

HELKAMA

THE PERFECT CONNECTION

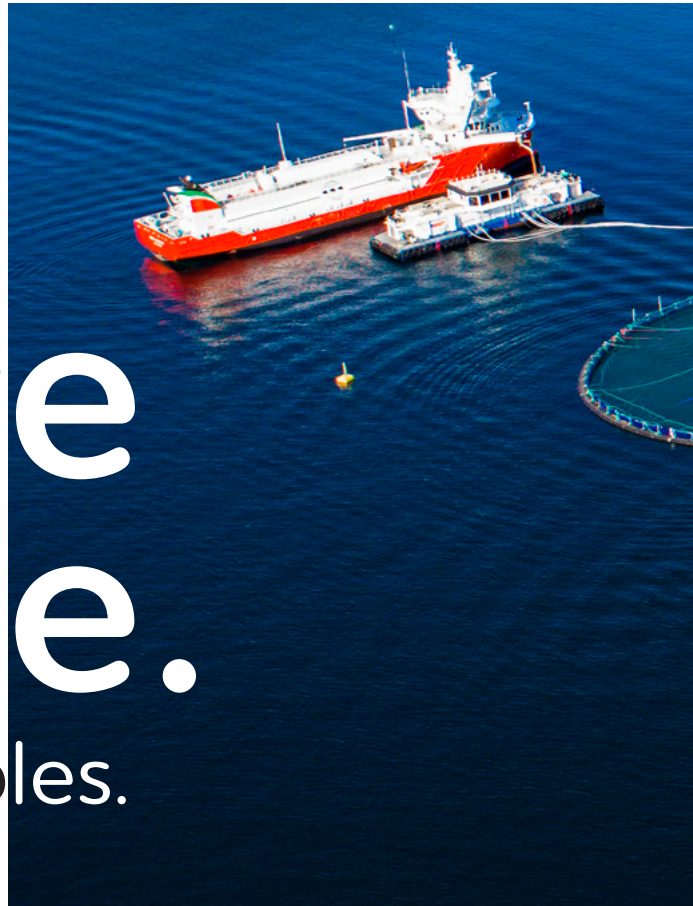
H-FLEX CABLES



09/2021

We are flexible.

And so are our cables.



Helkama specializes in the development and production of marine and telecom cables with experience in this field going back over fifty years. The name Helkama stands for quality, flexibility and outstanding personal service.

And flexibility is what this catalogue, and Helkama, is all about. H-Flex cables are made with polyurethane compound sheath to withstand abrasion and the strain of movable applications, so they are suitable for flexible, portable and movable installation. Our H-flex cables have excellent winding and unwinding strength and they are well suited for reeling and festoons, ship-to-shore and drag chain use. The cables are perfect for use even in fish farming conditions, because they can be submersed into water and they are resistant to UV, chemicals and other fluids.

Utilizing the latest technology, we are focusing on reducing cable weight and size as well as increasing cable flexibility. Using XLPE insulation reduces the cable diameter, making it possible to fit more cables and equipment in the installation space. The smaller size combined with high flexibility, smaller bending radius and slippery sheathing materials enables easier pulling and faster installation.

In addition to standard H-flex cables, our customers can choose a completely customized H-flex cable to suit their needs. We can produce cables with hybrid properties, or for applications demanding extra strength and durability reinforce the cable to withstand immense tensile loads by using aramid fibers. This allows applications without an extra hoisting cable.

Our high technical quality has been achieved by not only continuous development work, but by working closely together with our clients. And our focus is seriously on service. Or rather, we are serious when it comes to service. Our sales team is there to help with Your project from the design phase all the way to the cables arriving on time for the assembly crew on-site.

We ship yearly to over 60 countries, to more than 1000 active customers. Our short delivery times backed up by extensive stocks enable us to deliver punctually, giving our clients better project schedule control.

We are flexible, and it's not just a slogan made up by a clever marketing team. It is who we truly are, what we do and what we are the best in the field at!



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H-FLEX PWR PUR

0.6/1 kV

Unscreened power and control cable



• Flame-retardant • Oil & chemical resistant • Halogen-free • Mud resistant

CONDUCTOR	Stranded copper conductor 1.0-300 mm ² IEC 60228 class5
INSULATION	XLPE plastic
BEDDING	Non-woven separator tape
SHEATH	Polyurethane compound Standard colour black, other colours on request



APPLICATION

Intended for flexible, portable and movable applications such as ship-to-shore cable, outdoor cranes and various industrial applications. Suitable for flexible applications in machineries, machine tools, robot technics, and can be submersed into water. Good mechanical characteristics, high tensile strength, resistant to UV, abrasion, chemicals, oil and other fluids. Good winding and unwinding strength. Suitable for drag chain use. Mud resistant according to NEK606.

PHYSICAL PROPERTIES:

MIN. BENDING RADIUS	Fixed: $4 \times \varnothing < 25 \text{ mm} < 6 \times \varnothing$ Mobile: $6 \times \varnothing < 25 \text{ mm} < 8 \times \varnothing$ S-shape deflection: $15 \times \varnothing < 25 \text{ mm} < 20 \times \varnothing$
MAX. TENSILE LOAD WITHOUT STRENGTH MEMBERS	15 N/mm ² of phases copper cross section
CORE IDENTIFICATION	Colour code for 1...4 (5 if PE conductor) core cable, number code for 5...37 core cable
MARINE TYPE APPROVALS	RMRS, DNV-GL, BV and ABS

MAIN CHARACTERISTICS:

RATED VOLTAGE	AC 0.6/1 kV (1.2 kV) DC 0.9/1.5 kV (if voltage to earth does not exceed 0.9 kV)
MAXIMUM CONDUCTOR TEMPERATURE	90 °C
FLAME-RETARDANT	IEC 60332-1-2 - test for single cable
HALOGEN-FREE	IEC 60754 series
MECHANICAL FLEX TEST	EN 50396 - conditions according to EN 50525
OIL RESISTANCE	EN 60811-404 - conditions according to EN 50363-10-2
OPERATING TEMPERATURE	-60 - 80 °C fixed use -35 - 80 °C flexible use

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H-FLEX PWR PUR 0.6/1 kV

Part number	G-type	No. of conductors x Conductor area (mm ²)	Nominal outer Ø (mm)	Weight kg/km	Current rating A
5300105010	5300105011	1x1.0	5,5	30	17
5300107010	5300107011	1x1.5	6,0	35	22
5300108010	5300108011	1x2.5	6,5	50	30
5300109010	5300109011	1x4	7,0	60	39
5300110010	5300110011	1x6	7,5	80	50
5300111010	5300111011	1x10	8,5	125	71
5300112010	5300112011	1x16	9,5	180	94
5300113010	5300113011	1x25	12,0	280	123
5300114010	5300114011	1x35	13,0	375	153
5300115010	5300115011	1x50	14,5	515	196
5300116010	5300116011	1x70	17,0	720	240
5300117010	5300117011	1x95	18,5	930	284
5300118010	5300118011	1x120	20,5	1170	331
5300119010	5300119011	1x150	23,5	1480	381
5300120010	5300120011	1x185	26,0	1805	429
5300121010	5300121011	1x240	29,0	2395	507
5300122010	5300122011	1x300	32,0	2960	582
5300105020	---	2x1.0	8,0	60	14
5300107020	---	2x1.5	8,5	65	19
5300108020	---	2x2.5	10,0	100	26
5300109020	---	2x4	11,0	130	33
5300110020	---	2x6	12,5	200	43
5300111020	---	2x10	15,0	310	60
5300112020	---	2x16	17,0	445	80
5300113020	---	2x25	21,0	690	105
5300114020	---	2x35	23,0	930	130
5300115020	---	2x50	27,0	1290	167
5300116020	---	2x70	31,0	1795	204
5300117020	---	2x95	35,0	2340	241
5300105030	5300105031	3x1.0	8,5	70	12
5300107030	5300107031	3x1.5	9,5	90	15
5300108030	5300108031	3x2.5	10,5	130	21
5300109030	5300109031	3x4	12,0	170	27
5300110030	5300110031	3x6	13,5	260	35
5300111030	5300111031	3x10	15,5	400	50
5300112030	5300112031	3x16	18,0	585	66
5300113030	5300113031	3x25	23,0	925	86
5300114030	5300114031	3x35	24,5	1225	107
5300115030	5300115031	3x50	29,0	1725	137
5300116030	5300116031	3x70	33,5	2420	168
5300117030	5300117031	3x95	37,5	3150	199
5300118030	5300118031	3x120	42,0	3980	232
5300119030	5300119031	3x150	48,0	5020	267
5300120030	5300120031	3x185	53,0	6155	300
5300121030	5300121031	3x240	60,0	8210	355
5300105040	5300105041	4x1.0	9,5	95	12
5300107040	5300107041	4x1.5	10,5	110	15
5300108040	5300108041	4x2.5	11,5	160	21
5300109040	5300109041	4x4	13,0	220	27
5300110040	5300110041	4x6	14,5	320	35
5300111040	5300111041	4x10	17,5	510	50
5300112040	5300112041	4x16	20,0	750	66
5300113040	5300113041	4x25	25,5	1170	86
5300114040	5300114041	4x35	27,5	1570	107

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H-FLEX PWR PUR 0.6/1 kV

Part number	G-type	No. of conductors x Conductor area (mm ²)	Nominal outer Ø (mm)	Weight kg/km	Current rating A
5300115040	5300115041	4x50	32,5	2220	137
5300116040	5300116041	4x70	37,5	3110	168
5300117040	5300117041	4x95	42,0	4065	199
5300118040	5300118041	4x120	46,5	5120	232
5300119040	5300119041	4x150	53,5	6490	267
5300120040	5300120041	4x185	59,0	7955	300
5300105050	5300105051	5x1.0	10,5	110	10
5300107050	5300107051	5x1.5	11,0	130	13
5300108050	5300108051	5x2.5	12,5	195	17
5300109050	5300109051	5x4	14,0	265	23
5300110050	5300110051	5x6	16,0	390	29
5300111050	5300111051	5x10	19,0	620	41
5300112050	5300112051	5x16	22,0	905	55
5300113050	5300113051	5x25	28,0	1435	71
5300114050	5300114051	5x35	30,5	1935	89
5300115050	5300115051	5x50	35,5	2760	114
5300116050	5300116051	5x70	41,5	3935	139
5300117050	5300117051	5x95	46,0	5160	165
5300118050	5300118051	5x120	52,0	6630	192
5300119050	5300119051	5x150	59,5	8550	221
5300105060	5300105061	6x1.0	11,0	145	9
5300107060	5300107061	6x1.5	12,0	150	11
5300108060	5300108061	6x2.5	14,0	230	15
5300105070	5300105071	7x1.0	11,0	140	9
5300107070	5300107071	7x1.5	12,0	165	11
5300108070	5300108071	7x2.5	13,5	255	15
5300109070	5300109071	7x4	15,0	355	20
5300110070	5300110071	7x6	17,0	515	26
5300111070	5300111071	7x10	20,5	835	37
5300112070	5300112071	7x16	24,0	1255	49
5300113070	5300113071	7x25	30,5	2000	64
5300105100	5300105101	10x1.0	14,5	205	8
5300107100	5300107101	10x1.5	15,5	245	10
5300108100	5300108101	10x2.5	17,5	365	14
5300105120	5300105121	12x1.0	15,0	235	7
5300107120	5300107121	12x1.5	16,0	280	10
5300108120	5300108121	12x2.5	18,5	430	13
5300105140	5300105141	14x1.0	15,5	270	7
5300107140	5300107141	14x1.5	17,0	320	9
5300108140	5300108141	14x2.5	19,5	490	12
5300105160	5300105161	16x1.0	16,5	300	7
5300107160	5300107161	16x1.5	18,0	365	9
5300108160	5300108161	16x2.5	20,5	550	12
5300105190	5300105191	19x1.0	17,0	340	6
5300107190	5300107191	19x1.5	18,5	415	8
5300108190	5300108191	19x2.5	21,5	645	11

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H-FLEX PWR PUR 0.6/1 kV

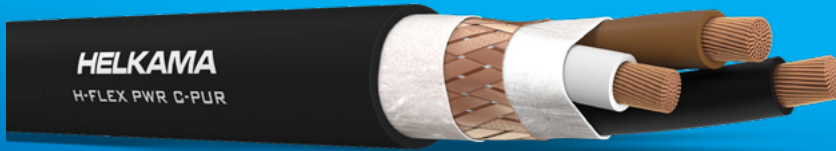
Part number	G-type	No. of conductors x Conductor area (mm ²)	Nominal outer Ø (mm)	Weight kg/km	Current rating A
5300105240	5300105241	24x1.0	20,5	435	6
5300107240	5300107241	24x1.5	22,5	540	8
5300108240	5300108241	24x2.5	26,0	825	10
5300105270	5300105271	27x1.0	21,0	495	5
5300107270	5300107271	27x1.5	23,0	590	7
5300108270	5300108271	27x2.5	26,5	910	10
5300105300	5300105301	30x1.0	22,0	540	5
5300107300	5300107301	30x1.5	24,0	655	7
5300108300	5300108301	30x2.5	27,5	1010	9
5300105370	5300105371	37x1.0	23,0	640	5
5300107370	5300107371	37x1.5	25,5	780	7
5300108370	5300108371	37x2.5	29,0	1205	9
---	5330113031	3x25+3x6	23,0	1060	86
---	5330114031	3x35+3x6	25,0	1355	107
---	5330115031	3x50+3x10	29,0	1940	137
---	5330116031	3x70+3x16	33,5	2765	168
---	5330117031	3x95+3x16	37,5	3475	199
---	5330118031	3x120+3x25	42,0	4530	232
---	5330119031	3x150+3x25	48,5	5560	267
---	5330120031	3x185+3x35	53,0	6880	300
---	5330121031	3x240+3x50	60,0	9190	355



H-FLEX PWR C-PUR

0.6/1 kV

Screened power and control cable



• Flame-retardant • Oil & chemical resistant • Halogen-free • Mud resistant

CONDUCTOR	Stranded copper conductor 1.0-300 mm ² IEC 60228 class5
INSULATION	XLPE plastic
BEDDING	Non-woven separator tape
SCREEN	Copper wire braid, coverage > 94%
SHEATH	Polyurethane compound Standard colour black, other colours on request



APPLICATION

Intended for flexible, portable and movable applications such as ship-to-shore cable, outdoor cranes and various industrial applications. Suitable for flexible applications in machineries, machine tools, robot technics, and can be submersed into water. Good mechanical characteristics, high tensile strength, resistant to UV, abrasion, chemicals, oil and other fluids. Good winding and unwinding strength. Suitable for drag chain use. Mud resistant according to NEK606.

PHYSICAL PROPERTIES:

MIN. BENDING RADIUS	Fixed: 4 x Ø < 25 mm < 6 x Ø Mobile: 8 x Ø < 25 mm < 10 x Ø S-shape deflection: 15 x Ø < 25 mm < 20 x Ø
MAX. TENSILE LOAD WITHOUT STRENGTH MEMBERS	15 N/mm ² of phases copper cross section
CORE IDENTIFICATION	Colour code for 1...4 (5 if PE conductor) core cable, number code for 5...37 core cable
MARINE TYPE APPROVALS	RMRS, DNV-GL, BV and ABS

MAIN CHARACTERISTICS:

RATED VOLTAGE	AC 0.6/1 kV (1.2 kV) DC 0.9/1.5 kV (if voltage to earth does not exceed 0.9 kV)
MAXIMUM CONDUCTOR TEMPERATURE	90 °C
FLAME-RETARDANT	IEC 60332-1-2 - test for single cable
HALOGEN-FREE	IEC 60754 series
MECHANICAL FLEX TEST	EN 50396 - conditions according to EN 50525
OIL RESISTANCE	EN 60811-404 - conditions according to EN 50363-10-2
OPERATING TEMPERATURE	-60 - 80 °C fixed use -35 - 80 °C flexible use

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H-FLEX PWR C-PUR 0.6/1 kV

Part number	G-type	No. of conductors x Conductor area (mm ²)	Screen Cross-section (mm ²)	Nominal outer Ø (mm)	Weight kg/km	Current rating A
5400105010	5400105011	1x1.0	1.9	6.0	50	17
5400107010	5400107011	1x1.5	1.9	6.5	55	22
5400108010	5400108011	1x2.5	1.9	7.0	70	30
5400109010	5400109011	1x4	2.6	7.5	90	39
5400110010	5400110011	1x6	2.6	8.0	110	50
5400111010	5400111011	1x10	3.3	9.0	155	71
5400112010	5400112011	1x16	3.3	10.5	220	94
5400113010	5400113011	1x25	3.9	12.5	320	123
5400114010	5400114011	1x35	4.6	13.5	420	153
5400115010	5400115011	1x50	5.9	15.5	570	196
5400116010	5400116011	1x70	6.0	17.5	780	240
5400117010	5400117011	1x95	7.0	19.5	1005	284
5400118010	5400118011	1x120	7.3	21.0	1245	331
5400119010	5400119011	1x150	8.2	24.0	1560	381
5400120010	5400120011	1x185	9.1	26.5	1895	429
5400121010	5400121011	1x240	10.2	29.5	2505	507
5400122010	5400122011	1x300	11.2	33.0	3095	582
5400105020	---	2x1.0	3.3	9.0	90	14
5400107020	---	2x1.5	3.3	10.0	105	19
5400108020	---	2x2.5	3.3	11.0	130	26
5400109020	---	2x4	3.9	12.0	165	33
5400110020	---	2x6	4.6	13.0	260	43
5400111020	---	2x10	5.9	15.5	380	60
5400112020	---	2x16	7.0	17.5	530	80
5400113020	---	2x25	7.3	22.0	780	105
5400114020	---	2x35	8.4	24.0	1015	130
5400115020	---	2x50	9.8	27.5	1390	167
5400116020	---	2x70	11.3	32.0	1930	204
5400117020	---	2x95	12.8	35.5	2460	241
5400105030	5400105031	3x1.0	3.3	9.5	110	12
5400107030	5400107031	3x1.5	3.3	10.0	125	15
5400108030	5400108031	3x2.5	3.9	11.5	165	21
5400109030	5400109031	3x4	4.1	12.5	215	27
5400110030	5400110031	3x6	4.6	14.0	305	35
5400111030	5400111031	3x10	6.0	16.5	470	50
5400112030	5400112031	3x16	7.0	19.0	660	66
5400113030	5400113031	3x25	7.9	23.5	1000	86
5400114030	5400114031	3x35	9.0	25.5	1310	107
5400115030	5400115031	3x50	10.6	29.5	1805	137
5400116030	5400116031	3x70	12.1	34.5	2505	168
5400117030	5400117031	3x95	13.9	38.0	3240	199
5400118030	5400118031	3x120	15.4	42.5	4075	232
5400119030	5400119031	3x150	17.2	49.0	5145	267
5400120030	5400120031	3x185	19.2	53.5	6245	300
5400121030	5400121031	3x240	21.7	60.5	8290	355
5400105040	5400105041	4x1.0	3.3	10.5	130	12
5400107040	5400107041	4x1.5	3.9	11.0	150	15
5400108040	5400108041	4x2.5	4.0	12.5	200	21
5400109040	5400109041	4x4	4.6	13.5	265	27
5400110040	5400110041	4x6	5.9	15.5	380	35
5400111040	5400111041	4x10	7.0	18.0	575	50
5400112040	5400112041	4x16	7.1	21.0	830	66
5400113040	5400113041	4x25	8.8	26.0	1280	86
5400114040	5400114041	4x35	10.0	28.0	1685	107
5400115040	5400115041	4x50	11.7	33.0	2340	137

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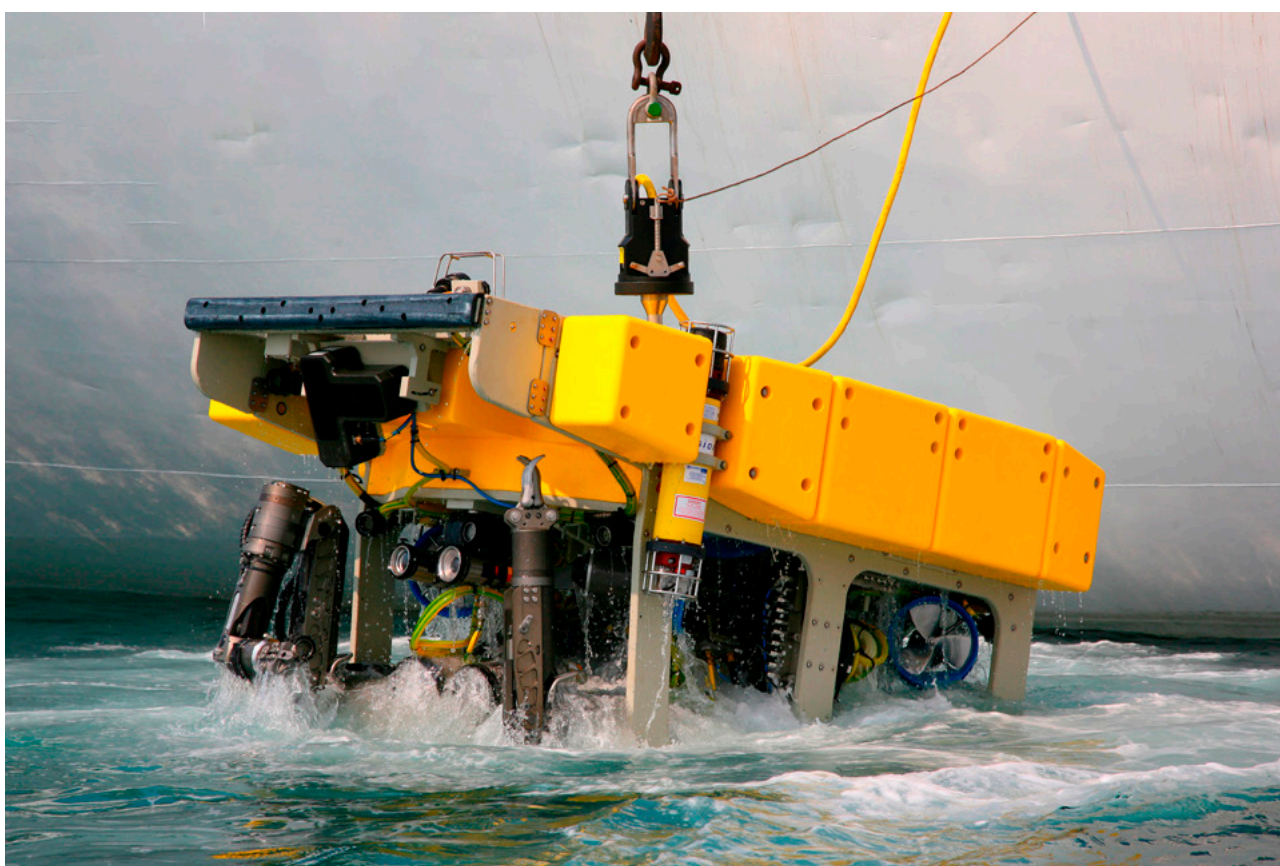
H-FLEX PWR C-PUR 0.6/1 kV

Part number	G-type	No. of conductors x Conductor area (mm ²)	Screen Cross-section (mm ²)	Nominal outer Ø (mm)	Weight kg/km	Current rating A
5400116040	5400116041	4x70	13.5	38.0	3260	168
5400117040	5400117041	4x95	15.4	42.5	4220	199
5400118040	5400118041	4x120	17.2	47.5	5325	232
5400119040	5400119041	4x150	19.3	54.5	6725	267
5400120040	5400120041	4x185	21.6	60.0	8170	300
5400105050	5400105051	5x1.0	3.9	11.0	155	10
5400107050	5400107051	5x1.5	3.9	12.0	175	13
5400108050	5400108051	5x2.5	4.6	13.5	245	17
5400109050	5400109051	5x4	5.9	14.5	330	23
5400110050	5400110051	5x6	6.0	16.5	450	29
5400111050	5400111051	5x10	7.0	20.0	695	41
5400112050	5400112051	5x16	7.8	23.0	970	55
5400113050	5400113051	5x25	9.8	28.5	1480	71
5400114050	5400114051	5x35	11.2	31.5	2065	89
5400115050	5400115051	5x50	13.1	36.5	2885	114
5400116050	5400116051	5x70	15.1	42.5	4075	139
5400117050	5400117051	5x95	17.1	47.5	5350	165
5400118050	5400118051	5x120	19.2	52.5	6805	192
5400119050	5400119051	5x150	21.6	60.0	8745	221
5400105060	5400105061	6x1.0	3.9	12.0	190	9
5400107060	5400107061	6x1.5	4.3	13.0	205	11
5400108060	5400108061	6x2.5	4.8	14.5	285	15
5400105070	5400105071	7x1.0	3.9	12.0	180	9
5400107070	5400107071	7x1.5	4.3	13.0	215	11
5400108070	5400108071	7x2.5	4.8	14.5	300	15
5400109070	5400109071	7x4	6.0	16.0	415	20
5400110070	5400110071	7x6	7.0	18.0	560	26
5400111070	5400111071	7x10	7.4	21.5	870	37
5400112070	5400112071	7x16	8.7	25.5	1300	49
5400113070	5400113071	7x25	10.9	31.5	2020	64
5400105100	5400105101	10x1.0	5.9	15.0	270	8
5400107100	5400107101	10x1.5	6.0	16.5	310	10
5400108100	5400108101	10x2.5	7.0	18.5	445	14
5400105120	5400105121	12x1.0	6.0	15.5	295	7
5400107120	5400107121	12x1.5	6.0	17.0	340	10
5400108120	5400108121	12x2.5	7.0	19.0	495	13
5400105140	5400105141	14x1.0	6.0	16.5	325	7
5400107140	5400107141	14x1.5	6.3	18.0	385	9
5400108140	5400108141	14x2.5	7.1	20.0	555	12
5400105160	5400105161	16x1.0	6.0	17.0	360	7
5400107160	5400107161	16x1.5	7.0	18.5	435	9
5400108160	5400108161	16x2.5	7.6	21.5	640	12
5400105190	5400105191	19x1.0	7.0	18.0	415	6
5400107190	5400107191	19x1.5	7.1	19.5	485	8
5400108190	5400108191	19x2.5	8.0	22.5	725	11
5400105240	5400105241	24x1.0	7.7	21.5	525	6

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H-FLEX PWR C-PUR 0.6/1 kV

Part number	G-type	No. of conductors x Conductor area (mm ²)	Screen Cross-section (mm ²)	Nominal outer Ø (mm)	Weight kg/km	Current rating A
5400107240	5400107241	24x1.5	8.5	23.0	620	8
5400108240	5400108241	24x2.5	9.6	26.5	915	10
5400105270	5400105271	27x1.0	7.9	22.0	570	5
5400107270	5400107271	27x1.5	8.7	24.0	680	7
5400108270	5400108271	27x2.5	9.9	27.0	1010	10
5400105300	5400105301	30x1.0	8.2	22.5	620	5
5400107300	5400107301	30x1.5	9.1	24.5	740	7
5400108300	5400108301	30x2.5	10.3	28.0	1105	9
5400105370	5400105371	37x1.0	8.9	24.5	735	5
5400107370	5400107371	37x1.5	9.9	26.5	885	7
5400108370	5400108371	37x2.5	11.2	30.5	1335	9
---	5430113031	3x25+3x6	8.0	24.0	1150	86
---	5430114031	3x35+3x6	9.1	26.0	1455	107
---	5430115031	3x50+3x10	10.7	30.0	2055	137
---	5430116031	3x70+3x16	12.3	35.0	2910	168
---	5430117031	3x95+3x16	14.0	38.5	3630	199
---	5430118031	3x120+3x25	15.5	43.0	4700	232
---	5430119031	3x150+3x25	17.3	49.5	5745	267
---	5430120031	3x185+3x35	19.3	54.5	7125	300
---	5430121031	3x240+3x50	21.9	61.5	9470	355



H-FLEX CTL PUR

250 V

Unscreened control cable



• Flame-retardant • Oil & chemical resistant • Halogen-free • Mud resistant

CONDUCTOR	Stranded copper conductor IEC 60228 class5
INSULATION	XLPE plastic
BEDDING	Separator tape
SHEATH	Polyurethane compound Standard colour black, other colours on request

CE

RoHS

APPLICATION

Intended for flexible, portable and movable applications such as ship-to-shore cable, outdoor cranes and various industrial applications. Suitable for flexible applications in machineries, machine tools, robot technics, and can be submersed into water. Good mechanical characteristics, high tensile strength, resistant to UV, abrasion, chemicals, oil and other fluids. Good winding and unwinding strength. Suitable for drag chain use. Mud resistant according to NEK606.

PHYSICAL PROPERTIES:

MIN. BENDING RADIUS	Fixed: $4 \times \varnothing < 25 \text{ mm} < 6 \times \varnothing$ Mobile: $6 \times \varnothing < 25 \text{ mm} < 8 \times \varnothing$ S-shape deflection: $15 \times \varnothing < 25 \text{ mm} < 20 \times \varnothing$
MAX. TENSILE LOAD WITHOUT STRENGTH MEMBERS	15 N/mm ² of phases copper cross section
CORE IDENTIFICATION	White insulation with black numbers
MARINE TYPE APPROVALS	RMRS, DNV-GL, BV and ABS

MAIN CHARACTERISTICS:

RATED VOLTAGE	150/250 V (300 V)
MAXIMUM CONDUCTOR TEMPERATURE	90 °C
FLAME-RETARDANT	IEC 60332-1-2 - test for single cable
HALOGEN-FREE	IEC 60754 series
MECHANICAL FLEX TEST	EN 50396 - conditions according to EN 50525
OIL RESISTANCE	EN 60811-404 - conditions according to EN 50363-10-2
OPERATING TEMPERATURE	-60 - 80 °C fixed use -35 - 80 °C flexible use

Subject to change without prior notice. See latest update on our webpage.

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H-FLEX CTL PUR 250 V

Part number	G-type	No. of conductors x Conductor area (mm ²)	Nominal outer Ø (mm)	Weight kg/km	Current rating A
5300103020	---	2x0.5	6.0	35.0	8.7
5300103030	5300103031	3x0.5	6.5	40.0	7.6
5300103040	5300103041	4x0.5	7.0	50.0	6.9
5300103050	5300103051	5x0.5	8.0	60.0	6.4
5300103070	5300103071	7x0.5	8.0	70.0	5.8
5300103100	5300103101	10x0.5	10.5	105.0	5.1
5300103120	5300103121	12x0.5	11.0	120.0	4.8
5300103140	5300103141	14x0.5	11.5	135.0	4.6
5300103160	5300103161	16x0.5	12.5	155.0	4.4
5300103190	5300103191	19x0.5	12.5	170.0	4.1
5300103200	5300103201	20x0.5	12.5	180.0	4.1
5300103240	5300103241	24x0.5	14.5	220.0	3.8
5300103270	5300103271	27x0.5	15.0	235.0	3.7
5300103320	5300103321	32x0.5	15.5	270.0	3.5
5300103370	5300103371	37x0.5	17.0	310.0	3.3
5300104020	---	2x0.75	7.0	40.0	11.3
5300104030	5300104031	3x0.75	7.0	50.0	9.8
5300104040	5300104041	4x0.75	7.5	65.0	8.9
5300104050	5300104051	5x0.75	9.0	80.0	8.3
5300104070	5300104071	7x0.75	9.0	95.0	7.4
5300104100	5300104101	10x0.75	12.0	145.0	6.6
5300104120	5300104121	12x0.75	12.0	165.0	6.2
5300104140	5300104141	14x0.75	13.0	190.0	5.9
5300104160	5300104161	16x0.75	14.0	215.0	5.6
5300104190	5300104191	19x0.75	14.0	240.0	5.3
5300104200	5300104201	20x0.75	14.0	255.0	5.2
5300104240	5300104241	24x0.75	16.5	305.0	4.9
5300104270	5300104271	27x0.75	17.0	335.0	4.7
5300104320	5300104321	32x0.75	17.5	385.0	4.5
5300104370	5300104371	37x0.75	19.0	440.0	4.3



H-FLEX CTL C-PUR

250 V

Screened control cable



• Flame-retardant • Oil & chemical resistant • Halogen-free • Mud resistant

CONDUCTOR	Stranded copper conductor IEC 60228 class5
INSULATION	XLPE plastic
BEDDING	Separator tape
SCREEN	Copper wire braid, coverage > 94%
SHEATH	Polyurethane compound Standard colour black, other colours on request



APPLICATION

Intended for flexible, portable and movable applications such as ship-to-shore cable, outdoor cranes and various industrial applications. Suitable for flexible applications in machineries, machine tools, robot technics, and can be submersed into water. Good mechanical characteristics, high tensile strength, resistant to UV, abrasion, chemicals, oil and other fluids. Good winding and unwinding strength. Suitable for drag chain use. Mud resistant according to NEK606.

PHYSICAL PROPERTIES:

MIN. BENDING RADIUS	Fixed: $4 \times \varnothing < 25 \text{ mm} < 6 \times \varnothing$ Mobile: $6 \times \varnothing < 25 \text{ mm} < 8 \times \varnothing$ S-shape deflection: $15 \times \varnothing < 25 \text{ mm} < 20 \times \varnothing$
MAX. TENSILE LOAD WITHOUT STRENGTH MEMBERS	15 N/mm ² of phases copper cross section
CORE IDENTIFICATION	White insulation with black numbers
MARINE TYPE APPROVALS	RMRS, DNV-GL, BV and ABS

MAIN CHARACTERISTICS:

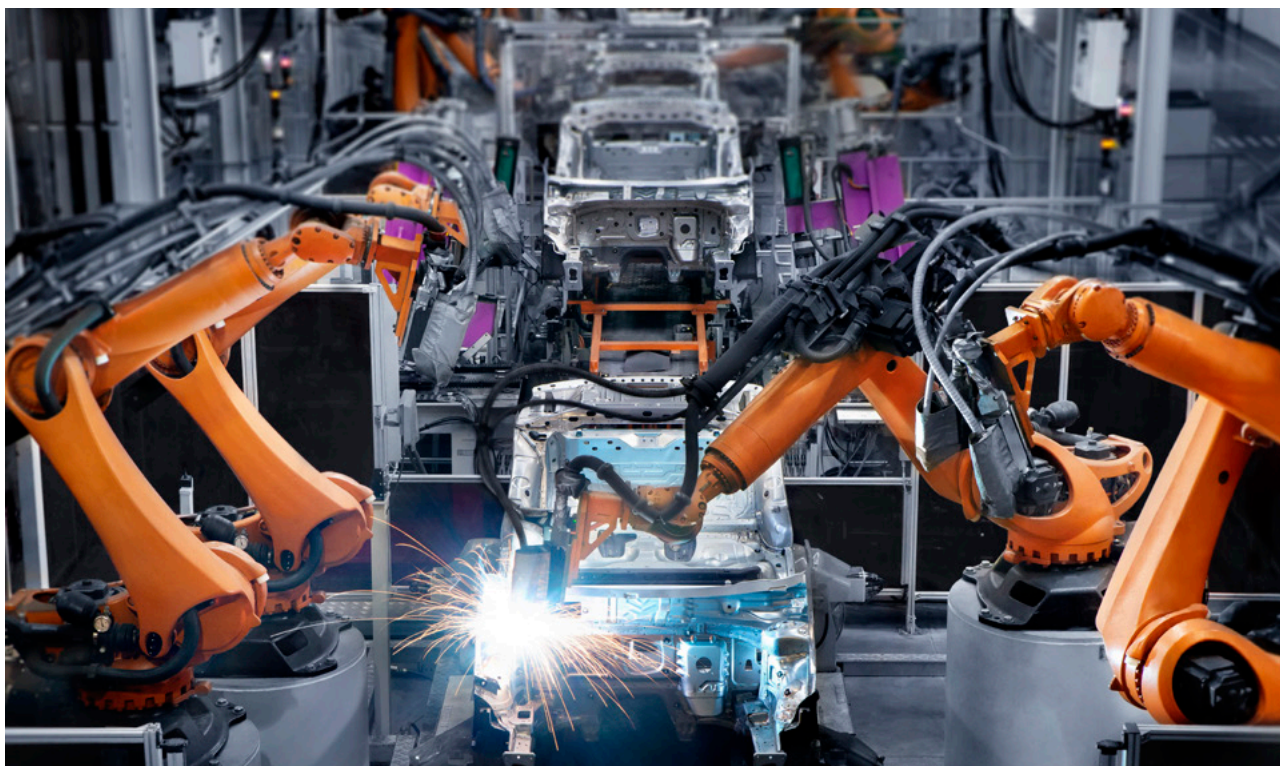
RATED VOLTAGE	150/250 V (300 V)
MAXIMUM CONDUCTOR TEMPERATURE	90 °C
FLAME-RETARDANT	IEC 60332-1-2 - test for single cable
HALOGEN-FREE	IEC 60754 series
MECHANICAL FLEX TEST	EN 50396 - conditions according to EN 50525
OIL RESISTANCE	EN 60811-404 - conditions according to EN 50363-10-2
OPERATING TEMPERATURE	-60 - 80 °C fixed use -35 - 80 °C flexible use

Subject to change without prior notice. See latest update on our webpage.

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H-FLEX CTL C-PUR 250 V

Part number	G-type	No. of conductors x Conductor area (mm ²)	Screen Cross-section (mm ²)	Nominal outer Ø (mm)	Weight kg/km	Current rating A
5400103020	---	2x0.5	2.6	7.0	60	8.7
5400103030	5400103031	3x0.5	2.6	7.5	70	7.6
5400103040	5400103041	4x0.5	2.6	8.0	75	6.9
5400103050	5400103051	5x0.5	3.2	9.0	95	6.4
5400103070	5400103071	7x0.5	3.2	9.0	105	5.8
5400103100	5400103101	10x0.5	3.9	11.5	150	5.1
5400103120	5400103121	12x0.5	3.9	12.0	160	4.8
5400103140	5400103141	14x0.5	3.9	12.5	175	4.6
5400103160	5400103161	16x0.5	4.6	13.5	205	4.4
5400103190	5400103191	19x0.5	4.6	13.5	220	4.1
5400103200	5400103201	20x0.5	4.7	13.5	235	4.1
5400103240	5400103241	24x0.5	5.9	16.0	285	3.8
5400103270	5400103271	27x0.5	5.9	16.0	305	3.7
5400103320	5400103321	32x0.5	6.0	16.5	335	3.5
5400103370	5400103371	37x0.5	7.0	17.5	380	3.3
5400104020	---	2x0.75	2.6	7.5	70	11.3
5400104030	5400104031	3x0.75	2.6	8.0	80	9.8
5400104040	5400104041	4x0.75	2.6	8.5	90	8.9
5400104050	5400104051	5x0.75	3.3	10.5	120	8.3
5400104070	5400104071	7x0.75	3.3	10.5	135	7.4
5400104100	5400104101	10x0.75	4.1	13.0	190	6.6
5400104120	5400104121	12x0.75	4.6	13.0	215	6.2
5400104140	5400104141	14x0.75	4.6	14.0	235	5.9
5400104160	5400104161	16x0.75	4.9	15.0	265	5.6
5400104190	5400104191	19x0.75	5.9	15.0	300	5.3
5400104200	5400104201	20x0.75	6.0	15.0	320	5.2
5400104240	5400104241	24x0.75	7.0	17.5	375	4.9
5400104270	5400104271	27x0.75	7.0	18.0	405	4.7
5400104320	5400104321	32x0.75	7.0	19.0	460	4.5
5400104370	5400104371	37x0.75	7.1	20.0	515	4.3



H-FLEX INS PUR

250 V

Unscreened instrumentation and control cable



• Flame-retardant • Oil & chemical resistant • Halogen-free • Mud resistant

CONDUCTOR	Stranded copper conductor IEC 60228 class5
INSULATION	XLPE plastic
TWISTED PAIR	Two insulated cores twisted together to form a pair See next page for Quad
SHEATH	Polyurethane compound Standard colour black, other colours on request



APPLICATION

Intended for flexible, portable and movable applications such as ship-to-shore cable, outdoor cranes and various industrial applications. Suitable for flexible applications in machineries, machine tools, robot technics, and can be submersed into water. Good mechanical characteristics, high tensile strength, resistant to UV, abrasion, chemicals, oil and other fluids. Good winding and unwinding strength. Suitable for drag chain use. Mud resistant according to NEK606.

PHYSICAL PROPERTIES:

MIN. BENDING RADIUS	Fixed: $4 \times \emptyset < 25 \text{ mm} < 6 \times \emptyset$ Mobile: $6 \times \emptyset < 25 \text{ mm} < 8 \times \emptyset$ S-shape deflection: $15 \times \emptyset < 25 \text{ mm} < 20 \times \emptyset$
MAX. TENSILE LOAD WITHOUT STRENGTH MEMBERS	15 N/mm ² of phases copper cross section
CORE IDENTIFICATION	White and blue insulation with black numbers
MARINE TYPE APPROVALS	RMRS, DNV-GL, BV and ABS

MAIN CHARACTERISTICS:

RATED VOLTAGE	150/250 V (300 V)
MAXIMUM CONDUCTOR TEMPERATURE	90 °C
FLAME-RETARDANT	IEC 60332-1-2 - test for single cable
HALOGEN-FREE	IEC 60754 series
MECHANICAL FLEX TEST	EN 50396 - conditions according to EN 50525
OIL RESISTANCE	EN 60811-404 - conditions according to EN 50363-10-2
OPERATING TEMPERATURE	-60 - 80 °C fixed use -35 - 80 °C flexible use

Subject to change without prior notice. See latest update on our webpage.

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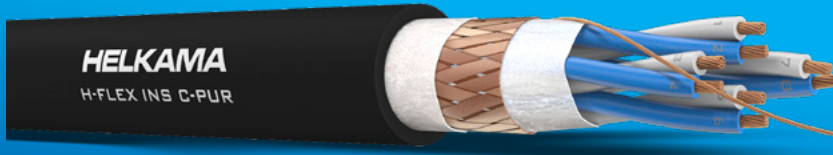
H-FLEX INS PUR 250 V

Part number	No. of conductors x Conductor area (mm ²)	Nominal outer Ø (mm)	Weight kg/km
5900103012	1x2x0.5	6.0	35
5900103013	1x3x0.5	6.5	40
5900103014	1x4x0.5	7.0	50
5900103022	2x2x0.5	9.0	55
5900103032	3x2x0.5	9.0	70
5900103042	4x2x0.5	10.5	95
5900103072	7x2x0.5	12.5	140
5900103082	8x2x0.5	13.0	160
5900103102	10x2x0.5	15.0	195
5900103122	12x2x0.5	15.5	230
5900103142	14x2x0.5	16.5	260
5900103162	16x2x0.5	17.5	290
5900103192	19x2x0.5	19.0	335
5900103242	24x2x0.5	21.5	430
5900103272	27x2x0.5	22.5	475
5900103302	30x2x0.5	23.5	520
5900103322	32x2x0.5	24.0	550
5900103372	37x2x0.5	26.0	630
5900104012	1x2x0.75	7.0	40
5900104013	1x3x0.75	7.0	50
5900104014	1x4x0.75	7.5	65
5900104022	2x2x0.75	10.0	80
5900104032	3x2x0.75	10.5	100
5900104042	4x2x0.75	11.5	125
5900104072	7x2x0.75	14.0	195
5900104082	8x2x0.75	15.0	225
5900104102	10x2x0.75	17.0	275
5900104122	12x2x0.75	18.0	320
5900104142	14x2x0.75	19.0	365
5900104162	16x2x0.75	20.0	410
5900104192	19x2x0.75	22.0	490
5900104242	24x2x0.75	24.5	610
5900104272	27x2x0.75	26.0	675
5900104302	30x2x0.75	27.0	750
5900104322	32x2x0.75	28.0	790
5900104372	37x2x0.75	29.5	895
5900107012	1x2x1.5	8.5	65
5900107013	1x3x1.5	9.0	85
5900107014	1x4x1.5	10.0	110
5900107022	2x2x1.5	13.0	135
5900107032	3x2x1.5	14.0	175
5900107042	4x2x1.5	15.0	215
5900107072	7x2x1.5	18.5	345
5900107082	8x2x1.5	20.0	395
5900107102	10x2x1.5	23.0	500
5900107122	12x2x1.5	24.0	580
5900107142	14x2x1.5	25.5	675
5900107162	16x2x1.5	27.0	755
5900107192	19x2x1.5	29.5	890
5900107242	24x2x1.5	33.0	1130
5900107272	27x2x1.5	35.0	1255
5900107302	30x2x1.5	36.5	1375
5900107322	32x2x1.5	38.0	1470
5900108012	1x2x2.5	10.0	100
5900108013	1x3x2.5	10.5	125
5900108014	1x4x2.5	11.5	155
5900108022	2x2x2.5	15.0	185
5900108032	3x2x2.5	15.5	245
5900108042	4x2x2.5	17.5	320
5900108072	7x2x2.5	21.0	520
5900108082	8x2x2.5	23.0	600
5900108102	10x2x2.5	26.0	750
5900108122	12x2x2.5	27.5	875
5900108142	14x2x2.5	29.5	1010
5900108162	16x2x2.5	31.5	1140
5900108192	19x2x2.5	34.0	1355
5900108242	24x2x2.5	38.0	1705

H-FLEX INS C-PUR

250 V

Screened instrumentation and control cable



• Flame-retardant • Oil & chemical resistant • Halogen-free • Mud resistant

CONDUCTOR	Stranded copper conductor IEC 60228 class5
INSULATION	XLPE plastic
TWISTED PAIR	Two insulated cores twisted together to form a pair See next page for Quad
SCREEN	Copper wire braid, coverage > 94%
SHEATH	Polyurethane compound Standard colour black, other colours on request



APPLICATION

Intended for flexible, portable and movable applications such as ship-to-shore cable, outdoor cranes and various industrial applications. Suitable for flexible applications in machineries, machine tools, robot technics, and can be submersed into water. Good mechanical characteristics, high tensile strength, resistant to UV, abrasion, chemicals, oil and other fluids. Good winding and unwinding strength. Suitable for drag chain use. Mud resistant according to NEK606.

PHYSICAL PROPERTIES:

MIN. BENDING RADIUS	Fixed: $4 \times \varnothing < 25 \text{ mm} < 6 \times \varnothing$ Mobile: $8 \times \varnothing < 25 \text{ mm} < 10 \times \varnothing$ S-shape deflection: $15 \times \varnothing < 25 \text{ mm} < 20 \times \varnothing$
MAX. TENSILE LOAD WITHOUT STRENGTH MEMBERS	15 N/mm ² of phases copper cross section
CORE IDENTIFICATION	White and blue insulation with black numbers
MARINE TYPE APPROVALS	RMRS, DNV-GL, BV and ABS

MAIN CHARACTERISTICS:

RATED VOLTAGE	150/250 V (300 V)
MAXIMUM CONDUCTOR TEMPERATURE	90 °C
FLAME-RETARDANT	IEC 60332-1-2 - test for single cable
HALOGEN-FREE	IEC 60754 series
MECHANICAL FLEX TEST	EN 50396 - conditions according to EN 50525
OIL RESISTANCE	EN 60811-404 - conditions according to EN 50363-10-2
OPERATING TEMPERATURE	-60 - 80 °C fixed use -35 - 80 °C flexible use

Subject to change without prior notice. See latest update on our webpage.

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H-FLEX INS C-PUR 250 V

Part number	Number of conductors & cross-section n x mm ²	Screen Cross-section (mm ²)	Nominal outer Ø (mm)	Weight kg/km
5700103012	1x2x0.5	2,6	7.0	60
5700103013	1x3x0.5	2,6	7.5	70
5700103014	1x4x0.5	2,6	8.0	75
5700103022	2x2x0.5	3,3	10.0	100
5700103032	3x2x0.5	3,5	10.5	115
5700103042	4x2x0.5	3,9	11.5	135
5700103072	7x2x0.5	4,7	13.5	195
5700103082	8x2x0.5	5,1	14.0	210
5700103102	10x2x0.5	6,0	16.0	260
5700103122	12x2x0.5	6,2	16.5	290
5700103142	14x2x0.5	7,0	17.5	330
5700103162	16x2x0.5	7,1	19.0	365
5700103192	19x2x0.5	7,7	20.0	415
5700103242	24x2x0.5	8,6	22.5	515
5700103272	27x2x0.5	9,1	23.5	565
5700103302	30x2x0.5	9,6	24.5	625
5700103322	32x2x0.5	9,9	25.5	655
5700103372	37x2x0.5	10,6	27.0	735
5700104012	1x2x0.75	2,6	7.5	70
5700104013	1x3x0.75	2,6	8.0	80
5700104014	1x4x0.75	2,7	9.0	100
5700104022	2x2x0.75	3,9	11.0	120
5700104032	3x2x0.75	4,0	11.5	145
5700104042	4x2x0.75	4,5	13.0	175
5700104072	7x2x0.75	5,5	15.0	250
5700104082	8x2x0.75	6,0	16.0	285
5700104102	10x2x0.75	7,1	18.0	350
5700104122	12x2x0.75	7,1	19.0	395
5700104142	14x2x0.75	7,7	20.0	440
5700104162	16x2x0.75	8,2	21.5	505
5700104192	19x2x0.75	8,9	23.0	580
5700104242	24x2x0.75	10,0	25.5	715
5700104272	27x2x0.75	10,6	27.0	785
5700104302	30x2x0.75	11,2	28.0	855
5700104322	32x2x0.75	11,5	29.0	905
5700104372	37x2x0.75	12,2	31.0	1040
5700107012	1x2x1.5	3,3	10.0	105
5700107013	1x3x1.5	3,3	10.0	140
5700107014	1x4x1.5	3,9	11.0	150
5700107022	2x2x1.5	5,1	14.0	185
5700107032	3x2x1.5	5,4	15.0	230
5700107042	4x2x1.5	6,0	16.5	285
5700107072	7x2x1.5	7,4	19.5	425
5700107082	8x2x1.5	8,0	21.0	490
5700107102	10x2x1.5	9,3	24.0	600
5700107122	12x2x1.5	9,8	25.0	685
5700107142	14x2x1.5	10,6	26.5	780
5700107162	16x2x1.5	11,2	28.5	875
5700107192	19x2x1.5	12,2	30.5	1010
5700107242	24x2x1.5	13,6	34.0	1265
5700107272	27x2x1.5	14,4	36.0	1395
5700107302	30x2x1.5	15,3	37.5	1540
5700107322	32x2x1.5	15,7	38.5	1625
5700108012	1x2x2.5	3,6	11.0	135
5700108013	1x3x2.5	3,9	11.5	165
5700108014	1x4x2.5	4,3	12.5	205
5700108022	2x2x2.5	6,0	16.0	250
5700108032	3x2x2.5	6,3	17.0	315
5700108042	4x2x2.5	7,1	18.5	390
5700108072	7x2x2.5	8,6	22.5	620
5700108082	8x2x2.5	9,3	24.0	695
5700108102	10x2x2.5	10,8	27.5	865
5700108122	12x2x2.5	11,3	28.5	995
5700108142	14x2x2.5	12,2	30.5	1130
5700108162	16x2x2.5	13,1	32.5	1290
5700108192	19x2x2.5	14,2	35.0	1505
5700108242	24x2x2.5	16,1	39.5	1890

TECHNICAL INFORMATION

ELECTRICAL DATA

H-FLEX PWR PUR AND H-FLEX PWR C-PUR

Size	Conductor resistance, max./20 °C ohm/km	Insulation resistance max./20 °C Mohm/km
1.0 mm ²	19.5	1300
1.5 mm ²	13.3	1100
2.5 mm ²	7.98	900
4 mm ²	4.95	700
6 mm ²	3.30	600
10 mm ²	1.91	500
16 mm ²	1.21	400
25 mm ²	0.78	500
35 mm ²	0.554	400
50 mm ²	0.386	400
70 mm ²	0.272	400
95 mm ²	0.206	300
120 mm ²	0.161	300
150 mm ²	0.129	300
185 mm ²	0.106	400
240 mm ²	0.0801	300
300 mm ²	0.0641	300

H-FLEX CTL PUR AND H-FLEX CTL C-PUR

Size	Loop resistance, max./20 °C ohm/km	Loop inductance, nom. mH/km	Insulation resistance max./20 °C Mohm/km
0.5 mm ²	82.8	0.6	1000
0.75 mm ²	55.2	0.6	1100

H-FLEX INS PUR AND H-FLEX INS C-PUR

Size	Loop resistance of pair, max./20 °C ohm/km	Pair capacitance, nom. nF/km	Loop inductance, nom. mH/km	Insulation resistance max./20 °C Mohm/km
0.5 mm ²	82.8	55	0.6	1000
0.75 mm ²	55.2	55	0.6	1100
1.5 mm ²	28.2	60	0.7	1100
2.5 mm ²	16.94	60	0.7	900

OIL RESISTANCE

Sheathing material is oil resistant according to method EN 60811-404 and requirements from EN 50363-10-2. Oil resistance demonstrated by immersion in mineral oil IRM902 for one week in 100 °C.

MUD RESISTANCE

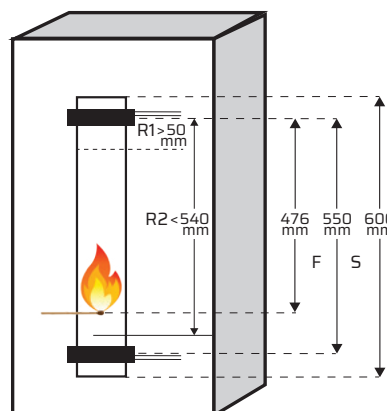
Sheathing material is mud resistant according to NEK 606 requirements. Mud resistance demonstrated by immersion in different types of drilling fluids for 56 days in 70 °C.

WATER PERFORMANCE

Water resistance: AD8 Submersion in salt and fresh water down to 500 m depth.

IEC 60332-1 TEST

IEC 60332-1 test for single cable. Test procedure and requirements according to picture below.



Min. 50 mm of the cable, measured from the upper support, must remain unburned after the specified time.

ADDITIONAL TESTS

IEC 60754-1

Acid gas emission test
Halogen content of material < 5 mg/g

IEC 60754-2

pH and conductivity test
Acidity of combustion gases pH > 4.3
Conductivity of combustion gases < 10 µS/mm

IEC 60684-2

Fluorine content test

EN 50396 PART 6.2

Mechanical flexing test
Mechanical bending test ongoing, 2.5 million bends

DIAMETER TOLERANCE

Nominal outer	Tolerance	Nominal outer	Tolerance
1 - 10	±0.5 mm	30.1 - 40	±2.0 mm
10.1 - 20	±1.0 mm	40.1 - 50	±2.5 mm
20.1 - 30	±1.5 mm	50.1 - 60	±3.0 mm

CORE IDENTIFICATION

H-FLEX PWR PUR / H-FLEX PWR C-PUR (according to HD 308 S2)

0.6/1 kV	Normal type	G-type (with earth conductor)
1-core		
2-cores		
3-cores		
3-cores + 3-ground cores		
4-cores		
5-cores		
7-cores and above		

Black numbers on white base

Black numbers on white base
Last core yellow/green.

BU = Blue, **BN** = Brown, **BK** = Black, **GY** = Grey, **Y/G** = Yellow/Green

250 V pair cables	250 V triad cables	250 V quad cables	250 V multicore cables
Pairs numbered Pair 1 1 1 Pair 2 2 2 Pair 3 3 3 etc. Each pair white - blue. Pairs numbered 1, 2, 3, 4, 5....	Built up as triple with the following identification Triple white-blue-red	(Quad)cable is built up as a star quad with the following identification 1 core white 2 core blue 3 core white 4 core blue	2-cores Black numbers on white base 3-cores Black numbers on white base 4-cores to 37-cores Black numbers on white base

MARKING ON THE SHEATH

Lot number, Cable type, Cable size (number of cores x size of conductors mm²), Voltage, Temperature, Standards, Manufacturer's name, Production month and year, Meter marking.





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THE PERFECT CONNECTION

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