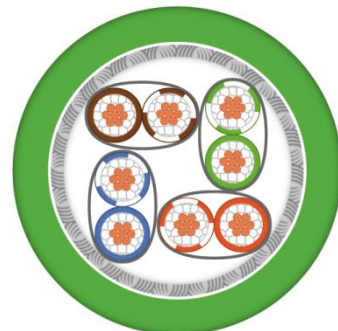


2170934	DATA SHEET	
valid from: 27.10.2020	ETHERLINE® Cat. 7 FLEX 4x2x26/7 AWG	

Application

Field of use:	Connecting cable for generic cabling systems acc. to ISO/IEC 11801 and EN 50173
Performance:	Bandwidth up to 600 MHz acc. to IEC 61156-6 Category 7 and EN 50288-4-2
Characteristics:	halogen free, flame retardant, oil resistant, UV resistant and largely resistant to acids, alkalis and certain oils
Applications:	EtherCAT, EtherNet/IP, Power over Ethernet (IEEE 802.3af) and many others



Design

Certification	RU AWM Style 11117 and 21576 80 °C, 1000 V acc. To UL 758 cRU AWM I/II A/B acc. to CSA C22.2 No.210
Conductor	stranded bare copper 26/19 AWG
Insulation	foamed PE core Ø: ca. 1,00 mm
Core identification code	pair 1: white-blue/blue; pair 2: white-orange/orange; pair 3: white-green/green; pair 4: white-brown/brown
Stranding	cores twisted to pairs, pairs individually shielded with plastic laminated aluminium foil pairs stranded together
Screen	braid of tinned copper wire (coverage ca. 70 %)
Outer sheath	PUR green, similar to RAL 6018 outer Ø: ca. 6.4 mm

Electrical properties at 20°C

Loop resistance	max. 29.0 Ω/100 m
Insulation resistance	min. 5 GΩxkm
Mutual capacitance	nom. 46 nF/km
Characteristic impedance	nom. 100 Ω acc. to IEC 61156-6
Velocity of propagation	0.78c
Signal propagation time	≤ 480 ns/100 m
Delay skew	≤ 25 ns/100 m (at 100 MHz)
Operating voltage (max.)	EN: 125 V (not for power purposes)
Rated voltage	UL: 1000 V
Test voltage	core/core: 3000 V core/screen: 3000 V

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Electrical transmission properties at 20°C

The transmission characteristics meet the requirements of the standards EN 50288-4-2 and IEC 61156-6 for category 7. The normative requirements for the transmission properties are shown in the following table:

f [MHz]		4	10	20	62,5	100	200	250	500	600
(max.) Attenuation	[dB/100 m]	5,5	8,5	21,1	21,7	27,8	40,1	45,3	66,2	73,3
(min.) TCL	[dB]	34	30	27	22	20	17	16	13	12,2
(min.) EL TCTL	[dB/100 m]	23	15	9	—	—	—	—	—	—
(min.) NEXT	[dB]	80	80	80	75,5	72,4	67,9	66,5	61,9	60,8
(min.) PS EL FEXT	[dB/100 m]	77	71	65	55,1	51	45	43	37	35,4
(min.) ACR-F/EL FEXT	[dB/100 m]	80	74	68	58,1	54	48	46	40	38,4
(min.) Return Loss	[dB]	23	25	25	21,5	20,1	18	17,3	17,3	17,3

Mechanical and thermal properties

Minimum bending radius	fixed: 4x cable $\varnothing$ occasional flexing: 10x cable $\varnothing$
Temperature range	fixed: -50 °C up to +80 °C occasional flexing: -40 °C up to +80 °C UL: 80 °C
Flammability	flame retardant acc. to IEC 60332-1-2 resp. EN 60332-1-2 HFT acc. to UL 1581 §1090
Halogen free	acc. to VDE 0472-815
UV resistance	acc. to ISO 4892-2, method A
Oil resistance	acc. to EN 50363-10-2
General requirements	This cable is conform to EU-Directive 2014/35/EU (Low Voltage Directive) and to EU-Directive 2011/65/EU (RoHS, Restriction of the use of certain hazardous substances).
Environmental information	These cables meet the substance-specific requirements of the EU Directive 2011/65/EU (RoHS).

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