



## 65010028 - MLAN 1000 S/FTP 4PR AWG 23/1 FRNC Dca

Data cable for marine and offshore usage  
Category 7 better than class F up to 600 MHz

### APPLICATION

UV-resistant reinforced data cable for transmission analog and digital signals for cabling in environments with harder electrical and mechanical requirements, as well as for use on ships and offshore. With DNV and GL rating. Approved for usage acc. to euroclass classification Dca.

**Usage:** IEEE 802.3 : Ethernet 10Base-T ; Fast Ethernet 100Base-T ; Gigabit Ethernet 1000Base-T ; 10GBase-T  
IEEE 802.5 : ISDN ; FDDI ; ATM ; Cable sharing  
IEEE 802.3at : PoE / PoE+ suitable

### STANDARDS

EN 50288-4-1 ; EN 50173 ; EN 50174-2 ;  
ISO/IEC 11801 2. edition ; IEC 61156-5  
DNVGL-certificate : TAE00003V0

### CONSTRUCTION

**Conductor:** copper, solid, bare, AWG 23/1  
**Core insulation:** SFS-PE  
**Core diameter:** 1,38 ± 0,05 mm  
**Core identification:** wh-bu, wh-or, wh-gn, wh-bn (IEC 708-1)  
**Pair screen:** plastic-laminated aluminium foil  
**Screening:** tinned copper wire braid  
**Sheath material:** halogen-free compound (FRNC) SHF 1  
**Sheath color:** yellow, RAL 1021

### BEHAVIOR UNDER FIRE CONDITIONS

EN 60332-1-2 ; EN 60332-3-24 ; EN 50399 ; EN 50575  
EN 61034 ; EN 50267 ; IEC 60754-2 ; IEC 61034  
EN 13501-6 class Dca-s1 d2 a1

### CHEMICAL PROPERTIES

RoHS 2011/65/EU ; IEC 60811-2-1 (IRM 902, 4h at 70°C)  
UV-resistant

### ELECTRICAL CHARACTERISTICS

loop resistance max.	max. 150 Ω / km
Insulation resistance min.	min. 5 GΩ x km at +20°C
Operating capacity	nom. 45 nF / km
Impedance	100 Ω ± 5 Ω
Test voltage	700 V / AC
Nominal voltage U <sub>0</sub> /U	125 V
NVP	ca. 0,79 c
Signal delay	max. 425 ns/100m
Delay skew	< 8 ns/100m
Coupling attenuation	> 85 dB, Type 1
Coupling resistance	< 5 mΩ/m at 10MHz, Grade 1
Separation class	D

### THERMAL & MECHANICAL PROPERTIES

Temperature range stationary	-20°C to +60°C
Temperature range during inst.	0°C to +50°C
max. bending radius installed	5 x outer diameter
max. bending radius moved	10 x outer diameter
Maximum traction	120N
Fire load	0,175kWh/m

Dimension	Diameter appr.mm	Cable weight appr.kg/km	Copper index kg/km	Article number
AWG23/1	8.1	75	34	



**Transmission characteristics**

The stated performance data are characteristic measurements.

<b>f</b> (MHz)	<b>Attenuation</b> (dB/100m)	<b>NEXT</b> (dB)	<b>ACR</b> (dB/100m)	<b>EL-FEXT</b> (dB/100m)	<b>RL</b> (dB)
	<b>NOM</b>	<b>NOM</b>	<b>NOM</b>	<b>NOM</b>	<b>NOM</b>
1	1,7	105	103	95	25
4	3,2	105	102	93	28
10	5,2	105	100	92	30
16	6,5	105	98	91	30
20	7,3	105	98	90	30
31,25	9,4	105	96	86	30
62,5	13,6	103	89	82	30
100	17	100	83	77	30
155	22,2	98	76	73	28
200	24,3	95	71	70	26
300	30,2	93	73	67	25
400	35,2	90	55	64	24
500	39,1	87	48	62	23
600	43,5	85	41	60	23
900	55,2	81	26	53	21
1000	58,1	80	22	50	20

