



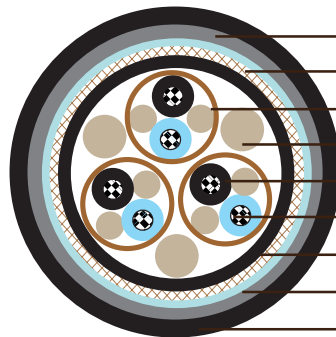
Water Blocked S1 or S1/S5 RFOU(i) 250V

Applications

These cables are partially water blocked, flame retardant, low smoke, halogen free and mud resistant, used for instrumentation, communication, control and alarm systems.

Standards

- IEC 60092-376
- IEC 60092-351
- IEC 60092-359
- IEC 60332-1
- IEC 60332-3-22
- IEC 60754-1,2
- IEC 61034-1,2
- NEK 606:2004
- VG 95218 part 29



- SHF2/SHF MUD Inner Sheath
- Copper Wire Braid
- Copper/Polyester Tape + Drain Wire
- Water Blocking Fillers
- HFEP/Insulation
- Stranded Copper Conductor
- Halogen-free Bedding
- Water Blocking tape
- Polyurethane Outer Sheath

Construction

- **Conductors:** Circular tinned annealed stranded copper wire to IEC 60228 class 2.
- **Insulation:** Halogen free EPR compound.
- **Twinning:** Colour coded cores twisted together.
- **Filler:** Water blocking fillers, if required.
- **Individual Shielding:** Each pairs/triples are screened by copper backed polyester tape in contact with a stranded tinned copper drain wire and wrapped with polyester tape. Pairs/triples are numbered with numbered tape or by numbers printed directly on the insulated conductors.
- **Filler:** Water blocking fillers, if required.
- **Bedding:** Halogen free compound, PETP wrapping tape will be applied over the bedding, if required.
- **Armour:** Tinned copper wire braid, PETP wrapping tape will be applied over the braiding, if required.
- **Water Blocking Elements:** Water blocking tape and strings for providing longitudinal water tightness.
- **Inner Sheath:** Halogen free thermosetting compound, SHF2 (for TYPE S1). Halogen





free MUD resistant thermosetting compound, SHF MUD (for TYPE S1/S5), coloured grey (blue for intrinsically safe).

- **Outer Sheath:** Polyurethane for providing transversal water tightness, PE is optional, but can not meet low smoke standard.

Electrical Characteristics

Nominal Cross Section Area	mm ²	0.75	1.0	1.5	2.5
Nominal Conductor Diameter	mm	1.1	1.3	1.6	2.0
Maximum Resistant@20 °C	Ω/km	26.3	19.3	12.9	8.02
Mutual Capacitance	nF/km	90	100	110	120
Nominal Inductance@1KHz	MH/km	0.686	0.649	0.637	0.598
Maximum L/R@1KHz	μH/Ω	20	25	35	50
Operating Voltage	V	250	250	250	250

Mechanical and Thermal Properties

- **Bending Radius:** 8×OD (during installation); 6×OD (fixed installed)
- **Temperature Range:** -20°C ~ +90°C

Dimensions and Weight

Construction No. of elements×No. of cores in element×Cross section(mm ²)	Nominal Insulation Thickness mm	Nominal Bedding Thickness mm	Nominal Inner Sheath Thickness mm	Nominal Outer Sheath Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
1×2×0.75	0.6	1.1	1.1	1.0	12.9±2	221
2×2×0.75	0.6	1.1	1.3	1.0	15.2±2	341
4×2×0.75	0.6	1.1	1.3	1.0	18.2±2	504
7×2×0.75	0.6	1.1	1.4	1.0	21.0±2	704
8×2×0.75	0.6	1.1	1.4	1.0	22.4±2	793
9×2×0.75	0.6	1.1	1.5	1.0	24.6±2	877
10×2×0.75	0.6	1.1	1.5	1.0	25.5±2	919
12×2×0.75	0.6	1.1	1.5	1.0	26.1±2	1061
14×2×0.75	0.6	1.1	1.6	1.0	27.3±2	1092
15×2×0.75	0.6	1.1	1.6	1.0	28.9±2	1176
16×2×0.75	0.6	1.1	1.6	1.0	29.3±2	1223
18×2×0.75	0.6	1.1	1.7	1.0	30.7±2	1334
19×2×0.75	0.6	1.1	1.7	1.0	31.0±2	1428
20×2×0.75	0.6	1.1	1.7	1.0	32.1±2	1491
21×2×0.75	0.6	1.1	1.8	1.0	33.0±2	1565





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Construction No. of elements×No. of cores in element×Cross section(mm ²)	Nominal Insulation Thickness mm	Nominal Bedding Thickness mm	Nominal Inner Sheath Thickness mm	Nominal Outer Sheath Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
23×2×0.75	0.6	1.1	1.8	1.0	33.5±2	1675
24×2×0.75	0.6	1.2	1.8	1.0	35.4±2	1806
27×2×0.75	0.6	1.2	1.9	1.0	36.0±2	1859
30×2×0.75	0.6	1.2	1.9	1.0	37.1±2	2006
32×2×0.75	0.6	1.2	2.0	1.0	38.1±2	2163
33×2×0.75	0.6	1.2	2.0	1.0	38.9±2	2268
37×2×0.75	0.6	1.2	2.0	1.0	40.0±2	2447
1×3×0.75	0.6	1.1	1.2	1.0	13.3±2	236
2×3×0.75	0.6	1.1	1.3	1.0	18.4±2	515
3×3×0.75	0.6	1.1	1.4	1.0	19.2±2	546
4×3×0.75	0.6	1.1	1.4	1.0	20.5±2	641
5×3×0.75	0.6	1.1	1.5	1.0	21.8±2	756
6×3×0.75	0.6	1.1	1.5	1.0	23.7±2	877
7×3×0.75	0.6	1.1	1.5	1.0	23.7±2	914
8×3×0.75	0.6	1.1	1.6	1.0	25.5±2	998
9×3×0.75	0.6	1.1	1.6	1.0	26.6±2	1118
10×3×0.75	0.6	1.1	1.7	1.0	28.4±2	1150
12×3×0.75	0.6	1.1	1.7	1.0	29.3±2	1339
14×3×0.75	0.6	1.1	1.8	1.0	30.5±2	1386
15×3×0.75	0.6	1.1	1.8	1.0	31.3±2	1465
16×3×0.75	0.6	1.1	1.8	1.0	32.1±2	1538
18×3×0.75	0.6	1.1	1.9	1.0	33.6±2	1680
19×3×0.75	0.6	1.1	1.9	1.0	33.9±2	1738
20×3×0.75	0.6	1.2	2.0	1.0	35.2±2	1911
21×3×0.75	0.6	1.2	2.0	1.0	35.8±2	1985
23×3×0.75	0.6	1.2	2.0	1.0	37.1±2	2153
24×3×0.75	0.6	1.2	2.0	1.0	38.0±2	2331
27×3×0.75	0.6	1.2	2.1	1.0	39.9±2	2452
30×3×0.75	0.6	1.2	2.2	1.0	41.7±2	2683
32×3×0.75	0.6	1.2	2.2	1.0	42.7±2	2825
1×2×1.0	0.6	1.1	1.2	1.0	13.4±2	242
2×2×1.0	0.6	1.1	1.3	1.0	16.5±2	389
3×2×1.0	0.6	1.1	1.3	1.0	18.6±2	541
4×2×1.0	0.6	1.1	1.4	1.0	19.4±2	625
5×2×1.0	0.6	1.1	1.4	1.0	21.1±2	719
6×2×1.0	0.6	1.1	1.5	1.0	22.7±2	830
7×2×1.0	0.6	1.1	1.5	1.0	22.7±2	861
8×2×1.0	0.6	1.1	1.6	1.0	23.6±2	919
9×2×1.0	0.6	1.1	1.6	1.0	25.8±2	1045
10×2×1.0	0.6	1.1	1.6	1.0	26.8±2	1061





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Construction No. of elements×No. of cores in element×Cross section(mm ²)	Nominal Insulation Thickness mm	Nominal Bedding Thickness mm	Nominal Inner Sheath Thickness mm	Nominal Outer Sheath Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
12×2×1.0	0.6	1.1	1.7	1.0	27.6±2	1255
14×2×1.0	0.6	1.1	1.7	1.0	28.7±2	1271
15×2×1.0	0.6	1.1	1.8	1.0	30.5±2	1386
16×2×1.0	0.6	1.1	1.8	1.0	31.0±2	1444
18×2×1.0	0.6	1.1	1.9	1.0	32.5±2	1575
19×2×1.0	0.6	1.1	1.9	1.0	32.8±2	1633
20×2×1.0	0.6	1.1	1.9	1.0	33.9±2	1764
21×2×1.0	0.6	1.2	2.0	1.0	35.3±2	1880
23×2×1.0	0.6	1.2	2.0	1.0	35.7±2	2016
24×2×1.0	0.6	1.2	2.0	1.0	37.2±2	2116
27×2×1.0	0.6	1.2	2.1	1.0	38.5±2	2294
30×2×1.0	0.6	1.2	2.1	1.0	39.7±2	2483
33×2×1.0	0.6	1.2	2.2	1.0	41.2±2	2699
37×2×1.0	0.6	1.2	2.2	1.0	42.4±2	2914
1×3×1.0	0.6	1.1	1.2	1.0	13.8±2	263
2×3×1.0	0.6	1.1	1.4	1.0	19.3±2	583
3×3×1.0	0.6	1.1	1.4	1.0	19.9±2	620
4×3×1.0	0.6	1.1	1.4	1.0	21.4±2	735
5×3×1.0	0.6	1.1	1.5	1.0	22.7±2	866
6×3×1.0	0.6	1.1	1.6	1.0	25.0±2	1024
7×3×1.0	0.6	1.1	1.6	1.0	25.0±2	1040
8×3×1.0	0.6	1.1	1.6	1.0	26.4±2	1150
9×3×1.0	0.6	1.1	1.7	1.0	28.4±2	1307
10×3×1.0	0.6	1.1	1.8	1.0	30.0±2	1328
12×3×1.0	0.6	1.1	1.8	1.0	30.9±2	1575
14×3×1.0	0.6	1.1	1.8	1.0	32.0±2	1622
15×3×1.0	0.6	1.1	1.9	1.0	33.1±2	1738
16×3×1.0	0.6	1.1	1.9	1.0	33.8±2	1964
18×3×1.0	0.6	1.2	2.0	1.0	35.9±2	2032
19×3×1.0	0.6	1.2	2.0	1.0	36.2±2	2142
20×3×1.0	0.6	1.2	2.0	1.0	37.1±2	2258
21×3×1.0	0.6	1.2	2.1	1.0	37.9±2	2357
23×3×1.0	0.6	1.2	2.1	1.0	39.6±2	2651
24×3×1.0	0.6	1.2	2.1	1.0	40.7±2	2819
27×3×1.0	0.6	1.2	2.2	1.0	42.3±2	2924
30×3×1.0	0.6	1.2	2.3	1.0	44.1±2	3203
32×3×1.0	0.6	1.2	2.3	1.0	45.2±2	3376
1×2×1.5	0.7	1.1	1.2	1.0	14.4±2	284
2×2×1.5	0.7	1.1	1.4	1.0	17.8±2	520
3×2×1.5	0.7	1.1	1.4	1.0	19.9±2	672





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4×2×1.5	0.7	1.1	1.5	1.0	21.5±2	751
5×2×1.5	0.7	1.1	1.5	1.0	23.5±2	893
6×2×1.5	0.7	1.1	1.6	1.0	25.3±2	1040
7×2×1.5	0.7	1.1	1.6	1.0	25.3±2	1082
8×2×1.5	0.7	1.1	1.7	1.0	26.8±2	1187
9×2×1.5	0.7	1.1	1.7	1.0	28.9±2	1292
10×2×1.5	0.7	1.1	1.8	1.0	30.2±2	1334
12×2×1.5	0.7	1.1	1.8	1.0	31.3±2	1444
14×2×1.5	0.7	1.1	1.8	1.0	32.2±2	1596
15×2×1.5	0.7	1.2	1.9	1.0	34.7±2	1769
16×2×1.5	0.7	1.2	2.0	1.0	35.4±2	1864
18×2×1.5	0.7	1.2	2.0	1.0	37.0±2	2016
19×2×1.5	0.7	1.2	2.0	1.0	37.3±2	2090
20×2×1.5	0.7	1.2	2.1	1.0	39.2±2	2368
21×2×1.5	0.7	1.2	2.1	1.0	40.2±2	2462
23×2×1.5	0.7	1.2	2.2	1.0	41.0±2	2667
24×2×1.5	0.7	1.2	2.2	1.0	42.7±2	2741
27×2×1.5	0.7	1.2	2.3	1.0	43.7±2	2914
30×2×1.5	0.7	1.2	2.3	1.0	45.1±2	3155
33×2×1.5	0.7	1.4	2.4	1.0	47.1±2	3654
37×2×1.5	0.7	1.4	2.5	1.0	48.7±2	3780
1×3×1.5	0.7	1.1	1.2	1.0	15.0±2	315
2×3×1.5	0.7	1.1	1.4	1.0	19.5±2	536
3×3×1.5	0.7	1.1	1.5	1.0	22.1±2	777
4×3×1.5	0.7	1.1	1.5	1.0	23.8±2	914
5×3×1.5	0.7	1.1	1.6	1.0	25.3±2	1097
6×3×1.5	0.7	1.1	1.7	1.0	27.9±2	1292
7×3×1.5	0.7	1.1	1.7	1.0	28.0±2	1328
8×3×1.5	0.7	1.1	1.8	1.0	29.8±2	1475
9×3×1.5	0.7	1.1	1.8	1.0	31.5±2	1664
10×3×1.5	0.7	1.1	1.9	1.0	33.8±2	1764
12×3×1.5	0.7	1.2	2.0	1.0	35.1±2	2048
14×3×1.5	0.7	1.2	2.0	1.0	36.6±2	2121
15×3×1.5	0.7	1.2	2.0	1.0	37.6±2	2252
16×3×1.5	0.7	1.2	2.1	1.0	38.6±2	2573
18×3×1.5	0.7	1.2	2.2	1.0	41.2±2	2709
19×3×1.5	0.7	1.2	2.2	1.0	41.5±2	2809
20×3×1.5	0.7	1.2	2.2	1.0	42.5±2	3019
21×3×1.5	0.7	1.2	2.3	1.0	43.5±2	3150
23×3×1.5	0.7	1.2	2.3	1.0	45.0±2	3423





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Construction No. of elements×No. of cores in element×Cross section(mm ²)	Nominal Insulation Thickness mm	Nominal Bedding Thickness mm	Nominal Inner Sheath Thickness mm	Nominal Outer Sheath Thickness mm	Nominal Overall Diameter mm	Nominal Weight kg/km
24×3×1.5	0.7	1.4	2.4	1.0	46.9±2	3476
27×3×1.5	0.7	1.4	2.4	1.0	48.4±2	3817
30×3×1.5	0.7	1.4	2.5	1.0	50.5±2	4179
32×3×1.5	0.7	1.4	2.6	1.0	52.0±2	4436
1×2×2.5	0.7	1.1	1.2	1.0	15.3±2	336
2×2×2.5	0.7	1.1	1.4	1.0	19.5±2	557
3×2×2.5	0.7	1.1	1.5	1.0	22.2±2	819
4×2×2.5	0.7	1.1	1.5	1.0	23.5±2	945
5×2×2.5	0.7	1.1	1.6	1.0	25.4±2	1113
6×2×2.5	0.7	1.1	1.7	1.0	27.4±2	1297
7×2×2.5	0.7	1.1	1.7	1.0	27.4±2	1355
8×2×2.5	0.7	1.1	1.7	1.0	29.5±2	1470
9×2×2.5	0.7	1.1	1.8	1.0	31.4±2	1570
10×2×2.5	0.7	1.1	1.9	1.0	32.9±2	1675
12×2×2.5	0.7	1.1	1.9	1.0	33.6±2	1843
14×2×2.5	0.7	1.2	2.0	1.0	35.6±2	2090
15×2×2.5	0.7	1.2	2.1	1.0	38.0±2	2273
16×2×2.5	0.7	1.2	2.1	1.0	38.9±2	2468
18×2×2.5	0.7	1.2	2.2	1.0	40.9±2	2693
19×2×2.5	0.7	1.2	2.2	1.0	41.3±2	2798
20×2×2.5	0.7	1.2	2.2	1.0	42.8±2	3024
21×2×2.5	0.7	1.2	2.3	1.0	44.1±2	3171
23×2×2.5	0.7	1.2	2.3	1.0	44.7±2	3418
24×2×2.5	0.7	1.4	2.4	1.0	47.2±2	3497
27×2×2.5	0.7	1.4	2.4	1.0	48.1±2	3796
30×2×2.5	0.7	1.4	2.5	1.0	49.8±2	4148
33×2×2.5	0.7	1.4	2.6	1.0	51.7±2	4515
37×2×2.5	0.7	1.4	2.6	1.0	53.2±2	4904
1×3×2.5	0.7	1.1	1.3	1.0	15.9±2	373
2×3×2.5	0.7	1.1	1.5	1.0	22.9±2	882
3×3×2.5	0.7	1.1	1.5	1.0	23.6±2	992
4×3×2.5	0.7	1.1	1.6	1.0	25.3±2	1171
5×3×2.5	0.7	1.1	1.7	1.0	27.4±2	1381
6×3×2.5	0.7	1.1	1.8	1.0	30.3±2	1633
7×3×2.5	0.7	1.1	1.8	1.0	30.3±2	1722
8×3×2.5	0.7	1.1	1.8	1.0	32.2±2	1869
9×3×2.5	0.7	1.2	1.9	1.0	34.6±2	2158
10×3×2.5	0.7	1.2	2.0	1.0	37.1±2	2184
12×3×2.5	0.7	1.2	2.1	1.0	38.8±2	2557
14×3×2.5	0.7	1.2	2.1	1.0	40.3±2	2835





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15×3×2.5	0.7	1.2	2.2	1.0	41.7±2	3040
16×3×2.5	0.7	1.2	2.2	1.0	42.8±2	3203
18×3×2.5	0.7	1.2	2.3	1.0	44.9±2	3502
19×3×2.5	0.7	1.2	2.3	1.0	45.3±2	3644
20×3×2.5	0.7	1.4	2.4	1.0	46.9±2	3974
21×3×2.5	0.7	1.4	2.4	1.0	47.8±2	4132
23×3×2.5	0.7	1.4	2.5	1.0	49.7±2	4358
24×3×2.5	0.7	1.4	2.5	1.0	50.6±2	4515
27×3×2.5	0.7	1.4	2.6	1.0	53.1±2	5003
30×3×2.5	0.7	1.4	2.7	1.0	55.5±2	5497
32×3×2.5	0.7	1.6	2.8	1.0	57.5±2	5901



Standard



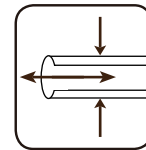
Standard



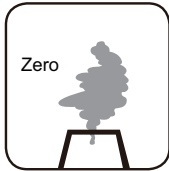
Standard



Standard



Water Tightness
VG 95218-29



Halogen Free
IEC60754-1



Low Corrosivity
IEC60754-2



Low Smoke Emission
IEC 61034-1&2



Flame Retardancy
IEC60332-1



Reduced Fire Propagation
IEC60332-3-22

