# **Detailed Specifications & Technical Data**

**ENGLISH MEASUREMENT VERSION** 



1538A Multi-Conductor - IBM RISC System/6000



# **Description:**

28 AWG stranded (7x36) bare copper conductors, non-plenum, patented step polyolefin insulation, twisted pairs, overall Beldfoil® shielded + TC braid shield (65% coverage), TC drain wire, PVC jacket (see RISC color code chart below).

# **Physical Characteristics (Overall)**

#### Conductor

#### AWG:

# Conductors	# Pairs	AWG	Stranding	Conductor Material
6	3	28	7x36	BC - Bare Copper

#### Insulation

#### **Insulation Material:**

Layer #	Insulation Material
1	Solid PP - Solid Polypropylene
2	Solid PE - Solid Polyethylene

#### **Outer Shield**

#### **Outer Shield Material:**

Layer #	Outer Shield Trade Name	Туре	Outer Shield Material	Coverage (%)
1	Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100
2		Braid	TC - Tinned Copper	65

#### **Outer Shield Drain Wire AWG:**

AWG	Stranding	<b>Drain Wire Conductor Material</b>
28	7x36	TC - Tinned Copper

## **Outer Jacket**

#### **Outer Jacket Material:**

Outer Jacket Material
PVC - Polyvinyl Chloride

### **Overall Cabling**

Overall Nominal Diameter: 0.225 in.

### Pair

#### **Pair Color Code Chart:**

Number	Color
1	White over Blue & Blue over White
2	White over Orange & Orange over White
3	White over Green & Green over White

# **Mechanical Characteristics (Overall)**

Non-UL Temperature Rating:	-30°C To +75°C
Bulk Cable Weight:	24 lbs/1000 ft.
Min. Bend Radius (Install)/Minor Axis:	2.250 in.

# **Applicable Specifications and Agency Compliance (Overall)**

#### **Applicable Standards & Environmental Programs**

NEC/(UL) Specification: CL2

# **Detailed Specifications & Technical Data**





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EU Directive 2000/53/EC (ELV):	Yes
EU Directive 2002/95/EC (RoHS):	Yes
EU RoHS Compliance Date (mm/dd/yyyy):	01/01/2004
EU Directive 2002/96/EC (WEEE):	Yes
EU Directive 2003/11/EC (BFR):	Yes
CA Prop 65 (CJ for Wire & Cable):	Yes
MII Order #39 (China RoHS):	Yes
Other Specification:	RJ-45 compatible
Customer Part Number Reference Specification:	IBM P/N: N Cable
me Test	

Flame Test

UL Flame Test: UL1685 UL Loading

Plenum/Non-Plenum

Plenum (Y/N): No

# **Electrical Characteristics (Overall)**

Nom. Characteristic Impedance:

Impedance (Ohm) 120

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)
12

Nom. Capacitance Cond. to Other Conductor & Shield:

Capacitance (pF/ft) 21.5

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft) 63

**Nominal Outer Shield DC Resistance:** 

DCR @ 20°C (Ohm/1000 ft) 5.5

Nom. Attenuation:

Freq. (MHz)	Attenuation (dB/1000 ft.)
1	8
4	17
10	26
16	32

Max. Operating Voltage - UL:

Voltage 150 V RMS

Max. Recommended Current:

Current 0.9 Amps per conductor @ 25°C

## **Electrical Characteristics-Premise (Overall)**

# **Premise**

**Minimum NEXT:** 

Freq. (MHz)	NEXT (dB)
1	60
4	50
10	45
16	40

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# Notes (Overall)

**Notes:** US Patent # 5, 220, 130. Single conductors are dually insulated. The outer layer of insulation must be stripped off before attaching modular connectors.

Notes (Cont'd.):

Use a stripping tool such as Cooper Tools Xcelite Model 103-S or equivalent with a mechanical stop to avoid nicking the inner insulation.

# **Put Ups and Colors:**

Item #	Putup	Ship Weight	Color	Notes	Item Desc
1538A 008U1000	1,000 FT	24.000 LB	GRAY		3 PR #28 PP/PE SH FR PVC
1538A 0081000	1,000 FT	25.000 LB	GRAY	С	3 PR #28 PP/PE SH FR PVC

#### Notes:

C = CRATE REEL PUT-UP.

# IBM RISC System/6000

Description P	Part	UL NEC/ C(UL) CEC Type	No. of Pairs/ Cond.	Standard Lengths		Standard Unit Wt.		Nominal OD		AWG (stranding)	Shielding	Nom.	Nominal Capacitance			
Description	No.			Ft.	m	Lbs.	kg	Inch	mm	Material Nom. DCR	Material Nam DCP	Imped. $(\Omega)$	pF/Ft.	* pF/m	pF/Ft.	pF/m

28 AWG Stranded (7x36) Bare Copper Conductors • Twisted Pairs • Overall Beldfoil® Shielded + TC Braid Shield (65% Coverage) • TC Drain Wire

20 AWG Strai	ided (7x30)	Dale Cup	pei c	Onductor	S • I WISLE	u raiis	o Ve	iali be	iuloli Si	nielueu + 10	Diala Silleia	1 (05/6	COVEIA	ige) • i	O Diali	IVVIIE
Non-Plenun	ı • Paten	ted Step	Po	lyolefin	Insulat	ion •	Gray	PVC	Jacke	t (See RISC	Color Cod	e Char	t belov	v)		
IBM Part No. N Cable	1538A	NEC: CL2	3	U-1000 1000	U-304.8 304.8	24.0 25.0	10.9 11.4	.225	5.72	28 (7x36) Bare Copper 63.0 $\Omega$ /M' 207.0 $\Omega$ /km	Overall Beldfoil + 65% TC Braid 5.5Ω/M' 18.0Ω/km	120	12.0	39.4	21.5	70.5
RJ-45 compatible																
IBM Part No. XX, YY Cable	1540A	NEC: CL2	7/c	U-1000 1000	U-304.8 304.8	21.0 21.0	9.5 9.5	.190	4.83	28 (7x36) Bare Copper 63.0Ω/M' 207.0Ω/km	Overall Beldfoil + 65% TC Braid 7.2Ω/M' 23.6Ω/km	_	12.5	41.0	23.0	75.5

RJ-45 compatible

DC = DC Resistance • TC = Tinned Copper

# Color Codes: IBM RISC System/6000

Cond.	Color
1st	White over Blue
2nd	White over Orange
3rd	White over Green
4th	White over Brown
5th	White over Gray
6th	White over Red
7th	White over Yellow

Pair No.	Color Combination
1	White over Blue & Blue over White
2	White over Orange & Orange over White
3	White over Green & Green over White



<sup>\*</sup> Capacitance between conductors
\*\*Capacitance between one conductor and other conductors connected to shield