

# 2 Hour Fire-Rated 2 Pair Communication Cable

RP6600100M, RP6600300M



## DESCRIPTION

- CI 2 Hour Fire-Rated Shielded Communication Cable
- IE SF/UTP 2x2xAWG22/1 Cable with Circuit Integrity Behavior
- Rated for both horizontal and vertical runs
- Tested to 1,742° F

## APPLICATIONS

- Campus Wiring
- Riser Applications
- Horizontal Backbone Wiring
- Building Control Systems
- Intelligent Fire Alarm Systems
- Circuit integrity structured wiring alarm cable compatible with all known connection systems to EN 50173
- IEEE 802.3: 10Base-T; (100Base-T <75m), IEEE 802.5 16 MB; ISDN; TPDDI; ATM RS485 (10Mbps)

### Code Compliance:

- Approved by LU (London Underground) – Independently tested by BRE Global
- Fire resistant BS5839-1 (clause 26.2e); BS8434-2; BSEN 50200
- Flame retardant BS4066 part 3; Smoke emission BSEN 20568
- LUL-Flammability, smoke and fume 2-01001-002
- LU STANDARD e4156 part 1 – Approval ref TLL-ENG-MATTS-0076 (dated 21/06/2007)
- Generally to ISO/IEC 11801: 95, EN 50173:95; EN 50288-1
- Generally categorized between Cat 3 and Cat 5 (see notes)
- Passes – ISO/IEC 11801 class D (95); TIA Cat 5 Ch (TSB67); ISO/IEC 11801 Class C

### Mechanical Properties:

Bending Radius	Without load: $\geq 32.5$ mm With load: $\geq 65$ mm
Temperature Range	During operation: $-20^{\circ}\text{C}$ to $+60^{\circ}\text{C}$ During installation: $0^{\circ}\text{C}$ to $+50^{\circ}\text{C}$

### Construction:

Raceway/ Conduit Size	Max # of 22 AWG LU 4-Pair
1/2"	1
3/4"	2
1"	4
1-1/4"	7
1-1/2"	7
2"	7

Part #'s	Length	# of pairs	AWG	Outer Diameter	Weight
RP6600100M	100m (328')	2	22	0.32"	26 lbs.
RP6600300M	300M (984')	2	22	0.32"	72 lbs.

# 2 Hour Fire-Rated 4 Pair Communication Cable

RP6600100M4, RP6600300M4



## FIRE / FLAME RESISTANCE

Low Smoke:	BSEN 20568, IEC 61034-2, BSEN 20568
Halogen Free:	IEC 60754-1&2
Flame Retardant:	IEC 60332-1, IEC 60332-3-24, BS4066 part 3, UL 1581 VW 1
Circuit Integrity:	BS5839-1 2002 (clause 26.2e); BS8434-2; BSEN 50200, IEC60331

BS5839 enhanced 3 in 1 test	PASSED
Continued data operation @ 1,742° F	> 2 hours
BS6387 CWZ	PASSED
BS EN 50200 (IEC60331)	>3 hours

## ELECTRICAL PROPERTIES

at 20°C± 5°C

Loop Resistance		≤ 110 Ω/km
Resistance Unbalance		≤ 2%
Insulation Resistance	(500 V) 1 minute	≥ 2000 M Ω *km
Mutual Capacitance	At 800 Hz	Nom. nF/km
Capacitance Unbalance	(Pair/Ground)	≥ 1600 pF/km
Characteristic Impedance	(At 10) MHz	(100 ± 15) Ω
Nominal Velocity of Propagation		ca. 57%
Test Voltage	(DC, 1 min) core/core and core/screen	1000 V
Transfer Impedance	At 10 MHz	5 m Ω/m

## CONSTRUCTION

Conductor:	Bare copper wire, Ø 0.65 mm (AWG 22) 0.332mm <sup>2</sup>
Insulation:	PE/Silicone Rubber <sup>1</sup> , Ø PE 1.0mm and Silicone Rubber 1.7 mm
Twisting:	2 cores to the pair
Cable Lay Up:	2 pairs to the core
Fire Protection Wrapping:	Glass tape
Screen:	Stranded drain wire + Al-PET-foil + copper braid, tinned
Sheath:	Halogen free, flame retardant thermoplastic sheathing compound acc. to EN 50290-2-27, Ø 8.2 mm
Color:	Red RAL 3000

### Notes:

- Silicone rubber insulation especially for circuit integrity cables
- Structured cabling Characteristic Impedance is normally within (100 ± 5) Ω , due to the insulation system this is not achievable all the time
- Structured cabling systems minimum for c=65%, due to the insulation (PE + Sil Rbr) system this is not achieved, that is nvp 0,57
- Cat 5 (95) specification: not the Cat5e of today i.e. gigabit ethernet
- When used in a 100m Channel, 90m + 10m patch cords, the Class D (95) is fit for some purposes: it is advisable to approve a 100m sample and perform a trial on the system before installation