

GAALSHIP® HF 250 OSA FR WSR

Pairs/triples twisted cables for telecommunication and instrumentation, overall screened, armoured, fire resistant and water spray resistant



ELETTROTEK KABEL® GAALSHIP® HF 250 OSA FR WSR



Applications:

Fire resistant and water spray instrumentation cables for fixed electrical installations aboard ships, screened against electromagnetic interferences, suitable for the signal and telecommunication of safety-fire devices. These cables prevent the cable short-circuit due to water sprays of Fire Fighters' hydrants used during the fire, allowing the continuous operation of these devices.

Construction:

Conductor:	Plain annealed copper or Tinned annealed copper conductor Cl. 2, acc. to IEC 60228, DIN VDE 0295
Insulation:	Fire resistant tape + GAALTHERM® 597
Cores color:	Pair: black- light blue Triple: black- light blue - brown
Stranding:	Core laid-up together in pairs/triples, laying up of pairs/triples
Wrapping:	Polyester tape
Overall screen:	Aluminium/polyester tape with tinned annealed copper stranded drain wire
Inner sheath:	Polyester tape or extruded halogen free compound
1st Wrapping:	Fire resistant glass fiber tape
2nd Wrapping:	Two plain annealed copper tapes + polyester tape
3rd Wrapping:	Fire resistant glass fiber tape
Armour:	Tinned annealed copper wires braid acc. to IEC 60092-350
Outer sheath:	Orange (RAL 2003), Halogen free thermoplastic compound type SHF1, acc. to IEC 60092-360
Marking:	ELETTROTEK KABEL® GAALSHIP® HF 250 OSA FR WSR cross nominal section, 150/250 V, IEC 60092-376 IEC 60331, BS 8491 A48 production date. Progressive meter marking.

Type Approvals/Certificates:

RINA (Registro Italiano Navale)
BV (Bureau Veritas)
LR (Lloyd's Register)
DNV-GL (Det Norske Veritas - Germanischer Lloyd)
ABS (American Bureau of Shipping)
 Other approvals on request

Resistance:



Fire resistant acc. to:
 IEC 60331-21,
 IEC 60331-2, EN 50200 Annex E Water Spray Test (under 20 mm Ø),
 IEC 60331-1, BS 8491 Water Jet Test (over 20 mm Ø)



Flame and fire retardant acc. to:
 IEC 60332-1-2,
 IEC 60332-3-22



Halogen free acc. to:
 IEC 60754-1/2



Smoke emission properties acc. to:
 IEC 61034-1/2

Technical data:

Nominal voltage:	150/250 V
Temperature range:	-40°C up to +90°C
Installation temp.:	-5°C
Min. bending radius:	4 x Outer diameter

Features:

Sheathing and insulating materials acc. to IEC 60092-360
 Design guidelines acc. to IEC 60092-376
 Cold bend test at low temperatures acc. to CSA C22.2 No. 0.3-09 (-40°C)
 Cold bend impact at low temperatures acc. to CSA C22.2 No. 0.3-09 (-35°C)
 On request class 5 conductor acc. to IEC 60228
 On request plain annealed copper wires braid armour or galvanized steel wires braid armour acc. to IEC 60092-350

GAALSHIP® MARINE CABLES

GAALSHIP® HF 250 OSA FR WSR

Pairs/triples twisted cables for telecommunication and instrumentation, overall screened, armoured, fire resistant and water spray resistant



ELETTROTEK KABEL® GAALSHIP® HF 250 OSA FR WSR



Part no.	No. of pairs/triples x cross section n x mm ²	Outer diameter ca. mm			Cable weight approx. kg/km	Max. resistance of conductors at 20°C (Ohm/km)	Current rating in open air at 45°C (A)	Capacitance approx. (nF/km)	Inductance approx. (mH/km)	Reactance approx. (Ohm/km)		Impedance approx. (Ohm/km)				Short circuit rating I sec. (kA)
		Min.	Nom.	Max.						50 Hz	60 Hz	at 20°C		at 90°C		
												50 Hz	60 Hz	50 Hz	60 Hz	
11230CGX052M05	5 x 2 x 0,5	18,3	19,8	21,3	490	41,6	5	70	0,68	0,214	0,256	41,6	41,6	53,04	53,04	0,07
11230CGX012M07	1 x 2 x 0,75	10,2	11,7	13,2	194	26,3	12	65	0,6	0,188	0,226	26,3	26,3	33,54	33,54	0,11
11230CGX022M07	2 x 2 x 0,75	11,6	13,1	14,6	236	26,3	10	65	0,6	0,188	0,226	26,3	26,3	33,54	33,54	0,11
11230CGX042M07	4 x 2 x 0,75	17,4	18,9	20,4	452	26,3	7	65	0,6	0,188	0,226	26,3	26,3	33,54	33,54	0,11
11230CGX052M07	5 x 2 x 0,75	19,1	20,6	22,1	537	26,3	7	65	0,6	0,188	0,226	26,3	26,3	33,54	33,54	0,11
11230CGX072M07	7 x 2 x 0,75	20,4	22,4	23,9	618	26,3	7	65	0,6	0,188	0,226	26,3	26,3	33,54	33,54	0,11
11230CGX102M07	10 x 2 x 0,75	24,8	26,8	28,3	860	26,3	7	65	0,6	0,188	0,226	26,3	26,3	33,54	33,54	0,11
11230CGX142M07	14 x 2 x 0,75	28	30,5	33	1048	26,3	6	65	0,6	0,188	0,226	26,3	26,3	33,54	33,54	0,11
11230CGX242M07	24 x 2 x 0,75	36,4	38,9	41,4	1706	26,3	5	65	0,6	0,188	0,226	26,3	26,3	33,54	33,54	0,11
11230CGX372M07	37 x 2 x 0,75	43,1	45,6	48,1	2279	26,3	5	65	0,6	0,188	0,226	26,3	26,3	33,54	33,54	0,11
11230CGX012M10	1 x 2 x 1	10,6	12,1	13,6	210	26,3	15	60	0,6	0,188	0,226	19,3	19,3	24,61	24,61	0,14
11230CGX032M10	3 x 2 x 1	16,7	18,2	19,7	418	19,3	10	60	0,6	0,188	0,226	19,3	19,3	24,61	24,61	0,14
11230CGX042M10	4 x 2 x 1	18,3	19,8	21,3	502	19,3	8	60	0,6	0,188	0,226	19,3	19,3	24,61	24,61	0,14
11230CGX072M10	7 x 2 x 1	21,3	23,3	24,8	683	19,3	8	60	0,6	0,188	0,226	19,3	19,3	24,61	24,61	0,14
11230CGX012M15	1 x 2 x 1,5	11,5	13	14,5	243	12,9	19	55	0,55	0,173	0,207	12,9	12,9	16,45	16,45	0,21
11230CGX022M15	2 x 2 x 1,5	13,7	15,2	16,7	346	12,9	16	55	0,55	0,173	0,207	12,9	12,9	16,45	16,45	0,21
11230CGX042M15	4 x 2 x 1,5	20,2	21,7	23,2	600	12,9	11	55	0,55	0,173	0,207	12,9	12,9	16,45	16,45	0,21
11230CGX052M15	5 x 2 x 1,5	22,2	23,7	25,2	723	12,9	11	55	0,55	0,173	0,207	12,9	12,9	16,45	16,45	0,21
11230CGX072M15	7 x 2 x 1,5	23,8	25,8	27,3	844	12,9	11	55	0,55	0,173	0,207	12,9	12,9	16,45	16,45	0,21
11230CGX082M15	8 x 2 x 1,5	27,9	29,9	31,4	1008	12,9	11	55	0,55	0,173	0,207	12,9	12,9	16,45	16,45	0,21
11230CGX102M15	10 x 2 x 1,5	29,3	31,3	32,8	1204	12,9	11	55	0,55	0,173	0,207	12,9	12,9	16,45	16,45	0,21
11230CGX122M15	12 x 2 x 1,5	31,3	33,8	36,3	1313	12,9	11	55	0,55	0,173	0,207	12,9	12,9	16,45	16,45	0,21
11230CGX192M15	19 x 2 x 1,5	37,4	39,9	42,4	1926	12,9	9	55	0,55	0,173	0,207	12,9	12,9	16,45	16,45	0,21
11230CGX122M25	1 x 2 x 2,5	13	14,5	16	324	8,02	27	48	0,5	0,157	0,188	8,02	8,02	10,23	10,23	0,36
11230CGX013M07	1 x 3 x 0,75	10,7	12,2	13,7	206	26,3	10	65	0,6	0,188	0,226	26,3	26,3	33,54	33,54	0,11
11230CGX073M07	7 x 3 x 0,75	23,4	24,9	26,9	788	26,3	7	65	0,6	0,188	0,226	26,3	26,3	33,54	33,54	0,11
11230CGX073M10	7 x 3 x 1	24,4	25,9	27,9	879	19,3	8	60	0,6	0,188	0,226	19,3	19,3	24,61	24,61	0,14

Other dimensions and colors available on request.