Detailed Specifications & Technical Data

ENGLISH MEASUREMENT VERSION

9688 Multi-Conductor - Type 1A

For more Information
please call

1-800-Belden1

General Description:

IBM Type 1A, 22 AWG solid BC conductors, non-plenum, flame-retardant foam polyethylene insulation, each pair individually Beldfoil® shield (65% coverage), rip cord, PVC jacket.

Usage (Overall)

Suitable Applications:	Token Ring 4 & 16 Mbps, FDDI over Copper, and video

Physical Characteristics (Overall)

Conductor

AWG:

# Pairs	AWG	Stranding	Conductor Material
2	22	Solid	BC - Bare Copper

Total Number of Conductors:	4

Insulation

Insulation Material:

Insulation Material
FRFPE - Flame Retardant Foam Polyethylene

Insulation Resistance:	> 16000 Megaohms

Inner Shield

Inner Shield Material:

Inner Shield Trade Name	Type	Inner Shield Material	Coverage (%)
Beldfoil®	Tape	Aluminum Foil-Polyester Tape	100

Outer Shield

Outer Shield Material:

Type	Outer Shield Material	Coverage (%)
Braid	TC - Tinned Copper	65

Outer Jacket

Outer Jacket Material:

Outer Jacket Material
PVC - Polyvinyl Chloride

Outer Jacket Ripcord:	Yes

Overall Cable

Overall Nominal Diameter:	0.296 x 0.431 in.

Pair

Pair Color Code Chart:

Number	Color
1	Black & Orange
2	Red & Green

Mechanical Characteristics (Overall)

Operating Temperature Range:	-40°C To +75°C
Bulk Cable Weight:	48 lbs/1000 ft.
Max. Recommended Pulling Tension:	83 lbs.
Min. Bend Radius/Minor Axis:	4.500 in.
Min. Bend/Installation:	4.500 in.

Applicable Specifications and Agency Compliance (Overall)

Applicable Standards & Environmental Programs

NEC/(UL) Specification:	CMG, MPG
CEC/C(UL) Specification:	CMG

EU Directive 2011/65/EU (ROHS II):	Yes
IEEE Specification:	IEEE802.5 Token Ring
EU CE Mark:	Yes
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:	Verified IBM Type 1A
Customer Part Number Reference Specification:	IBM P/N: 4716748, 33G2772

Flame Test

UL Flame Test:	UL1685 FT4 Loading
CSA Flame Test:	FT4

Plenum/Non-Plenum

Plenum (Y/N):	No
Plenum Number:	82688

Surface Printing (Overall)

Electrical Characteristics (Overall)

Nom. Characteristic Impedance:

Impedance (Ohm)
150

Nom. Capacitance Conductor to Conductor:

Capacitance (pF/ft)
8.5

Maximum Capacitance Unbalance (pF/100 m):	100

Nominal Velocity of Propagation:

VP (%)
78

Nom. Conductor DC Resistance:

DCR @ 20°C (Ohm/1000 ft)
16.7

Max. Attenuation:

Freq. (MHz)	Attenuation (dB/100 m)
4	2.2
16	4.4
31.25	6.9
62.5	9.8
100	12.3
200	17.4
300	21.4

Max. Operating Voltage - UL:

Voltage
300 V RMS

Max. Recommended Current:

Current
2.3 Amps per conductor @ 25°C

Common Mode Attenuation:

Freq. (MHz)	Attenuation (dB/100 m)
62.5	10.6
100	13.4
200	19.0
300	23.3
400	26.9
550	31.5
600	32.9

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Electrical Characteristics-Premise (Overall)

Premise

Minimum NEXT:

Freq. (MHz)	NEXT (dB)
4	58.0
16	50.4
31.25	46.1
62.5	41.5
100	38.5
200	34.0
300	31.3

Notes (Overall)

Notes: IBM qualified Type 1A media cable for use in IBM cabling system. For non-suffix "A" type IBM product, see 1634A

Put Ups and Colors:

Item #	Putup	Ship Weight	Color	Notes	Item Desc
9688 0101000	1,000 FT	50.000 LB	BLACK	C Z	2PR#22FRFPE FRPE BRD PVC
9688 0102000	2,000 FT	100.000 LB	BLACK	C Z	2PR#22FRFPE FRPE BRD PVC
9688 0103600	3,600 FT	190.800 LB	BLACK	C Z	2PR#22FRFPE FRPE BRD PVC
9688 010500	500 FT	26.500 LB	BLACK	C Z	2PR#22FRFPE FRPE BRD PVC

Notes:
C = CRATE REEL PUT-UP.
Z = FINAL PUT-UP LENGTH MAY VARY (+ OR -) 10% FOR SPOOLS OR REELS AND(+ OR -) 5% FOR UNREEL CARTONS FROM LENGTH SHOWN.

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