

RE-2X(St)H...CI. FE 180 PH30 (CU/MGT+XLPE/OSCR/LSZH 300/500V Class 2)

RE-2G(St)H...CI. FE 180 PH30 (CU/SR/OSCR/LSZH 300/500V Class 2)

RE-2X(St)HSAWAH...CI. FE 180 PH30 (CU/MGT+XLPE/OSCR/LSZH/SWA/LSZH 300/500V Class 2)

RE-2G(St)HSAWAH...CI. FE 180 PH30 (CU/SR/OSCR/LSZH/SWA/LSZH 300/500V Class 2)



APPLICATION

The 300/500V Mica+XLPE/SR Insulated & Overall Screened Multipair Instrumentation Cables are designed, manufactured and tested as data transmission cables for emergency services. These are used for data and voice transmission when high frequency signal has to be assured also in the event of a fire.

STANDARDS

Basic design to BS 5308/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Note: Asterisk * denotes superseded standard.

VOLTAGE RATING

300/500 V

CABLE CONSTRUCTION

Conductor: Plain annealed copper wire, stranded according to IEC(EN) 60228 class 2.

Insulation: Mica glass tape covered by extruded cross-linked XLPE compound or 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 cables with 8 pairs or more, 4 pairs are assembled to form a bunch, the bunches are then cabled together.

Overall Screen: Aluminum/polyester tape with 0.5mm² screen (7/0.3mm) tinned copper drain wire.

Inner Sheath(optional): Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1

Armouring(optional): Galvanized steel wire armour

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: White with black numberings.

Sheath Colour: Orange (other colours on request).

TYPE CODE

RE- Instrumentation cable H Halogen free & zero halogen

2X XLPE 2G Silicon Rubber

(St) Static shield of aluminium tape SWA Steel Wire Armoured

FE180 Insulation integrity (950°C 180 minutes) CI Circuit integrity

PH 90 Fire Test for 90 mins at 830°C

Physical AND THERMAL PROPERTIES

Temperature range during operation (fixed state): -30°C – +70°C

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

Minimum bending radius: 6 x Overall Diameter (unarmoured cables with silicone rubber insulation)

8 x Overall Diameter (unarmoured cables with XLPE insulation)

10 x Overall Diameter (armoured cables)

Electrical PROPERTIES

DIELECTRIC TEST:	2000 V r.m.s. x 5' (core/core)
INSULATION RESISTANCE	XLPE: ≥1000 MΩ x km (at 20°C) SR: ≥300 MΩ x km (at 20°C)
SHORT CIRCUIT TEMPERATURE	XLPE: 250°C SR: 350°C

CONSTRUCTION PARAMETERS

CONDUCTOR			RE-2X(ST)H.CI. FE		RE-2X(ST)H.SWAH...CI. FE 180 PH30					
			180	PH30						
NO. OF CORE X CROSS SECTION			RE-2G(ST)H.CI. FE		RE-2G(ST)H.SWAH...CI. FE 180 PH30					
			180	PH30						
NO. OF CORE X CROSS SECTION	NO./ NOMINAL DIAMETER OF STRANDS	NOMINAL INSULATION THICKNESS	UNARMOURED		ARMOURED					
			NOMINAL OVERALL DIAMETER	APPROX WEIGHT	DIAMETER UNDER ARMOUR	ARMOUR WIRE DIAMETER	NOMINAL OVERALL DIAMETER	APPROX WEIGHT		

			R			R	R	
MM2	NO./MM	MM	MM	KG/KM	MM	MM	MM	KG/KM
1 Pairs								
1X2x1.0	7/0.43	0.6	8.0	76	8.0	0.90	12.4	281
1X2x1.5	7/0.53	0.7	8.5	94	8.5	0.90	13.1	332
1X2x2.5	7/0.67	0.8	10.5	130	10.5	0.90	15.1	401
2 Pairs								
2X2x1.0	7/0.43	0.6	12.4	120	12.4	0.90	17.4	370
2X2x1.5	7/0.53	0.7	14.0	160	14.0	0.90	18.4	450
2X2x2.5	7/0.67	0.8	16.0	230	16.0	0.90	20.5	550
5 Pairs								
5X2x1.0	7/0.43	0.6	16.5	276	16.5	1.25	22	854
5X2x1.5	7/0.53	0.7	20.5	368	20.5	1.25	26.2	1023
5X2x2.5	7/0.67	0.8	23.0	518	23.0	1.25	28.9	1276
10 Pairs								
10X2x1.0	7/0.43	0.6	20.5	501	20.5	1.25	26.4	1271
10X2x1.5	7/0.53	0.7	26.0	673	26.0	1.60	32.8	1742
10X2x2.5	7/0.67	0.8	29.5	971	29.5	1.60	36.5	2205
20 Pairs								
20X2x1.0	7/0.43	0.6	26.5	917	26.5	1.60	33.3	2197
20X2x1.5	7/0.53	0.7	34.0	1258	34.0	1.60	41.2	2705
20X2x2.5	7/0.67	0.8	38.5	1830	38.5	2.00	46.7	3836

Note : Other conductor sizes & core configurations are available upon request.