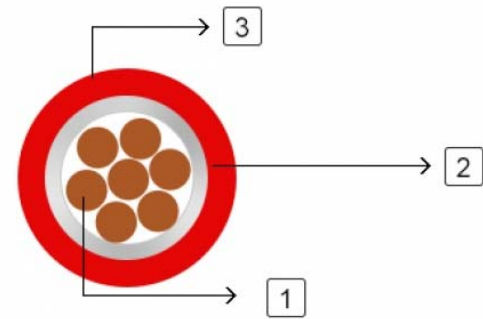


300/500V Mica+XLPE Insulated, LSZH Sheathed Power Cables (Single Core)



FR200P 05M2XH-R (CU/MGT+XLPE/LSZH 300/500V Class 2)

Application:	These cables are designed for areas where the integrity of the electrical circuit is critical in maintaining power supply. Applications can be found in emergency lightings, control and power circuits, power stations, fire alarm systems, underground tunnels, lifts, escalators, and high-rise buildings.
STANDARDS:	Basic design to IEC 60502-1

FIRE PERFORMANCE

Circuit Integrity	IEC 60331-21; BS 6387 CWZ; DIN VDE 0472-814(FE180); CEI 20-36/2-1; SS229-1; NBN C 30-004 (cat. F3); NF C32-070-2.3(CR1)
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Note: Asterisk * denotes superseded standard.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

300/500 V

CABLE CONSTRUCTION

- 1 Conductor: Plain annealed copper wire, stranded according to IEC(EN) 60228 class 2.
- 2 Insulation: Mica glass tape covered by extruded cross-linked XLPE compound
- 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.)

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: 8 x Overall Diameter

Electrical PROPERTIES

Dielectric test:	2000 V r.m.s. x 5' (core/core)
Insulation resistance	1000 MΩ x km (at 20°C)
Short circuit temperature	250°C

CONSTRUCTION PARAMETERS

Conductor		FR300 05M2XH-R			
Nominal Cross Section Area	No./ Nominal Diameter of trands	Nominal Insulation Thickness	Nominal Sheath Thickness	Without Earth Conductor	
				Nominal Overall Diameter	Approx. Weight
mm2	No./mm	mm	mm	mm	kg/km
1.5	7/0.53	0.5	0.5	4.4	29
2.5	7/0.67	0.5	0.5	4.9	40
4	7/0.85	0.5	0.5	5.5	55

Electrical PROPERTIES

Conductor Operating Temperature : 90°C

Ambient Temperature : 30°C
Current-Carrying Capacities (Amp)

Conductor crosssection area	Reference Method 4 (enclosed in conduit in thermally insulating wall etc)		Reference Method 3 (enclosed in conduit on a wall or in trunking etc)		Reference Method 1 (clipped direct)		Reference Method 11 (on a perforated cable tray, horizontal or vertical)		Reference Method 12 (free air)		
									Horizontal flat spaced	Vertical flat spaced	Trefoil
	2 cables, single- phase a.c. or d.c.	3 or 4 cables, 3- phase a.c.	2 cables, single-	3 or 4 cables, 3- phase a.c.	2 cables, single- phase a.c. or d.c. flat and touching	3 or 4 cables, 3- phase a.c. flat and touching or trefoil	2 cables, single - phase a.c. or d.c. or flat and touching	3 or 4 cables, 3- phase a.c. flat and touching or trefoil	2 cables, single-phase a.c. or d.c. or 3 cables three phase	2 cables, single- phase a.c. or d.c. or 3 cables three phase	3 cables, trefoil 3- phase phase a.c.
			phase a.c. a.c. or d.c								
1	2	3	4	5	6	7	8	9	10	11	12
mm2	A	A	A	A	A	A	A	A	A	A	A
1.5	18	17	22	19	25	23	-	-	-	-	-
2.5	24	23	30	26	34	31	-	-	-	-	-
4	33	30	40	35	46	41	-	-	-	-	-

Voltage Drop (Per Amp Per Meter)

Nominal Cross Section Area	2 cables d.c.	2 cables, single-phase a.c.		3 or 4 cables, 3-phase a.c.		
		Ref. Methods 3 and 4 (enclosed in conduit etc, in or on a wall)	Ref. Methods 1 and 11 (clipped direct or on trays touching)	Ref. Methods 3 and 4 (enclosed in conduit etc, in or on a wall)	Ref. Methods 1,	Ref. Methods 1 and 11
					11 and 12 (in trefoil)	(Flat and touching)
1	2	3	4	5	6	7
mm2	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m	mV/A/m
1.5	31	31	27	27	27	27
2.5	19	19	16	16	16	16
4	33	12	10	10	10	10