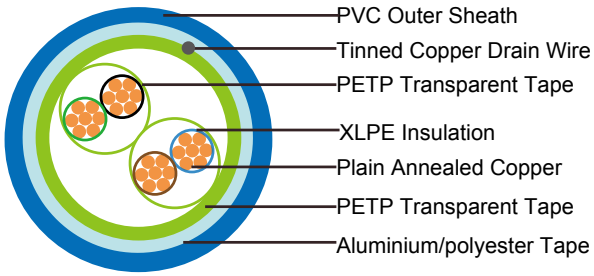
Flame Retardant Overall Screened Instrumentation Cables

(Multipair)RE-2X(St)Y



APPLICATION

The unarmoured XLPE versions are generally used for indoor installation and suitable for wet and damp areas. Generally used within industrial process manufacturing plants for communication, data and voice transmission signals and services.

STANDARDS

Basic design to BS EN 50288-7 (formerly BS 5308)

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	BS EN 60332-1-2

VOLTAGE RATING

300V, 500V

CABLE CONSTRUCTION

Conductor: Plain or metal coated copper wire, solid, stranded or flexible according to IEC 60228 class 1, 2 and 5.

Insulation: Extruded XLPE compound according to EN 50290-2-29. PVC, PE, PP compound can be offered as options.

Pairs: Two insulated conductors uniformly twisted together with a lay not exceeding 100mm (≤1.5mm^2) or 150mm (for 2.5mm^2).

Binder Tape: PETP transparent tape.

Overall Screen: Aluminium/polyester tape is applied over the laid up pairs with metallic side down in contact with tinned copper drain wire, 0.5mm². Copper braid screen or aluminium/polyester tape combined with copper braid screen can be offered as option.

Outer Sheath: Thermoplastic PVC compound according to EN 50290-2-22.

Outer Sheath Option: UV resistance, hydrocarbon resistance, oil resistance, anti-rodent and anti-termite properties can be offered as option. Compliance to fire performance standard (IEC 60332-1, IEC 60332-3, UL 1581, UL 1666 etc) depends on the oxygen index of the PVC compound and the overall cable design.

LSPVC can also be provided upon request.

COLOUR CODE

Insulation Colour: Colours and/or additional ring markings and/or symbols achieved by the use of coloured insulation or by a coloured surface using extrusion, printing or painting.
Outer Sheath: Black. Other colours can be offered upon request.

PHYSICAL AND THERMAL PROPERTIES

Temperature range during operation: -30°C - +90°C
Temperature range fixed installation: -5°C - +50°C
Maximum short circuit temperature (5 Seconds): 250°C
Minimum bending radius: 7.5 x Overall Diameter

ELECTRICAL PROPERTIES

300V

Conductor Area Size		mm^2	0.5	0.75	1.0	1.5
Insulation Thickness (Nominal)		mm	0.4	0.4	0.4	0.5
Insulation Thickness (Minimum)		mm	0.26	0.26	0.26	0.35
Conductor Resistance (20°C)		ohm/km	36.7	25.0	18.5	12.3
Minimum Insulation Resistance (20°C)		Mohm/km	1000			
Maximum Mutual Capacitance		nf/km	250			
Capacitance Unbalance		pf/500m	500			
Maximum L/R (Ratio)		μH/Ω	25	25	25	40
Operating Voltage		V	300			
Dielectric Strength for 1	AC	V	≥1000			
Minute	DC	V	≥2000			

500V

Conductor Area Size	mm^2	0.5	0.75	1.0	1.5	2.5
Insulation Thickness (Nominal)	mm	0.6	0.6	0.6	0.6	0.7
Insulation Thickness (Minimum)	mm	0.44	0.44	0.44	0.44	0.53
Conductor Resistance (20°C)	ohm/km	36.7	25.0	18.5	12.3	7.4
Minimum Insulation Resistance (20°C)	Mohm/km	1000				
Maximum Mutual Capacitance	nf/km	250				
Capacitance Unbalance	pf/500m	500				
Maximum L/R (Ratio)	μH/Ω	25	25	25	40	60
Operating Voltage	V	500				

Dielectric Strength for 1	AC	V	≥2000
Minute	DC	V	≥3000

CONSTRUCTION PARAMETERS

300V

Conductor		RE-2X(St)Y			
No. of Pairs X Cross Section	Class of Conductor	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Approx. Overall Diameter	Approx. Weight
mm^2		mm	mm	mm	kg/km
$0.5mm^2$					
1x2x0.5	2	0.4	0.9	5.5	40
2x2x0.5	2	0.4	0.9	7.7	67
3x2x0.5	2	0.4	1.0	8.3	89
4x2x0.5	2	0.4	1.0	9.0	109
5x2x0.5	2	0.4	1.1	10.1	134
8x2x0.5	2	0.4	1.1	11.8	190
10x2x0.5	2	0.4	1.1	13.7	233
12x2x0.5	2	0.4	1.2	14.4	274
16x2x0.5	2	0.4	1.2	15.9	346
20x2x0.5	2	0.4	1.3	17.4	425
24x2x0.5	2	0.4	1.3	19.8	504
$0.75mm^2$					
1x2x0.75	2	0.4	0.9	5.8	47
2x2x0.75	2	0.4	1.0	8.5	85
3x2x0.75	2	0.4	1.0	8.9	109
4x2x0.75	2	0.4	1.1	10.0	139
5x2x0.75	2	0.4	1.1	10.9	166
8x2x0.75	2	0.4	1.1	12.7	240
10x2x0.75	2	0.4	1.2	15.1	302
12x2x0.75	2	0.4	1.2	15.6	347
16x2x0.75	2	0.4	1.3	17.5	451
20x2x0.75	2	0.4	1.4	19.1	554
24x2x0.75	2	0.4	1.4	21.8	657
$1.0mm^2$					
1x2x1.0	2	0.4	0.9	6.2	57
2x2x1.0	2	0.4	1.0	9.2	104
3x2x1.0	2	0.4	1.1	9.9	140
4x2x1.0	2	0.4	1.1	10.8	174
5x2x1.0	2	0.4	1.1	11.8	208
8x2x1.0	2	0.4	1.2	14.1	313
10x2x1.0	2	0.4	1.2	16.5	386
12x2x1.0	2	0.4	1.3	17.2	454
16x2x1.0	2	0.4	1.4	19.3	590
20x2x1.0	2	0.4	1.4	20.9	715
24x2x1.0	2	0.4	1.5	24.1	863
$1.5mm^2$					

Conductor		RE-2X(St)Y			
No. of Pairs X Cross Section	Class of Conductor	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Approx. Overall Diameter	Approx. Weight
mm^2		mm	mm	mm	kg/km
1x2x1.5	2	0.5	0.9	7.2	74
2x2x1.5	2	0.5	1.1	10.9	144
3x2x1.5	2	0.5	1.1	11.5	190
4x2x1.5	2	0.5	1.2	12.9	244
5x2x1.5	2	0.5	1.2	14.1	294
8x2x1.5	2	0.5	1.3	16.8	443
10x2x1.5	2	0.5	1.4	20.0	557
12x2x1.5	2	0.5	1.4	20.6	644
16x2x1.5	2	0.5	1.5	23.2	839
20x2x1.5	2	0.5	1.6	25.3	1032
24x2x1.5	2	0.5	1.7	29.1	1243

500V

Conductor		RE-2X(St)Y			
No. of Pairs X Cross Section	Class of Conductor	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Approx. Overall Diameter	Approx. Weight
mm^2		mm	mm	mm	kg/km
$0.5mm^2$					
1x2x0.5	2	0.6	0.9	6.3	47
2x2x0.5	2	0.6	1.0	9.2	84
3x2x0.5	2	0.6	1.0	9.7	105
4x2x0.5	2	0.6	1.1	10.8	134
5x2x0.5	2	0.6	1.1	11.8	159
8x2x0.5	2	0.6	1.2	14.1	233
10x2x0.5	2	0.6	1.2	16.6	286
12x2x0.5	2	0.6	1.3	17.3	335
16x2x0.5	2	0.6	1.4	19.4	431
20x2x0.5	2	0.6	1.4	21.0	516
24x2x0.5	2	0.6	1.5	24.2	623
$0.75mm^2$					
1x2x0.75	2	0.6	0.9	6.6	54
2x2x0.75	2	0.6	1.0	9.8	99
3x2x0.75	2	0.6	1.1	10.6	131
4x2x0.75	2	0.6	1.1	11.5	161
5x2x0.75	2	0.6	1.2	12.8	198
8x2x0.75	2	0.6	1.2	15.1	285
10x2x0.75	2	0.6	1.3	18.0	360
12x2x0.75	2	0.6	1.3	18.5	412
16x2x0.75	2	0.6	1.4	20.8	532
20x2x0.75	2	0.6	1.5	22.7	652
24x2x0.75	2	0.6	1.6	26.1	787
$1.0mm^2$					
1x2x1.0	2	0.6	0.9	7.0	64

EES CABLE

LIGHT UP THE WORLD

Conductor		RE-2X(St)Y			
No. of Pairs X Cross Section	Class of Conductor	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Approx. Overall Diameter	Approx. Weight
mm^2		mm	mm	mm	kg/km
2x2x1.0	2	0.6	1.0	10.5	118
3x2x1.0	2	0.6	1.1	11.3	159
4x2x1.0	2	0.6	1.2	12.6	204
5x2x1.0	2	0.6	1.2	13.8	243
8x2x1.0	2	0.6	1.2	16.2	354
10x2x1.0	2	0.6	1.3	19.3	447
12x2x1.0	2	0.6	1.4	20.2	524
16x2x1.0	2	0.6	1.5	22.6	679
20x2x1.0	2	0.6	1.5	24.5	821
24x2x1.0	2	0.6	1.6	28.2	990
$1.5mm^2$					
1x2x1.5	2	0.6	0.9	7.6	78
2x2x1.5	2	0.6	1.1	11.6	152
3x2x1.5	2	0.6	1.2	12.5	206
4x2x1.5	2	0.6	1.2	13.6	257
5x2x1.5	2	0.6	1.3	15.2	317
8x2x1.5	2	0.6	1.3	17.9	466
10x2x1.5	2	0.6	1.4	21.3	587
12x2x1.5	2	0.6	1.5	22.2	689
16x2x1.5	2	0.6	1.6	25.0	895
20x2x1.5	2	0.6	1.7	27.2	1100
24x2x1.5	2	0.6	1.8	31.3	1324
$2.5mm^2$					
1x2x2.5	2	0.7	1.0	9.4	113
2x2x2.5	2	0.7	1.2	13.8	221
3x2x2.5	2	0.7	1.2	14.6	294
4x2x2.5	2	0.7	1.3	16.3	379
5x2x2.5	2	0.7	1.4	18.1	468
8x2x2.5	2	0.7	1.4	21.5	696
10x2x2.5	2	0.7	1.6	25.8	887
12x2x2.5	2	0.7	1.6	26.6	1030
16x2x2.5	2	0.7	1.7	29.9	1341
20x2x2.5	2	0.7	1.9	32.8	1668
24x2x2.5	2	0.7	2.0	37.8	2005