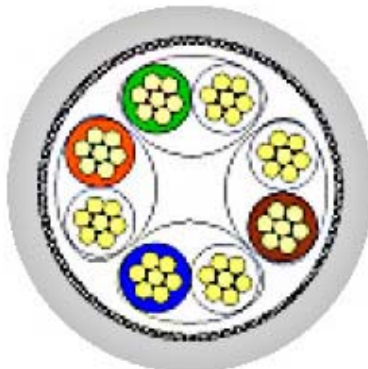


ToughCat S/FTP

Individually Screened Twisted Pair with Braiding



Application

Generic Data transmission. This cable is a **Cat5E S/FTP** cable meant for use as horizontal cable in tougher electrical and mechanical environment.

Standards

EN 50288-2-1, Det Norske Veritas (DNV) spesifikation No. 6-827.50-2 and Lloyd Register approval system, 2002

Fire rating

LSFROH (SHF1): IEC 60754-2; IEC 61034, IEC 60332-3-24

Oil resistance

Norm CEI 20.34: 4 hours, 70°C in IRM902 oil

Certification

This cable is certified by: Det Norske Veritas (DNV) and Lloyd Register.

Construction

Conductor	Stranded copper wire Ø 0.22 mm ²
Insulation	PE, Ø 1.4 mm
Twisting	2 cores to the pair
Cable lay up	4 pairs
Pair screen	Al-laminated plastic foil around each pair
Overall screen	Copper braid, tinned Ø 6,2 mm
Sheath	Oil resistant, Fire retardant and halogen free LSFROH (SHF1).

Mechanical Properties

Bending radius	Installation	8 x D
	Installed	4 x D
Temperature range	During operation	-20°C to + 85°C
	During installation	0°C to + 50°C
Fire load	4 pair	515 MJ/km
Maximum tensile load, installation	During installation	100N
	Installed	-

ToughCat S/FTP

Electrical Properties

at 20°C

DC loop resistance		≤ 158 Ω/km
Resistance unbalance		≤ 2%
Insulation resistance	(500 V)	≥ 5000 MΩxkm
Capacitance	at 800 Hz	Nom. 43 nF/km
Capacitance unbalance	(pair to ground)	≤ 300 pF/km
Mean Characteristic impedance	@ 100 MHz)	100 ± 5 Ω
Nominal velocity of propagation		0,75c
Propagation delay		≤ 450 ns/100 m
Delay skew		≤ 15 ns/100 m
Transfer impedance	at 1 MHz	≤ 10 mΩ /m
	at 10 MHz	≤ 8 mΩ /m
	at 30 MHz	≤ 10 mΩ /m

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
62.50	16,5	86	70	30	83	67	63	60
100	21,3	83	62	30	80	59	59	56
155.00	24,2	81	57	26	78	54	57	54
200.00	31,5	78	47	25	75	44	53	50
250.00	35,8	77	41	25	74	38	51	48
300.00	47,1	73	26	23	70	23	47	44
600.00	60,1	71	11	20	68	8	44	41

Technical Data

Description	Variant	Colour	Outher diameter (D) mm	Delivery form	Weigth kg/km	Material code	El. No	DCN No.
ToughCat S/FTP 4x2/0,22mm ²	LSFROH (SHF1)	Grey RAL7035	7,7	Drum 500m	68	1000745 -00500DP	1089209	792621