

ICS IE TOUGHCAT 7 GSWB

S/FTP Installation Cable for tougher environments, Incl. GSWB



GENERAL INFO

Generic Data transmission. This cable is a Cat.7 S/FTP cable meant for use as installation/horizontal cable in tougher electrical and mechanical environment, including ships and offshore units. Including a Galvanized Steel Wire Braid(GSWB) and SHFI outer sheath.

CERTIFICATIONS AND DESIGN STANDARDS



RoHS

ISO/IEC 11801

IEC 61156-5

EN 50173-1

EN 50288-4-1

Generic cabling system

Datacom cables

Generic cabling systems

Datacom cables shielded up to 600 MHz

CABLE CONSTRUCTION

Conductor material	Copper
Conductor surface	Bare
Core insulation material	Polyethylene (PE)
Screen over stranding element	Foil
Armouring/reinforcement	Braiding
Armouring/reinforcement material	Steel, galvanised
Screen construction	Braiding
Screen material	Copper, tinned
Screen over stranding	Braiding
Material inner sheath	Low smoke zero halogen
Material outer sheath	Low smoke zero halogen
Cable shape	Round
With rodent protection	Yes

APPLICATION PROPERTIES

Oil resistant (acc. IEC 60811-404)	Yes
Min. outer temperature, fixed installation [°C]	-40
Max. outer temperature, fixed installation [°C]	85
UV resistant	Yes
With rodent protection	Yes
Min. outer temperature during installation [°C]	-15
Max. outer temperature during installation [°C]	50
Bending radius (rule)	Installation: 8 x outer diameter; Installed: 4 x outer diameter
Certified for shipboard application	Yes

FIRE PROPERTIES

Flame retardant	In accordance with EN/IEC 60332-3-24
Halogen free (acc. IEC 60754-2)	Yes
Reaction-to-fire class (acc. EN 13501-6)	Eca

ELECTRICAL PROPERTIES

Nominal voltage U [V]	48
Test voltage [kV]	1
Category	7
NVP value [%]	79
Resistance unbalance (max) [%]	2
Nominal mutual capacitance [pF/m]	43
Capacitance unbalance (max) [pF/m]	1,500
Propagation delay (max) [ns/100m]	570
Delay skew (max) [ns/100m]	9
Transfer impedance at 10 MHz [mOhm/m]	10
Segregation classification (acc. EN 50174-2)	d

CAT 7 TRANSMISSION CHARACTERISTICS (AT 20°C)

Frequency (MHz)	Attenuation (dB/100 m)	NEXT (dB)	PS-NEXT (dB)	ACR (dB/100 m)	PS-ACR (dB/100 m)	ACRF (dB/100m)	PS-ACRF (dB)	Return Loss (dB)
1	1.8	100	97	98	95	105	102	-
4	3.3	100	97	97	94	105	102	27
10	5.2	100	97	95	92	97	94	30
16	6.6	100	97	93	90	93	90	30
20	7.4	100	97	93	90	91	88	30
31.2	9.3	100	97	91	88	87	84	30
62.5	13.4	100	97	87	84	81	78	30
100	17.2	100	97	83	80	77	74	30
125	19.4	95	92	76	73	75	72	26
155.5	21.8	94	91	72	69	73	70	26
175	23.3	93	90	70	67	72	69	25
200	25.1	92	89	67	64	71	68	25
250	28.4	90	87	62	59	69	66	24
300	31.4	89	86	58	55	67	64	24
450	39.5	87	84	48	45	64	61	23
600	46.6	85	82	38	35	61	58	22
750	53.2	83	80	30	27	59	56	21
900	59.2	82	79	23	20	58	55	20
1000	63.1	81	78	18	15	57	54	20

PRODUCT ORDER DATA

Product name	Colour outer sheath	SAP	EL no.	Packaging type	Standard packaging quantity	User unit
TOUHCAT7S_SWB S/FTP 4X2/0.56	Grey	60027371	60027371	Drum	500	MTR
TOUHCAT7S_SWB S/FTP 4X2/0.56	Grey	60027369	60027369	Drum (non-standard length)		MTR

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CONSTRUCTION DETAILS

Product name	Conductor category	Diameter conductor [mm]	AWG size	Number of stranding elements	SAP
TOUHCAT7S_SWB S/FTP 4X2/0.56	Class 1 = solid	0.57	23	4	60027371
TOUHCAT7S_SWB S/FTP 4X2/0.56	Class 1 = solid	0.57	23	4	60027369

CONSTRUCTION DETAILS(02)

Product name	Nominal outer diameter [mm]	Fire load [MJ/km]	Max. tensile strength during installation [kN]	Cable weight [kg/km]	DOP number	SAP
TOUHCAT7S_SWB S/FTP 4X2/0.56	10.6		0.54	168	1007680	60027371
TOUHCAT7S_SWB S/FTP 4X2/0.56	10.6		0.54	168	1007680	60027369

ELECTRICAL PROPERTIES(PER ITEM)

Product name	Nominal operation capacitance [nF/km]	Characteristic impedance [Ohm]	Loop resistance [Ohm]	Coupling attenuation [dB]	SAP
TOUHCAT7S_SWB S/FTP 4X2/0.56	43	100	150	85	60027371
TOUHCAT7S_SWB S/FTP 4X2/0.56	43	100	150	85	60027369