



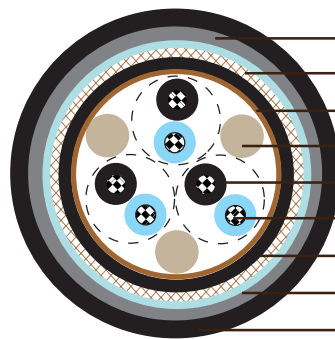
Water Blocked S4 or S4/S8 BFOU(c) 250V

Applications

These cables are partially water blocked, fire resistant, 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 60331-21
- 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
- Mica Tape + EPR 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:** Mica tape + Halogen free EPR compound.
- **Twinning:** Colour coded cores twisted together.
- **Filler:** Water blocking fillers, if required.
- **Collective Shielding:** Pairs/triples are layed up and collectively screened by copper backed polyester tape in contact with a stranded tinned copper drain wire. Pairs/triples are numbered with numbered tape or by numbers printed directly on the insulated conductors.
- **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.



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- **Inner Sheath:** Halogen free thermosetting compound, SHF2 (for TYPE S4). Halogen free MUD resistant thermosetting compound, SHF MUD (for TYPE S4/S8), 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	75	80	85	95
Nominal Inductance@1KHz	MH/km	0.727	0.686	0.667	0.623
Maximum L/R@1KHz	μH/Ω	20	25	35	55
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	1.2	1.0	14.1±2	242
2×2×0.75	0.6	1.1	1.3	1.0	18.4±2	357
3×2×0.75	0.6	1.1	1.4	1.0	19.2±2	520
4×2×0.75	0.6	1.1	1.4	1.0	20.2±2	583
5×2×0.75	0.6	1.1	1.5	1.0	21.8±2	672
6×2×0.75	0.6	1.1	1.5	1.0	23.2±2	761
7×2×0.75	0.6	1.1	1.5	1.0	23.2±2	777
8×2×0.75	0.6	1.1	1.6	1.0	25.1±2	845
9×2×0.75	0.6	1.1	1.6	1.0	26.3±2	924
10×2×0.75	0.6	1.1	1.7	1.0	27.6±2	945
12×2×0.75	0.6	1.1	1.7	1.0	28.2±2	998
14×2×0.75	0.6	1.1	1.7	1.0	29.3±2	1087
15×2×0.75	0.6	1.1	1.8	1.0	31.2±2	1187

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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
16×2×0.75	0.6	1.1	1.8	1.0	31.7±2	1234
18×2×0.75	0.6	1.1	1.9	1.0	33.3±2	1339
19×2×0.75	0.6	1.1	1.9	1.0	33.6±2	1381
20×2×0.75	0.6	1.2	2.0	1.0	35.3±2	1549
21×2×0.75	0.6	1.2	2.0	1.0	36.1±2	1607
23×2×0.75	0.6	1.2	2.0	1.0	36.6±2	1717
24×2×0.75	0.6	1.2	2.1	1.0	38.8±2	1817
27×2×0.75	0.6	1.2	2.1	1.0	39.5±2	1943
30×2×0.75	0.6	1.2	2.2	1.0	40.9±2	2063
33×2×0.75	0.6	1.2	2.2	1.0	42.3±2	2263
37×2×0.75	0.6	1.2	2.3	1.0	43.7±2	2441
1×3×0.75	0.6	1.1	1.2	1.0	14.6±2	268
2×3×0.75	0.6	1.1	1.4	1.0	19.7±2	572
3×3×0.75	0.6	1.1	1.4	1.0	20.3±2	614
4×3×0.75	0.6	1.1	1.5	1.0	21.7±2	704
5×3×0.75	0.6	1.1	1.5	1.0	23.2±2	809
6×3×0.75	0.6	1.1	1.6	1.0	25.5±2	945
7×3×0.75	0.6	1.1	1.6	1.0	25.5±2	982
8×3×0.75	0.6	1.1	1.7	1.0	27.2±2	1066
9×3×0.75	0.6	1.1	1.7	1.0	28.7±2	1192
10×3×0.75	0.6	1.1	1.8	1.0	30.7±2	1197
12×3×0.75	0.6	1.1	1.8	1.0	31.6±2	1292
14×3×0.75	0.6	1.1	1.9	1.0	33.0±2	1444
15×3×0.75	0.6	1.1	1.9	1.0	33.9±2	1528
16×3×0.75	0.6	1.2	2.0	1.0	35.3±2	1622
18×3×0.75	0.6	1.2	2.0	1.0	36.8±2	1775
19×3×0.75	0.6	1.2	2.0	1.0	37.1±2	1838
20×3×0.75	0.6	1.2	2.1	1.0	38.6±2	2084
21×3×0.75	0.6	1.2	2.1	1.0	39.3±2	2158
23×3×0.75	0.6	1.2	2.2	1.0	40.8±2	2326
24×3×0.75	0.6	1.2	2.2	1.0	41.5±2	2357
27×3×0.75	0.6	1.2	2.3	1.0	43.5±2	2557
30×3×0.75	0.6	1.2	2.3	1.0	45.3±2	2777
32×3×0.75	0.6	1.4	2.4	1.0	46.9±2	2982
1×2×1.0	0.6	1.1	1.2	1.0	14.5±2	257
2×2×1.0	0.6	1.1	1.4	1.0	19.2±2	394
3×2×1.0	0.6	1.1	1.4	1.0	19.9±2	578
4×2×1.0	0.6	1.1	1.4	1.0	21.0±2	646
5×2×1.0	0.6	1.1	1.5	1.0	22.6±2	746
6×2×1.0	0.6	1.1	1.6	1.0	24.4±2	861



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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
7×2×1.0	0.6	1.1	1.6	1.0	24.4±2	887
8×2×1.0	0.6	1.1	1.6	1.0	26.1±2	950
9×2×1.0	0.6	1.1	1.7	1.0	27.7±2	1045
10×2×1.0	0.6	1.1	1.7	1.0	28.8±2	1087
12×2×1.0	0.6	1.1	1.7	1.0	29.4±2	1150
14×2×1.0	0.6	1.1	1.8	1.0	30.9±2	1255
15×2×1.0	0.6	1.1	1.9	1.0	32.9±2	1370
16×2×1.0	0.6	1.1	1.9	1.0	33.4±2	1423
18×2×1.0	0.6	1.2	2.0	1.0	35.4±2	1575
19×2×1.0	0.6	1.2	2.0	1.0	35.7±2	1628
20×2×1.0	0.6	1.2	2.0	1.0	37.0±2	1769
21×2×1.0	0.6	1.2	2.1	1.0	38.5±2	1943
23×2×1.0	0.6	1.2	2.1	1.0	39.0±2	2074
24×2×1.0	0.6	1.2	2.2	1.0	40.9±2	2090
27×2×1.0	0.6	1.2	2.2	1.0	41.6±2	2242
30×2×1.0	0.6	1.2	2.2	1.0	42.9±2	2415
33×2×1.0	0.6	1.2	2.3	1.0	44.5±2	2620
37×2×1.0	0.6	1.4	2.4	1.0	46.3±2	2872
1×3×1.0	0.6	1.1	1.2	1.0	15.0±2	294
2×3×1.0	0.6	1.1	1.4	1.0	20.0±2	578
3×3×1.0	0.6	1.1	1.4	1.0	20.7±2	630
4×3×1.0	0.6	1.1	1.5	1.0	22.0±2	725
5×3×1.0	0.6	1.1	1.6	1.0	24.4±2	924
6×3×1.0	0.6	1.1	1.6	1.0	26.6±2	1071
7×3×1.0	0.6	1.1	1.6	1.0	26.6±2	1113
8×3×1.0	0.6	1.1	1.7	1.0	28.4±2	1208
9×3×1.0	0.6	1.1	1.8	1.0	30.2±2	1370
10×3×1.0	0.6	1.1	1.8	1.0	32.2±2	1355
12×3×1.0	0.6	1.1	1.9	1.0	33.3±2	1507
14×3×1.0	0.6	1.2	1.9	1.0	34.9±2	1685
15×3×1.0	0.6	1.2	2.0	1.0	36.0±2	1806
16×3×1.0	0.6	1.2	2.0	1.0	37.0±2	1853
18×3×1.0	0.6	1.2	2.1	1.0	39.2±2	2153
19×3×1.0	0.6	1.2	2.1	1.0	39.5±2	2226
20×3×1.0	0.6	1.2	2.2	1.0	40.7±2	2415
21×3×1.0	0.6	1.2	2.2	1.0	41.4±2	2499
23×3×1.0	0.6	1.2	2.2	1.0	42.8±2	2641
24×3×1.0	0.6	1.2	2.3	1.0	43.7±2	2704
27×3×1.0	0.6	1.2	2.3	1.0	45.7±2	2956
30×3×1.0	0.6	1.4	2.4	1.0	48.1±2	3281

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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
32×3×1.0	0.6	1.4	2.5	1.0	49.5±2	3476
1×2×1.5	0.7	1.1	1.3	1.0	16.3±2	352
2×2×1.5	0.7	1.1	1.5	1.0	22.5±2	777
3×2×1.5	0.7	1.1	1.5	1.0	23.2±2	845
4×2×1.5	0.7	1.1	1.6	1.0	24.9±2	992
5×2×1.5	0.7	1.1	1.6	1.0	26.8±2	1150
6×2×1.5	0.7	1.1	1.8	1.0	29.8±2	1365
7×2×1.5	0.7	1.1	1.8	1.0	29.8±2	1423
8×2×1.5	0.7	1.1	1.8	1.0	31.6±2	1528
9×2×1.5	0.7	1.1	1.9	1.0	33.7±2	1743
10×2×1.5	0.7	1.1	2.0	1.0	36.4±2	1764
12×2×1.5	0.7	1.1	2.0	1.0	37.5±2	1948
14×2×1.5	0.7	1.2	2.1	1.0	39.6±2	2258
15×2×1.5	0.7	1.2	2.2	1.0	40.9±2	2415
16×2×1.5	0.7	1.2	2.2	1.0	42.0±2	2536
18×2×1.5	0.7	1.2	2.3	1.0	44.0±2	2762
19×2×1.5	0.7	1.2	2.3	1.0	44.4±2	2861
20×2×1.5	0.7	1.2	2.3	1.0	45.5±2	3087
21×2×1.5	0.7	1.2	2.4	1.0	46.9±2	3266
23×2×1.5	0.7	1.2	2.5	1.0	48.7±2	3570
24×2×1.5	0.7	1.2	2.5	1.0	49.5±2	3528
27×2×1.5	0.7	1.4	2.6	1.0	52.0±2	3896
30×2×1.5	0.7	1.4	2.7	1.0	54.3±2	4263
32×2×1.5	0.7	1.4	2.7	1.0	55.8±2	4499
33×2×1.5	0.7	1.4	2.5	1.0	50.5±2	3407
37×2×1.5	0.7	1.4	2.6	1.0	52.2±2	3691
1×3×1.5	0.7	1.1	1.3	1.0	16.3±2	352
2×3×1.5	0.7	1.1	1.5	1.0	22.5±2	777
3×3×1.5	0.7	1.1	1.5	1.0	23.2±2	845
4×3×1.5	0.7	1.1	1.6	1.0	24.9±2	992
5×3×1.5	0.7	1.1	1.6	1.0	26.8±2	1150
6×3×1.5	0.7	1.1	1.8	1.0	29.8±2	1365
7×3×1.5	0.7	1.1	1.8	1.0	29.8±2	1423
8×3×1.5	0.7	1.1	1.8	1.0	31.6±2	1528
9×3×1.5	0.7	1.1	1.9	1.0	33.7±2	1743
10×3×1.5	0.7	1.2	2.0	1.0	36.4±2	1764
12×3×1.5	0.7	1.2	2.0	1.0	37.5±2	1948
14×3×1.5	0.7	1.2	2.1	1.0	39.6±2	2258
15×3×1.5	0.7	1.2	2.2	1.0	40.9±2	2415
16×3×1.5	0.7	1.2	2.2	1.0	42.0±2	2525



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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
18×3×1.5	0.7	1.2	2.3	1.0	44.0±2	2762
19×3×1.5	0.7	1.2	2.3	1.0	44.4±2	2846
20×3×1.5	0.7	1.2	2.3	1.0	45.5±2	3087
21×3×1.5	0.7	1.4	2.4	1.0	46.9±2	3266
23×3×1.5	0.7	1.4	2.5	1.0	48.7±2	3570
24×3×1.5	0.7	1.4	2.5	1.0	49.5±2	3602
27×3×1.5	0.7	1.4	2.6	1.0	52.0±2	3896
30×3×1.5	0.7	1.4	2.7	1.0	54.3±2	4263
32×3×1.5	0.7	1.4	2.7	1.0	55.8±2	4499
1×2×2.5	0.7	1.1	1.3	1.0	16.5±2	352
2×2×2.5	0.7	1.1	1.5	1.0	22.4±2	777
3×2×2.5	0.7	1.1	1.5	1.0	23.3±2	840
4×2×2.5	0.7	1.1	1.6	1.0	24.8±2	977
5×2×2.5	0.7	1.1	1.6	1.0	26.7±2	1129
6×2×2.5	0.7	1.1	1.7	1.0	28.9±2	1307
7×2×2.5	0.7	1.1	1.7	1.0	28.9±2	1355
8×2×2.5	0.7	1.1	1.8	1.0	31.3±2	1475
9×2×2.5	0.7	1.1	1.9	1.0	33.3±2	1664
10×2×2.5	0.7	1.2	2.0	1.0	35.2±2	1685
12×2×2.5	0.7	1.2	2.0	1.0	36.0±2	1832
14×2×2.5	0.7	1.2	2.0	1.0	37.6±2	2016
15×2×2.5	0.7	1.2	2.2	1.0	40.8±2	2315
16×2×2.5	0.7	1.2	2.2	1.0	41.4±2	2342
18×2×2.5	0.7	1.2	2.3	1.0	43.5±2	2625
19×2×2.5	0.7	1.2	2.3	1.0	43.9±2	2720
20×2×2.5	0.7	1.2	2.3	1.0	45.5±2	2956
21×2×2.5	0.7	1.4	2.4	1.0	47.2±2	3140
23×2×2.5	0.7	1.4	2.4	1.0	47.8±2	3376
24×2×2.5	0.7	1.4	2.5	1.0	50.2±2	3434
27×2×2.5	0.7	1.4	2.6	1.0	51.4±2	3691
30×2×2.5	0.7	1.4	2.6	1.0	53.0±2	4001
33×2×2.5	0.7	1.4	2.7	1.0	55.1±2	4352
37×2×2.5	0.7	1.4	2.8	1.0	56.9±2	4725
1×3×2.5	0.7	1.1	1.3	1.0	17.1±2	404
2×3×2.5	0.7	1.1	1.5	1.0	24.0±2	924
3×3×2.5	0.7	1.1	1.6	1.0	25.0±2	1040
4×3×2.5	0.7	1.1	1.6	1.0	26.6±2	1208
5×3×2.5	0.7	1.1	1.7	1.0	28.9±2	1418
6×3×2.5	0.7	1.1	1.8	1.0	32.0±2	1675
7×3×2.5	0.7	1.1	1.8	1.0	32.0±2	1754

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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
8×3×2.5	0.7	1.1	1.9	1.0	34.2±2	1911
9×3×2.5	0.7	1.2	2.0	1.0	36.8±2	2210
10×3×2.5	0.7	1.2	2.1	1.0	39.9±2	2300
12×3×2.5	0.7	1.2	2.2	1.0	41.2±2	2578
14×3×2.5	0.7	1.2	2.2	1.0	42.9±2	2851
15×3×2.5	0.7	1.2	2.3	1.0	44.3±2	3050
16×3×2.5	0.7	1.2	2.3	1.0	45.5±2	3213
18×3×2.5	0.7	1.4	2.4	1.0	48.1±2	3549
19×3×2.5	0.7	1.4	2.5	1.0	48.7±2	3707
20×3×2.5	0.7	1.4	2.5	1.0	49.9±2	3990
21×3×2.5	0.7	1.4	2.5	1.0	50.9±2	4148
23×3×2.5	0.7	1.4	2.6	1.0	52.9±2	4505
24×3×2.5	0.7	1.4	2.6	1.0	53.8±2	4541
27×3×2.5	0.7	1.4	2.7	1.0	56.5±2	4982
30×3×2.5	0.7	1.6	2.9	1.0	59.7±2	5565
32×3×2.5	0.7	1.6	2.9	1.0	61.3±2	5875



Standard



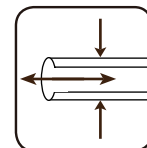
Standard



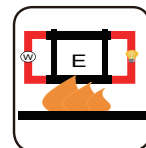
Standard



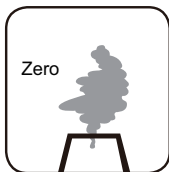
Standard



Water Tightness
VG 95218-29



Circuit Integrity
IEC 60331-21



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