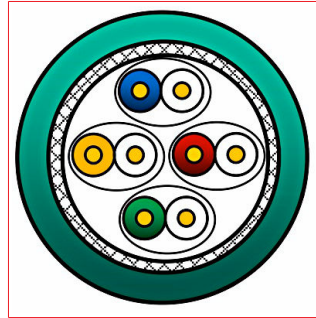
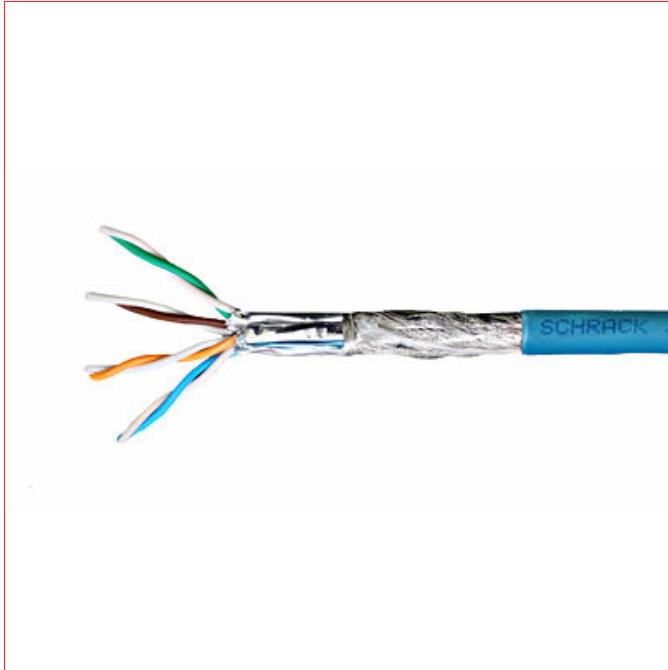


Data Sheet for Article: HVKP423BA1

S/FTP Cat.7 4x2xAWG23/1, 1200 MHz, LSOH-3, B2ca, 65%

waterblue, Drum 1000m



SCHRACK-Info

Installationcables for generic, structured network cabling systems

- Horizontal and building backbone cable
- Support all applications requiring Class D to Class F applications, such as:
10GBase-T (10 Gigabit Ethernet), 1000Base-T (Gigabit Ethernet), 100 Base-T, 10 Base-T, FDDI, ATM as well as VoIP, PoE

GENERAL STANDARDS

- International standard: ISO/IEC 11801 2nd edition (2002) and ISO/IEC 11801 Amendment 2 (2010)
- European standard: EN 50173-1 (2011)



Technical Data

Category	Cat.7
Cable shielding	S/FTP
Conductor	4 individual shielded pairs
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
Insulation material	Foamed polyethylene
Nominal diameter over insulation (mm)	1.45
Shielding	shielded
Pair-Foil	Foil
Overall Shield	Solid tinned copper
Braid coverage (%)	65
Ripcord	Nylon
Cable jacket	LS0H-3
Euroclass acc. to EN50575	B2ca
Smoke production	s1
Droplets	d1
Acidity	a1
Burning load (kJ/m)	585
Smoke density - transmittance (%)	> 60
Amount of halogen acid gas - pH	> 4.3
Amount of halogen acid gas - Conductivity (µS/m)	< 10
Outside diameter (mm)	7.2 +0.3/-0.1
Weight nominal (kg/km)	74
Sheath colour	waterblue, RAL 5021
Length/Put-ups	1000m - 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
D.C. insulation resistance: conductor – conductor and conductor – screen (MΩ*km)	≥ 5000
Dielectric strength conductor – screen (2 sec) (kV DC)	2.5
Mutual capacitance (nF/km)	< 56
Capacitance unbalance pair to ground (pF/km)	< 1600
Resistance difference (%)	< 2 / < 4
Elongation at break of the conductors (%)	10
Minimum elongation at break of the insulation (%)	≥ 100
Minimum elongation at break of the sheath (%)	≥ 100

Technical Data - continued

Tensile strength of sheath (MPa)	> 9
Maximum continuous current per conductor (@ 25°C) (A)	1.5
SKEW (ns/100m)	≤ 25
NVP (%)	76
Net length (mm)	1.000,00
Net weight (kg)	0,07
Net diameter (mm)	7,40

REFERENCE STANDARD: IEC 61156-5

Electrical parameters at 20 ° C	Freq. (MHz)	Specification	Unit
Propagation delay (phase delay)	4-600	$\leq 534 + 36/\sqrt{f}$	ns/100m
Longitudinal attenuation	4-600	$\leq 1.80 \cdot \sqrt{f} + 0.01 \cdot f + 0.20/\sqrt{f}$	dB
Transverse Conversion Loss (TCL, level 1)	1-250	$> 40 - 10 \cdot \log(f)$	dB
Equal Level Transverse Conversion Loss (ELTCTL)	1-30	$> 35 - 20 \cdot \log(f)$	dB
Near end cross talk (NEXT)	4-600	$\geq 102.4 - 15 \cdot \log(f)$ (78 max)	dB
Power sum near end cross talk (PS NEXT)	4-600	$\geq 99.4 - 15 \cdot \log(f)$ (75 max)	dB
Attenuation cross talk ratio far end (ACR-F)	4-600	$\geq 95.3 - 20 \cdot \log(f)$ (78 max)	dB
Power sum attenuation cross talk ratio far end (PS ACR-F)	4-600	$\geq 92.3 - 20 \cdot \log(f)$ (75 max)	dB
Attenuation cross talk ratio (ACR)	4-600	NEXT- longitudinal att.	dB
Power sum attenuation cross talk ratio (PS ACR)	4-600	PSNEXT - longitudinal att.	dB
Return loss (RL)	$4 \leq f \leq 10$	$\geq 20 + 5 \cdot \log(f)$	dB
	$10 \leq f \leq 20$	≥ 25	dB
	$20 \leq f \leq 600$	$\geq 25 - 7 \cdot \log(f/20)$, (17.3 min)	dB
Coupling attenuation (type 1)	30-100	≥ 85	dB
	100-1200	$\geq 85 - 20 \cdot \log(f/100)$	dB
Transfer impedance (Z _t , grade 1)	1	< 10	mΩ/m
	10	< 10	mΩ/m
	30	< 30	mΩ/m
	100	< 100	mΩ/m

REFERENCE STANDARD: IEC 61156-5

High frequency @ 20°C

TYPE	1 *	4	10	16	31.2	62.5	100	125	200	300	600	1000 *	1200 *	MHz
Attenuation	2.0	3.7	5.9	7.4	10.4	14.9	19.0	21.4	27.5	34.2	50.1	66.9	74.4	dB/100m
NEXT	78.0	78.0	78.0	78.0	78.0	75.5	72.4	70.9	67.9	65.2	60.7	57.4	59.2	dB/100m
PS NEXT	75.0	75.0	75.0	75.0	75.0	72.5	69.4	67.9	64.9	62.2	57.7	54.4	56.2	dB/100m
ACR	76.0	74.3	72.1	70.6	67.6	60.6	53.4	49.6	40.4	31.1	10.6	-9.5	-15.2	dB/100m
PS ACR	73.0	71.3	69.1	67.6	64.6	57.6	50.4	46.6	37.4	28.1	7.6	-12.5	-18.2	dB/100m
ACR-F	78.0	78.0	75.3	71.2	65.4	59.4	55.3	53.4	49.3	45.8	39.7	35.3	33.7	dB/100m
PS ACR-F	75.0	75.0	72.3	68.2	62.4	56.4	52.3	50.4	46.3	42.8	36.7	32.3	30.7	dB/100m
Return Loss	20.0	23.0	25.0	25.0	23.6	21.5	20.1	19.4	18.0	17.3	17.3	17.3	17.3	dB/100m
TCL level 1	40.0	34.0	30.0	28.0	25.1	22.0	20.0	19.0	17.0					dB/100m
EL TCTL	35.0	23.0	15.0	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	131.6	131.6	131.6	131.6	Ω
Impedance lower limit	81.8	86.8	89.4	89.4	87.7	84.5	82.0	80.7	77.6	76.0	76.0	76.0	76.0	Ω
Propagation delay	570	552	545	543	540	539	538	537	536	536	535	535	535	ns/100m

*Limits below 4MHz are for information only. Values at 1000MHz are for information only.

TYPICAL VALUES

TYPE	1 *	4	10	16	31.2	62.5	100	125	200	300	600	1000	1200	MHz
Attenuation	1.8	3.3	5.3	6.7	9.4	13.4	17.1	19.3	26.7	30.8	45.5	67.1	60.3	dB/100m
NEXT	103	100	98	97	95	94	93	92	91	90	89	87	88	dB/100m
PS NEXT	100	97	95	94	92	91	90	89	88	87	86	84	85	dB/100m
ACR	101	97	93	91	85	81	76	73	64	59	43	20	28	dB/100m
PS ACR	98	94	90	88	82	78	73	70	61	56	40	17	25	dB/100m
ACR-F	95	94	93	91	90	87	85	83	77	74	60	45	30	dB/100m
PS ACR-F	92	91	92	88	87	84	82	80	74	71	57	42	47	dB/100m
Return Loss	27	30	32	32	35	33	32	31	30	25	23	21	21	dB/100m

Typical values are informative.

Article Table

DESCRIPTION	NVP (%)	COPPER WEIGHT (kg/km)	Order No.
S/FTP Cat.7 4x2xAWG23/1, 1200 MHz, LS0H-3, B2ca, 65% waterblue, Drum 1000m	76	32.5	HVKP423BA1
Optional Accessories			
PERFORMANCE LINE Jack RJ45 shielded, Cat.6a 10GB 4PPoE 100W (SFB)			HSPMRJ6G1A
PERFORMANCE LINE Jack RJ45 shielded, Cat.6a 10GB 4PPoE 100W (SFB), 24 pieces			HSPMRJ6G2A
Cable dispenser for 250kg Load for drums up to 52cm width			HTOOL00006
Back to back cable tie black 16mm x 4m			Q7KB0416-S
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 yellow 16mm x 4m			Q7KB0416-Y
Back to back cable tie green 16mm x 4m			Q7KB0416-U