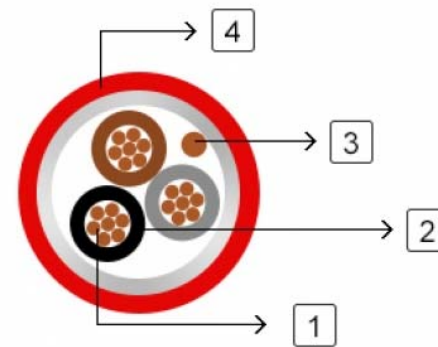


**300/500V SR Insulated & LSZH
Sheathed Fire Alarm Cables**



FR200P 2GSH-U (PH30) (CU/SR/OS/LSZH 300/500V Class 1)
FR200P 2GSH-R (PH30) (CU/SR/OS/LSZH 300/500V Class 2)

Application: The cables are designed, manufactured and tested as data transmission cables for emergency services. These are primarily intended for indoor instrumentation and control cabling, electrically noisy environments and fire alarm systems in office buildings when high frequency signal transmission has to be assured in the event of a fire.

STANDARDS: Basic design to BS 7629-1

FIRE PERFORMANCE

Circuit Integrity	IEC 60331-21; BS 6387 CWZ; DIN VDE 0472-814(FE180); BS 8434-1 (30mins); BS 5839-1 Clause 26 2d; CEI 20-36/2-1; SS229-1; NBN C 30-004 (cat. F3); NF C32-070-2.3(CR1)
Circuit Integrity with mechanical shock	EN 50200(PH30); CEI 20-36/4-0
Circuit Integrity with mechanical shock & water spray	EN 50200 annex E
System circuit integrity	DIN 4102-12, E30 depending on lay system
Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1 ; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Note: Asterisk * denotes superseded standard.

CABLE CONSTRUCTION

1. Conductors: Plain annealed copper wire, solid according to IEC(EN) 60228 class 1, stranded according to IEC(EN) 60228 class 2.
2. Insulation: Fire resistant silicone rubber compound type EI2 as per BS 7655-1.1.

Cabling Elements: Insulated cores are twisted to form pairs with varying lay length to minimize crosstalk. Two-pair cable had four cores laid in quad formation.

Cabling: Pairs are cabled together in concentric layers with suitable non-hygroscopic fillers.

3. Overall screen: Aluminum/polyester tape with tinned copper drain wire.
4. Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.)

COLOUR CODE

Insulation Colour:

Cables up to 6 pairs black-red / black-blue / red-blue / yellow-black /yellow-red / yellow-blue

Cables above 6 pairs all pairs black-red numbered on the wrapping tape.

Sheath Colour: Colour red (other colours on request).

Physical AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -30°C – +90°C

Temperature range during installation (mobile state): -20°C – +50°C

Minimum bending radius: 7.5 x Overall Diameter

CONSTRUCTION PARAMETERS

Cable Code	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
mm2	mm	mm	mm	kg/km
1 Pairs				
1x2x1 FR200P 2GSH-R (PH30)	0.6	0.9	7.4	77
1x2x1.5 FR200P 2GSH-R (PH30)	0.7	0.9	8,7	100

2 Pairs				
2x2x1 FR200P 2GSH-R (PH30)	0.6	1.0	10.6	130
2x2x1.5 FR200P 2GSH-R (PH30)	0.7	1.0	10.2	188
3 Pairs				
3x2x1 FR200P 2GSH-R (PH30)	0.6	1.1	11.2	196
3x2x1.5 FR200P 2GSH-R (PH30)	0.7	1.1	12.9	223
5 Pairs				
5x2x1 FR200P 2GSH-R (PH30)	0.6	1.2	13.7	245
5x2x1.5 FR200P 2GSH-R (PH30)	0.7	1.3	16.7	346
6 Pairs				
6x2x1 FR200P 2GSH-R (PH30)	0.6	1.2	14.8	300
6x2x1.5 FR200P 2GSH-R (PH30)	0.7	1.3	17.5	426
10 Pairs				
10x2x1 FR200P 2GSH-R (PH30)	0.6	1.4	18.9	378
10x2x1.5 FR200P 2GSH-R (PH30)	0.7	1.5	23.4	541
15 Pairs				
15x2x1 FR200P 2GSH-R (PH30)	0.6	1.5	23.2	567
15x2x1.5 FR200P 2GSH-R (PH30)	0.7	1.6	28.9	892
20 Pairs				
20x2x1 FR200P 2GSH-R (PH30)	0.6	1.6	26.2	831
20x2x1.5 FR200P 2GSH-R (PH30)	0.7	1.8	32.5	1182