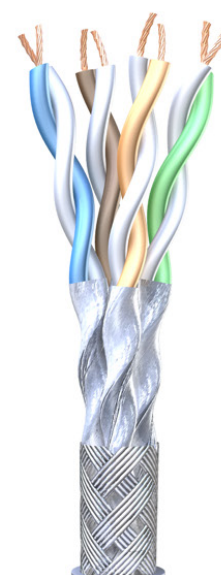


ToughCat 5e <600 MHz> 24/7awg SU/FTP Marine Grade • DNV & LR

Cable Design

Conductor	Stranded Bare Cu-wire AWG 24/7 (0,22mm ²)
Insulation	Polyethylene (PE) Ø 1,40 mm
Pair assembly	2 cores twisted to a pair. 4 pairs total
Pair identification	wh-bu, wh-or, wh-gn, wh-bn
Pair Screen	Individual plastic laminated aluminium foil
Braid	Tinned copper wire braid
Diameter	6,20 mm
Outer Jacket	Oil resistant, LSZH SHF-1, Grey RAL7035
Diameter	Ø 7,70
Weight	68 kg/km



Application

Generic Data transmission Cat5e SU/FTP meant for use as installation/horizontal cable in tougher electrical and mechanical environments, including ships and offshore units. approved by DNV and Lloyd Register

Standards

Applicable Standards	EN 50173-1; EN 50288-2-1, ISO/IEC 11801; IEC 61156-5. approved by Det Norske Veritas (DNV) & Lloyd Register (LR)
Flamability Rating	IEC 60332-3-24, IEC 60754-2, IEC 61034
Chemical resistance	Mineral oils - IRM 902 (IEC 60811-2-1) : 7 days/23°C, 4 hours/70°C Diesel - IRM 903 (IEC 60811-2-1) : 7 days/23°C, 4 hours/70°C

Specification

Part Number	Type
1000745	Cat5e 4x2xAWG24/7 SU/FTP <600 MHz> SHF-1 DNV & LR approved

ToughCAT5e 1000745 600 SU/FTP 4PR AWG 24/7 SHF-1

Thermal & Mechanical Characteristics

Temperature range	during operation	-40 to +85	°C
	during installation	-15 to +50	°C
Bending radius	without load	8	x Ø
	with load	4	x Ø
Maximum tensile load	during operation	No load	
	during installation	100	N
Fire load	4 pair	515	MJ/km

Electrical Characteristics

DC loop resistance		≤	158	Ω/km
Resistance unbalance		≤	2	%
Insulation resistance	(500 V)	≥	5000	MΩ x km
Capacitance	at 800 Hz	nom.	43	nF/km
Capacitance unbalance	(pair to ground)	≤	1500	pF/km
Mean characteristic impedance	@ 100 MHz		100±5	Ω
Nominal velocity of propagation			0,75	c
Propagation delay		≤	450	ns/100m
Delay skew		≤	15	ns/100m
Transfer impedance	at 1 MHz	≤	10	mΩ/m
	at 10 MHz	≤	8	mΩ/m
	at 30 MHz	≤	10	mΩ/m
Coupling attenuation		≥	85	dB

Frequency (MHz)	Attenuation (dB/100m)	NEXT (dB)	ACR (dB/100m)	ReturnLoss (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