



Low Voltage Computer Cable

D-200 Series are multi-pair cables of 110-ohm twisted pairs, group shielded

• UL AWM Style 2835 60°C, 30 volt

Meets E.I.A. Standards RS-422, RS-423, RS-485

THE D-200 SERIES CABLE ARE MULTIPLE-PAIR FLEXIBLE CABLES DESIGNED FOR TRANSMISSION OF DIGITAL PULSE SIGNALS.

DESIGN FEATURES OF THE D-200 SERIES DIGITAL DATA CABLE

Unlike conventional flexible cable construction, the primary features offered by the D-200 series data cable are the high and accurately controlled characteristic impedance of every pair, regardless of its position in the cable and special geometry chosen to reduce crosstalk. **ADVANTAGES**

1. Less Crosstalk and noise from mismatches due to consistent impedance along the cable.

2. Special geometry and pair construction provide exceptionally uniform capacitance between pair wires, reducing crosstalk.

STANDARD DATA CABLE CONSTRUCTIONS

					CABLE DIAMETER		WEIGHT	
BLACK JACKET	GREY JACKET	NO. OF PAIRS	COND.AWG.	DELAY NS/FT	Inches	ММ	Lbs per 1000 ft.	Kg/Km
D-200-4	D-200-4G	4	24	1.61	.315"	8.00	41.	61.0
D-200-7	D-200-7G	7	24	1.61	.410"	10.41	73.	109.0
D-200-12	D-200-12G	12	24	1.61	.455"	11.56	96.	143.0
D-200-15	D-200-15G	15	24	1.61	.510"	12.95	120.	179.0
D-200-20	D-200-20G	20	24	1.61	.635"	16.13	160.	238.0
D-200-24	D-200-24G	24	24	1.61	.660"	16.76	180.	268.0
D-200-27	D-200-27G	27	24	1.61	.690"	17.53	210.	312.0
D-200-30	D-200-30G	30	24	1.61	.710"	18.03	230.	342.0
D-200-33	D-200-33G	33	24	1.61	.750"	19.05	250.	372.
D-200-42	D-200-42G	42	24	1.61	.840"	21.34	280.	417.0
D-200-50	D-200-50G	50	24	1.61	.910"	23.10	320.	476.0

TECHNICAL DATA

Characteristic	Balanced**	Single-ended∆					
Characteristic Impedance	110. ohms ±5%	78. ohms ± 4%					
Capacitance	14. pf/ft (46. PF/MTR)	21. pf/ft (68.9 PF/MTR)					
Signal Delay	1.61 ns/ft (5.28 NS/MTR)	1.61 ns/ft (5.28 NS/MTR)					
DC Resistance/100 ft.	5.6 ohms loop	2.8 ohms					
Insulation Breakdown	6. KV min. DC	6. KV min DC					
Insulation Resistance	>1000. megohms/M'	>1000. megohms/M'					
Temperature Range	-20°C up to +80°C (60°C for U.L.)						
Min. Bend Radius	6 x cable diameter						

The Photos below (for a 1.25 megabit clock rate) show typical waveforms.



OUTPUT PULSE at 500 FT.



Vertical: 2 volts/cm

Pulse transmission loss in data cables causes a moderate amplitude loss, with definite rounding of the leading and trailing edges. We recommend the use of differential (balanced) pair drivers and differential-input pair receivers for lowest crosstalk and best pulse shape. Where the system uses differential (balanced) drive and receive, all D-200 pairs exhibit 110-ohm characteristic impedance. Where the system uses single ended (unbalanced) drive and receive, all D-200 pairs exhibit 78-ohm impedance. Since these line receivers cannot discriminate between noise and the desired signal, crosstalk may limit the cable length over which transmission is reliable. Although the use of balanced drive and differential line reception will avoid most noise problems, there can be installations where the expected external noise is unknown but assumed to be very great. Here the use of data cables having individually-shielded pairs may be considered as conservative engineering practice. The assurance of a lower received noise may justify the increased size and cost.

The D-210 series cables (using individual shields over pairs) are recommended for high noise or long run application. See the following page.