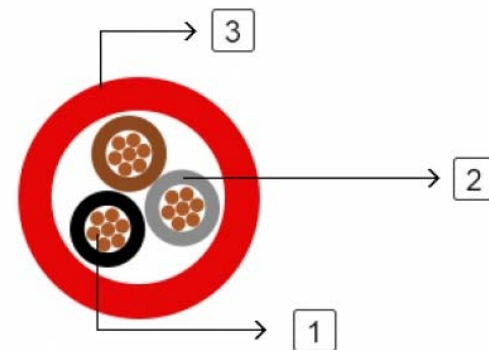


**450/750V SR Insulated control cables (2-5
cores)**



FR200P 07SZ1-R (PH60) (CU/SR/LSZH 450/750V Class 2)

Application: The cables are designed, manufactured and tested for general application in power supply and signal wiring, for emergency circuit and fire circuit control.

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(PH60); 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Note: Asterisk * denotes superseded standard.

VOLTAGE RATING

450/750 V

CABLE CONSTRUCTION

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

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

3. 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:

Without earth conductor

2 cores blue - brown

3 cores brown - black - grey

4 cores blue - brown - black - grey

5 cores blue - brown - black - grey - black

With earth conductor

3 cores yellow/green - blue - brown

4 cores yellow/green - brown - black - grey

5 cores yellow/green - blue - brown - black - grey

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

Electrical PROPERTIES

Dielectric test: 2500 V r.m.s. x 5' (core/core)

Insulation resistance ≥300 MΩ x km (at 20°C)

Short circuit temperature

350°C

CONSTRUCTION PARAMETERS

Cable Code	No. of Core X Cross Section	Nominal Thickness	Insulation	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	mm ²	mm		mm	mm	kg/km
2 core,						
FFX200 (PH60)	07SZ1-R 2x1.5	0.8		1.0	7,8	96
FFX200 (PH60)	07SZ1-R 2x2.5	0.9		1.1	9,2	138
FFX200 (PH60)	07SZ1-R 2x4.0	0.9		1.2	10,5	189
3 core						
FFX200 (PH60)	07SZ1-R 3x1.5	0.8		1.0	8,3	116
FFX200 (PH60)	07SZ1-R 3x2.5	0.9		1.1	9,8	169
FFX200 (PH60)	07SZ1-R 3x4.0	0.9		1.2	11,6	246
4 core						
FFX200 (PH60)	07SZ1-R 4x1.5	0.8		1.1	9,3	147
FFX200 (PH60)	07SZ1-R 4x2.5	0.9		1.2	11,3	222
FFX200 (PH60)	07SZ1-R 4x4.0	0.9		1.3	12,5	299
5 core						
FFX200 (PH60)	07SZ1-R 5x1.5	0.8		1.1	10,5	180
FFX200 (PH60)	07SZ1-R 5x2.5	0.9		1.2	12,3	259
FFX200 (PH60)	07SZ1-R 5x4.0	0.9		1.3	14,0	359

Electrical PROPERTIES

Conductor Operating Temperature : 90°C

Ambient Temperature : 30°C

Current-Carrying Capacities (Amp)

Nominal Cross Section Area	Reference Method 4 (enclosed in an conduit insulated wall etc)	Reference Method 3 (enclosed in conduit on a wall or ceiling, or in trunking)		Reference Method 1 (clipped direct)		Reference Method 11 (on a perforated cable tray), or Reference Method	
	one 3-core cable or one 4-core cable 3-phase a.c.	one 2-core cable single phase a.c. or d.c.	one 3-core cable or one 4-core cable 3-phase a.c.	one 2-core cable singlephase a.c. or d.c.	one 3-core cable or one 4-core cable 3-phase a.c.	one 2-core cable singlephase a.c. or d.c.	one 3-core cable or one 4-core cable 3-phase a.c.
1	2	3	4	5	6	7	8
mm ²	A	A	A	A	A	A	A
1.5	16.5	22	19.5	24	22	26	23
2.5	22	30	26	33	30	36	32
4	30	40	35	45	40	49	42

Voltage Drop (Per Amp Per Meter)

Nominal Cross Section Area	2-core cable d.c.	2-core cable single- phase a.c	3-core or 4-core cable 3-phase a.c.
1	2	3	4
mm ²	mV/A/m	mV/A/m	mV/A/m
1.5	31	31	27
2.5	19	19	16
4	12	12	10