

## GAALSHIP® HF 250 ISA FR WSR

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



ELETTROTEK KABEL® GAALSHIP® HF 250 ISA 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:

<b>Conductor:</b>	Plain annealed copper or Tinned annealed copper conductor Cl. 2, acc. to IEC 60228, DIN VDE 02955
<b>Insulation:</b>	Fire resistant tape + GAALTHERM® 597
<b>Cores color:</b>	Pair: black- light blue Triple: black- light blue - brown
<b>Stranding:</b>	core laid-up together in pairs/triples, laying up of pairs/triples
<b>Wrapping:</b>	Polyester tape on each pair/triple
<b>Individual screen:</b>	Aluminium/polyester tape with tinned annealed copper stranded drain wire
<b>Inner sheath:</b>	Polyester tape or extruded halogen free compound
<b>1<sup>st</sup> Wrapping:</b>	Fire resistant glass fiber tape
<b>2<sup>nd</sup> Wrapping:</b>	Two plain annealed copper tapes + polyester tape
<b>3<sup>rd</sup> Wrapping:</b>	Fire resistant glass fiber tape
<b>Armour:</b>	Tinned annealed copper wires braid acc. to IEC 60092-350
<b>Outer sheath:</b>	Orange (RAL 2003), Halogen free thermoplastic compound type SHF1, acc. to IEC 60092-360
<b>Marking:</b>	ELETTROTEK KABEL® GAALSHIP® HF ISA FR WSR cross nominal section, 150/250 V, IEC 60092-376 IEC 60331, BS 8491 A48 production date. Progressive meter marking.

### Technical data:

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

### 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

### 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 ISA FR WSR

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Part no.	No. of pairs/triples x cross section n x mm <sup>2</sup>	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)
		50 Hz	60 Hz	at 20°C						at 90°C						
				50 Hz						60 Hz	50 Hz	60 Hz				
11250CGX052M05	5 x 2 x 0,5	20	21,5	23	564	41,6	5	75	0,64	0,201	0,241	41,6	41,6	53,04	53,04	0,07
11250CGX012M07	1 x 2 x 0,75	10,2	11,7	13,2	194	26,3	12	70	0,64	0,201	0,241	26,3	26,3	33,54	33,54	0,11
11250CGX022M07	2 x 2 x 0,75	16,4	17,9	19,4	415	26,3	10	70	0,64	0,201	0,241	26,3	26,3	33,54	33,54	0,11
11250CGX042M07	4 x 2 x 0,75	19,2	20,7	22,2	519	26,3	7	70	0,64	0,201	0,241	26,3	26,3	33,54	33,54	0,11
11250CGX052M07	5 x 2 x 0,75	21,1	22,6	24,1	623	26,3	7	70	0,64	0,201	0,241	26,3	26,3	33,54	33,54	0,11
11250CGX072M07	7 x 2 x 0,75	22,4	24,4	25,9	719	26,3	7	70	0,64	0,201	0,241	26,3	26,3	33,54	33,54	0,11
11250CGX102M07	10 x 2 x 0,75	27,7	29,7	31,2	1023	26,3	7	70	0,64	0,201	0,241	26,3	26,3	33,54	33,54	0,11
11250CGX142M07	14 x 2 x 0,75	31,4	33,9	36,4	1266	26,3	6	70	0,64	0,201	0,241	26,3	26,3	33,54	33,54	0,11
11250CGX242M07	24 x 2 x 0,75	40,9	43,4	45,9	2080	26,3	5	70	0,64	0,201	0,241	26,3	26,3	33,54	33,54	0,11
11250CGX372M07	37 x 2 x 0,75	48,8	51,3	53,8	2851	26,3	5	70	0,64	0,201	0,241	26,3	26,3	33,54	33,54	0,11
11250CGX012M10	1 x 2 x 1	10,6	12,1	13,6	209	19,3	15	65	0,64	0,201	0,241	19,3	19,3	24,61	24,61	0,14
11250CGX032M10	3 x 2 x 1	18,3	19,8	21,3	477	19,3	10	65	0,64	0,201	0,241	19,3	19,3	24,61	24,61	0,14
11250CGX042M10	4 x 2 x 1	19,9	21,4	22,9	570	19,3	8	65	0,64	0,201	0,241	19,3	19,3	24,61	24,61	0,14
11250CGX072M10	7 x 2 x 1	23,6	25,6	27,1	812	19,3	8	65	0,64	0,201	0,241	19,3	19,3	24,61	24,61	0,14
11250CGX012M15	1 x 2 x 1,5	11,5	13	14,5	242	12,9	19	60	0,52	0,163	0,196	12,9	12,9	16,45	16,45	0,21
11250CGX022M15	2 x 2 x 1,5	18,9	20,4	21,9	538	12,9	16	60	0,52	0,163	0,196	12,9	12,9	16,45	16,45	0,21
11250CGX042M15	4 x 2 x 1,5	22,2	23,7	25,2	685	12,9	11	60	0,52	0,163	0,196	12,9	12,9	16,45	16,45	0,21
11250CGX052M15	5 x 2 x 1,5	24,4	25,9	27,4	831	12,9	11	60	0,52	0,163	0,196	12,9	12,9	16,45	16,45	0,21
11250CGX072M15	7 x 2 x 1,5	26,3	28,3	29,8	983	12,9	11	60	0,52	0,163	0,196	12,9	12,9	16,45	16,45	0,21
11250CGX082M15	8 x 2 x 1,5	31,1	33,1	34,6	1191	12,9	11	60	0,52	0,163	0,196	12,9	12,9	16,45	16,45	0,21
11250CGX102M15	10 x 2 x 1,5	32,5	34,5	36	1411	12,9	11	60	0,52	0,163	0,196	12,9	12,9	16,45	16,45	0,21
11250CGX122M15	12 x 2 x 1,5	35,2	37,7	40,2	1640	12,9	11	60	0,52	0,163	0,196	12,9	12,9	16,45	16,45	0,21
11250CGX192M15	19 x 2 x 1,5	41,9	44,4	46,9	2322	12,9	9	60	0,52	0,163	0,196	12,9	12,9	16,45	16,45	0,21
11250CGX122M25	1 x 2 x 2,5	13	14,5	16	322	8,02	27	55	0,52	0,163	0,196	8,02	8,02	10,23	10,23	0,36
11250CGX013M07	1 x 3 x 0,75	10,7	12,2	13,7	206	26,3	10	70	0,64	0,201	0,241	26,3	26,3	33,54	33,54	0,11
11250CGX073M07	7 x 3 x 0,75	25,6	27,1	29,1	895	26,3	7	70	0,64	0,201	0,241	26,3	26,3	33,54	33,54	0,11
11250CGX073M10	7 x 3 x 1	26,9	28,4	30,4	1016	19,3	8	65	0,64	0,201	0,241	19,3	19,3	24,61	24,61	0,14

Other dimensions and colors available on request.