



# H-FLEX INS PUR 250V

Unscreened instrumentation and control cable for flexible use

**DESIGN:**  
**HELKAMA specification**

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**1. Conductor**  
- stranded copper conductor IEC 60228:2004 class5  
- tinned stranded copper conductor on request

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**Insulation**  
- XLPE plastic

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**3. Twisted pair**  
- two insulated cores twisted together to form a pair  
- See next page for Quad

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**4. Sheath**  
- Polyurethane compound  
- standard colour black, other colours on request

CE ✓ RoHS

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

**Application:** The cable is intended for flexible, portable, movable applications. Applications such as ship to shore cable, outdoor cranes and various industrial applications. It is suitable for flexible applications in machineries, machine tools, robot technics and can be submersed into water. The cable has good mechanical characteristics, high tensile strength, is abrasion resistant and resistant to UV, chemicals, oil and other fluids. The cable can be coiled back and forth. Suitable to dragchain use. Mud resistant according to NEK606.

## Main characteristics

Rated voltage	<b>150/250V (300V)</b>
Maximum conductor temperature	<b>90 °C</b>
Flame-retardant	<b>IEC 60332-1-2</b> -test for single insulated wire and cable
Halogen-free	<b>IEC 60754</b> series
Mechanical flex test	<b>EN 50396</b> -conditions according to EN 50525
Oil resistancy	<b>EN 60811-404</b> -conditions according to EN 50363-10-2

## Mechanical

	Min. bending radius
	- fixed: $4 \times d < 25 \text{ mm} < 6 \times d$
	- mobile: $6 \times d < 25 \text{ mm} < 8 \times d$
	- s-shape deflection: $15 \times d < 25 \text{ mm} < 20 \times d$
	Max. tensile load without strength members 15 N/mm <sup>2</sup> of phases copper cross section
Operating temperature	<b>-60 – +80 °C</b> fixed use <b>-35 – +80 °C</b> flexible use

## Core identification

White and blue insulation with black numbers

## Marine type approvals

DNV-GL, BV and ABS

<b>H-FLEX INS PUR 250V</b>	<b>Number of conductors &amp; cross-section n x mm<sup>2</sup></b>	<b>Cross-section of screen mm<sup>2</sup></b>	<b>Nominal outer diameter mm</b>	<b>Approximate weight kg/km</b>
<b>Part number Normal</b>				
5900103012	1x2x0,5	0,4	7,5	70
5900103013	1x3x0,5	0,5	7,5	75
5900103014	1x4x0,5	0,5	8,0	85
5900103022	2x2x0,5	0,7	10,5	105
5900103032	3x2x0,5	0,8	10,5	125
5900103042	4x2x0,5	0,9	11,5	145
5900103072	7x2x0,5	1,1	13,5	205
5900103082	8x2x0,5	1,2	14,5	225
5900103102	10x2x0,5	1,4	16,0	280
5900103122	12x2x0,5	1,4	17,0	305
5900103142	14x2x0,5	1,5	18,0	350
5900103162	16x2x0,5	1,6	19,0	385
5900103192	19x2x0,5	1,8	20,0	435
5900103242	24x2x0,5	2,0	22,5	535
5900103272	27x2x0,5	2,1	24,0	595
5900103302	30x2x0,5	2,2	25,0	645
5900103322	32x2x0,5	2,3	25,5	680
5900103372	37x2x0,5	2,5	27,0	760
5900104012	1x2x0,75	0,5	8,0	80
5900104013	1x3x0,75	0,5	8,0	90
5900104014	1x4x0,75	0,6	9,0	105
5900104022	2x2x0,75	0,8	11,5	135
5900104032	3x2x0,75	0,9	12,0	155
5900104042	4x2x0,75	1,0	13,0	185
5900104072	7x2x0,75	1,3	15,5	270
5900104082	8x2x0,75	1,4	16,0	300
5900104102	10x2x0,75	1,6	18,5	365
5900104122	12x2x0,75	1,7	19,0	410
5900104142	14x2x0,75	1,8	20,5	475
5900104162	16x2x0,75	1,9	21,5	525
5900104192	19x2x0,75	2,1	23,0	600
5900104242	24x2x0,75	2,3	26,0	740
5900104272	27x2x0,75	2,5	27,0	810
5900104302	30x2x0,75	2,6	28,5	885
5900104322	32x2x0,75	2,7	29,5	950
5900104372	37x2x0,75	2,9	31,0	1070
5900107012	1x2x1,5	0,7	10,0	115
5900107013	1x3x1,5	0,7	10,5	150
5900107014	1x4x1,5	0,8	11,0	160
5900107022	2x2x1,5	1,2	14,5	195
5900107032	3x2x1,5	1,2	15,0	245
5900107042	4x2x1,5	1,4	16,5	300
5900107072	7x2x1,5	1,7	19,5	445
5900107082	8x2x1,5	1,9	21,5	510
5900107102	10x2x1,5	2,2	24,0	625
5900107122	12x2x1,5	2,3	25,0	710
5900107142	14x2x1,5	2,4	27,0	800
5900107162	16x2x1,5	2,6	28,5	905
5900107192	19x2x1,5	2,8	30,5	1040
5900107242	24x2x1,5	3,2	34,5	1295
5900107272	27x2x1,5	3,4	36,0	1440
5900107302	30x2x1,5	3,6	38,0	1575
5900107322	32x2x1,5	3,7	39,5	1690
5900107372	37x2x1,5	4,0	41,5	1910
5900108012	1x2x2,5	0,8	11,0	150
5900108013	1x3x2,5	0,9	11,5	180
5900108014	1x4x2,5	1,0	12,5	215
5900108022	2x2x2,5	1,3	16,0	270
5900108032	3x2x2,5	1,4	17,0	330
5900108042	4x2x2,5	1,6	19,0	415
5900108072	7x2x2,5	2,0	22,5	640
5900108082	8x2x2,5	2,2	24,0	725
5900108102	10x2x2,5	2,5	27,5	890
5900108122	12x2x2,5	2,6	29,0	1020
5900108142	14x2x2,5	2,9	31,0	1185
5900108162	16x2x2,5	3,1	33,0	1320
5900108192	19x2x2,5	3,3	35,5	1540
5900108242	24x2x2,5	3,7	39,5	1925
5900108272	27x2x2,5	4,0	41,5	2130
5900108302	30x2x2,5	4,2	44,0	2345
5900108322	32x2x2,5	4,3	45,0	2480
5900108372	37x2x2,5	4,6	48,0	2850