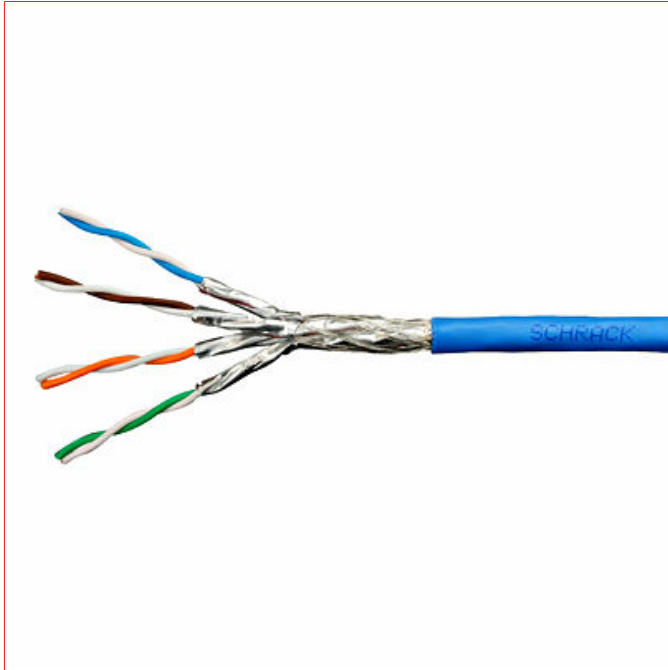


Data Sheet for Article: HSKP4233P5

# S/FTP Cable Cat.7, 4x2xAWG23/1, 1.000Mhz, LSOH-3, Dca, 30%

blue, Drum 500m



## SCHRACK-Info

- Installation cable for generic cabling systems.
- Support current and future applications requiring Class D to F (z.B. 10GBase-T, 1000Base-T, 100Base-TX, ATM) as well as VoIP, PoE,

### STANDARDS:

- ISO/IEC 11801, EN 50173-1
- Better than category 7 according to IEC 61156-5, EN 50288-4-1
- Much better than IEEE 802.3an 10 Gigabit Ethernet



## Technical Data

Category	Cat.7
Cable shielding	S/FTP
Conductor material	Solid bare copper AWG23/1 (0.58mm)

## Technical Data - continued

Color code pairs	Pair 1 White / Blue Pair 2 White / Orange Pair 3 White / Green Pair 4 White / Brown
Number of pairs	4, all twisted together
Insulation material	Foamed polyethylene
Nominal diameter over insulation (mm)	1,45
Shielding	shielded
Pair-Foil	Laminated aluminium polyester, Aluminium facing outside (PiMF)
Overall Shield	Solid tinned copper
Braid coverage (%)	30
Ripcord	Nylon
Cable jacket	LS0H-3
Jacket	LS0H-3, FRNC according to: IEC 61034-1/2, EN 50268-1/2 IEC 60754-1/2, EN 50267-1/2 IEC 60332-3-24, EN 60332-3-24
Euroclass acc. to EN50575	Dca
Smoke production	s1
Droplets	d1
Acidity	a1
Burning load (kJ/m)	750
Outside diameter (mm)	7,9
Net diameter (mm)	7,90
Net weight (kg)	0,06
Weight nominal (kg/km)	62
Colour	Blue
Length/Put-ups	500m - drum
Min. ambient temperature (°C)	-30
Max. ambient temperature (°C)	60
Temperature range - Operation (°C)	-30 to +60
Temperature range - Installation (°C)	+0 to +50
Bending radii cable - Static (Ø)	4
Bending radii cable - Dynamic (Ø)	8
Max. pulling tension (N)	110
Rated voltage	72 VDC
Max. continuous current per conductor (25°C) (A)	1,5
DC resistance at 20° C (Ohm/100m)	< 9,5
Resistance unbalance: within a pair / between pairs (%)	< 2 / < 4
D.C. insulation resistance: conductor – conductor and conductor – screen (MΩ*km)	≥ 5000
Dielectric strength conductor – conductor (2 sec) (kV DC)	2,5
Dielectric strength conductor – screen (2 sec) (kV DC)	2,5

## Technical Data - continued

Mutual capacitance (nF/km)	< 56
Capacitance unbalance pair to ground (pF/km)	< 1600
NVP (%)	78

## ELECTRICAL CHARACTERISTICS AT 20°C ACCORDING TO IEC 61156-5

	Freq. (MHz)	Specification	Unit
NVP (Nominal velocity of propagation)	4 – 600	0,78	c
Skew	4 – 600	≤ 25	ns/100m
Propagation delay	4 – 600	≤ 534 + 36/√f	ns/100m
Attenuation	4 – 600	≤ 1,8*√f+0,01*f+0,20/√f	dB
TCL, level 1 (Transverse conversion loss)	1 – 250	> 40 – 10*log (f)	dB
ELTCL (Equal level transverse conversion loss)	1 – 30	> 35 – 20*log (f)	dB
NEXT (Near end cross talk)	4 – 600	≥ 102,4-15*log (f) (78 max.)	dB
PS NEXT (Power sum near end cross talk)	4 – 600	≥ 99,4-15*log (f) (75 max.)	dB
ACR-N (Attenuation cross talk ratio)	4 – 600	NEXT – Dämpfung	dB
PS ACR-N (Power sum attenuation cross talk ratio)	4 – 600	PSNEXT – Dämpfung	dB
ACR-F (Equal level far end cross talk)	4 – 600	≥ 95,3-20*log (f) (78 max.)	dB
PS ACR-F (Power sum equal level far end cross talk)	4 – 600	≥ 92,3-20*log (f) (75 max.)	dB
Input impedance open / short (Zo/s)	4 – 600	100	Ω
RL (Return loss)	4 ≤ f ≤ 10	≥ 20 + 5*log (f)	dB
	10 ≤ f ≤ 20	≥ 25	dB
	20 ≤ f ≤ 600	≥ 25-7*log (f/20)	dB
Coupling attenuation (type I)	30 – 100	≥ 55	dB
	100 – 1000	≥ 55-20*log (f/100)	dB
Transfer impedance (ZT, grade 1)	1	< 50	mΩ/m
	10	< 100	mΩ/m
	30	< 200	mΩ/m
	100	< 1000	mΩ/m

## REFERENCE STANDARD: IEC 61156-5

Frequency	1 *	4	10	16	31,2	62,5	100	125	200	250	300	600	1000*	MHz
Attenuation	2	3,7	5,9	7,4	10,4	14,9	19	21,4	27,5	31,0	34,2	50,1	66,9	dB/100m
NEXT	78	78	78	78	78	75,5	72,4	70,9	67,9	66,4	65,2	60,7	57,4	dB/100m
PS NEXT	75	75	75	75	75	72,5	69,4	67,9	64,9	63,4	62,2	57,7	54,4	dB/100m
ACR-N	76,0	74,3	72,1	70,6	67,6	60,6	53,4	49,6	40,4	35,5	40,4	10,6	-9,5	dB/100m
PS ACR-N	73	71,3	69,1	67,6	64,6	57,6	50,4	46,6	37,4	32,5	28,1	7,6	-12,5	dB/100m
ACR-F	78	78	75,3	71,2	65,4	59,4	55,3	53,4	49,3	47,3	45,8	39,7	35,3	dB/100m
PS ACR-F	75	75	72,3	68,2	62,4	56,4	52,3	50,4	46,3	44,3	42,8	36,7	32,3	dB/100m
RL	20	23	25	25	23,6	21,5	20,1	19,4	18	17,3	17,3	17,3	17,3	dB/100m
TCL level 1	40	34	30	28	25,1	22	20	19	17	16				dB/100m
EL TCTL	35	23	15	10,9	5,1									dB/100m
Impedance upper limit	122,2	115,2	111,9	111,9	114,1	118,3	121,9	123,9	128,8	131,5	131,6	131,6	142,8	Ω
Impedance lower limit	81,6	86,8	89,4	89,4	87,7	84,5	82,0	80,7	77,7	76	76	76	70	Ω
Laufzeit	570	552	545	543	540	539	538	537	536	536	536	535	535	ns/100m

\* Limits below 4 MHz and values at 1000 MHz are for information only.

## TYPICAL VALUES

Frequency	1 *	4	10	16	31,3	62,5	100	125	200	300	600	1000	MHz
Attenuation	1,8	3,3	5,3	6,7	9,4	13,4	17,1	19,3	26,7	30,8	45,5	60,3	dB/100m
NEXT	103	100	98	97	95	94	93	92	91	90	89	88	dB/100m
PS NEXT	100	97	95	94	92	91	90	89	88	87	86	85	dB/100m
ACR-N	101	97	93	91	85	81	76	71	64	59	43	28	dB/100m
PS ACR-N	98	94	90	88	82	78	73	70	61	56	40	25	dB/100m
ACR-F	95	94	93	91	90	87	85	83	77	74	60	50	dB/100m
PS ACR-F	92	91	92	88	87	84	82	80	74	71	57	47	dB/100m
RL	27	30	32	32	35	33	32	31	30	25	23	21	dB/100m

Typical values are for information only.

## Article Table

DESCRIPTION	NVP (%)	Order No.
S/FTP Cable Cat.7, 4x2xAWG23/1, 1.000Mhz, LS0H-3, Dca, 30% blue, Drum 500m	78	HSKP4233P5
<b>Optional Accessories</b>		
PERFORMANCE LINE Jack RJ45 shielded, Cat.6a 10GB 4PPoE 100W (SFB)		HSPMRJ6G1A
PERFORMANCE LINE Jack RJ45 shielded, Class Ea 10GB PoE+ (SFB)		HSPMRJ6G1T
TOOLLESS LINE Jack RJ45 shielded, Cat.6a 10GB 4PPoE (100W) (SFA)		HSEMRJ6GWA
TOOLLESS LINE Jack RJ45 shielded, Class Ea 10GB 4PPoE 100W (SFA)		HSEMRJ6GWT
TOOLLESS LINE Jack RJ45 shielded, Cat.6 (SFA)		HSEMRJ6GWS
Cable dispenser for 250kg Load for drums up to 52cm width		HTOOL00006
Back to back cable tie blue 16mm x 4m		Q7KB0416-B
Back to back cable tie red 16mm x 4m		Q7KB0416-R
Back to back cable tie black 16mm x 4m		Q7KB0416-S
Back to back cable tie yellow 16mm x 4m		Q7KB0416-Y
Back to back cable tie green 16mm x 4m		Q7KB0416-U