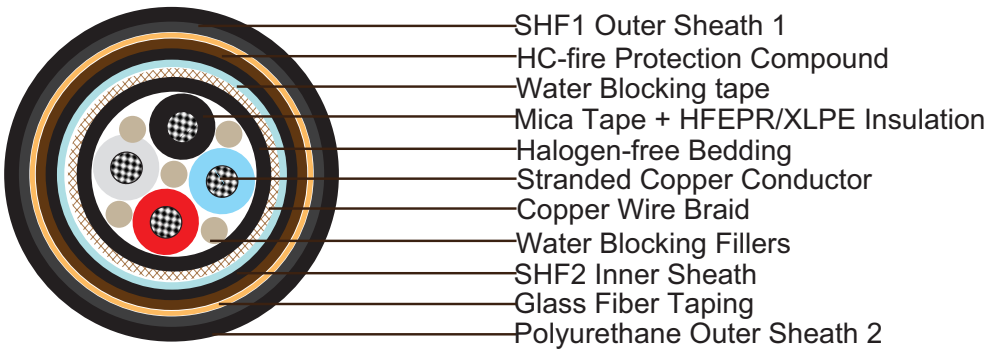
Water Blocked P34 BFOU-HCF 0.6/1 kV

Applications

These cables are partially water blocked, fire resistant, flame retardant, low smoke and halogen free, used for emergency control, power and lighting systems that need to be operational during a 1100˚C hydrocarbon fire.

Standards

- IEC 60092-353
- 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



Construction

- **Conductors:** Tinned annealed stranded compacted copper to IEC 60228 class 2.
- **Insulation:** Mica tape + Halogen free EPR/XLPE.
- **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.
- **HC-fire protection** Extruded thermoplastic fire protection compound.
- **Taping:** Lapped glass fibre tape.
- **Outer Sheath 1:** Flame retardant halogen-free thermoplastic compound, SHF1, coloured black.

- **Outer Sheath 2:** Polyurethane for providing transversal water tightness, PE is optional,but can not meet low smoke standard.

Electrical Characteristics

Nominal Cross Section Area	mm²	1.5	2.5	4	6	16	35
Nominal Conductor Diameter	mm	1.6	2.1	2.6	3.2	5.1	7.4
Maximum DC Resistant@20˚C	Ω/km	12.2	7.56	4.7	3.11	1.16	0.529
Continuous Current Rating@45˚C 1 Core	A	23	30	40	52	96	157
Continuous Current Rating@45˚C 2 Core	A	20	26	34	44	82	133
Continuous Current Rating@45˚C 3&4 Core	A	16	21	28	36	67	110
Short Circuit Current 1s	A	210	360	570	860	2290	5010
Operating Voltage	KV	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1

Nominal Cross Section Area	mm²	50	70	95	120	150	185	240	300
Nominal Conductor Diameter	mm	8.7	10.3	12.2	13.8	15.1	17.0	19.6	21.9
Maximum DC Resistant@20˚C	Ω/km	0.391	0.27	0.195	0.154	0.126	0.1	0.0762	0.0607
Continuous Current Rating@45˚C 1 Core	A	196	242	293	339	389	444	522	601
Continuous Current Rating@45˚C 2 Core	A	167	206	249	288	331	444	444	511
Continuous Current Rating@45˚C 3&4 Core	A	137	169	205	237	272	311	365	421
Short Circuit Current 1s	A	7150	10020	13590	17170	21460	26470	34340	42930
Operating Voltage	KV	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1

Note: For more than 4-cores, the current ratings may be calculated from the following formula ($I_N = I_1 / \sqrt[3]{N}$), I_1= Current rating for 1-core, N = Number of cores.

Ambient Temperature Correction Factors

Ambient Temperature Correction Factors	35	40	45	50	55	60	65	70	75	80
Rating Factor	1.1	1.05	1.0	0.94	0.88	0.82	0.74	0.67	0.58	0.47

Mechanical and Thermal Properties

- **Bending Radius:** 20×OD (during installation); 12×OD (fixed installed)
- **Temperature Range:** -20˚C ~ +90˚C

Dimensions and Weight

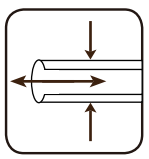
Construction No. of cores×Cross section(mm²)	Nominal Insulation Thickness mm	Nominal Diameter Over Bedding mm	Nominal Diameter Over Sheath1 mm	Nominal Overall Diameter mm	Nominal Weight kg/km
1×50	1.4	15.0	18.5	47.9±2	3045
1×70	1.4	16.5	20.5	49.9±2	3465
1×95	1.6	18.5	23.0	53.3±2	3990
1×120	1.6	20.5	25.0	55.3±2	4473
1×150	1.8	23.0	27.0	57.3±2	4988
1×185	2.0	25.0	29.5	60.3±2	5649
1×240	2.2	28.0	32.5	69.2±2	7403
1×300	2.4	30.5	35.5	71.2±2	8400
2×1.5	1.0	10.0	13.0	42.5±2	1985
2×2.5	1.0	11.0	14.5	44.0±2	2184
3×1.5	1.0	10.5	14.0	44.0±2	2247
3×2.5	1.0	11.5	15.0	44.5±2	2310
3×4	1.0	13.0	16.5	45.0±2	2520
3×6	1.0	14.0	18.0	47.0±2	2730
3×16	1.0	18.5	23.0	52.4±2	3675
3×35	1.2	25.0	29.5	59.9±2	5082
3×70	1.4	33.0	39.0	74.4±2	8558
3×120	1.6	41.0	48.0	83.9±2	11865
3×150	1.8	46.0	54.5	91.3±2	13965
4×2.5	1.0	12.5	16.5	46.8±2	2415
4×6	1.0	15.5	19.5	50.3±2	3014
4×16	1.0	20.5	25.0	55.5±2	4022
7×1.5	1.0	14.0	17.5	46.5±2	2678
12×1.5	1.0	18.5	22.5	52.0±2	3297
27×1.5	1.0	26.5	31.0	66.5±2	5324
7×2.5	1.0	15.0	19.0	48.0±2	2898
12×2.5	1.0	20.5	24.5	54.0±2	3675

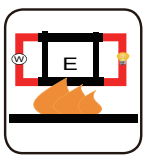
Standard

Standard

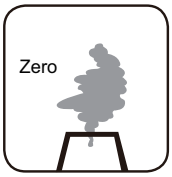
Standard

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