RE-2X(St)H...Cl. FE 180 PH30 (CU/MGT+XLPE/OSCR/LSZH 300/500V Class 2)
RE-2G(St)H...Cl. FE 180 PH30 (CU/SR/OSCR/LSZH 300/500V Class 2)
RE-2X(St)HSWAH...Cl. FE 180 PH30 (CU/MGT+XLPE/OSCR/LSZH/SWA/LSZH 300/500V Class 2)
RE-2G(St)HSWAH...Cl. FE 180 PH30 (CU/SR/OSCR/LSZH/SWA/LSZH 300/500V Class 2)

APPLICATION

The Mica+xlPe or sR Insulated & Overall screened Multicore **Fire Resistant** 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Note: Asterisk * denotes superseded standard.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: The cores are cabled together in concentric layers with suitable non-hygroscopic fillers.

Overall Screen: Aluminum/polyester tape with 0.5mm2 screen (7/0.3mm) with 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 – +90°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 180 PH30 RE-2G(ST)H.CI. FE 180 PH30		RE-2X(ST)HSWAH...CI. FE 180 PH30 RE-2G(ST)HSWAH...CI. FE 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
MM2	NO./MM	MM	MM	KG/KM	MM	MM	MM	KG/KM
2 core								

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2x1.0	7/0.43	0.6	8.0	82	8.0	0.90	12.4	288
2x1.5	7/0.53	0.7	8.5	101	8.5	0.90	13.1	342
2x2.5	7/0.67	0.8	10.5	137	10.5	0.90	15.1	419
2x4	7/0.85	0.8	12.5	180	12.5	0.90	17.1	484
3 core								
3x1.0	7/0.43	0.6	8.0	100	8.0	0.90	12.4	324
3x1.5	7/0.53	0.7	9.5	127	9.5	0.90	14.1	383
3x2.5	7/0.67	0.8	12.0	176	12.0	0.90	16.6	466
3x4	7/0.85	0.8	13.5	236	13.5	0.90	18.1	560
4 core								
4x1.0	7/0.43	0.6	9.0	127	9.0	0.90	13.6	383
4x1.5	7/0.53	0.7	10.5	161	10.5	0.90	15.1	445
4x2.5	7/0.67	0.8	13.0	224	13.0	0.90	17.6	548
4x4	7/0.85	0.8	15.0	302	15.0	1.25	20.5	772
7 core								
7x1.0	7/0.43	0.6	11.0	187	11.0	0.9	15.6	485
7x1.5	7/0.53	0.7	12.5	250	12.5	0.90	17.3	597
7x2.5	7/0.67	0.8	15.0	354	15.0	1.25	20.5	862
12 core								
12x1.5	7/0.53	0.7	16.0	402	16.0	1.25	21.7	997
12x2.5	7/0.67	0.8	20.0	585	20.0	1.60	26.4	1421
19 core								
19x1.5	7/0.53	0.7	19.0	597	19.0	1.60	25.6	1465
19x2.5	7/0.67	0.8	24.0	873	24.0	1.60	30.6	1837

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

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