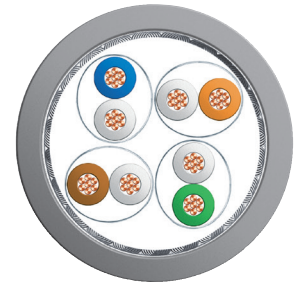


ToughCat 7 <600 MHz> 23/7awg SU/FTP Marine Grade • DNV & ABS

Cable Design

Conductor	Stranded Bare Cu-wire AWG 23/7
Insulation	Polyethylene (PE)
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	6,60 mm
Outer Jacket	Oil resistant, LSZH SHF-1, Grey RAL7035
Diameter	Ø 8,10
Weight	75 kg/km



Application

Generic Data transmission Cat7 SU/FTP meant for use as installation/horizontal cable in tougher electrical and mechanical environments, including ships and offshore units. DNV and ABS approved.

Standards

Applicable Standards	EN 50173-1; EN 50288-4-1, ISO/IEC 11801; IEC 61156-5. approved by DNV & ABS
Flamability Rating	IEC 60332-3-24, IEC 60754-2, IEC 61034
Chemical resistance	Mineral oils - IRM 902 (IEC60811-2-1) : 7 days/23°C, 4 hours/70°C Diesel - IRM 903 (IEC60811-2-1) : 7 days/23°C, 4 hours/70°C

Specification

Part Number	Type
1016274	Cat7 4x2xAWG23/7 SU/FTP <600 MHz> SHF-1 DNV & ABS approved

ToughCAT7 1016274 600 SU/FTP 4PR AWG 23/7 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	670	MJ/km

Electrical Characteristics

DC loop resistance		≤	138	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			0,76	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	2,0	90	88	-	87	85	85	82
4	3,6	90	86	27	87	83	85	82
10	5,5	90	84	30	87	81	79	76
16	7,5	90	82	30	87	79	75	72
20	7,7	90	82	30	87	79	73	70
31,25	9,8	90	80	30	87	77	69	66
62,5	14,0	86	72	30	83	69	63	60
100	17,9	83	65	30	80	62	59	56
155	22,4	81	59	26	78	55	57	54
200	25,6	78	52	25	75	49	53	50
250	28,8	77	48	25	74	45	51	48
300	31,6	73	41	23	70	38	47	44
600	45,7	71	25	20	68	22	44	41