

ICS IE ToughCat 7S S/FTP

Installation cable for tougher environments



Application

Generic Data transmission. This cable is a Cat7S S/FTP cable meant for use as installation (horizontal) cable in tougher electrical and mechanical environment, including ships and offshore units.

Construction

Conductor	: Solid copper wire Ø 0.56 mm (AWG 23)
Insulation	: Foamskin PE, Ø 1.4 mm
Twisting	: 2 Cores to the pair
Lay up	: 4 Pairs (PiMF) to the core
Pair screen	: Al-laminated plastic foil around each pair
Overall screen	: Copper braid, tinned
Sheath	: Oil resistant, Fire retardant and halogen free LSHF-FR (SHF1)
Marking text	: E.g. "meter" "year" manufacturer ToughCat7S S/FTP 4x2/0.56

Outer Sheath Colours

Available colours	: Dark Grey
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Installation recommendations

Min. Bending Radius during Installation	: 8xD
Min. Bending Radius Fix Installed	: 4xD
Max. Conductor Operating Temperature	: 85°C

Standards applied

IEC 61156-5	Transmission characteristics
EN 50173-1	Generic cabling systems
EN 50288-4-1	Multi-Element Metallic Cables
ISO/IEC 11801	Information technology
IEC 60332-3-24	Flame Retardant
IEC 60754-2	Halogen Free
IEC 61034	Low Smoke
IEC 60811-2-1	Chemical resistance

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Range and Dimensions

Article Code	Nominal diameter outer sheath, mm	MJ/km	kWh/m	Weight of Cable Approx. (Kg/Km)
P83B04P23AAZGR1	7.6	670	0,186	64

Electrical properties at 20°C

DC loop resistance		< 150 Ω/km
Resistance unbalance		< 2%
Insulation resistance	500 V	> 5000 MΩxkm
Capacitance	at 800 Hz	Nom. 43 nF/km
Capacitance unbalance	pair to ground	< 1500 pF/km
Characteristic impedance	1 – 100 MHz	100 ± 5 Ω
	100 – 250 MHz	100 ± 10 Ω
	250 – 600 MHz	100 ± 15 Ω
Nominal velocity of propagation		ca. 79 %
Propagation delay		< 570 ns/100 m
Delay skew		< 9 ns/100 m
Test voltage	(DC, 1 min) core/core and core/screen	1000 V
Transfer impedance	At 1 MHz	< 10 mΩ/m
	At 10 MHz	< 10 mΩ/m
	At 30 MHz	< 10 mΩ/m
	At 100 MHz	< 10 mΩ/m
Coupling attenuation		> 85 dB

Nominal Transmission characteristics at 20°C

F (MHz)	Attenuation (dB/100m)	NEXT (dB)	ACR (dB/100m)	Return loss (dB)	PS-NEXT (dB)	PS-ACR (dB/100m)	ELFEXT (dB/100m)	PS-ELFEXT (dB/100m)
1	2,1	90	88	-	87	85	85	82
4	4,0	90	86	27	87	83	85	82
10	6,3	90	84	30	87	81	79	76
16	8,0	90	82	30	87	79	75	72
20	9,0	90	81	30	87	78	73	70
31.25	11,4	90	79	30	87	76	69	66
62.5	16,5	86	70	30	83	67	63	60
100	21,3	83	62	30	80	59	59	56
155	24,2	81	57	26	78	54	57	54
200	31,5	78	47	25	75	44	53	50
250	35,8	77	41	25	74	38	51	48
300	47,1	73	26	23	70	23	47	44
600	60,1	71	11	20	68	8	44	41

NOTICE

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