

## 82688 Multi-Conductor - IBM Type 1A



For more Information  
please call

1-800-Belden1

**General Description:**

IBM Type 1A, 22 AWG solid BC conductors, plenum, foam FEP Teflon® insulation, each pair individually Beldfoil® shielded + overall TC braid shield (65% coverage), rip cord, Flamarrest® 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
FFEP - Foam Fluorinated Ethylene Propylene

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 Trade Name	Outer Jacket Material
Flamarrest®	LS PVC - Low Smoke Polyvinyl Chloride

Outer Jacket Ripcord: Yes

**Overall Cable**

Overall Nominal Diameter: 0.248 x 0.348 in.

**Pair**

Pair Color Code Chart:

Number	Color
1	Black & Orange
2	Red & Green

**Mechanical Characteristics (Overall)**

Operating Temperature Range: 0°C To +75°C

Bulk Cable Weight: 65 lbs/1000 ft.

Max. Recommended Pulling Tension: 83 lbs.

Min. Bend Radius/Minor Axis: 2.500 in.

Min. Bend/Installation: 2.500 in.

**Applicable Specifications and Agency Compliance (Overall)****Applicable Standards & Environmental Programs**

NEC/(UL) Specification: CMP

CEC/C(UL) Specification: CMP

EU Directive 2011/65/EU (ROHS II):	Yes
IEEE Specification:	IEEE802.3 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):	10/01/2005
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: 4716749, 33G8220

**Flame Test**

UL Flame Test:	NFPA 262
CSA Flame Test:	FT6

**Plenum/Non-Plenum**

Plenum (Y/N):	Yes
Non-Plenum Number:	9688

**Surface Printing (Overall)**

Surface Printing:	BELDEN 82688 CMP 75C 2PR22 SHIELDED (UL) E108998 C(UL0----ETL VERIFIED TO IBM-A SPECIFICATION 33G8220 AND IBM SPECIFICATION 4716749
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**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
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**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

**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 systems.**Put Ups and Colors:**

Item #	Putup	Ship Weight	Color	Notes	Item Desc
82688 0101000	1,000 FT	47.000 LB	BLACK	C Z	2 PR #22 FFEP SH FRPVC

**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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