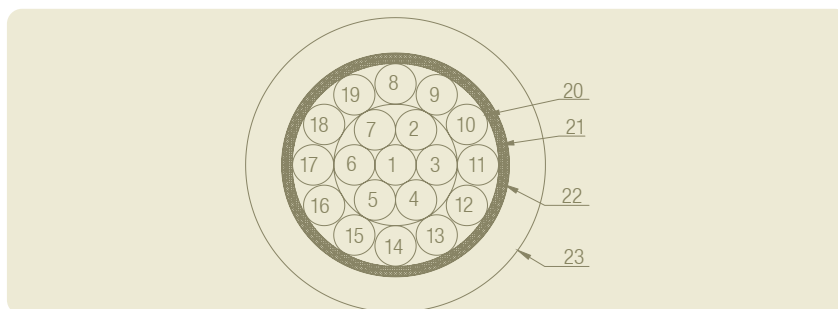
LSZH Z_T OPTIMIZED

Wire insulation: POLIAX™ - Jacket: ASC3-55J

Operating temperature: -40°C up to +70°C.

Voltage rating: 600 VAC.

Standard colour: black.



Example of construction

1 TO 19 - SINGLE WIRES

AWG 20 / X 2037 TPC.

Conductor: tin plated copper.

Construction: 37 x 0.142 mm.

Diameter: 0.97 mm.

Area: 0.59 mm².

Resistance: 3.5 Ω/ 100 m.

Insulation: POLIAX™.

Diameter: 1.50 mm.

20 - POLYESTER

SEPARATING TAPE

21 & 22 - SHIELDING

tin plated copper double braid,

Z_T optimized. (see table below).

23 - BLACK ASC3-55J JACKET

LSZH thermoplastic elastomer.

Main characteristics

DIMENSIONS AND WEIGHT

- Diameter on assembled wires: 7.50 mm.
- Diameter on shielding: 9.00 mm.
- Diameter on outer jacket: 10.70 ± 0.50 mm.
- Nominal cable weight: 275 g/m.

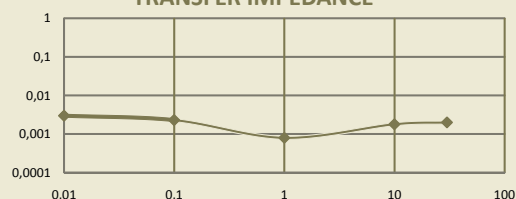
MECHANICAL CHARACTERISTICS

- Allowable traction: 80 daN.
- Minimum bend radius: 110 mm.

BEHAVIOUR TO FIRE

- a-Reaction to fire: category A according to IEC 60332-3.
- b-Opacity of fumes: test passed according to IEC 61034-2.
- c-Toxicity of gas emitted during the combustion process: conventional index of the toxicity < 10.
- d-Corrosivity of fumes: test according to IEC 60754- 2 passed.

TRANSFER IMPEDANCE



FREQUENCY
MHz

TRANSFER IMPEDANCE
Ω/ m

0.01

0.003

0.1

0.0023

1

0.0008

10

0.0018

30

0.002

Composite cables

EXAMPLE OF A Z_T OPTIMIZED COMPOSITE CABLE

As a specialist in composite cables, AXON' offer custom designed constructions. Please contact us.

TYPE XZT 19x2.94 / AWG 12

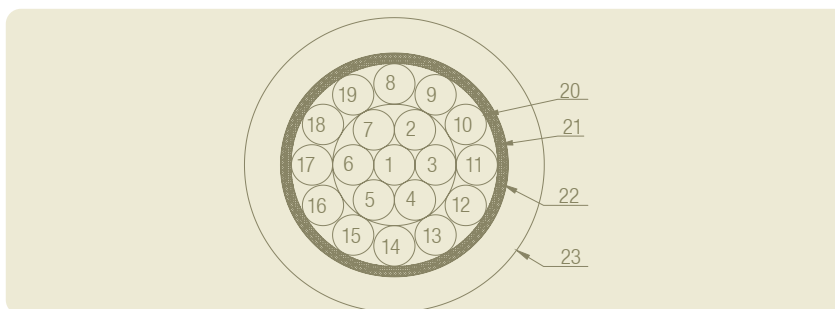
LSZH - Z_T OPTIMIZED

Wire insulation: POLIAX™ - Jacket: ASC3-55J

Operating temperature: -40°C up to +70°C.

Voltage rating: 600 VAC.

Standard colour: black.



Example of construction

1 TO 19 - SINGLE WIRES

AWG 12 / X 1291 TPC.
Conductor: tin plated copper.
Construction: 91 x 0.203 mm.
Diameter: 2.15 mm.
Area: 2.94 mm².
Resistance: 0.7 Ω/ 100 m.
Insulation: POLIAX™.
Diameter: 2.90 mm.

20 - POLYESTER SEPARATING TAPE

21 & 22 - SHIELDING

tin plated copper double braid,
Z_T optimized. (see table below).

23 - BLACK ASC3-55J JACKET

LSZH thermoplastic elastomer.

Main characteristics

DIMENSIONS AND WEIGHT

- Diameter on assembled wires: 14.50 mm.
- Diameter on shielding: 16.00 mm.
- Diameter on outer jacket: 18.40 ± 0.90 mm.
- Nominal cable weight: 880 g/m.

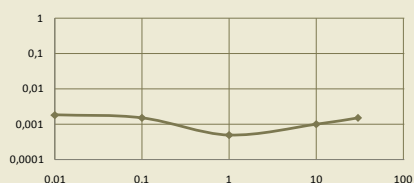
MECHANICAL CHARACTERISTICS

- Allowable traction: 160 daN.
- Minimum bend radius: 110 mm.

BEHAVIOUR TO FIRE

- a-Reaction to fire: category A according to IEC 60332-3.
- b-Opacity of fumes: test passed according to IEC 61034-2.
- c-Toxicity of gas emitted during the combustion process: conventional index of the toxicity < 10.
- d-Corrosivity of fumes: test passed according to IEC 60754- 2.

TRANSFER IMPEDANCE



FREQUENCY MHz	TRANSFER IMPEDANCE Ω/ m
0.01	0.0018
0.1	0.0015
1	0.0005
10	0.001
30	0.0015

Composite cables

EXAMPLE OF A Z_T OPTIMIZED COMPOSITE CABLE

As a specialist in composite cables, AXON' offer custom designed constructions. Please contact us.

TYPE XZT 30 PBLGO.38 / AWG 22

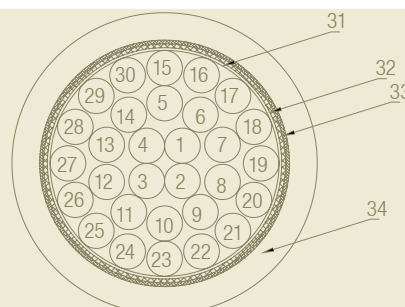
LSZH - Z_T OPTIMIZED

Wire insulation: POLIAX™ - Jacket: ASC3-55J

Operating temperature: -40°C up to +70°C.

Voltage rating: 600 VAC.

Standard colour: black.



Example of construction

1 TO 30 - 30 SHIELDED JACKETED TWISTED PAIRS

AWG 22 / X 2237 TSTX 2.
Single wire.
Conductor: tin plated copper.
Construction: 37 x 0.114 mm.
Diameter: 0.78 mm.
Area: 0.38 mm².
Resistance: 5.93 Ω/ 100 m.
Insulation: POLIAX™.
Diameter: 1.20 mm.
Shielding: tin plated copper.
Outer jacket: POLIAX™.
Diameter: 3.35 mm.

31 - POLYESTER SEPARATING TAPE

32 & 33 - SHIELDING
tin plated copper double braid,
Z_T optimized. (see table below).

34 - BLACK ASC3-55J JACKET
LSZH thermoplastic elastomer.

Main characteristics

DIMENSIONS AND WEIGHT

- Diameter on assembled wires: 21.50 mm.
- Diameter on shielding: 23.00 mm.
- Diameter on outer jacket: 26.20 ± 1.30 mm.
- Nominal cable weight: 1160 g/m.

ELECTRICAL CHARACTERISTICS

Impedance between the pair wires: 50 Ω.
Impedance between the pair wires and the shielding of the pairs: 30 Ω.
Capacity between the pair wires: 130 pF/m.
Capacity between the pair wires and the shielding of the pair: 210 pF/m.

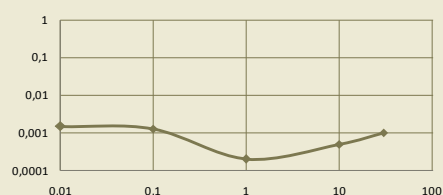
MECHANICAL CHARACTERISTICS

- Allowable traction: 180 daN.
- Minimum bend radius: 265 mm.

BEHAVIOUR TO FIRE

- a-Reaction to fire: category A according to IEC 60332-3.
- b-Opacity of fumes: test passed according to IEC 61034-2.
- c-Toxicity of gas emitted during the combustion process: conventional index of the toxicity < 10.
- d-Corrosivity of fumes: test passed according to IEC 60754- 2.

TRANSFER IMPEDANCE



FREQUENCY
MHz

TRANSFER IMPEDANCE
Ω/ m

0.01	0.0015
0.1	0.0013
1	0.0002
10	0.0005
30	0.001



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